Berkshire Encyclopedia of World History
Editorial & Production Staff

Project Director
Karen Christensen

Editorial and Production Staff
Karen Advokaat, Rachel Christensen, Tom Christensen, Emily Colangelo, Sarah Conrick, Benjamin Kerschberg, Junhee (June) Kim, Jess LaPointe, David Levinson, Courtney Linehan, Janet Lowry, Marcy Ross, Gabby Templet

Photo Researcher
Gabby Templet

Copyeditors
Francesca Forrest, Mike Nichols, Carol Parikh, Mark Siemens, Daniel Spinella, and Rosalie Wieder

Information Management and Programming
Deborah Dillon and Trevor Young

Designers
Lisa Clark and Jeff Potter

Printers
Thomson-Shore, Inc.

Map Maker
XNR Productions

Composition Artists
Steve Tiano, Brad Walrod, and Linda Weidemann

Production Coordinators
Benjamin Kerschberg and Marcy Ross

Proofreaders
Mary Bagg, Sue Boshers, Robin Gold, Libby Larson, Amina Sharma, and Barbara Spector

Indexers
Peggy Holloway and Barbara Lutkins
Contents

List of Entries, ix
Reader’s Guide, xv
How to Spell It and How to Say It:
100 Important People, Places, and Terms in World History, xxv

Entries

VOLUME I:
Abraham—Coal
1

VOLUME II:
Cold War—Global Imperialism and Gender
376

VOLUME III:
Global Migrations in Modern Times—Mysticism
844

VOLUME IV:
Napoleon—Sun Yat-sen
1327

VOLUME V:
Tang Taizong—Zoroastrianism
1802

This Fleeting World: An Overview of Human History, TFW–1

Chapter One: Foraging Era, TFW–2

Chapter Two: Agrarian Era, TFW–15

Chapter Three: Modern Era, TFW–36

Index, 2123
Entries

This Fleeting World,
by David Christian
Agrarian Era
Foraging (Paleolithic) Era
Modern Era

Abraham
Absolutism, European
Adolescence
Africa
Africa, Colonial
Africa, Postcolonial
African Religions
African Union
African-American and Caribbean Religions
Afro-Eurasia
Age Stratification
Agricultural Societies
AIDS
Airplane
Akbar
Aksum
Alchemy
Alcohol
Alexander the Great
al-Khwarizmi
al-Razi
American Empire
Andean States
Animism

Anthropology
Anthroposphere
Apartheid in South Africa
Arab Caliphates
Arab League
Archaeology
Architecture
Aristotle
Art—Africa
Art—Ancient Greece and Rome
Art—Central Asia
Art—East Asia
Art—Europe
Art—Native North America
Art—Overview
Art—Russia
Art—South Asia
Art—Southeast Asia
Art—West Asia
Art, Paleolithic
Asia
Asian Migrations
Asoka
Association of Southeast Asian Nations
Assyrian Empire
Augustine, St.
Aurangzeb
Austro-Hungarian Empire
Automobile
Aztec Empire

Babi and Baha’i
Babylon
Balance of Power
Bands, Tribes, Chiefdoms, and States
Barter
Benin
Berlin Conference
Biological Exchanges
Bolívar, Simón
British East India Company
British Empire
Buddhism
Bullroarers
Byzantine Empire

Caesar, Augustus
Caesar, Julius
Capitalism
Caravan
Carrying Capacity
Cartography
Catherine the Great
Catholicism, Roman
Celts
Cereals
Charlemagne
Charles V
Child, Lydia
Childhood
China
<table>
<thead>
<tr>
<th>Chinese Popular Religion</th>
<th>Decolonization</th>
<th>Ethnic Nationalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Churchill, Winston</td>
<td>Deforestation</td>
<td>Ethnicity</td>
</tr>
<tr>
<td>Cinchona</td>
<td>Delhi Sultanate</td>
<td>Ethnocentrism</td>
</tr>
<tr>
<td>Citizenship</td>
<td>Democracy, Constitutional</td>
<td>Eurocentrism</td>
</tr>
<tr>
<td>Civil Disobedience</td>
<td>Descartes, René</td>
<td>Europe</td>
</tr>
<tr>
<td>Civil Law</td>
<td>Desertification</td>
<td>European Union</td>
</tr>
<tr>
<td>Civilization, Barbarism, Savagery</td>
<td>Détente</td>
<td>Expansion, European</td>
</tr>
<tr>
<td>Climate Change</td>
<td>Diasporas</td>
<td>Expeditions, Scientific</td>
</tr>
<tr>
<td>Coal</td>
<td>Dictionaries and Encyclopedias</td>
<td>Exploration, Chinese</td>
</tr>
<tr>
<td>Coffee</td>
<td>Diplomacy</td>
<td>Exploration, Space</td>
</tr>
<tr>
<td>Cold War</td>
<td>Disease and Nutrition</td>
<td>Extinctions</td>
</tr>
<tr>
<td>Colonialism</td>
<td>Diseases—Overview</td>
<td>Famine</td>
</tr>
<tr>
<td>Columbian Exchange</td>
<td>Diseases, Animal</td>
<td>Fascism</td>
</tr>
<tr>
<td>Columbus, Christopher</td>
<td>Diseases, Plant</td>
<td>Festivals</td>
</tr>
<tr>
<td>Comintern</td>
<td>Displaced Populations,</td>
<td>Feudalism</td>
</tr>
<tr>
<td>Communication—Overview</td>
<td>Typology of</td>
<td>Fire</td>
</tr>
<tr>
<td>Communism and Socialism</td>
<td>Dress</td>
<td>Firearms</td>
</tr>
<tr>
<td>Comparative Borders and</td>
<td>Drugs</td>
<td>First, Second, Third, Fourth</td>
</tr>
<tr>
<td>Frontiers</td>
<td></td>
<td>Worlds</td>
</tr>
<tr>
<td>Comparative Ethnology</td>
<td>Du Bois, W. E. B.</td>
<td>Food</td>
</tr>
<tr>
<td>Comparative History</td>
<td>Dutch East India Company</td>
<td>Foraging Societies, Contemporary</td>
</tr>
<tr>
<td>Computer</td>
<td>Dutch Empire</td>
<td>Forms of Government—Overview</td>
</tr>
<tr>
<td>Confucianism</td>
<td>Early Modern World</td>
<td>Freedom</td>
</tr>
<tr>
<td>Confucius</td>
<td>Earthquakes</td>
<td>French Empire</td>
</tr>
<tr>
<td>Congress of Vienna</td>
<td>Eastern Europe</td>
<td>Frontiers</td>
</tr>
<tr>
<td>Constantine the Great</td>
<td>Economic Growth, Extensive and Intensive</td>
<td>Fur Trade</td>
</tr>
<tr>
<td>Consumerism</td>
<td>Ecumenicism</td>
<td>Galileo Galilei</td>
</tr>
<tr>
<td>Containment</td>
<td>Education</td>
<td>Gama, Vasco da</td>
</tr>
<tr>
<td>Contraception and Birth Control</td>
<td>Egypt—State Formation</td>
<td>Games</td>
</tr>
<tr>
<td>Contract Law</td>
<td>Egypt, Ancient</td>
<td>Gandhi, Mohandas</td>
</tr>
<tr>
<td>Creation Myths</td>
<td>Einstein, Albert</td>
<td>Gay and Lesbian Rights</td>
</tr>
<tr>
<td>Crusades, The</td>
<td>Electricity</td>
<td>Movement</td>
</tr>
<tr>
<td>Cultural and Geographic Areas</td>
<td>Elizabeth I</td>
<td>General Agreement on Tariffs</td>
</tr>
<tr>
<td>Cultural Ecology</td>
<td>Empire</td>
<td>and Trade</td>
</tr>
<tr>
<td>Culture</td>
<td>Energy</td>
<td>Genetics</td>
</tr>
<tr>
<td>Cyrus the Great</td>
<td>Engines of History</td>
<td>Genghis Khan</td>
</tr>
<tr>
<td>Dance and Drill</td>
<td>Enlightenment, The</td>
<td>Genocide</td>
</tr>
<tr>
<td>Daoism</td>
<td>Equatorial and Southern Africa, 4000 BCE–1100 CE</td>
<td>Geographic Constructions</td>
</tr>
<tr>
<td>Darwin, Charles</td>
<td>Erosion</td>
<td>German Empire</td>
</tr>
<tr>
<td>Dating Methods</td>
<td>Esperanto</td>
<td>Glass</td>
</tr>
<tr>
<td>Global Commons</td>
<td>Inca Empire</td>
<td>Language, Standardization of</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Global Imperialism and Gender</td>
<td>Indigenous Peoples</td>
<td>Laozi</td>
</tr>
<tr>
<td>Global Migration in Modern Times</td>
<td>Indigenous Peoples Movements</td>
<td>Latter-day Saints</td>
</tr>
<tr>
<td>Globalization</td>
<td>Indo-European Migration</td>
<td>League of Nations</td>
</tr>
<tr>
<td>Gold and Silver</td>
<td>Industrial Technologies</td>
<td>Leisure</td>
</tr>
<tr>
<td>Grand Tour</td>
<td>Information Societies</td>
<td>Lenin, Vladimir</td>
</tr>
<tr>
<td>Greece, Ancient</td>
<td>Initiation and Rites of Passage</td>
<td>Leonardo da Vinci</td>
</tr>
<tr>
<td>Green or Environmental Movements</td>
<td>Inner Eurasia</td>
<td>Letters and Correspondence</td>
</tr>
<tr>
<td>Green Revolution</td>
<td>International Court of Justice</td>
<td>Liberalism</td>
</tr>
<tr>
<td>Gregory VII</td>
<td>International Criminal Court</td>
<td>Libraries</td>
</tr>
<tr>
<td>Guevara, Che</td>
<td>International Law</td>
<td>Lincoln, Abraham</td>
</tr>
<tr>
<td>Guilds</td>
<td>International Monetary Systems</td>
<td>Literature and Women</td>
</tr>
<tr>
<td>Gum Arabic</td>
<td>International Organizations—Overview</td>
<td>Locke, John</td>
</tr>
<tr>
<td>Hammurabi</td>
<td>Interglocal Networks</td>
<td>Logistics</td>
</tr>
<tr>
<td>Han Wudi</td>
<td>Interwar Years (1918–1939)</td>
<td>Long Cycles</td>
</tr>
<tr>
<td>Hanseatic League</td>
<td>Isabella I</td>
<td>Luther, Martin</td>
</tr>
<tr>
<td>Harappan State and Indus Civilization</td>
<td>Jainaism</td>
<td>Macedonian Empire</td>
</tr>
<tr>
<td>Harun al-Rashid</td>
<td>Japanese Empire</td>
<td>Machiavelli, Niccolo</td>
</tr>
<tr>
<td>Hatshepsut</td>
<td>Jefferson, Thomas</td>
<td>Magellan, Ferdinand</td>
</tr>
<tr>
<td>Hausa States</td>
<td>Jesus</td>
<td>Mahavira</td>
</tr>
<tr>
<td>Henry the Navigator</td>
<td>Joan of Arc</td>
<td>Malaria</td>
</tr>
<tr>
<td>Herodotus</td>
<td>Judaism</td>
<td>Mali</td>
</tr>
<tr>
<td>Hinduislm</td>
<td>Justinian I</td>
<td>Manichaeism</td>
</tr>
<tr>
<td>Hitler, Adolf</td>
<td>Kamehameha I</td>
<td>Manorialism</td>
</tr>
<tr>
<td>Ho Chi Minh</td>
<td>Kanem-Bornu</td>
<td>Mansa Musa</td>
</tr>
<tr>
<td>Holocaust</td>
<td>Kangxi Emperor</td>
<td>Mao Zedong</td>
</tr>
<tr>
<td>Homer</td>
<td>King, Martin Luther, Jr.</td>
<td>Maritime History</td>
</tr>
<tr>
<td>Hong Merchants</td>
<td>Kinship</td>
<td>Marriage and Family</td>
</tr>
<tr>
<td>Horticultural Societies</td>
<td>Kongo</td>
<td>Marx, Karl</td>
</tr>
<tr>
<td>Hudson’s Bay Company</td>
<td>Kushan Empire</td>
<td>Mass Media</td>
</tr>
<tr>
<td>Human Evolution—Overview</td>
<td>Labor Systems, Coercive</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Human Rights</td>
<td>Labor Union Movements</td>
<td>Matriarchy and Patriarchy</td>
</tr>
<tr>
<td>Iberian Trading Companies</td>
<td>Language, Classification of</td>
<td>Mehmed II</td>
</tr>
<tr>
<td>Ibn Battuta</td>
<td></td>
<td>Mencius</td>
</tr>
<tr>
<td>Ibn Khaldun</td>
<td></td>
<td>Mercantilism</td>
</tr>
<tr>
<td>Ibn Sina</td>
<td></td>
<td>Meroë</td>
</tr>
<tr>
<td>Imperialism</td>
<td></td>
<td>Mesoamerica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mesopotamia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Metallurgy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Migrations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Military Engineering</td>
</tr>
</tbody>
</table>
Military Strategy and Tactics
Military Training and Discipline
Millennialism
Miranda, Francisco de
Missionaries
Mississippian Culture
Modernity
Money
Mongol Empire
Moses
Motecuhzoma II
Mughal Empire
Muhammad
Multinational Corporations
Museums
Music—Genres
Music and Political Protest
Mysticism
Napoleon
Napoleonic Empire
Nationalism
Nation-State
Native American Religions
Natural Gas
Natural Law
Nature
Navigation
Newton, Isaac
Nkrumah, Kwame
Nonviolence
North Atlantic Treaty Organization
Nubians
Oil
Oral History
Organization of American States
Orientalism
Orthodoxy, Christian
Osman I
Ottoman Empire
Pacific, Settlement of
Paleoanthropology
Pan-Africanism
Paper
Parliamentarianism
Pastoral Nomadic Societies
Paul, St.
Peace Making in the Modern Era
Peace Projects
Pentecostalism
Periodization—Overview
Periodization, Conceptions of
Persian Empire
Peter the Great
Pilgrimage
Piracy
Plastics
Plato
Political Thought
Polo, Marco
Population
Population Growth as Engine of History
Porcelain
Portuguese Empire
Postcolonial Analysis
Postmodernism
Production and Reproduction
Progress
Property Rights and Contracts
Protestantism
Qin Shi Huangdi
Quinine
Race and Racism
Radio
Railroad
Rameses II
Raynal, Abbé Guillaume
Red Cross and Red Crescent Movement
Religion—Overview
Religion and Government
Religion and War
Religious Freedom
Religious Fundamentalism
Religious Syncretism
Renaissance
Revolution—China
Revolution—Cuba
Revolution—France
Revolution—Haiti
Revolution—Iran
Revolution—Mexico
Revolution—Russia
Revolution—United States
Revolutions, Communist
Ricci, Matteo
Roman Empire
Roosevelt, Eleanor
Roosevelt, Franklin Delano
Rubber
Rumi
Russian-Soviet Empire
Sacred Law
Sailing Ships
Saladin
Salt
Sasanian Empire
Science—Overview
Scientific Instruments
Scientific Revolution
Secondary-Products Revolution
Secularism
Senghor, Léopold
Sex and Sexuality
Shaka Zulu
Shamanism
Shinto
Siddhartha Gautama
Sikhism
Silk Roads
| Sima Qian | Trading Patterns, Ancient American  |
| Slave Trades | Trading Patterns, Ancient European  |
| Smith, Adam | Trading Patterns, China Seas |
| Social Darwinism | Trading Patterns, Eastern  |
| Social History | European  |
| Social Sciences | Trading Patterns, Indian Ocean  |
| Social Welfare | Trading Patterns, Mediterranean  |
| Sociology | Trading Patterns, Mesoamerican  |
| Socrates | Trading Patterns, Pacific  |
| Sokoto Caliphate | Trading Patterns, Trans-Saharan  |
| Songhai | Transportation—Overview  |
| Spanish Empire | Travel Guides  |
| Spice Trade | Treaty of Versailles  |
| Sports | Túpac Amaru  |
| Srivijaya | Turkic Empire  |
| Stalin, Joseph | Tutu, Desmond  |
| State Societies, Emergence of | Ugarit  |
| State, The | ‘Umar ibn al-Khattab  |
| Steppe Confederations | United Nations  |
| Sugar | Universe, Origins of  |
| Sui Wendi | Urban II  |
| Sui Yangdi | Urbanization  |
| Stileman | Utopia  |
| Sumerian Society | Victoria  |
| Sun Yat-sen | Viking Society  |
| Tang Taizong | Wagadu Empire  |
| Tea | War and Peace—Overview  |
| Technology—Overview | Warfare—Africa  |
| Telegraph and Telephone | Warfare—China  |
| Textiles | Warfare—Europe  |
| Thomas Aquinas, St. | Warfare—Islamic World  |
| Thucydides | Warfare—Japan and Korea  |
| Timber | Warfare—Post-Columbian Latin America  |
| Time, Conceptions of | Warfare—Post-Columbian North America  |
| Timur | Women’s and Gender History  |
| Totemism | Women’s Emancipation Movements  |
| Tourism | Women’s Reproductive Rights Movements  |
| Trade Cycles | World Cities in History—Overview  |
| | World Maps, Chinese  |
| | World System Theory  |
| | World War I  |
| | World War II  |
| | Writing Systems and Materials  |
| | Writing World History  |
| | Yijing  |
| | Yongle Emperor  |
| Zhong He | Zheng He  |
| Zhu Yuanzhang | Zimbabwe, Great  |
| Zoroastrianism |
Association of Southeast Asian Nations
Aurangzeb
Babi and Baha’i
British East India Company
Buddhism
China
Chinese Popular Religion
Confucianism
Confucius
Cyrus the Great
Daoism
Delhi Sultanate
Dutch East India Company
Genghis Khan
Han Wudi
Harappan State and Indus Civilization
Hinduism
Ho Chi Minh
Hong Merchants
Inner Eurasia
Islamic Law
Islamic World
Jainism
Japanese Empire
Khmer Kingdom
Kushan Empire
Laozi
Mahavira
Mao Zedong
Mencius
Mesopotamia
Mongol Empire
Mughal Empire
Orientalism
Pacific, Settlement of
Pastoral Nomadic Societies
Persian Empire
Polo, Marco
Porcelain
Qin Shi Huangdi
Revolution—China
Revolution—Iran
Revolutions, Communist
Ricci, Matteo
Rumi
Sasanian Empire
Shinto
Siddhartha Gautama
Sikhism
Silk Roads
Sima Qian
Spice Trade
Srivijaya
Steppe Confederations
Sui Wendi
Sui Yangdi
Süleyman
Sun Yat-sen
Tang Taizong
Tea
Timur
Trading Patterns—China Seas
Trading Patterns—Indian Ocean
Trading Patterns—Pacific
Turkic Empire
‘Umar ibn al-Khattab
Warfare—China
Warfare—Islamic World
Warfare—Japan and Korea
Warfare—South Asia
Warfare—Southeast Asia
Warfare—Steppe Nomads
World Maps, Chinese
Yijing
Yongle Emperor
Zheng He
Zhu Yuanzhang
Zoroastrianism

Europe
Afro-Eurasia
Alexander the Great
Art—Europe
Art—Russia
Berlin Conference
British East India Company
British Empire
Caesar, Augustus
Caesar, Julius
Catherine the Great
Catholicism, Roman
Celts
Charlemagne
Charles V
Churchill, Winston
Columbian Exchange
Columbus, Christopher
Congress of Vienna
Crusades, The
Darwin, Charles
Descartes, René
Détente
Dutch East India Company
Dutch Empire
Early Modern World
Eastern Europe
Elizabeth I
Enlightenment, The
Eurocentrism
Europe
European Union
Expansion, European
Fascism
Feudalism
French Empire
Galileo Galilei
Gama, Vasco da
German Empire
Grand Tour
Greece, Ancient
Gregory VII
Guilds
Hanseatic League
Henry the Navigator
Henry the Navigator
Herodotus
Hitler, Adolf
Ho Chi Minh
Homer
Ibn Battuta
Ibn Khaldun
Ibn Sina
Isabella I
Jefferson, Thomas
Jesus
Joan of Arc
Justinian I
Kamehameha I
Kangxi Emperor
Kenyatta, Jomo
King, Martin Luther, Jr.
Laozi
Lenin, Vladimir
Leonardo da Vinci
Lincoln, Abraham
Locke, John
Luther, Martin
Machiavelli, Niccolo
Magellan, Ferdinand
Mahavira
Mansa Musa
Mao Zedong
Marx, Karl
Mehmed II
Mencius
Miranda, Francisco de
Moses
Motecuhzoma II
Muhammad
Napoleon
Newton, Isaac
Nkrumah, Kwame
Osman I
Paul, St.
Peter the Great
Plato
Polo, Marco
Qin Shi Huangdi
Rameses II
Raynal, Abbé Guillaume
Ricci, Matteo
Roosevelt, Eleanor
Roosevelt, Franklin Delano
Rumi
Saladin
Senghor, Léopold
Shaka Zulu
Siddhartha Gautama
Sima Qian
Smith, Adam
Socrates
Stalin, Joseph
Sui Wendi
Sui Yangdi
Süleyman
Sun Yat-sen
Tang Taizong
Thomas Aquinas, St.
Thucydides
Timur
Túpac Amaru
Tutu, Desmond
ʿUmar ibn al-Khattab
Urban II
Victoria
Yongle Emperor
Zheng He
Zhu Yuanzhang

Commerce—
Organizations and Institutions
British East India Company
Dutch East India Company
Guilds
Hanseatic League
Hong Merchants
Hudson’s Bay Company
Iberian Trading Companies
Multinational Corporations

Commerce—
Systems and Patterns
Barter
Capitalism
Columbian Exchange
Economic Growth, Intensive and Extensive
General Agreement on Tariffs and Trade
International Monetary Systems
Labor Systems, Coercive
Mercantilism
Money
Piracy
Property Rights and Contracts
Silk Roads
Slave Trades
Trade Cycles
Trading Patterns, Ancient American
Trading Patterns, Ancient European
Trading Patterns, China Seas
Trading Patterns, Eastern European
Trading Patterns, Indian Ocean
Trading Patterns, Mediterranean
Trading Patterns, Mesoamerican
Trading Patterns, Pacific
Trading Patterns, Trans-Saharan
World System Theory

Commerce—
Trade Goods and Products
Alcohol
Cereals
Coal
Coffee
Drugs
Food
Fur Trade
Glass
Gold and Silver
Gum Arabic
Natural Gas
Oil
Paper
Plastics
Porcelain
Rubber
Salt
Slave Trades
Spice Trade
Sugar
Tea
Textiles
Timber

Communication
Communication—Overview
Dictionaries and Encyclopedias
Esperanto
Language, Classification of
Language, Standardization of
Letters and Correspondence
Libraries
Mass Media
Radio
Telegraph and Telephone
Writing Systems and Materials

Conflict and Peace Making—War and Conflict
Conflict and Peace Making—Diplomacy and Peace Making

Containment
Détente
Diplomacy
Interwar Years (1918–1939)
Nonviolence
Peace Making in the Modern Era
Peace Projects
Treaty of Versailles

Conflict and Peace Making—War and Conflict
Cold War
Crusades, The
Firearms
Genocide
Holocaust
Logistics
Military Engineering
Military Strategy and Tactics
Military Training and Discipline
Religion and War
Revolution—China
Revolution—Cuba
Revolution—France
Revolution—Haiti
Revolution—Iran
Revolution—Mexico
Revolution—Russia
Revolution—United States
Revolutions, Communist
War and Peace—Overview
Warfare—Africa
Warfare—China
Warfare—Europe
Warfare—Islamic World
Warfare—Japan and Korea
Warfare—Post-Columbian

Cultural Contact and Relations
Colonialism
Comparative Borders and Frontiers
Decolonization
Diasporas
Displaced Populations, Typology of
Ethnic Nationalism
Ethnicity
Ethnocentrism
Eurocentrism
Expansion, European
Expeditions, Scientific
Exploration, Chinese
Exploration, Space
Grand Tour
Indigenous Peoples
Interregional Networks
Maritime History
Missionaries
Navigation
Orientalism
Pilgrimage
Race and Racism
Slave Trades

Warfare—Pre-Columbian Mesoamerica and North America
Warfare—Pre-Columbian South America
Warfare—South Asia
Warfare—Southeast Asia
Warfare—Steppe Nomads
Warfare, Air
Warfare, Comparative
Warfare, Land
Warfare, Naval
Warfare, Origins of
World War I
World War II
Social Darwinism
Tourism
Travel Guides
World System Theory

**Daily Life**
Adolescence
Age Stratification
Childhood
Dress
Education
Festivals
Games
Initiation and Rites of Passage
Kinship
Leisure
Marriage and Family
Sex and Sexuality
Sports
Textiles

**Disciplines and Fields of Study**
Anthropology
Archaeology
Cartography
Comparative Ethnology
Comparative History
Genetics
Museums
Paleoanthropology
Social History
Social Sciences
Sociology
Women's and Gender History

**Environment and Ecology**
Anthroposphere
Biological Exchanges
Climate Change
Deforestation

**Desertification**
**Earthquakes**
**Energy**
**Erosion**
**Extinctions**
**Famine**
**Fire**
**Green or Environmental Movements**
**Green Revolution**
**Nature**
**Time, Conceptions of Water**
**Water Management**

**Eras, Empires, States, and Societies**
Africa, Colonial
Africa, Postcolonial
Aksum
American Empire
Andean States
Assyrian Empire
Austro-Hungarian Empire
Aztec Empire
Babylon
Benin
British Empire
Byzantine Empire
Celts
China
Delhi Sultanate
Dutch Empire
Early Modern World
Egypt—State Formation
Egypt, Ancient
French Empire
German Empire
Greece, Ancient
Harappan State and Indus Civilization
Hausa States
Inca Empire
Islamic World
Japanese Empire
Kanem-Bornu
Khmer Kingdom
Kongo
Kushan Empire
Macedonian Empire
Mali
Meroë
Mesoamerica
Mesopotamia
Mississippian Culture
Mongol Empire
Mughal Empire
Napoleonic Empire
Nubians
Ottoman Empire
Persian Empire
Portuguese Empire
Roman Empire
Russian-Soviet Empire
Sasanian Empire
Sokoto Caliphate
Songhai
Spanish Empire
Srivijaya
State Societies, Emergence of State, The
Steppe Confederations
Sumerian Society
Turkic Empire
Ugarit
Viking Society
Wagadu Empire
Zimbabwe, Great

**Evolution**
Extinctions
Foraging (Paleolithic) Era (please see *This Fleeting World*)
Human Evolution—Overview
Paleoanthropology
Universe, Origins of

**Government, Politics, and Law**
Absolutism, European
Arab Caliphates
Bands, Tribes, Chiefdoms, and States
Citizenship
Civil Disobedience
Civil Law
Communism and Socialism
Confucianism
Contract Law
Democracy, Constitutional
Fascism
Feudalism
Forms of Government—Overview
Global Commons
Global Imperialism and Gender
Human Rights
Imperialism
International Law
Islamic Law
Liberalism
Manorialism
Nationalism
Natural Law
Parliamentarianism
Religion and Government
Sacred Law
Secularism
Social Welfare
Utopia
Zionism

**Health and Disease**
AIDS
Biological Exchanges
Cinchona

Disease and Nutrition
Diseases—Overview
Diseases, Animal
Diseases, Plant
Malaria
Quinine

**International and Regional Organizations**
African Union
Arab League
Association of Southeast Asian Nations
Comintern
European Union
International Court of Justice
International Criminal Court
International Organizations—Overview
League of Nations
North Atlantic Treaty Organization
Organization of American States
Red Cross and Red Crescent Movement
United Nations
Warsaw Pact

**Migration**
Asian Migrations
Diasporas
Displaced Populations, Typology of
Equatorial and Southern Africa, 4000 BCE–1100 CE
Expansion, European
Global Migration in Modern Times
Indo-European Migration
Migrations
Pacific, Settlement of

Pastoral Nomadic Societies
Urbanization

**Periodization**
Agrarian Era (please see *This Fleeting World*)
Civilization, Barbarism, Savagery
Foraging (Paleolithic) Era (please see *This Fleeting World*)
Long Cycles
Modern Era (please see *This Fleeting World*)
Periodization, Conceptions of
Periodization—Overview

**Philosophy, Thought, and Ideas**
Anthroposphere
Civilization, Barbarism, Savagery
Confucianism
Culture
Freedom
Modernity
Orientalism
Political Thought
Postcolonial Analysis
Postmodernism
Progress
Western Civilization
World Maps, Chinese

**Population**
Age Stratification
Carrying Capacity
Contraception and Birth Control
Population
Population Growth as Engine of History
Urbanization
World Cities in History—Overview
Asia
Eastern Europe
Europe
Frontiers
Geographic Constructions
Inner Eurasia

**Transportation**
Airplane
Automobile
Caravan
Navigation
Railroad
Sailing Ships
Transportation—Overview

**Ways of Living**
Agricultural Societies
Foraging Societies, Contemporary
Horticultural Societies
Indigenous Peoples
Information Societies
Pastoral Nomadic Societies

**Women and Gender**
AIDS
Childhood
Contraception and Birth Control
Dress
Gay and Lesbian Rights
Movement

Global Imperialism and Gender
Human Rights
Initiation and Rites of Passage
Kinship
Letters and Correspondence
Literature and Women
Marriage and Family
Matriarchy and Patriarchy
Sex and Sexuality
Women's and Gender History
Women's Emancipation
Movements
Women's Reproductive Rights
Movements
Women's Suffrage Movements
Ralph Waldo Emerson once said, “A foolish consistency is the hobgoblin of little minds.” Each time Berkshire Publishing Group sets to work on creating an encyclopedia, we review our guidelines on how we will present the names and terms that have changed in the course of history or through language alterations. We strive for consistency, though not the foolish kind against which Emerson warned.

Languages and geographic terms evolve regularly, and sometimes staying current means that we can’t be completely consistent. Adding to the challenge is the fact that words in languages not based on the Latin alphabet (e.g., Chinese, Japanese, Arabic, Hebrew) must be transliterated—spelled in the language of another alphabet or “romanized” into English. And even within a language, transliteration systems change. Many people who grew up knowing the Wade-Giles system of Chinese romanization (with such spellings as Peking and Mao Tse-tung) had to become accustomed to seeing words using the pinyin romanization system introduced in the 1950s (with new spellings such as Beijing and Mao Zedong).

By and large, we look to *Merriam-Webster’s Collegiate Dictionary*, 11th Edition (known as M-W 11), as our spelling authority, with *Merriam-Webster’s Biographical Dictionary* and M-W’s *Geographic Dictionary* for terms not in M-W 11. However, sometimes we overrule Merriam-Webster for a compelling reason. For example, historian Ross Dunn—who wrote the Berkshire Encyclopedi*a of World History’s* article on Ibn Battuta (and who is a leading expert on Battuta)—spells the name without the final “h,” while M-W spells it “Battutah.” In another case, the West African town of Timbuktu is so well known by that spelling that we opted for it in preference to M-W’s preferred “Tombuctou.”

Finally, there is the matter of using diacritical marks—accent marks, ayns (’) and hamzas (’), and other markings—that provide phonetic distinctions to words from other languages. The use of diacritics is always a big question for a publisher on international topics. We—and the scholars we work with—tend to prefer to use various marks, from European-language accent graves to Japanese macrons and Arabic ums and ahs. But we have found that they can distract, and even intimidate, the general reader, so our policy has generally been to minimize their use. In time, as U.S. students become more comfortable with non-English forms and as we publish for global audiences, we will be able to make greater use of these marks, which are designed to be helpful to the reader.

That said, we thought it would be useful (and fun) to provide a listing of the “Top 100” terms—suggested by our editors—that have alternate spellings and names. We’ve also listed pronunciations for non-English names and terms. (The syllable in capital letters is the accented one; note, however, that Chinese and other languages do not necessarily stress syllables as is done in English.)
<table>
<thead>
<tr>
<th>Preferred form</th>
<th>Pronunciation</th>
<th>Alternates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander the Great</td>
<td>Alexander,</td>
<td>Alexander, Alexander of Macedon</td>
</tr>
<tr>
<td></td>
<td>a-SHO-ka</td>
<td>Ashoka</td>
</tr>
<tr>
<td>Augustine, St.</td>
<td>Augustine of</td>
<td>Hippo</td>
</tr>
<tr>
<td>Aurangzeb</td>
<td>or-ang-ZEB</td>
<td>‘Alamgir</td>
</tr>
<tr>
<td>Caesar, Augustus</td>
<td>Augustus Caesar,</td>
<td>Caesar Augustus</td>
</tr>
<tr>
<td>Chiang Kai-shek</td>
<td>chang kye-shek</td>
<td>Jiang Jieshi</td>
</tr>
<tr>
<td>Confucius</td>
<td>con-FYU-shus</td>
<td>Kong Fuzi, K’ung Fu-tzu</td>
</tr>
<tr>
<td>Gandhi, Mohandas</td>
<td>GHAN-dee,</td>
<td>Mahatma Gandhi</td>
</tr>
<tr>
<td></td>
<td>mo-HAN-des</td>
<td></td>
</tr>
<tr>
<td>Galileo Galilei</td>
<td>ga-li-LAY-o</td>
<td>not Galilei, Galileo</td>
</tr>
<tr>
<td>Genghis Khan</td>
<td>JEN-gis kon</td>
<td>Chinghis, Chinghiz, Chingiz</td>
</tr>
<tr>
<td>Han Wudi</td>
<td>hon woot-see</td>
<td>Han Wu-ti</td>
</tr>
<tr>
<td>Ibn Battuta</td>
<td>ib-un ba-TOO-ta</td>
<td>Ibn Battutah</td>
</tr>
<tr>
<td>Ibn Sina</td>
<td>ib-un see-na</td>
<td>Avicenna</td>
</tr>
<tr>
<td>Jesus</td>
<td></td>
<td>Jesus Christ, Jesus of Nazareth</td>
</tr>
<tr>
<td>Kangxi emperor</td>
<td>kong-hsee</td>
<td>K’ang-hsi</td>
</tr>
<tr>
<td>Khubilai Khan</td>
<td>KOO-blah kon</td>
<td>Kublai, Qubilai</td>
</tr>
<tr>
<td>Laozi</td>
<td>laud-zuh</td>
<td>Lao-tzu, Lao Tzu</td>
</tr>
<tr>
<td>Mao Zedong</td>
<td>mao zeh-DON</td>
<td>Mao Tse-tung</td>
</tr>
<tr>
<td>Mencius</td>
<td>MEN-chee-us</td>
<td>Mengzi, Meng-tzu, Meng Tzu</td>
</tr>
<tr>
<td>Moses</td>
<td></td>
<td>Moshe</td>
</tr>
<tr>
<td>Motecuhzoma II</td>
<td>mo-tek-w-ZO-ma</td>
<td>Montezuma II; Moctezuma</td>
</tr>
<tr>
<td>Muhammad</td>
<td>mo-HA-med</td>
<td>Mohammad, the Prophet Muhammed, Mehemet</td>
</tr>
<tr>
<td>Napoleon</td>
<td>na-POLE-con</td>
<td>Napoleon Bonaparte</td>
</tr>
<tr>
<td>Qin Shi Huangdi</td>
<td>chin sher</td>
<td>Ch’in Shih Huang-ti</td>
</tr>
<tr>
<td></td>
<td>hwang-dee</td>
<td></td>
</tr>
<tr>
<td>Saladin</td>
<td>SAL-a-den</td>
<td>Salah al-Din, Selahedin</td>
</tr>
<tr>
<td>Siddhartha Gautama</td>
<td>si-DAR-ta GAU-ta-ma</td>
<td>Buddha, The</td>
</tr>
<tr>
<td>Sima Qian</td>
<td>suma chee-en</td>
<td>Ssu-ma Ch’ien</td>
</tr>
<tr>
<td>Sui Wendi</td>
<td>sway wen-dee</td>
<td>Sui Wen-ti</td>
</tr>
<tr>
<td>Sui Yangdi</td>
<td>sway yahng-dee</td>
<td>Sui Yang-ti</td>
</tr>
<tr>
<td>Süleyman</td>
<td>soo-lay-MON</td>
<td>Süleyman the Magnificant, Süleyman I, Suleyman the Lawgiver</td>
</tr>
<tr>
<td>Sun Yat-sen</td>
<td>soon yat-sen</td>
<td>Sun Yixian</td>
</tr>
<tr>
<td>Tang Taizong</td>
<td>tahng taizong</td>
<td>T’ang T’ai-tsung</td>
</tr>
</tbody>
</table>
### People (continued)

<table>
<thead>
<tr>
<th>Preferred form</th>
<th>Pronunciation</th>
<th>Alternates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Aquinas, St.</td>
<td>a-KWY-nas</td>
<td>not Aquinas, Thomas</td>
</tr>
<tr>
<td>Timur</td>
<td>TEE-more</td>
<td>Timur Lenk, Tamerlane, Tamburlaine</td>
</tr>
<tr>
<td>Urban II</td>
<td>Otho</td>
<td>also Otto, Odo, Eude—of Lagery</td>
</tr>
<tr>
<td>Zheng He</td>
<td>jeng huh</td>
<td>Cheng Ho</td>
</tr>
<tr>
<td>Zhu Yuanzhang</td>
<td>joo you-ahn-jahng</td>
<td>Chu Yuan-chang</td>
</tr>
</tbody>
</table>

### Places

<table>
<thead>
<tr>
<th>Preferred form</th>
<th>Pronunciation</th>
<th>Alternates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afro-Eurasia</td>
<td></td>
<td>Afroeurasia; Africa, Europe, and Asia</td>
</tr>
<tr>
<td>Aksum</td>
<td></td>
<td>Axum</td>
</tr>
<tr>
<td>Beijing</td>
<td>bay-jin</td>
<td>Peking</td>
</tr>
<tr>
<td>Bukhara</td>
<td>boo-KAR-a</td>
<td>Bokhara, Boukhara</td>
</tr>
<tr>
<td>Cambodia</td>
<td>chan</td>
<td>Khmer Republic, Kampuchea</td>
</tr>
<tr>
<td>Chang River</td>
<td></td>
<td>Yangzi, Yangtze</td>
</tr>
<tr>
<td>Czech Republic and Slovakia</td>
<td>chek, slow-VA-kee-a</td>
<td>Czechoslovakia</td>
</tr>
<tr>
<td>East Indies</td>
<td></td>
<td>Insular Southeast Asia</td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td>United Arab Republic</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>gwang-joe</td>
<td>Canton</td>
</tr>
<tr>
<td>Habsburg</td>
<td></td>
<td>Hapsburg</td>
</tr>
<tr>
<td>Huange River</td>
<td>hwang</td>
<td>Huange He, Yellow River</td>
</tr>
<tr>
<td>Inner Asia</td>
<td></td>
<td>Central Asia</td>
</tr>
<tr>
<td>Iran</td>
<td></td>
<td>Persia</td>
</tr>
<tr>
<td>Iraq</td>
<td></td>
<td>Mesopotamia</td>
</tr>
<tr>
<td>Istanbul</td>
<td>iss-tan-BULL</td>
<td>Constantinople, Byzantium</td>
</tr>
<tr>
<td>Kandahar</td>
<td>KON-da-har</td>
<td>Qandahar</td>
</tr>
<tr>
<td>Kara-Kum</td>
<td>ka-ra-KOOM</td>
<td>Karakum</td>
</tr>
<tr>
<td>Kazakhs</td>
<td>kah-zaks</td>
<td>Khazaks</td>
</tr>
<tr>
<td>Khwarizm</td>
<td>KWA-ra-zem</td>
<td>Kwarezm, Khwarazm, Khuwarizm</td>
</tr>
<tr>
<td>Kongo</td>
<td></td>
<td>Congo</td>
</tr>
<tr>
<td>Kushan empire</td>
<td>koosh-an</td>
<td>Kushana, Kusana</td>
</tr>
<tr>
<td>Mesoamerica</td>
<td></td>
<td>Middle America, Central America</td>
</tr>
<tr>
<td>Mughul</td>
<td></td>
<td>Moghol, Mogol</td>
</tr>
<tr>
<td>Mumbai</td>
<td>MUM-bye</td>
<td>Bombay</td>
</tr>
<tr>
<td>Myanmar</td>
<td>MY-AN-mar</td>
<td>Burma</td>
</tr>
<tr>
<td>Samarkand</td>
<td>SA-mar-kand</td>
<td>Samarkand</td>
</tr>
</tbody>
</table>

(Continues on next page)
### Places (continued)

<table>
<thead>
<tr>
<th>Preferred form</th>
<th>Pronunciation</th>
<th>Alternates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shilla kingdom</td>
<td>shil-la</td>
<td>Silla kingdom</td>
</tr>
<tr>
<td>Songhai</td>
<td></td>
<td>Songhay</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>shree LAN-ka</td>
<td>Ceylon</td>
</tr>
<tr>
<td>Thailand</td>
<td>TIE-land</td>
<td>Siam</td>
</tr>
<tr>
<td>Timbuktu</td>
<td>tim-BUCK-too</td>
<td>Timbukto, Tombouctou</td>
</tr>
<tr>
<td>USSR</td>
<td></td>
<td>Soviet Union, Soviet Empire, Russia</td>
</tr>
<tr>
<td>Vietnam, Laos, Cambodia</td>
<td></td>
<td>known collectively as Indochina</td>
</tr>
<tr>
<td>West Indies</td>
<td></td>
<td>Caribbean</td>
</tr>
</tbody>
</table>

### Religious, Political, and Cultural Terms

<table>
<thead>
<tr>
<th>Preferred form</th>
<th>Pronunciation</th>
<th>Alternates</th>
</tr>
</thead>
<tbody>
<tr>
<td>al-Jazeera</td>
<td>as-jah-ZEER-a</td>
<td>Al Jazeera, Al-Jazeera</td>
</tr>
<tr>
<td>al-Qaeda</td>
<td>al-KAY-da</td>
<td>Al Qaeda, al-queda</td>
</tr>
<tr>
<td>al-Razi</td>
<td>al-rah-zee</td>
<td>ar-Razi</td>
</tr>
<tr>
<td>Analects of Confucius</td>
<td></td>
<td>Sayings of Confucius</td>
</tr>
<tr>
<td>Bhagavad Gita</td>
<td>ba-ga-vad GEE-ta</td>
<td>Bhagavadgita</td>
</tr>
<tr>
<td>Bible, The</td>
<td></td>
<td>Old and New Testaments</td>
</tr>
<tr>
<td>Brahma</td>
<td></td>
<td>Brahman, Brahmin</td>
</tr>
<tr>
<td>czar</td>
<td></td>
<td>tsar</td>
</tr>
<tr>
<td>Daoism</td>
<td></td>
<td>Taoism</td>
</tr>
<tr>
<td>Indigenous peoples</td>
<td></td>
<td>primitive, native, nonindustrial</td>
</tr>
<tr>
<td>Latter-day Saints</td>
<td></td>
<td>Mormons</td>
</tr>
<tr>
<td>Muslim</td>
<td></td>
<td>Moslem</td>
</tr>
<tr>
<td>Native Americans</td>
<td></td>
<td>Indians, American Indians</td>
</tr>
<tr>
<td>Persian</td>
<td></td>
<td>Achaemenian, Achaemenid empire</td>
</tr>
<tr>
<td>Qing dynasty</td>
<td>ching</td>
<td>Ch’ing dynasty</td>
</tr>
<tr>
<td>Quran</td>
<td></td>
<td>Qur’an, Koran</td>
</tr>
<tr>
<td>Sasanian</td>
<td></td>
<td>Sassanian, Sasanid, Sassanid empire</td>
</tr>
<tr>
<td>Shia</td>
<td>SHEE-a</td>
<td>Shi’a</td>
</tr>
<tr>
<td>Sharia</td>
<td>sha-REE-a</td>
<td>Shari’a, Islamic law</td>
</tr>
<tr>
<td>Siva</td>
<td>SHEE-va</td>
<td>Shiva</td>
</tr>
<tr>
<td>Song dynasty</td>
<td></td>
<td>Sung dynasty</td>
</tr>
<tr>
<td>Tang dynasty</td>
<td></td>
<td>T’ang dynasty</td>
</tr>
<tr>
<td>Preferred form</td>
<td>Pronunciation</td>
<td>Alternates</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Torah</strong></td>
<td></td>
<td>Five Books of Moses</td>
</tr>
<tr>
<td><strong>Vodun</strong></td>
<td>voo-DOO</td>
<td>Voodoo, Vodou</td>
</tr>
<tr>
<td><strong>World War I</strong></td>
<td></td>
<td>First World War, The Great War</td>
</tr>
<tr>
<td><strong>World War II</strong></td>
<td></td>
<td>Second World War</td>
</tr>
<tr>
<td><strong>Yijing</strong></td>
<td></td>
<td>I-ching, Yi-jing</td>
</tr>
</tbody>
</table>
Cold War

Following World War II, a new kind of war, a so-called “Cold War,” broke out. This new war centered on ideological and political conflicts, particularly the conflict between capitalism and Communism. This Cold War, which turned hot several times, particularly in Korea and Vietnam, endured for nearly fifty years and affected most of the globe as countries increasingly had to choose sides with one of the superpowers (the United States and the Soviet Union) in an increasingly bipolar world. During conferences at Yalta (1943) and Potsdam (1945) it became clear that the individual nations that made up the allied powers had very different views regarding the shape of the postwar world.

On 5 March 1946, the year after the war ended, the former British Prime Minister Winston Churchill made a speech in Fulton, Missouri, (now known as his “Iron Curtain Speech”) in which he defined the terms of this new conflict. According to Churchill, “From Stettin in the Baltic and Trieste in the Adriatic, an iron curtain has descended across the Continent.” In this speech, Churchill harshly criticized the actions of the Soviet Union. From this moment on, the same Stalin who had been referred to as “Uncle Joe” during the war effort was now once again transformed into a dangerous and dictatorial enemy.

The Cold War in Europe and the United States

In the United States, Cold War policies were set out in several early government documents. The first of these, which came to be known as the Truman Doctrine, was promoted in a speech on 12 March of 1947. In this speech, President Harry Truman declared, “I believe that it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures. I believe that we must assist free peoples to work out their own destinies in their own way.” In June of 1947, Secretary of State George Marshall set out the European Recovery Program (later known as the Marshall Plan), which provided for economic aid to back up the ideology of the Truman Doctrine. The final plank in the Cold War platform of the United States was set out by George Kennan in an article in Foreign Affairs. The “containment policy” that Kennan espoused became the rationale for most United States foreign policy behavior in the next forty years. Kennan’s policy of “containing” Communist nations later gave rise to the “Domino Theory,” that is, the idea that if one country fell to Communism, others would follow (particularly in Asia).

The earliest strain in the Cold War came in Germany as the United States and Western nations merged their zones to create a West German federal government and worked to rebuild West Germany while denouncing the Soviet Union’s policies in East Germany. The introduction of a new currency in West Germany led to a Soviet blockade of West Berlin, which lay within East Germany and thus within the Soviet zone of occupation. In response to the blockade, the Allies managed to supply West Berlin through a massive airlift that lasted for over a year. Ultimately, Germany was divided between east and west and in 1961 the Berlin Wall went up, physically dividing the city of Berlin into two zones of power.

The Cold War also led to the creation of NATO (North Atlantic Treaty Organization), an organization that provided for the mutual defense and assistance of Western European nations against any hostile action by the Soviet Union. The Soviet Union responded by creating an alliance with Eastern European countries, known as the Warsaw Pact.

Asia

The agreements made at Yalta had provided a structure for postwar cooperation in Asia but these initial agreements soon fell apart. The Soviet Union had agreed to enter the war in the Pacific three months after the defeat of Germany and Stalin abided by this agreement. Roosevelt had agreed to allow the Soviet Union to establish a base at Port Arthur, China, in exchange for Stalin’s agreement to sign a treaty of alliance with Chiang Kai-shek’s Republic of China. A Communist movement, viewed as a direct attempt by the Soviet Union to achieve
the worldwide revolution that had been advocated by Lenin, had emerged in China in the 1930s. The Communist and non-Communist parties in China had attempted to cooperate after the Japanese invasion but had been largely unsuccessful and both groups were anticipating a renewed struggle after the defeat of Japan. In 1949, the Nationalist government fled to Taiwan and Mao Zedong proclaimed the People’s Republic of China. The United States refused to recognize Mao’s government, instead maintaining ties to the Nationalist government in Taiwan. The United States lamented the “loss of China” and vowed to take whatever steps were necessary to prevent the spread of Communism throughout Asia.

The situation in Korea also deteriorated rapidly. The removal of Korea from Japanese control had been one of the stated objectives of the allies in World War II. Prior to the surrender of Japan in 1945, the United States and the Soviet Union had occupied the country, temporarily dividing it at the thirty-eighth parallel. The allies planned to hold elections after the restoration of peace and allow the newly elected government to rule an independent Korea. However, tensions between the United States and the Soviet Union had led to the establishment of separate governments in North and South Korea. The Communist government in North Korea, with the approval of Stalin and the Soviet Union, invaded South Korea on 25 June.
1950. As a result of a boycott of the U.N. Security Council by the Soviet Union, the United States was able to pass a resolution that labeled North Korea as an aggressive nation and called for U.N. forces to be sent to Korea. The U.N. forces, led by American general Douglas MacArthur, defeated North Korean troops and expelled them from South Korea. Subsequently, MacArthur and the U.N. forces crossed the thirty-eighth parallel and adopted a new mission, which aimed to unite all of Korea under a non-Communist government. China had issued several warnings that they might intervene if U.N. forces crossed the thirty-eighth parallel but these warnings were ignored. When the Chinese made good on their threat to supply both men and matériel, U.N. forces had to retreat back into South Korea. A defensive line was established near the thirty-eighth parallel. Peace negotiations dragged on without result and the Korean War eventually ended in a stalemate. At the end of the war, Korea remained divided.

The other major “hot” war in the post–World War II period was also fought through the lens of Cold War tensions. The initial war in French Indo-China began as a result of the French decision to try to reestablish control of their colony after the war. War broke out between the French and Ho Chi Minh’s Indo-Chinese Communist Party in 1946. After the French fortress at Dien Bien Phu fell to Communist forces the French agreed to negotiations and the Geneva Conference in 1954 brought an end to the first Indochina war. The United States had sent considerable aid to the French in order to prevent the spread of Communism, while pressuring the French to agree to Vietnamese independence at a future date. The Geneva agreements had called for elections in Vietnam but as it became clear that free elections would most likely result in a Communist victory, the United States sought other solutions. The United States was increasingly unwilling to risk another Asian domino to the Communists. Thus, the United States supported Ngo Dinh Diem, who refused to agree to the elections called for by the Geneva Accords. Despite U.S. assistance South Vietnam was on the verge of collapse by 1963. The United States responded by sending military advisers and increased material supplies. In 1965, the United States under President Lyndon Johnson began to send U.S. troops to Vietnam. President Nixon, under increasing pressure to end the war, bombed not just Vietnam but also Laos and Cambodia. The Treaty of Paris in January of 1973 ended the conflict. Two years after the war ended, South Vietnam fell to the Communists.

The spread of the Cold War to Asia led Southeast Asian nations to form an alliance in 1954, the Southeast Asia Treaty Organization (SEATO). This alliance was an effort to cooperate economically and also to resist further Communist encroachment in Southeast Asia. It included representatives of Australia, France, Great Britain, New Zealand, Pakistan, the Philippines, Thailand, and the United States.

Africa
Africa was more indirectly affected by Cold War tensions. Both the United States and the Soviet Union directed economic assistance plans and policies aimed at securing Cold War alliances. But in the postwar world, African nations were occupied by the struggle for independence and faced significant challenges upon obtaining independence. Independence was achieved earlier in north and central Africa, where there were fewer white settlers, than in South Africa, where the white-dominated government struggled to maintain its position of power and the policies of apartheid.

The Middle East
The Middle East achieved its independence after World War II. Regional differences, territorial disputes, and the British mandate that divided territory between Palestine and the newly created nation of Israel contributed to instability in the area. The Arab-Israeli conflict also contributed to violence in the region. Arab nations cooperated in an attempt to defeat the Israelis and reclaim the territory occupied by the citizens of that nation. The emergence of various militant religious groups radically altered the nature of many Middle Eastern governments, particularly in Iran. During the Cold War, regional problems
were further complicated by the political interests of the United States and the Soviet Union, both of whom valued the region, partly because of the vast oil resources in the Middle East. Its strategic location and vast production of petroleum made the Middle East of value to all industrialized nations. The United States contributed money and material aid to the Israeli government and intervened in the area in an attempt to maintain its interests, both economic and military, in the area while the Soviet Union fought and lost a war in Afghanistan.

**Latin America**

The United States had inaugurated a policy of nonintervention in Latin America in the 1930s but reversed this policy after World War II. Communist movements and fear of the spread of Communism in addition to economic interests in the area were primarily responsible for the change in policy. In Guatemala, Jacobo Arbenz Guzmán came to power and began to reduce the influence and interests of U.S. businesses. The United Fruit Company, controlled by U.S. interests, noted that the Communists were involved in the changes and asked for assistance. A U.S.-led military operation successfully deposed Arbenz Guzmán and the new government repealed his land reform measures and jailed and murdered Communists. A small guerrilla movement of Communists and other nationalists emerged and violence continued for three decades.

In 1959, Fidel Castro came to power in Cuba, enacting a social and political revolution in Cuba based on Marxist ideas. He also initiated land reform, seizing all land from owners who had more than 165 acres. Economic sanctions by the United States and other countries who refused to trade with Cuba caused a rapid decline in the Cuban economy.

Cuba became a key nation in the Cold War struggle between the United States and the Soviet Union. The United States attempted to overthrow Castro by landing Cuban exiles at the Bay of Pigs in 1961. After this failed invasion, Castro sought protection from the Soviet Union and vowed to spread Communism to other areas in Latin America. Although Castro failed to bring other Communist governments to power in Latin America, his alliance with the Soviet Union brought the world to the edge of a nuclear war during the Cuban missile crisis. The Soviet Union had agreed to install missiles in Cuba and to support Castro against further actions by the United States. In response, President John Kennedy ordered a naval blockade of Cuba, to prevent missiles from being sent to Cuba. Ultimately, Nikita Khrushchev backed down and agreed to dismantle existing sites and pledged not to install missiles at a future date. This direct confrontation and the realization of how close the world had come to nuclear war led to the installation of a direct phone line between the United States and the Soviet Union and subsequently to a thaw in relations and talks regarding the reduction of nuclear arms.

**Developing Nations and the Cold War**

*During the Cold War era, economic development was a key issue for many developing nations. In April, 1955 delegates from 29 Asian and African nations meet at Bandung, Indonesia and reached the following agreement on economic cooperation.*

The Asian-African Conference recognized the urgency of promoting economic development in the Asian-African region. There was general desire for economic cooperation among the participating countries on the basis of mutual interest and respect for national sovereignty. The proposals with regard to the economic cooperation within the participating countries do not preclude either the desirability or the need for cooperation with countries outside the region, including the investment of foreign capital. It was further recognized that the assistance being received by certain participating countries from outside the region, through international or under bilateral agreements, had made a valuable contribution to the implementation of their development programmes.

How to Spot a Communist

These instructions were developed for the American public by the U. S. First Army Headquarters and disseminated through the popular media in the 1950s.

If there is no fool-proof system in spotting a Communist, there are, fortunately, indications that may give him away. These indications are often subtle but always present, for the Communist, by reason of his “faith” must act and talk along certain lines. While a certain heaviness of style and preference for long sentences is common to most Communist writing, a distinct vocabulary provides the... more easily recognized feature of the “Communist Language.” Even a superficial reading of an article written by a Communist or a conversation with one will probably reveal the use of some of the following expressions: integrative thinking, vanguard, comrade, hootenanny, chauvinism, book-burning, syncretistic faith, bourgeois-nationalism, jingoism, colonialism, hooliganism, ruling class, progressive, demagogy, dialectical, witch-hunt, reactionary, exploitation, oppressive, materialist... The “Communist Logic”... is diametrically opposed to our own. Thus the Communist refers to the iron curtain police states as “democracies,” and any defensive move on the part of the Western powers is condemned as “aggression.” The Communist thus builds for himself a topsy-turvy world with a completely distorted set of values. For this reason, it is practically impossible to win an argument with a hard-core Communist.... The Communist mind cannot and will not engage in a detached examination of ideas. Talking to a Communist about his own ideas, then, is like listening to a phonograph record. His answers will invariably follow a definite pattern because he can never admit, even hypothetically, that the basis for his ideas may not be sound. This attitude is typical not only for the individual but also on a national scale... The answer is final and no arguments are permitted so far as the Communists are concerned.

The Communist, then, is not really “logical.” The finality of his arguments and the completeness of his condemnation marks him clearly, whether as a speaker, a writer or a conversation partner.


The End of the Cold War

Although there were earlier improvements in the relations between the United States and the Soviet Union and agreements to limit nuclear weapons (SALT I and SALT II), real change occurred only with the collapse of Communism in Eastern Europe and the Soviet Union. When Mikhail Gorbachev became premier of the Soviet Union in 1985 he began attempting to reform the Communist system. The two best-known aspects of his reform program are perestroika, the attempted decentralization and restructuring of the economy, and glasnost, a move toward free speech and a free press. Instead of the reform and revival that Gorbachev hoped would transpire, revolutions occurred in Eastern Europe and when the Soviet Union did not send troops to restore order, the Communist governments in Eastern Europe simply fell. The most prominent symbol of the collapse of the Communist regimes in Eastern Europe was the dismantling of the Berlin Wall in 1989 and the subsequent reunification of Germany in the 1990s. After an attempted Communist coup in the Soviet Union in 1991, the Union of Soviet Socialist Republics also collapsed. Individual republics such as the Ukraine withdrew from the union and Gorbachev resigned as president of the union after an attempted coup by military and old-style Communists, which led to the rise of Boris Yeltsin as a political figure.

With the collapse of Communism, the Cold War that had dominated European politics for nearly fifty years was essentially over. Although Communism itself still existed in China, Cuba, and a few other areas, the dismantling of the Soviet Union seemed to signify its decline and the victory of democracy. The decline of the rivalry between the United States and the Soviet Union eased tensions and pressure on nations in Asia and Latin Amer-
ica. Nonetheless, the United States and the former Soviet Union continued to have very different views regarding world affairs. The end of Cold War tensions did not lead to the destruction of NATO, but it did temporarily reduce tensions and end the nuclear arms race between the United States and the Soviet Union. It also paved the way for a reunited Germany and for Eastern European nations to join the European Union.

Michelle Den Beste

See also Balance of Power; Détente; Eastern Europe; Russian-Soviet Empire

Further Reading


Colonialism

Colonialism is broadly defined as “a system of political, economic, and cultural domination forcibly imposed by a technologically advanced foreign minority on an indigenous minority” (Gellar 1995, 140). Colonialism is a component of empire building, European expansion, and the creation of the modern world system. The word colony comes from the Latin word colonie, which referred to agricultural communities that produced food for the Roman empire.

Colonialism probably goes back some six thousand years in human history to when humans first established settlements large enough to require more food than the surrounding area could provide to support their numbers. The first colonies were probably neighboring peoples whose land or labor (or both) were exploited for food. All classic preindustrial states were colonial in that they often took the land and exploited the labor and resources of subjugated peoples.

Extent and Causes of Western Colonization

Interest in colonialism in the modern era has focused primarily on Western colonialism from about 1500 to the present. Western colonialism has drawn most of the attention because it was so widespread and was a major force in human history. To give some sense of its breadth, consider the German geographer Alexander Supan’s observation that in 1900 European nations and the United States exerted colonial control over 90.4 percent of the territory of Africa, 98.9 percent of the Pacific islands, 56.5 percent of Asia, 100 percent of Australia, and 27.2 percent of the Americas. The major European colonizers were Great Britain, France, Spain, and Germany, with Portugal, the Netherlands, Belgium, and Italy playing a lesser role.

South and Southeast Asia were colonized at first by the Dutch, Portuguese, and Spanish; in the eighteenth and nineteenth centuries the British and French expanded into these regions as well. Africa was colonized by the British, French, Belgians, Spanish, Portuguese, Germans, Italians, and Spanish, with the last decades of the nineteenth and early decades of the twentieth century being the period of most intense colonization.

Colonization of the Americas began at the close of the fifteenth century and did not end until the close of the nineteenth century. Some experts argue that the United States replaced European nations as the colonial power in the Americas through its taking of Native American territory and its dominance over the economies and, at times, governments, of nations such as Honduras, Haiti, and Cuba. This form of colonization is referred to as informal colonialism because the colonizing nation does not have official control over the colonized nation.

In some cases, colonies were placed under direct control of the colonizing nation’s government; in other cases trading companies acted as intermediaries. Still other colonies were organized as protectorates, while some
Indigenous and Colonial Forms of Administration

The following description of the Tiv of Nigeria under British colonial rule indicates the problems that can result when the traditional political and social system of the colonized people is ignored or misunderstood and replaced with the hierarchical, centralized system of the colonizer.

We have seen that the largest political entity known to them before our arrival was the family-group descended from it still lower down the genealogical ladder. If therefore, we place one man over a whole clan—or worse one man over two whole clans—we cannot expect this system to work smoothly and it is asking almost the impossible of a District Head to expect him to be obeyed implicitly in areas outside his family-group areas, where the people have their own family-group chief. A straw shows which way the wind is blowing and the fact that one District Head whom I asked for his clan genealogy was totally ignorant of the most salient facts about the genealogy of a family-group area not his own but under his jurisdiction, is abundant evidence that he knew little about the area in question.

Is it therefore surprising to read the following comment by a District Officer? “The District Head is only a superior sort of family-head, who scarcely recognises himself as responsible for his district except as and when instructed by the District Officer, and in some areas where I have toured, has never been before.”

This state of affairs has no doubt, arisen partly from the pre-conceived idea of the functions of a clan, such as stated by Rivers, but nothing is so dangerous as generalisations drawn from the analogy of other parts of the world. “The clan plays an important part in the political constitution of the community at large. For, throughout the world, each clan has its own council, composed of the older generation of males, which transacts all its business. The clan usually has the right to elect its own chiefs, when it has any, and depose them, without regard to the council of the larger unit of which it forms a part.”

If we delete the word “Clan” in this quotation and substitute for it “Family-group,” we shall obtain a true statement of the Tiv organisation, where the family-group is a kind of clan in miniature.

Another reason which has led to the creation of so-called district heads, is the European desire for centralisation and the concentration of power in the hands of one single individual with whom we can treat and whom we can hold responsible for the behavior of the population under his, shall we say, “control”? This is readily comprehensible, for it is extremely difficult to deal separately with a large number of independent chiefs. A good example of this centralisation and its bad results is to be seen in the case of German pre-war Tanganyika.


nations remained nominally independent but were run
by puppet governments whose policies were ultimately
controlled by a Western power (as in informal coloniza-
tion). In some cases, the method of governing the colony
evolved over time: British India, for example, was initially
governed through the English East India Company but
was taken over by the British government in 1858.

Some experts stress economic factors as the root
causes of European colonialism; others stress political fac-
tors, and still others a combination of factors. Economically,
the expanding world system in conjunction with the
Industrial Revolution created greater demand for raw
materials and markets for products. Colonies met both
needs, as they provided raw materials at low cost and
monopoly markets for European-produced goods. Polit-
ically, the colonial expansion of the mid- to late 1800s
was fueled by national rivalries in Europe, balance-of-
power concerns, and national pride. The Berlin Confer-
ence of 1884–1885 provided a political rationale for
colonization by stipulating that control of a territory
rested on a colonial power’s occupation of that territory.
The technological advances of the Industrial Revolu-
tion, especially steam ships, railroads, the telegraph, and
more deadly weapons, made colonization quicker,
cheaper, and easier. Finally, it should be noted that the
ideas of social thinkers such as Charles Darwin, Lewis
Henry Morgan, Karl Marx, and Herbert Spencer were used or misused by colonists to portray colonized peoples as inferior and in need of Western civilization, education, democracy, and Christianity. Thus, colonialism was typically rationalized as being beneficial to those being colonized. It was, in the words of Rudyard Kipling, “The White Man’s Burden.”

**Exploitative Colonialism**

Exploitative colonialism is an economic system in which the colonizers seek to exploit the economic resources of the colony while incurring the lowest possible cost themselves. Agricultural plantations, mining operations, and manufacturing plants are typical of exploitative colonialism. Government and other institutions exist to support the economic endeavor.

Most nineteenth-century Asian and African colonies were run on the exploitative pattern. The colonial power established a new political, economic, and social structure in the colony in the service of economic exploitation. Colonial policy was set in the home nation for the home nation’s benefit and with little concern for the colony. The colony was ruled by a small elite of Western officials, businessmen, farmers, and missionaries who lived apart from the indigenous population in urban enclaves designed and built in European style. In British Nigeria in the 1920s, for example, there was one British official for every 100,000 people. The colonizers often ruled indirectly through favored local leaders who were expected to maintain order, recruit laborers, and collect taxes and food for the colonists. The local leaders and their families, in turn, received preferential treatment. The colonizing power typically made use of a divide-and-rule strategy in which local ethnic groups were pitted against one another so as to forestall organized resistance to colonization.

Colonialism drew the colonies into the expanding world economic system. The colonizers sought land, the products of the land, mineral wealth, and cheap labor. They also sought to use the colonies as a market for goods produced in the home nation. This activity stimulated economic expansion in the colonies, but nearly all wealth flowed to the home nation. There was relatively little economic opportunity for the colonized peoples. Some might find employment as low-level civil servants or as domestics in European households, but most remained farmers or were forced to work in mines or factories. The crucial role of middleman was often taken by so-called “middleman minorities”—people from distant ethnic groups encouraged to settle in the colony to fill this role. Asian Indians, for example, filled this role in British colonies in Africa and the Caribbean.

**Settlers and Settler Colonies**

In many colonies, there were some people from the home nation who chose to live in the colony and make it their home. Many in the first generation of settlers saw the new land as their home, and this feeling intensified with successive generations when the latter were permitted to grow up in the new land. In some colonies, such as the United States and New Zealand, the settlers became the largest and dominant group, displacing the indigenous peoples and taking their land. In many other colonies, such as the British colonies in Africa, settlers formed small enclaves, established large farming operations, and lived in relative peace with the indigenous population. Settlers often supported independence movements as they, too, saw themselves as suffering from the home country’s economic exploitation. Once independence was achieved, however, settlers and indigenous populations often found themselves on opposite sides of issues such as land reform.

**Resistance**

Colonized peoples rarely accepted colonization without a fight. Revolts, massacres, destruction of property, and the like were common in the first stages of colonization. Revolts were meet with force—the military and police were key enforcers of colonial rule—and were rarely successful. Later, more serious resistance took various forms, such as the civil disobedience led by Mohandas Gandhi that helped India achieve independence, the Ghost Dance movement in North America, the Boxer Rebellion in China, the Zulu Wars in South Africa, the Mau Mau...
movement in Kenya, and the Maroon wars in Jamaica. Local Christian churches were often used as vehicles of resistance to oppression and inequality. Educated members of the local population often contributed to the struggle through poetry, literature, and the media.

**Costs and Benefits of Colonialism**

There is little dispute that the colonizing nations benefited from colonialism, while the colonies suffered—and often continued to suffer after independence. Nonetheless, some scholars argue that there were benefits to the colony. While colonizers depended on slavery in some regions, such as the Americas, they also ended it in many regions. Arguably, other benefits of colonialism included control of regional wars and the establishment of a political and economic structure and infrastructure that allowed for postcolonial modernization and democratization. But those claims are contentious: Others argue that the economic and political structure and infrastructure of colonialism were meant to serve the colonists and had little positive impact on the local populations following decolonization.

The list of the costs of colonialism, on the other hand, is a long one. It includes massive loss of life through disease, relocations, and slavery; inhibition of local economic growth; new ethnic rivalries and conflicts; psychological damage to the colonized people, reflected in increased suicide and homicide rates; disruption of indigenous kinship and family relationships; a reduced role for women; and destruction of craft specializations as crafts were replaced by imported goods.
Decolonization

By the end of the twentieth century nearly all European colonies had become independent nations. The United States was among the first of the colonies to declare independence, which it achieved with its 1783 victory in the Revolutionary War. Many Spanish colonies in the Americas followed suit in the nineteenth century. For the African, Asian, and Pacific colonies of Britain, France, and Germany, decolonization came in the mid- to late twentieth century, most often as a result of disruptions and political realignments following World Wars I and II.

Decolonization typically takes one of two forms. In the first, exemplified by the United States and Canada, settlers, desiring political and economic independence, sought the end of colonial control. With the mother country no longer in power, the settlers were free to rule their own newly established nation. This independence generally had no benefits for the original inhabitants of the land, however, who continued to find themselves marginalized and pushed out of territories desired by the growing European-descended population. This was the general pattern throughout the Americas, Australia, and New Zealand. The slave revolt in Haiti that led to independence in 1804 was one notable exception to that pattern.

The other form of decolonization was more common and involved the indigenous, colonized people retaking control of their territory. In most regions it was a long process that often involved violence. At first, requests for more autonomy were generally rejected by the colonizer; somewhat later limited reforms that provided a degree of home rule were often initiated. Finally, the colonial government would leave and the indigenous people would establish their own government and take control of the economy.

The period following decolonization was difficult for most new nations. Old ethnic rivalries for power surfaced, there were often conflicts between settlers and indigenous populations, the numbers of people with the
education and experience necessary to run the government and economy were often insufficient to meet the need, and the newly independent countries often lacked the capital to support needed infrastructure and social-welfare development. For many colonies that achieved independence from the 1960s onward, political unrest, a succession of governments, dictatorial rule, poverty, population dislocations, and civil war have followed decolonization.

Decolonization also had a profound effect on many former colonial powers. The loss of low-cost raw materials and a ready market for products caused economic difficulties, although established economic relations between the colonizer and former colony rarely disintegrated entirely. Britain, the Netherlands, and Portugal all created unions of former colonies that helped keep those relations intact. Former colonial powers have also had to absorb millions of immigrants from their former colonies. Some were from favored ethnic groups who fell from favor in the new power structure; others came to the colonial home country in flight from civil wars, revolts, and poverty; many were simply seeking a better life. As a result of the influx of immigrants from former colonies, Britain, the Netherlands, and France have become multicultural nations with sizeable minority populations—and now face all the attendant questions and problems of racism, minority rights, diversity, cultural norms, and freedom of religion and expression.

David Levinson

See also Africa, Colonial; Africa, Postcolonial; Biological Exchanges; Empire; Imperialism; Postcolonial Analysis

Further Reading


Columbian Exchange

Two hundred million years ago the continents of Earth were massed together contiguously. There was maximum opportunity for terrestrial species to migrate and therefore a higher degree of biotic uniformity than later. Then the continents split, drifted away from each other, and thereafter each continent’s species evolved independently. North America and Asia reconnected several times in the far north and so share many species, but there are many contrasts between the two; the Old World, for example, has such native species as nightingales and cobras, which the New World does not share, while the New World has hummingbirds and rattlesnakes, not present in the Old World. Contrasts between South America and the Old World are especially dramatic; in the former one finds nose-waggling tapirs, whereas in the latter one finds nose-waggling elephants.

Old and New Worlds: People, Crops, & Animals

Ten thousand years ago the most recent ice age ended, the continental glaciers melted, and sea levels rose, dividing the Old and New Worlds once again. Before that a number of species had passed between the two, the
most influential of which was the Old World anthropoid Homo sapiens. Thereafter the peoples of the Old World and the Americas evolved separately. The genetic differences that resulted were minor, but the cultural differences were major because the two peoples took different paths in exploiting their different environments.

Both invented agriculture—that is, the domestication of crops and of livestock—but two very different systems of agriculture. The Native Americans probably arrived from Asia with the dog and were therefore familiar with the concept of tame animals, but domesticated few creatures in America, possibly because there were few suitable. Those they domesticated included the llama and alpaca, the guinea pig, and several species of fowl. The Native Americans excelled as farmers, developing one-third or so of all of today’s most important food crops: maize, beans of several kinds, the white and sweet potatoes, manioc (cassava), squashes and pumpkins, peanuts, papayas, guavas, avocados, pineapples, tomatoes, chilies, sunflower seeds, and others.

Not surprisingly, Old World indigenes, of whom there were many more than Native Americans and who lived in a wider expanse of land and participated in a greater variety of ecosystems, domesticated more kinds of animals and plants. Horses, donkeys, cattle, pigs, sheep, goats, chickens (today’s protagonists of our barnyards and meadows and our chief sources of meat, milk, leather, and animal fiber) are all Old World in origin. The same is true of wheat, barley, rye, oats, rice, peas, turnips, sugarcane, onions, lettuce, olives, bananas, peaches, pears, and many other stock items of our diets today.

Separation of the Old and New Worlds: Disease

The Old World outdid the New as a source of infectious diseases, too. The bigger number of people in a greater variety of ecosystems were bound to have a greater variety of diseases, especially because they lived in close contact with their livestock. The intermixing of Old World humans across Eurasia and Africa, and their propinquity with their animals, produced many of the historically most significant diseases. An undoubtedly incomplete list includes smallpox, measles, influenza, malaria, yellow fever, and typhus. Pre-Columbian Amerindians had tuberculosis and treponematosis (having probably brought the latter with them from the Old World) and cultivated, unintentionally, new infections in America, including Chagas Disease, but their indigenous diseases were few and mild compared with those native to the Old World. (Syphilis is often nominated as a distinctively American infection, but that is debatable.)

When Christopher Columbus brought the Old and New Worlds together in 1492, he unleashed the organisms of each on the other. The most spectacular early result of the intermixing was the traumatic spread of Eastern Hemisphere infections among the Native Americans. The European conquest of the Americas was not so much a matter of brutality, though there was plenty of that, as of imported diseases. Smallpox figures significantly in the Spanish conquests of Mexico and Peru, and again and again throughout the Americas. The Native American population fell by as much, claim highly respected demographic historians, as 90 percent before beginning recovery.

On the other hand, Old World plants and animals immensely increased the capacity of America to support in time large human populations. Horses, pigs, and cattle, for instance, went feral from Florida to the Argentine pampa and within a century had propagated into the millions. Old World livestock revolutionized human life and whole ecosystems in the Americas. Meat had been a rare item in the diets of the vast peasantry of the advanced Amerindian societies. After the Columbian Exchange it became common in many regions and in the others, if not common, at least more available than before.

There had been no beasts of burden in the Americas except the dog and the llama. The pyramids and other monuments of the high American civilizations were raised by human muscle. If the burro had been the only domesticated animal brought to Mexico by the invaders, it alone would have revolutionized indigenous societies there.

The impact of the horse on Native American societies was particularly spectacular. Many Amerindians who had been strictly pedestrian became equestrian. From
approximately 1750 to 1800, the native peoples of North America’s Great Plains (Blackfoot, Sioux, Cheyenne, Comanche, Pawnee, and others) and of South America’s pampas (Pehuenches, Puelches, Tehuelches, Ranqueles, and others), all took to the horse.

Old World crops did not at first advance in the New World as rapidly as Old World livestock—they were, after all, not mobile—but also because most of them were temperate-zone plants not suited to Europe’s earliest American colonies, which were all in the tropics. But European colonists adjusted, imported suitable species such as sugarcane, for instance, and suitable varieties of homeland crops, and sowed them where the soils and climates were similar to those at home. They discovered that wheat prospered in the Mexican high country, for example. Olive trees and grapes for wine did well in Peru. Within a century of Columbus most of the Old World’s important crops were growing in America.

Among the most profitable was sugarcane, the source of a quasi-addictive substance: sugar. The market for sugar in Europe seemed endlessly expansive for centuries, and therefore sugarcane became the single most important crop in the West Indies, Brazil, and other hot, wet regions in or contiguous to the American tropics. The planting, cultivation, harvesting, and processing of the cane required millions of laborers. The Amerindian populations were plummeting, and European immigrants were in short supply. The workers had to come from some untapped source. The single most powerful force driving the Atlantic slave trade was the sugar plantations’ need for laborers. An estimated 12.5 million Africans were commandeered to work American soils, a majority of them, certainly a plurality, to raise an Old World sweet in the New World for Old World consumption.

**1492 and the Old World**

Amerindian livestock did not revolutionize life in the Old World. Guinea pigs and turkeys have never figured sig-
nificantly in Europe, Asia, or Africa as food sources, and the llama was so obviously inferior to several Old World animals as a beast of burden that it has never had more than novelty value in the Eastern Hemisphere.

Amerindian crops, however, had enormous effect on the Old World. Most of those which became standard in Old World diets were brought back by the Spanish and Portuguese to Iberia, where they were being cultivated by the sixteenth century; they spread out from there. Some would flourish where Old World crops would not; manioc, for instance, where the rainfall was too much or too little, the soil infertile, and the pests too voracious for traditional staples like rice and yams. Several American foods were more nourishing, more productive, and easier to cultivate and to harvest than traditional Old World crops. Maize became a standard crop in sub-Saharan Africa, in some regions the most important crop.

The white potato, from the high, wet, cool Andes, became one of the most important food sources for the lower classes of northern Europe. In Ireland it became indispensable for the peasantry, and when, in the 1840s, an American fungus, *Phytophthora infestans*, arrived and destroyed the potato crop, a million died of starvation and disease and a million and a half fled the country.

The list of examples of the influence of the Columbian exchange in the Old World diets is a long one; it includes the tomato in Italian cuisine, the chili in Indian recipes, the presence of maize in most sub-Saharan African diets, and so forth. By way of illustrative example, let us consider the story of American food crops in a land usually thought of as resistant to outside influences: China. No Old World people adopted these alien plants faster than the Chinese.

The eagerness with which the Chinese received American foods is related to population pressure. Between 1368 and 1644, the years of the Ming dynasty, the Chinese population doubled at the same time that farmers of the traditional staples, wheat in the north and rice in the south, were running into problems of diminishing returns. They were close to raising as much food as they could on suitable land using existing techniques. The problem may have been especially pressing in the south, where most of the level and near-level land close to markets and sources of water for irrigation was already occupied by rice paddies.

The Spanish and the Portuguese, both with American empires, carried the Amerindian crops to East Asia. The port of Manila, newly Spanish and only a few days’ sail from the China coast, played a major role in the transfer of native American crops to China. Sweet potatoes, a calorically rich food, arrived in China some time in the last years of the sixteenth century. This crop did well in inferior soils, tolerated drought, resisted insect pests, and prospered with little care compared with existing staples such as paddy rice. By 1650 sweet potatoes were common in Guangdong and Fujian provinces and well on the way to becoming the staple of the poorer peasants wherever climate would allow.

Maize arrived in China even before the mid-sixteenth century. It, too, was hardly and required no more attention

and strength in weeding and harvesting than children could provide. It produced food faster than most crops and provided high amounts of calories. It soon became a common secondary crop from Shanxi in the northwest to Yunnan in the southwest and eventually a primary crop in several inland provinces.

Peanuts, growing in China at least as early as 1538, have always been considered a novelty food in the West, but became a common item in Chinese meals. Peanuts provide plenty of calories and oil, and as they grow enrich the soil with nitrogen.

According to the demographic historian Ho Ping-ti, “During the last two centuries when rice culture was gradually approaching its limit, and encountering the law of diminishing returns, the various dry land food crops introduced from America have contributed most to the increase in national food production and have made possible a continual growth in population” (Ho 1959, 191–192). That statement applies as well to most of humanity in the Eastern Hemisphere.

Alfred W. Crosby

See also Biological Exchanges

Further Reading


Columbus, Christopher (1451–1506) Spanish explorer

Christopher Columbus is a tabula rasa, a blank slate upon which scholars of European overseas expansion inscribe their opinions about the significance of the man and the expansion. For some Columbus is a romantic figure, the last medieval crusader, whereas for others he is the first modern man, the man who first sloughed off the chains that had limited human development. People once saw him as initiating the civilizing and Christianizing process in the Americas, but now people condemn him for initiating slavery and genocide. His greatest claim to fame, however, is that he initiated the process that revealed the true nature of the earth’s surface and demonstrated that the seas are not an obstacle to worldwide communication but rather highways that can link all humankind.

All of these perceptions of Columbus mask the real man, obscuring his endeavors under a blanket of myths that reduces a complex individual to a stick figure. The difficulties involved in presenting the real Columbus are not, however, solely the responsibility of modern scholarship. The first person to generate a mythical Columbus was the explorer himself.

Columbus’s early life is especially murky, a fact that has given rise to a number of imaginative theories about his origins. The best evidence, however, indicates that he was born in Genoa, Italy, around 1451, the son of a weaver and his wife. Initially trained to practice his father’s trade, Columbus went to sea, as Genoese men often did. He sailed much of the Mediterranean before moving to Lisbon, Portugal, where his older brother, Bartholomew, was a chart maker.

Lisbon was the goal for Genoese seamen, merchants, and bankers who were seeking new routes to the East to replace the colonies along the Black Sea that had once
linked Genoa to the East but that were now in Muslim hands. Portugal attracted the Genoese because Portuguese sailors were sailing down the west coast of Africa and out into the Atlantic, where they had discovered four island chains: Canary, Cape Verde, Madeira, and Azores. To the Genoese these voyages held out the promise of finding a water route that would give them direct access to the markets of the Indies. In Portugal Columbus came to know the Atlantic as he participated in voyages to ports in the Gulf of Guinea, to the Azores, Ireland, perhaps even to Iceland.

Just as we cannot draw a precise map of Columbus’s travels, we do not know the extent of his formal knowledge of geography and related matters. He claimed to have read the Roman scholar Pliny’s *Natural History* and the works of contemporary cosmographers (scientists who study the visible universe) such as the Italian Paolo Toscanelli and the Venetian traveler Marco Polo, a copy of whose book Columbus annotated. He was also acquainted with the tradition that foretold the preaching of the Gospel to all humankind followed by the end of the world.

During the forty years preceding his first voyage, Columbus acquired a great deal of knowledge about and experience of the Atlantic world, not all of which proved accurate. For example, he asserted that the circumference of the earth is approximately 32,000 kilometers instead of 40,000 kilometers, the estimate that was accepted by some of his critics and that was close to accurate. His error was linked to his search for patronage: By accepting the smaller estimate of the earth’s size and by accepting the theory that the surface of the earth is largely land, not water, he was able to make the notion of reaching Asia by sailing west more attractive. A short trip of a few weeks would bring him to the Indies.

Obviously, Columbus did not achieve what he set out to achieve, although he never accepted that fact. His four voyages to the New World—1492–1493, 1493–1496, 1498–1500, and 1502–1504—never reached Asia and never found the trade route that he sought. Seen in that light, he was a failure.

Seen in terms of world history, however, Columbus achieved a great deal. His voyages demonstrated that the Atlantic could be crossed and recrossed in relative safety. This fact in turn encouraged others to extend the range of exploring expeditions, eventually leading to the Spanish explorer Balboa’s discovery of the Pacific Ocean in 1513 and then to the Portuguese navigator Magellan’s fleet circumnavigating the globe during the period 1519–1522. The discovery of the extent of the oceans radically transformed the European conception of the earth’s surface, making it possible to sail to all corners of the earth.

*It is not down in any map; true places never are.* • **HERMAN MELVILLE** (1819–1891)

---

*Christopher Columbus at sea.*
using the seas as a series of interlinked highways that made possible direct access not only to the markets of the East but to all the peoples of the earth. Finally, his voyages demonstrated the possibility of fulfilling the Stoic (relating to the Greek school of philosophy that taught that a wise person is free of passion) and Christian dream of a universal human community.

James Muldoon

See also Expansion, European; Spanish Empire

Comintern

The foundation of the Communist International, or Comintern (sometimes spelled Komintern), was officially proclaimed on 6 March 1919 at the Bolshoi Theater, Moscow, as the conclusion of debates at the First Congress of activists who refused the compromise position of the Socialist International controlled by reformist Social Democrats. Fifty-two delegates (thirty-four with a vote), predominantly from Central and Eastern Europe, and nominally from Asia and America, decided to create a Third International after what they denounced as the failure of the previous two Socialist Internationals, dominated by Social Democrats who had supported their respective countries during World War I.

The delegation of the host country included the highest-ranking members of the Russian Communist Party: Vladimir Lenin (1870–1924), Leon Trotsky (1879–1940), Joseph Stalin (1879–1953), Georgi Chicherin (1872–1936), Grigory Zinovyev (1883–1936), and Nicolay Bukharin (1888–1938), the latter becoming the first two chairmen of the new organization. Owing to the extreme difficulty of travel because Bolshevik Russia was under attack by Western powers, other countries with a strong tradition of working-class militancy had only token representation. The Congress was therefore easily dominated by the Russians from the start. The agenda is probably best summed up by Lenin’s own words in concluding his inaugural speech: “The victory of the proletarian revolution on a world scale is assured. The founding of an international Soviet republic is on the way,” (The Communist International 2004) but there was a fundamental ambiguity in the notion of an “international Soviet republic,” because it could easily be interpreted as a republic subservient to Soviet Russian interests—an accusation that always plagued the Comintern.
The proceedings of the Second Congress (1920) led to the subsequent split in the world left between Communists—who adhered to the Comintern and its objectives—and Socialists, or Social Democrats, who rejected them. Many well-wishers from the Socialist ranks attended, but Zinovyev presented a list of twenty-one conditions to which adherents had to subscribe—many of them unacceptable to people who otherwise supported the Russian Revolution. All were asked to adopt the standard name, “Communist Party,” and to accept Comintern decisions as binding, but the acid test was the adoption of “democratic centralism” as the governing principle of the Party in each country. In combination with the “dictatorship of the proletariat,” this mode of functioning was found incompatible with fundamental freedoms by many existing left-wing organizations, who therefore declined to join the Communist International.

In a climate of extreme domestic and international bitterness, almost every developed or colonized country of the world then saw the creation of a Communist Party, side by side with the existing Socialist party or parties, whatever their names. The ideal of world revolution obtained by civil or foreign war, which was sustained by the continued agitation and/or military operations in Germany, Poland, and the debris of the Austro-Hungarian Empire, did not really abate until the final defeat of the German Communists in October 1923. The fiery anti-bourgeois language of Comintern affiliates fueled both the revolutionary enthusiasm of its adherents and the fears of established governments, including those with moderate left-wing majorities.

But then the Comintern effected the first of the about-faces for which it became so notorious. At the Third Congress (1921), Lenin acknowledged that world revolution had not resulted from the “Imperialists’ War” (World War I) and that the Revolution could only be consolidated in Russia if the economy was modernized, notably with imports from capitalist countries. During the Fourth Congress (1922), Trotsky delivered an enthusiastic speech in favor of Russia’s New Economic Policy, but the rift was becoming evident between the continued supporters of world revolution (Trotsky and Zinovyev) and the advocates of “Socialism in one country,” led by Stalin and Bukharin after Lenin’s death in January 1924.

This was more than a personal quarrel, as the issue at stake was the orientation of the world Communist movement. In the end, Stalin’s views prevailed and in 1926 Bukharin (who was himself eliminated in 1929) replaced Zinovyev at the head of the Comintern, which became a mere instrument in Stalin’s hands in the furtherance of Soviet—some would say Russian—interests. This is the period when Socialists were described as “Social Fascists” in Communist publications and speeches all over the world. Hitler’s ascent to power in January 1933 and fears of German aggression led to another radical about-face, with the Communist International now clamoring for a “united front against Fascism,” commonly called the Popular Front, by all progressive forces. In 1935, the Seventh (and last) Congress of the Comintern, now headed by the Bulgarian Giorgi Dimitrov, gave its official sanction to this priority, which relegated world proletarian revolution—the initial purpose of the Third International—to a distant future. The final ideological blow came with the Nazi–Soviet Pact of August 1939, which technically made Communists worldwide the allies of Hitler, but the final dissolution of the Comintern came only on 22 May 1943, as a friendly gesture toward the Western allies of the Soviet Union in the “Great Patriotic War.”

Antoine Capet

See also Communism and Socialism; Revolutions, Communist; Russian-Soviet Empire

Further Reading


The term “communication” includes all the ways in which living beings convey information to one another. Plants and animals communicate by smell, sight, and sound. Human beings, with a limited sense of smell, communicate by sight and sound in far more complex ways than any other creatures. Not only have humans developed elaborate languages and gestures for face-to-face communication, they have also invented media such as writing and mechanical or electrical systems that transcend the constraints of time and space. Human communication systems have had profound implications for world history. Language is the most important way in which humans have overcome their bodies’ limitations through culture, allowing them to spread into all the Earth’s environments. But language, writing, and other media have divided humans into rival groups and led to conflicts and the exercise of power by some people over others. For the past 5,000 years, improvements in communication have been closely tied to changes in technology, from simple artifacts to elaborate equipment and complex networks. Advances in technology have increased the efficiency of communication in fundamental ways. Language has allowed humans to express complex ideas. Writing permitted communication at a distance and through time. Paper and printing diffused information widely, while the mass media has combined widespread with instantaneous diffusion. The Internet seems destined to offer the advantages of all earlier media, with the potential for transforming civilization in unforeseen ways.

**Language**

Speech is the original and only universal means of communication. All children learn to talk—except the deaf, who learn to sign—for language ability is innate in human beings. The six thousand languages spoken in the world today carry culture and provide identity, uniting people who understand each other and dividing them from those who speak another language. Yet anyone can learn any language, for there is no genetic predisposition for specific languages.

For centuries, people have known that some languages resemble one another: French, Spanish, and Italian are Romance languages, while Russian, Polish, and Czech are Slavic. It was also known that languages change over time, and that the Romance languages, for instance, all evolved from Latin. Beyond these obvious resemblances are more subtle affinities that only trained linguists can identify. In 1786 Sir William Jones, a judge in India, described the resemblances between Sanskrit, the ancient language of India, on the one hand, and Greek and Latin, on the other. He even asserted: “no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists” (Ruhlen 1994, 27). Linguists later proved Jones right by identifying Indo-European as the ancestor of most languages of Europe and India. Identifying affinities between seemingly distant languages and trying to reconstruct their common ancestors is the ongoing task of historical linguistics.

For over a century, linguists concentrated on demonstrating that the languages of Europe, Persia, and India form a great family called Indo-European. They also identified Semitic (Arabic and Hebrew), Bantu (the languages of central and southern Africa), Altaic (in central and northern Asia), Austronesian (in Southeast Asia and Polynesia), and other language families. Using painstaking techniques, they reconstructed the vocabulary of the long-vanished languages. Beyond that, they dared not go, for there seemed to be no resemblances between different language families.

Recently, however, bolder linguists have advanced the hypothesis that entire language families that seem unrelated actually belong to superfamilies and descend from a common ancestral tongue spoken tens of thousands of years ago. The boldest of all have advanced the idea that all the languages spoken in the world descend from a single original language—the “Mother Tongue”—spoken in Africa about 100,000 years ago.
Meanwhile, anthropologists studying ancient bones found that the first *Homo sapiens*, unlike earlier hominids, had vocal cords capable of articulating words and minds able to carve sculptures and draw pictures: tantalizing clues to the complex thinking such as language requires. From the evidence of the bones, they deduced that *Homo sapiens* originated in Africa some 100,000 years ago and then migrated to other continents.

At the same time, geneticists were identifying the resemblances between the DNA of people on different continents. By doing so, they could determine the approximate length of time since two groups separated and where their ancestors came from. What they found is that *Homo sapiens* originated in Africa well over 100,000 years ago; some migrated to the Middle East around 100,000 years ago; they reached Southeast Asia about 80,000 years ago; New Guinea and Australia 50,000 years ago; Europe some 40,000 years ago; and the Americas 15,000 years ago (all figures give or take a few thousand years).

The findings of these three sciences, arrived at quite independently, are amazingly similar. What they tell us is that the language ability is unique to *Homo sapiens*; that the first language was probably spoken in Africa over 100,000 years ago; that humans dispersed throughout the world; and that as groups split up, their languages changed in different ways, producing the incredible variety that exists in the world today. Yet beneath that variety, the ability to learn and use language is the same all over the world, and all languages are equally capable of expressing the same range of ideas.

What caused the great variety of languages is separation. For millennia, as human groups dispersed, the differences between their languages increased. Before 10,000 years ago, when all people were gatherers and hunters who lived in small bands that rarely interacted, they must have spoken hundreds of thousands of different languages. Since the advent of agriculture and civilization, the trend has been reversed. Kingdoms and empires relied on communication and imposed a common language, if not on everyone, then at least on the educated. Several western European peoples speak languages derived from the language of the Roman empire. Arabic is spoken from Iraq to Morocco, lands conquered by the Arabs in the seventh and eighth centuries. Most Latin Americans speak Spanish, most North Americans speak English, and many Africans learned the languages of their former colonial masters.

Though colonial empires have vanished, the spread of imperial languages continues. In fact, thanks to radio, television, business, and the press, it has accelerated. In Africa, schools teach children French or English or Portuguese. To prosper in a globalizing world, increasing numbers of people know they must speak not only their mother tongue but also a national or global language, and sometimes several.

The spread of national and global languages threatens linguistic minorities. Languages spoken by small numbers of people, such as indigenous tribes in the Americas, India, or Southeast Asia, are disappearing as young people turn increasingly to the languages of television, the press, the schools, and government, and see no reason to retain the language of the older generation. By the end of the twenty-first century, only half the languages spoken today will still be used. When languages vanish, so does much of the oral culture that they carry, such as tales, myths, and religious beliefs. Linguists are trying to record and transcribe as many of the endangered languages as they can before they disappear forever, but it is an uphill battle. Often the only people still fluent in an endangered language are old and cannot recall all they once knew. As communication improves, the diversity of cultures in the world shrinks.

**Visual Communication**

Even before writing was invented, speech was only one of several means that humans used to communicate. People of the foraging era painted on the walls of caves or carved pictures on rocks. Such rock art is found in many places, the earliest in Namibia dating back 28,000 years, followed by the 16,000-year-old cave paintings of southern France, and many others, from the Sahara to Hawaii. Some archaeologists even speculate that Australian rock art may date back as far as 75,000 years ago. Neolithic people...
erected large stone monuments, such as Stonehenge in England or temples in Malta. The Olmecs of southern Mexico and the people of Easter Island in the Pacific Ocean carved gigantic stone sculptures. Such creations were works of art that served as ways of communicating ideas, as reminders of events, or as part of religious rituals.

Even more common than the artistic creations of prehistoric people are their mnemonic devices. Our world today is full of symbols that communicate and remind without the need for words: the silhouette of a person in pants and another one in a skirt indicate men’s and women’s toilets; a cigarette with a bar through it means “no smoking”; traffic signs can be grasped at a glance even by those who cannot read words. Mnemonic devices were among the earliest means of communication devised by Homo sapiens. Tally sticks with notches, found in the caves of Cro-Magnon peoples in France dating back 30,000 years, may have corresponded to the phases of the moon. Polynesian navigators made maps out of sticks and strings to help them remember the location of islands and to instruct their disciples. The Incas of South America kept records of taxes and other transactions with quipus, or knotted strings. And in Mesopotamia (now Iraq) and nearby regions, long before writing, people kept records of goods produced and exchanged with the help of tokens, bits of clay fashioned into different shapes that corresponded to the items they represented (sheep, bushels of grain, jars of oil, and so on).

These are the physical objects that have survived or left traces for scientists to analyze. But like all people today, prehistoric people also must also have engaged in more ephemeral means of visual communication, such as gestures, facial expressions, songs, body movements, and dance. It is likely that they combined words, gestures, and music in religious rituals, storytelling, and dramas. The variety of ways in which humans could communicate with one another, even in prehistoric times, was almost limitless.

**Writing**

Writing is a means of inscribing words on a physical medium that can be preserved through time or transmitted from person to person. Full writing systems, capable of conveying any word in a language, appeared in several regions of the world at the beginning of their urban civilizations. The first was Sumer, in lower Mesopotamia, between 3300 and 3000 BCE. The script that the Sumerians created is called cuneiform, or wedge-shaped, because it was inscribed on clay tablets with the wedge-shaped end of a reed. Cuneiform writing and clay tablets were adaptable to many other languages in the Middle East and remained in use for 3,000 years. Tens of thousands of tablets have been found, almost all of them dealing with mundane matters of business, taxes, and administration. By the second millennium BCE, cuneiform was used to write literary texts such as the *Epic of Gilgamesh*.

The Egyptians, probably inspired by their Mesopotamian neighbors, created three writing systems. The best known is hieroglyphics, a combination of pictures and symbols that were carved on stone monuments and painted inside burial chambers and on important documents. Religious texts were written on papyrus, made from a reed that grew in the Nile delta, in a simpler script called hieratic. Everyday matters, such as business records or lists of words, were written in demotic, a kind of handwriting. Unfortunately, unlike the permanent clay tablets of Mesopotamia, almost all the papyrus documents have long since perished.

The Chinese began writing around 1500 BCE. Their first known writings were on bones used by soothsayers to predict the future. From the start, Chinese writing was logographic, meaning that each character represented a word. Though modern Chinese characters look different, scholars can trace their development from the earliest engravings to the present. It is by far the longest lasting writing system in the world, and suits the Chinese language admirably. Chinese characters were also adopted by Koreans and Japanese.

In the Americas, only the Mayas created a full writing system, about 300 BCE. Like Egyptian hieroglyphics, it was pictographic and extremely complex. It was used in conjunction with the ancient world’s most elaborate calendar to inscribe religious texts and the chronologies of kings and battles on temple walls. Mayan writing may
have been based on Olmec systems dating back to the mid-second millennium BCE.

Today, most of the world uses alphabetic scripts. The first alphabet was devised by Semitic people in Egypt around 1800 BCE and spread from there to Palestine and beyond. Semitic alphabets such as Hebrew and Arabic include only consonants. Vowels are indicated by marks above the letters, but only in religious texts and in readings for children. When the Greeks adopted alphabetic writing from the Phoenicians in the eighth century BCE, they added vowels, which were necessary to express the Greek language. The Latin and Cyrillic (Russian) alphabets, used by a majority of the world’s people today, are derived from the Greek.

Writing has been used for many different purposes: simple business documents, personal messages, monumental inscriptions, sacred texts like the Bible and the Quran, and works of literature and philosophy. For centuries, only a small minority—upper-class men, specially trained scribes, and a very few women—could read and write. Ancient economies were too limited to need much writing, and writing materials (except for clay) were too costly for most people. More widespread literacy had to await the invention of paper and printing during the second millennium CE.

Postal Systems
Early writing systems were invented or adopted by government officials to keep records and communicate information and orders. Small states used messengers, but larger kingdoms and empires needed more reliable means of staying in touch with distant provinces. The Persians built the Royal Road from Susa, their capital in western Iran, to Ephesus on the Black Sea. Along it they established relay posts with fresh horses for royal messengers. The Romans built many roads and created an imperial messenger service, the *cursus publicus*. The Chinese, the Inca, and other empires found the same solution to the problem of administration at a distance.

Members of the public, however, had to find a traveler willing to take a letter to its destination. Only in the seventeenth century were postal services open to the public, at a very high cost. It was railroads, introduced in Britain in the 1830s and spreading to the rest of the world during the nineteenth century, that transformed postal systems from the exclusive privilege of the wealthy and powerful to the rapid, reliable, and cheap means of communication we are familiar with today.

Paper and Printing
Writing needed only simple artifacts and touched only a minority of people. To reach more people, communication had to be mediated by technology. The first in a series of ever more powerful communications media were paper and printing. Both were Chinese inventions. The earliest paper, made from hemp and ramie fibers, dates to the first century BCE. China was an extensive empire with a large literate elite that valued ancient texts and the art of calligraphy, and therefore used a great deal of paper. By the Song dynasty (960–1279 CE) there was an active trade in how-to manuals, novels, religious texts, and other books. The craft of papermaking spread from China to the Middle East in the eighth century and to Europe after the twelfth century.

What made paper truly useful was the invention of printing. Woodblock printing, in which a text was carved into a block of wood, originated in China in the eighth century CE and was used to print tracts, engravings, and paper money. Movable type made of ceramic appeared in the eleventh century, followed by metal type in the thirteenth. It was more widely used in Korea than in China, where woodblock predominated until the nineteenth century. Movable metal type was reinvented in Europe by Johannes Gutenberg (between 1390 and 1400–1468), who printed a Bible in 1453, and soon used to print all sorts of books, pamphlets, maps, posters, newspapers, playing cards, and much else, and contributed greatly to the expansion of literacy in the West as well as in East Asia.

Among the means of communication that printing permitted, the press became the most popular and
influential, especially after the invention of steam-powered rotary presses in the early nineteenth century and the appearance of cheap tabloids a few decades later. Newspapers provided not only local news and useful information, but also stories from foreign countries slanted so as to inflame nationalistic passions. Far from bringing about greater international understanding, the press raised popular enthusiasm for imperial conquests in the late nineteenth century and world wars in the early twentieth century.

**Optical and Aural Signaling**

The human voice only carries a short distance, and communicating in writing means transporting a physical object. In many parts of the world, people sought means of conveying information more rapidly over longer distances. Native Americans used smoke signals; tom-toms or drums were known in the Americas and in Africa; the Romans and medieval Europeans built towers on which fires were lit to warn of danger; ships used flags; and in 1775, Paul Revere hung lanterns in a church tower in Boston to warn of approaching British troops. All such signals had a weakness, however; they could only convey a few prearranged signals in one direction.

This changed during the wars of the French Revolution with the invention of two open-ended bidirectional visual communication systems: the optical telegraph and naval flag telegraphs. The optical telegraph, invented by the Frenchman Claude Chappe (1763–1805), consisted of articulated boards that could be moved into different positions to indicate either a code number or a letter of the alphabet. Starting in 1794, the French government placed such devices on towers throughout France and Napoleon’s empire. Employees watched for signals from one neighboring tower and relayed it to another. On clear days, a message could travel from Paris to Toulon, 760 kilometers and 120 towers away, in twelve minutes. In night and fog, however, the system stopped.

At the same time and for the same reason—war—British naval officers transformed naval flag signaling from an occasional one-way message to a method of conveying any information between any two ships within sight of each other. At night, ships used lanterns with shutters. When the Napoleonic wars ended in 1815, these methods were quickly adopted by merchant ships and spread around the world.

**Electrical Telecommunication**

The telegraph and telephone are treated in detail in a separate article, so here we can give a very brief summary. The electric telegraph was developed in Britain in the
1830s and in the United States in the early 1840s. The American system, using a single wire and the code devised by Samuel Morse (1791–1872), was gradually adopted worldwide. An electric telegraph line cost less to build than its optical predecessor, could operate at night and in any weather, and sent messages much faster. So great was its capacity that it was opened to all users: railroads, governments, the press, and the general public. By the 1850s, telegraph networks covered Europe and the eastern United States. During the following decades, colonial powers erected telegraph lines in India and parts of Africa, as did independent nations in Latin America. The Chinese resisted for several decades, seeing it as an instrument of western penetration and espionage.

Meanwhile, engineers and entrepreneurs experimented with submarine telegraph cables to connect islands and continents into a global network. The first successful transatlantic cable began operating in 1866, followed in quick succession by cables to India, Australia, and China in the 1870s, and around Africa in the 1880s. On the North Atlantic, competition reigned, but elsewhere, the cable business was monopolized by a few British firms. International and intercontinental telecommunication facilitated the expansion of trade and the flow of information around the world. It did not, however, lower the desire or reduce the opportunities for war as its pioneers had expected.

Unlike telegraphy, which had its greatest impact on long-distance communications, telephony was largely a local matter restricted, until well into the twentieth century, to businesses and wealthy people. The telephone was invented in 1876 in the United States by Alexander Graham Bell (1847–1922) and soon installed in all the major cities of North America and Europe. A transcontinental connection from New York to San Francisco was delayed for technical reasons until 1915. Only since World War II have telephone lines, and more recently cellular phones, spread to rural areas and developing countries.

Guglielmo Marconi (1874–1937) demonstrated the first wireless communication system in 1895. For the first twenty years, its use was restricted to sending telegrams in Morse code, while engineers concentrated on building ever larger transmitters to communicate over ever longer distances with ships at sea and across continents and oceans.

**Electronic Mass Communication**

The nature of wireless communication changed radically when newer equipment began transmitting voices and music as well as dots and dashes. Broadcasting began with station KDKA in Pittsburgh in 1920. Two years later the United States had 564 commercial stations supported by advertisements. In most other countries, broadcasting was monopolized from the start by governments that used the new medium for cultural “uplift” and political propaganda. By the 1930s, shortwave radio broadcast political messages to foreign countries.

Television was technically feasible by the late 1930s, but its use in mass communication was delayed by World War II. It became a common consumer item in the United States during the 1950s and in Europe and Japan in the 1960s and 1970s. Though signals could only be broadcast locally, stations were connected by cables and the industry was dominated by three networks in the United States and one or two national networks in other countries. To prevent their citizens from watching foreign broadcasts, governments imposed mutually incompatible technical standards. In the 1970s and after, two new technologies—satellites and cables—challenged the entire system of national or commercial centralization, encouraging the proliferation of alternative information and entertainment media.

**Motion Pictures and Sound Recording**

During the nineteenth century, photography developed as a new art medium. At the end of the century, inventors in the United States and France found ways of projecting images in sequence so rapidly that the eye saw motion. Entrepreneurs soon found ways of presenting entire dramas on film, creating an industry that grew even more popular with the advent of talking pictures in the late 1920s and color films in the late 1930s.
Sound recording began in 1877 when Thomas Edison (1847–1931) recorded a voice on a cylinder. Ten years later, flat disks not only permitted the recording of music, but could be mass produced. After World War II, records were gradually edged out by magnetic tape and, since the 1980s, by compact disks and other digital media derived from computer technology.

Computers and the Internet

Until the 1980s, the mass media were unidirectional, with the public in the role of passive recipients. Computers made mass communication interactive on a global scale. This became possible when personal computers became affordable consumer items and even more when a gigantic decentralized network, the Internet, permitted the connection of any computer to any other. At first, the Internet operated like a free text-messaging service, but by the 1990s, the World Wide Web transmitted pictures, voice, and music as well as text. Businesses quickly seized upon the Web as a cheap means of advertising and selling their goods and services. Unlike radio and television broadcasting, however, neither business nor governments have been able to monopolize or censor the Internet. Individuals and organizations can transmit any kind of message or information to any interested party with access to a computer. What is emerging is a combination of personal and mass communication linking all parts of the world.

Although the price of computers and Internet service keeps coming down, this technology still benefits disproportionately the organizations and citizens of the wealthier countries. As of this writing, there are more computers and telephone lines in Manhattan than in all of Africa, and the gap is widening. Like their predecessors, the new communication technologies favor the elites, both locally and globally.

The Future of Communication

In the twenty-first century, communication systems will continue to expand and deepen their penetration around the world. Cellular telephone and Internet access will reach even the most remote village. Newer media, such as wireless video-on-demand and virtual reality will supplement the media we know today. In the process, they will homogenize the world’s cultures. Local languages will disappear, replaced by a few global ones. Tastes in clothing, music, and entertainment will converge. Yet, if past experience is a guide, better communications will not bring about better understanding between the peoples of the world or reduce the likelihood of wars. While technology gives us the power to send information across time and space at ever lower cost, it cannot prevent the abuse of such power by those who control the media.

Daniel R. Headrick
At the core of modern socialism and Communism lies an ancient vision of an ideal human community characterized by abundance, equality, freedom, cooperation, and harmony. Elements of this vision have surfaced repeatedly—in the message of the Hebrew prophets, in millenarian movements in Asia, Africa, and elsewhere, and in the small utopian communities of early-nineteenth-century Europe and America. (In general terms, Communism refers to a political system that abolishes private property, and socialism to a system of collective ownership of the means of production and distribution.)

**Marxism**

Modern socialism took shape in the industrializing societies of Western Europe during the nineteenth century. As a set of ideas, this socialism is forever connected to the writings of Karl Marx (1818–1883). Having witnessed industrial capitalism during its early and harshest phase, Marx set out to analyze that phenomenon and to chart its future development. Through the wonders of modern technology, Marx argued, industrial capitalist societies had potentially solved the ancient problems of scarcity and poverty. They could now produce more than enough to meet the material needs of their citizens. In this sense, industrial capitalism was an enormously progressive development in human affairs, and he praised its achievements lavishly. But this vast potential was blocked by the fatal flaws of capitalism—private property, growing inequalities, bitter class conflict, worsening cycles of economic expansion and recession, competitive and individualistic values. Such societies, Marx believed, would self-destruct in a vast revolutionary upheaval, led by the factory working class (the proletariat), which was impoverished and exploited by the capitalist system. Then the vast productive possibilities of modern economies would be placed in service to the whole of society in a rationally planned and egalitarian community, bringing an end to class conflict, to national rivalries, and to the endemic poverty and inequalities of the past. This was socialism, and to Marx it marked the end of the sorry history of endless class struggle and opened the way to a bright and creative future for humankind.

**Socialist Movements**

Marx’s ideas inspired socialist movements of workers and intellectuals amid the grim harshness of Europe’s industrialization in the second half of the nineteenth century. Socialists established political parties in most European states and linked them together in international organizations. These parties recruited members, contested elections as they gained the right to vote, agitated for reforms, and in some cases plotted revolution. While established elites felt enormously threatened by socialist movements, nowhere in the most advanced capitalist countries of England, Germany, France, or the United States did Marx’s predicted revolution occur. Through democratic pressures and trade unions, workers gradually raised their standard of living while the beginnings of “welfare state” reforms softened the harsh edges of capitalism. Marx had not appreciated this capacity of capitalist societies to reform themselves. Furthermore, nationalism drew the loyalties of workers to their own countries rather than to the international working class, as Marx had imagined.

Socialist revolutions did occur in the twentieth century, but in places where Marx would have least expected
Karl Marx on the State

The Commune—the reabsorption of the state power by society as its own living forces instead of as forces controlling and subduing it, by the popular masses themselves, forming their own force instead of the organized force of their suppression, the political form of their social emancipation instead of the artificial force—appropriated by their oppressors (their own force opposed to an organized force against them)—of society wielded for their oppression by their enemies. The form was simple like all great things... The general suffrage, till now abused either for the parliamentary sanction of the Holy State Power, or a play in the hands of the ruling classes, only employed by the people to choose the instruments of parliamentary class rule once in so many years, now adapted to its real purposes: to choose by the communistic delusion as if administration and political governing were mysteries, transcendent functions only to be trusted to the hands of a trained caste—state parasites, richly paid sycophants and sinecurists, in the higher posts, absorbing the intelligence of the masses and turning them against themselves in the lower places of the hierarchy. Doing away with the state hierarchy altogether and replacing the haughty masters of the people with always removable servants, a mock responsibility by a real responsibility, as they act continuously under public supervision.

more peacefully, though there too an enormous famine broke out in the late 1950s, when Mao Zedong pushed for even larger collective farms, known as communes, and for a more complete social equality. In both countries, the agricultural sector grew only slowly as it served to subsidize massive industrialization programs.

Communists everywhere were modernizers, intent on creating industrial societies. Furthermore, they argued that they had found a superior path to industrialization that would avoid the exploitation, instability, and inequalities of capitalism. The key to Communist industrialization was state ownership and planning. Under a series of five year plans, Communist planners decided where factories and mines would be located, what they would produce and in what quantities, where they would find their supplies, to whom they would sell their products, and at what price. After a fashion, it worked! Industrial growth rates in both the Soviet Union (1930s) and China (1950s) were extremely rapid. The U.S.S.R. in particular became a fully industrialized society in little more than a decade, strong enough to out-produce and defeat the Nazis in World War II.

But Communist industrialization also created a new elite of managers, bureaucrats, and technical experts who gained privileged positions in society, thus undercutting the supposed egalitarianism of socialist societies. While Stalin largely accepted these inequalities as temporarially necessary for modern development, Mao Zedong was increasingly troubled by them and launched repeated campaigns to root out materialism, self-seeking, and feelings of superiority in China’s official elites.

Among the unique features of Communist societies was the extent to which party and state authorities penetrated and controlled the society. Since agriculture was collectivized and industry nationalized, virtually everyone was employed by state. Furthermore, the leaders of the Communist Party established the policies that the state bureaucracy was supposed to implement. Education served as a major vehicle for inculcating the party doctrines and Marxist thinking into the population. Organizations catering to the interests of students, women, workers, and various professional groups were all controlled by the party. The multitude of private voluntary organizations that characterize democratic capitalist societies had no counterpart in Communist countries.

The Search for Enemies

But the Communist societies of the Soviet Union and China were laced with conflict. Under both Stalin and Mao, those conflicts erupted into a search for enemies that disfigured both societies. In the Soviet Union that process culminated in the “Terror” of the late 1930s in which tens of thousands of prominent Communists, including virtually all of Lenin’s top associates, and millions of more ordinary people were caught up in this wave of terror. Based on suspicious associations in the past, denunciations by colleagues, connections to foreign countries, or simply bad luck, these people were arrested, usually in the dead of night, then tried and sentenced either to death or to long years in harsh and remote labor.
camps known as the Gulag. Close to a million people were executed between 1936 and 1941. Perhaps four or five million more were sent to the Gulag, where they were forced to work in horrendous conditions and died in appalling numbers. Victimizers too were numerous as the Terror consumed the energies of a huge corps of officials, investigators, interrogators, informers, guards, and executioners.

While the search for enemies in the Soviet Union occurred largely in secret and under the clear control of the state, in China it became a much more public process, particularly during the “Cultural Revolution” of 1966–1969. Mao became convinced that many within the Communist Party itself had been seduced by capitalist values of self-seeking and materialism and were no longer animated by the idealistic revolutionary vision of earlier times. And so, he called for rebellion against the Communist Party itself. Millions of young people responded and, organized as “Red Guards,” set out to rid the country of those who were “taking the capitalist road.” The outcome was chaos and violence that came to the edge of civil war, and Mao found himself forced to call in the military to restore order and Communist Party control. Both the Soviet “Terror” and the Chinese “Cultural Revolution” badly discredited the very idea of socialism and contributed to the ultimate collapse of the Communist experiment at the end of the century.

The End of the Communist Experiment

The demise of world Communism was both rapid and largely unexpected, and it occurred in various ways. In Eastern European countries, where Communist governments had been imposed by Soviet military force after World War II, popular movements in 1989 swept away despised governments with stunning rapidity. The dramatic breaching of the Berlin Wall, which had long separated East and West Berlin, became the enduring symbol of these movements. In the U.S.S.R., Mikhail Gorbachev’s efforts to reform Communism (1985–1991),
Of course, we do not want socialism in Latin America to be an imitation or a copy. It must be a heroic creation. We must inspire Indo-American socialism with our own reality, our own language. That is a mission worthy of a new generation. • José Carlos Mariátegui (1928)

Reducing state control over the economy and permitting unprecedented freedom of expression, backfired badly. His reforms sent the economy spiraling downward and stimulated nationalist and anti-Communist movements that led to the complete disintegration of the country itself in 1991 and the repudiation of its Communist Party. In China, the Communist Party retained power but abandoned many Communist economic policies during the 1980s and 1990s, ending collectivized agriculture, permitting massive foreign investment, and allowing many private or semiprivate businesses to operate freely. These reforms sparked an enormous boom in the Chinese economy that contrasted sharply with the economic disasters that accompanied the disintegration of the Soviet Union.

Scholars continue to debate the reasons for the quite sudden end of the Communist era in world history. In large measure, the fundamental failure of Communism was economic. By the 1980s, it was apparent that the economies of major Communist countries were stagnating, clearly unable to compete effectively with the more dynamic economies of the capitalist West. This perception drove the reform process in both the Soviet Union and China. A further factor was the erosion of belief. An earlier idealism about the potential for building socialism had largely vanished amid the horrors of Stalinism and Maoism, replaced, especially in the U.S.S.R., by a self-seeking cynicism.

The collapse of Communism, like its revolutionary beginnings, had global implications. It marked the end of the Cold War, which had dominated international life in the second half of the twentieth century and had threatened a nuclear holocaust. As the bipolar structure of the Cold War era faded away, the United States emerged as the world’s single superpower, bringing with it new charges of an American global empire in the making. Furthermore, the end of Communism signaled the closure of a century-long global debate about socialism and capitalism as distinct and rival systems. Market economies and capitalist ideologies had triumphed, at least temporarily. In Eastern Europe and more tentatively in the former Soviet Union, the demise of Communism also allowed the flowering of more democratic political systems. Despite the continued dominance of Communist parties in China, Cuba, Vietnam, and North Korea, expectations of a socialist future had largely disappeared everywhere and the Communist phenomenon in world history had ended.

Robert W. Strayer

See also Cold War; Comintern; Eastern Europe; Lenin, Vladimir; Revolution—China; Revolution—Cuba; Revolutions, Communist; Russian-Soviet Empire; Stalin, Joseph

Further Reading

Comparative Borders and Frontiers

Although people often use the terms *frontier*, *boundary*, and *border* interchangeably, and in some forms of usage the terms can be regarded as synonyms, historians have emphasized important distinctions between frontiers and boundaries. Frontiers are above all zones of interaction. They can arise as a result of cross-cultural encounters, population movements, and the absence of state authority or an effective monopoly of violence. Historian Leonard Thompson has defined a frontier thusly: “In our usage, a frontier is an area of interpenetration between societies. It contains three elements: a territorial element, a zone or territory as distinct from a boundary line; a human element, comprising peoples of initially separate and distinct societies; and a process element by which relations among such peoples commence, develop, and eventually crystallize. A frontier opens with the first contact between members of these two societies. It closes when a single authority has established political and economic dominance...” (Lamar and Thompson 1981, 87).

In contrast, boundaries are established by states to separate their subjects and territories from other political jurisdictions. Political geographer Ladis Kristof defines a boundary as the “outer line of effective control exercised by the central government” (Kristof 1959, 270). Borders are legal and political infrastructures created by states to maintain boundaries and regulate movement. Frontiers and boundaries have been important factors in global history, but a truly global survey of their impact has not yet been written.

Frontiers

Although the term *frontier* can be traced as far back as medieval Spain, it has most frequently and famously been applied to North American history. For more than a century historians in the United States have debated the “role of the frontier” in U.S. history. In 1893 the U.S. historian Frederick Jackson Turner spoke of “the” frontier as a “meeting point between savagery and civilization,” the “edge of free land,” and “the line of most rapid and effective Americanization.” He argued that in frontiers one could witness in rapid succession various forms of social evolution such as hunting, trading, ranching, farming, and finally manufacturing. Such characteristics of the United States as democracy, individualism, and idealism could, in his opinion, be attributed to the frontier experience. Many of Turner’s conclusions have been disputed, disregarded and replaced by more nuanced models of interaction between settlers and indigenous populations in North America, but the frontier still persists in popular imagination and popular culture. Turner himself saw comparative possibilities for analyzing frontier influences beyond North America: “For a moment at the frontier the bonds of custom are broken and unrestraint is triumphant... each frontier did indeed furnish a new field of opportunity, a gate of escape from the bondage of the past.” His concept of the frontier has been applied with varying degrees of success to such diverse areas as Australia, South Africa, Russia, and the Roman empire.

In 1952 Walter Prescott Webb, a Texas historian who had previously studied the Great Plains, published a study that attempted to apply the frontier model on a global scale. The discovery of America by Columbus, in his opinion, opened up a “Great Frontier” for European expansion. The West, he argued, enjoyed unparalleled access to land and resources, creating an economic boom that lasted for centuries. The closing of the Great Frontier, however, presented a new challenge to the West. With land for settlement no longer available and resources no longer easily accessible, Western society, together with its capitalism, democracy, and individualism, faced the possibility of uncertainty.

World historian William H. McNeill revisited the notion of the Great Frontier in 1983. He focused on European settler societies in certain areas of the world
and evaluated the ways in which frontier conditions transformed the societies and economies created as a result of the migration of Europeans across oceans and across the Eurasian steppe (the vast, usually level and treeless tracts in southeastern Europe or Asia) after 1500. The Great Frontier was characterized by a dichotomy between freedom and compulsion. In some cases the frontier promoted freedom and equality (the Cossacks, European colonists in North America), whereas in others the availability of land and relative shortage of labor led to enslavement or enserfment of workers. McNeill’s work helped to frame frontiers in such a way that no single outcome could be considered characteristic of frontier processes.

Most recently anthropologist Igor Kopytoff has applied the frontier concept to broad expanses of African history. In various places and periods networks of local frontiers formed a great process in African history. As a result of famines, conflicts, ecological pressures, and entrepreneurial pursuits, individuals and groups departed their settlements to take up residence in “no-man’s lands” beyond the jurisdiction of established communities. After they were successfully established, they formed a nucleus of a new group, which could serve as a magnet for the disaffected groups and individuals from neighboring societies. Given the right conditions (distance, ecological barriers, inability of existing societies to extend control), new polities (political organizations) emerged at the margins of existing polities. Some of these new polities eventually became powerful enough to form new polities and absorb their older neighbors. Kopytoff’s model effectively distanced frontiers from predetermined outcomes: “The frontier is permissive rather than determinant, it does not create a type of society, but provides an institutional vacuum for the unfolding of social processes” (Kopytoff 1987, 14). Thus, each frontier provides the possibility of generating multiple outcomes.

Comparative frontier studies have gradually abandoned the Eurocentric models promoted by Turner and his students. Historians in the United States still debate Turner’s legacy, with some even rejecting the term frontier because of its cultural baggage, but many sophisticated studies of cross-cultural interaction, ecological transformation, and settlement owe an intellectual debt to Turner.

Applied on a global scale, the frontier concept provides a lens for examining how the forces of environment, cross-cultural interaction, and adaptation can create new communities and societies. Furthermore, frontiers demonstrate how important processes of change can originate at the margins of existing societies and how peripheries can become new centers.

The Question of Ancient Borders

Although people often consider borders to be characteristically modern, recent research by Italian historian Mario Liverani has documented their existence in international relations of the ancient Near East. During the late Bronze Age (c. 1550–1200 BCE) interstate relations developed between emerging states in Anatolia (in modern Turkey), Egypt, Mesopotamia, and the lands adjacent to or between those states. Many of the rulers of such ancient states claimed to be universal rulers, but they nonetheless delineated fixed borders of effective control. In the ideology of kingship, the ruler should continuously expand his territory to the ends of the known world. Because the process of expansion would never be complete, rulers often erected commemorative monuments at the extremities of the territories they had conquered or traversed. Liverani writes: “if we view the border as an elastic perimeter that follows the outward movements of the king, the stela [a stone slab or pillar used for commemorative purposes], which has his name and image
Borders in the ancient Near East were fixed by treaties between two equal parties or victor and vanquished. Existing treaties mention features of the landscape, names of cities, and lists of settlements subject to each ruler. A major question was the distribution of revenues, or who would pay tribute to whom. Treaties also defined penalties for raiding, promoted cooperation to return runaways, and included terms of trade. Safe conducts—documents guaranteeing the right to travel across a ruler’s territory without bureaucratic hindrance from minor officials—originated in Near Eastern diplomacy to facilitate the movement of representatives of a ruler across foreign territories.

We should not view these ancient boundaries of control, however, as the exact equivalent of modern territorial borders. Rulers were mainly interested in controlling strategic points. Liverani states: “The territory controlled by the state resembles an ‘oasis’. . . there is no need for a boundary line, but rather for ‘gateways’ channels of controlled communication with other states (or other inhabited areas) beyond the depopulated belt” (Liverani 2001, 52). Remote border posts acted as a filter to let desirable things pass on into heart of the state and to keep out undesirable things.

**Imperial Boundary Maintenance in Eurasia**

In global history the Eurasian steppe has been the scene of various attempts by sedentary societies to create artificial barriers to impede the movement of more mobile societies. These barriers required large investments of resources, and in some ways they foreshadowed the functional role of modern borders in managing and controlling movement. Various states have used physical barriers in attempts to control the mobility of both their subjects and foreign adversaries. As late as the seventeenth century, Russia used the Belgorod Line, an earthen and wooden barrier created to prevent nomadic attacks, to also limit the outward movement of its subjects from serfdom to freedom in areas of the steppe beyond state control.

In the historiography (the writing of history) of western Eurasia, the remnants of Roman military fortifications have long attracted the attention of scholars. European historians were intrigued by the possible function of structures such as Hadrian’s Wall, which stretches virtually from sea to sea across Great Britain and once featured three layers of barriers: ditches, walls and watchtowers, and military roads, forts, and mobile patrols. One Roman source explains that the purpose of the wall was “to separate the Romans and barbarians” (Jones 1996, 47). The sixth-century Byzantine historian Procopius could even imagine the wall as a dividing line, beyond which human habitation was literally impossible due to pestilential air. Although boundary maintenance structures have been imagined as zones of extreme exclusion, the evidence points to a much more complex picture.

Because Roman frontier forts and garrisons ringed the diverse edges of the Mediterranean world, historians have tried to make sense of the role of border fortifications in diverse terrains. Military historian Edward Luttwak’s *The Grand Strategy of the Roman Empire*, published in 1976, argued that a Roman unified system of defense in depth was developed by the Flavian emperors (second century CE) and subsequent emperors and was applied strategically to the empire’s vast frontiers. Historians have debated whether these barriers indicate an aggressive or defensive posture, whether strategic thinking on an empire-wide level can in fact be documented, whether far-flung infrastructures were ad hoc (concerned with a particular end or purpose) local measures or were centrally planned, whether Roman ideology could ever admit a limit to expansion, and whether Greek traditions of building military barrier walls influenced Roman actions. Discussions have centered even on the meaning of the word *limes*, which some historians have used to describe the frontier defense “system,” but which others think referred only to military road networks. Because the “barbarian” invasions played a role in the fall of the Roman empire in the West, discussions of frontier fortifications have implications for broader questions of imperial decline/ transformation. Textual evidence is limited,

*Travel has no longer any charm for me. I have seen all the foreign countries I want to except heaven & hell & I have only a vague curiosity about one of those.* • **Mark Twain** (1835–1910)
but hundreds of miles of fortifications and thousands of archaeological sites in Africa, Asia, and Europe have yielded new information. At the very least the Romans seem to have been operating strategically in similar ways in different regions, in some cases setting the agenda, in other cases reacting to circumstances. Although barriers clearly were designed to deal with medium-intensity threats and were supported by intricate systems of garrisons and communication networks, the contemporary sources do not explicitly define the parameters of grand strategy.

Rather than separate Romans from “barbarians,” the boundary fortifications often facilitated contact between Romans and their neighbors. Archaeologist Peter Wells has documented the impact of Roman expansion along the Rhine: “The Roman expansion into temperate Europe can be productively viewed as a process that involved interaction between peoples, negotiation with political leaders, and sometimes combat” (Wells 1999, 95).

Archaeology, inscriptions, and texts demonstrate that the lines between Romans and their neighbors were more blurred than previously thought. Many non-Romans were living in Roman territories and employed by the Roman army. Even groups living far beyond the border in an expansive frontier zone were influenced by Roman culture and participated in trade networks. Objects traded hundreds of miles from the farthest Roman forts suggest connections rather than separation.

Historians examining more than two millennia of interaction between China and Inner Asia have faced similar problems of interpretation. Here, too, walls provide visual evidence of ancient divisions, but these walls are subject to varying interpretations. In his classic study Inner Asian Frontiers Asian studies expert Owen Lattimore spoke of the Great Wall of China as a dividing line ordained by the environment. It roughly approximated an ecological fault line between lands to the south, which were conducive to agriculture, and to the north, which were the domain of pastoral nomadism. For him the Great Wall was a kind of “optimum limit of growth” for the Chinese empire, but he emphasized that a linear boundary could not be established (Lattimore 1951, 238, 240). He focused attention on the struggle for control of marginal lands and a series of transitional zones between “full Chinese order” and “full steppe order” (Lattimore 1951, 498).

Historian Andrew Waldron has convincingly argued that “there was no single Great Wall in the Chinese past” (Waldron 1988, 69) and that pre-nineteenth-century Chinese observers rarely spoke of a single structure. European notions of a “Great Wall of China” evolved during centuries, influencing modern Chinese perceptions and culminating in the myth (developed during the late nineteenth century) that the “Great Wall” is the only human-made object visible from outer space. Waldron traces how simple earthen fortifications (first mentioned in 656 BCE) emerged, were unified in a system of walls under the Qin dynasty (221–206 BCE), and finally, many centuries later, became identified as an ancient structure ranging for more than 9,000 kilometers. These ancient walls were variously built, abandoned, repaired, and abandoned once again. Furthermore, wall building was only one of many strategies for dealing with the nomads. Furthermore, we can draw no direct correlation between wall building and the weakness of the Chinese state. Finally, the massive brick and stone walls that are commonly visited by tourists near Beijing were built relatively late, during a new period of wall building by the Ming dynasty (1368–1644).

Recent scholars have likewise looked at interactions across the Chinese walls. The walls themselves were never able to enforce a complete dichotomy between the Middle Kingdom (China) and the “outer darkness” beyond its borders. Several studies have demonstrated how nomadic confederacies thrived because of interaction with China. Anthropologist Thomas Barfield has argued that the success of nomadic confederacies depended upon a ruler’s abilities to secure resources from China. To do this, he might organize raids or act as an intermediary between China and the steppe. Often nomadic confederacies avoided conquering Chinese territory and preferred to use their power to extract resources, subsidies, or access to trade. Historian Sechin Jagchid has argued even that trade was the “essential element that
determined whether peace or war existed along China’s northern frontier” and has traced key institutions such as frontier markets, tribute, bestowals (acts of gift giving), and exchanges of brides between Chinese and nomadic rulers (Jagchid and Symons 1989, 1).

The resources necessary for boundary maintenance were enormous, and infrastructures were expensive to maintain. Policies such as diplomacy or trade proved to be cheaper and, in some cases, more effective. Even walls could not stop cross-cultural interaction because populations that appeared to be distinct when viewed from the perspective of the center were in fact often blurred when viewed at the margins.

Borders as a Global Framework

Boundaries and border infrastructures have not necessarily been pervasive in global history. In fact we do not know even how common boundaries were in certain parts of the world before the modern period. Many societies recognized some form of boundaries and created fortifications, but these were not necessarily linear or territorial borders in the modern sense.

The rise of Islam provides an interesting example of boundary conceptualization. Islamic political theory does not seem to have recognized the notion of political boundaries. According to Ralph Brauer, boundaries were noncanonical in Islamic law. Islamic jurists conceptualized the world as divided into two irreconcilable realms: the Dar al Islam (land of Islam) and the Dar al Harb (land of war). In theory Islam was expected to be ever expanding until the Islamic community was coterminous (having the same or coincident boundaries) with the whole world. Sanction for jihad (holy war) against non-Islamic states makes the boundaries of Islam permanently in a state of flux. Although Islamic statecraft recognizes temporary peace agreements with non-Muslims and brief, strategic concessions, in Islamic statecraft there was apparently no such thing as a permanent boundary. This unique approach might be explained by the fact that

Establishing Borders

*The Treaty of Nipchu (Nerchinsk) of August 1689 sought to establish and maintain peace on the border between China and Russia.*

**Article I.** The river Gorbitza, which joins the Schilka from its left side near the river Tchernaya, is to form the boundary between the two Empires. The boundary from the source of that river to the sea will run along the top of the mountain chain [in which the river rises]. The jurisdiction of the two Empires will be divided in such a way that [the valleys of] all the rivers or streams flowing from the southern slope of these mountains to join the Amur shall belong to the Empire of China, while [the valleys of] all the rivers flowing down from the other [or northern] side of these mountains shall be similarly under the rule of His Majesty the Czar of the Russian Empire. As to [the valleys of] the other rivers which lie between the Russian river Oud and the aforesaid mountains—running near the Amur and extending to the sea—which are now under Chinese rule, the question of the jurisdiction over them is to remain open. On this point the [Russian] Ambassadors are [at present] without explicit instructions from the Czar. Hereafter, when the Ambassadors on both sides shall have returned [to their respective countries], the Czar and the Emperor of China will decide the question on terms of amity, either by sending Plenipotentiaries or by written correspondence.

**Article II.** Similarly, the river Argun, which flows into the Amur, will form the frontier along its whole length. All territory on the left bank is to be under the rule of the Emperor of China; all on the right bank will be included in the Empire of the Czar. All habitations on the south side will be transferred to the other.

**Article III.** The fortified town of Albazin, built by His Majesty the Czar, is to be completely demolished, and the people residing there, with all military and other stores and equipment, are to be moved into Russian territory. Those moved can take all their property with them, and they are not allowed to suffer loss [by detention of any of it].
Article IV. Fugitives [lit., runaways] from either side who may have settled in the other’s country previous to the date of this Treaty may remain. No claims for their rendition will be made on either side. But those who may take refuge in either country after the date of this Treaty are to be sent without delay to the frontier and at once handed over to the chief local officials.

Article V. It is to be understood by both Governments that from the time when this Treaty of Amity is made, the subjects of either nation, being provided with proper passports, may come and go [across the frontier] on their private business and may carry on commerce [lit., buy and sell].

Article VI. All the differences [lit., quarrels] which may have occurred between the subjects [of each nation] on the frontier up to the date of this Treaty will be forgotten and [claims arising out of them will] not be entertained. But if hereafter any of the subjects [lit., traders or craftsmen] of either nationality pass the frontier [as if] for private [and legitimate] business and [while in the foreign territory] commit crimes of violence to property and life, they are at once to be arrested and sent to the frontier of their own country and handed over to the chief local authority [military], who will inflict on them the death penalty as a punishment of their crimes. Crimes and excesses committed by private people on the frontier must not be made the cause of war and bloodshed by either side. When cases of this kind arise, they are to be reported by [the officers of] the side on which they occur to the Sovereigns of both Powers, for settlement by diplomatic negotiation in an amicable manner.

If the Emperor of China desires to engrave [on stone] the Articles of the above Treaty agreed upon by the Envoys for the determination of the frontier, and to place the same [at certain positions] on the frontier as a record, he is at liberty to do so. Whether this is to be done or not is left entirely to the discretion of His Majesty the Emperor of China.

If a chieftain or a man leave his house, garden, and field and hires it out, and some one else takes possession of his house, garden, and field and uses it for three years; if the first owner returns and...
control cattle during the late nineteenth century) and antipersonnel land mines (developed during the U.S. Civil War).

The Soviet border infrastructure, dubbed the “Iron Curtain” during the Cold War, was the earliest and most extensive of these structures. Although the Bolsheviks espoused internationalism, they also embraced borders. Early Soviet boundary maintenance began during the Russian Civil War (1917–1920) when secret police units were given jurisdiction over the internal lines of demarcation between Soviet areas and the various “counterrevolutionary” governments within the boundaries of the old Russian empire. Fears of encirclement by aggressive capitalist enemies eager to undermine the Soviet state, coupled with economic pressures to stem the flight of specialists and millions of disaffected citizens, led Soviet leaders to solidify border patrols. By around 1930 more than 50,000 kilometers of Soviet borders were being guarded by forty thousand border guards who were assigned to ten border patrol districts. Borders tended to be more heavily patrolled in the west and in densely populated areas in other parts of Eurasia. In those areas patrol density averaged 2.5 men per kilometer of border, but fewer resources were devoted to areas in Asia or the far north that were remote and difficult to cross because of extreme terrains. An expensive and expansive infrastructure utilized patrols by land, air, and sea, networks of local informants, watchtowers, land mines, tens of thousands of miles of tracking strips (areas that were cleared of inhabitants and vegetation and specially maintained to make surveillance possible and footprints visible), thousands of miles of barbed-wire fences and, eventually, electronic signalization systems. Militarily sensitive areas might also be mined to prevent “border violations.” Access to border zones was rigidly controlled, and Soviet citizens could enter these areas only with official permission. As a result of these measures, unauthorized entry and exit became virtually impossible between the 1950s and 1991. These measures were replicated in Soviet satellite states, most notably in Germany’s Berlin Wall (1961–1989).

Although many such extreme borders disappeared with the end of the Cold War, many remained in place after 2000. Such borders continued to be maintained between India and Pakistan, between the two Koreas, in Israel, parts of the former U.S.S.R., China, and so forth. Economic migration has spurred the construction of new border infrastructures in certain areas. Administrative barriers to movement (primarily entry visas and residence restrictions) still limit and regulate movement from developing (or “southern,” Third World) countries to industrialized countries. Although the European Union abolished border controls among its member states in 1999, it strengthened its external borders in southern and eastern Europe. In particular, a highly sophisticated border infrastructure (a twenty-first-century Berlin Wall) was created to protect Spanish enclaves in Morocco from mass migration. The U.S.-Mexico border, which was only sporadically patrolled for much of the twentieth century, has become an increasingly complex border infrastructure. During the late 1990s border sectors near major metropolises such as San Diego, California, and El Paso, Texas, were equipped with walls, infrared scopes, underground sensors, and increased mobile and air patrols. By 2004, 9,600 kilometers of U.S. land borders were patrolled by roughly eight thousand officers, a figure that rivals the density of Soviet border patrol deployments during the 1930s. Thus, globalization did not bring about a “world without borders” during the waning years of the twentieth century.

Brian J. Boeck

Further Reading
Call it a clan, call it a network, call it a tribe, call it a family. Whatever you call it, whoever you are, you need one. • Jane Howard

Comparative Ethnology

Comparative ethnology (cross-cultural research) is a subfield of cultural anthropology. Anthropologists, psychologists, and sociologists who conduct cross-cultural research are interested primarily in developing and testing theories of human culture, society, and behavior by comparing the behaviors and customs of cultures around the world. The focus is on universal theories that explain all or some aspect of culture or behavior in all places at all times, rather than theories whose explanatory reach is only a single culture or a single geographic or cultural region. Cross-cultural research is similar to cross-national research (practiced mainly by political scientists and economists), which uses modern nation-states rather than cultures as its unit of study.

Cross-cultural research emerged as a distinct form of anthropological research during the late nineteenth century but did not garner much attention until the 1940s. By then a large quantity of ethnography (information on cultures and ethnic groups) had been gathered for hundreds of cultures around the world, providing the raw data for cross-cultural study. In the typical cross-cultural study, a researcher sets forth a theory or theories to be tested, selects a sample of cultures from around the world to be studied, collects information on the topics of interest from ethnographic reports on the cultures, converts the textual information to numeric codes of variable value, and then uses statistical tests to test the theory or theories.

With more and more ethnographic data available in the decades after World War II, cross-cultural research became more popular, with several hundred studies on kinship, child development, family life, war, religion, economics, and politics published during the 1960s and 1970s. These two decades were also a period of maturation for the field as many new research techniques were developed to make for more careful research and more trustworthy results. Among the pioneers in the field were the anthropologists George Peter Murdock at Yale, Harold Driver at Indiana University, Raoul Naroll at State University of New York at Buffalo, and John and Beatrice Whiting at Harvard. During the 1980s, as cultural anthropology became more focused on specific cultures, on the study of meaning, and on action research to assist and protect endangered peoples, cross-cultural research declined in popularity.
Cross-cultural research has always been controversial, with many anthropologists who prefer intensive field research with a single culture being uncomfortable with an approach that is based on library research, the use of secondary data, and statistical analysis and that produces broad generalizations that emphasize similarity rather than diversity across cultures. Nonetheless, several decades of cross-cultural research have produced a number of important generalizations, especially significant for world history:

1. About 50 percent of cultural change around the world during the last two centuries can be attributed to peaceful interaction between different cultures and about 50 percent to contact through warfare and domination.

2. The type of economy in a society is an important determinant of how parents raise their children and of adult personality. For example, in agricultural societies where cooperation is important, people will be more compliant, and they will raise their children to be obedient. In foraging societies where independent action is valued, adults will be more independent and will raise their children to be self-reliant.

3. Cultural evolution has been a powerful force in human history, with more efficient control of energy and a larger population typically leading to specialization and differentiation in the institutions of a society.

4. Maintaining a large military force to deter enemies or potential enemies more often produces war than peace. Peaceful contact such as through trading or participation in joint religious rituals more often produces peace.

5. From a cross-cultural perspective, there is no such thing as “female status.” Rather, female status is a complex set of beliefs and behaviors, with women often having high status and much influence in some domains such as the household economy or religion and little status and influence in other domains such as the military.

6. Ethnocentrism, the belief that one’s culture is superior to all others, is found in all cultures. It tends to be less pronounced among neighboring cultures that are similar in many ways.

7. All societies have a basic economic concern with control over and access to natural resources.

8. All societies have a clear division of labor by sex, with some work assigned exclusively to men and other work to women. Men tend to do work that requires much strength, whereas women tend to do work that is compatible with child care.

9. Although egalitarian (relating to human equality) societies have existed, in the modern world all societies are socially stratified, often into social classes, meaning that not all groups have equal access to a society’s resources.

10. A considerable amount of radical cultural change throughout history is the result of religious movements. These movements often develop in times of societal stress and are led by charismatic figures often defined as prophets.

11. The evolutionary ideas of the nineteenth century that suggested that human society evolved through time from a state of lesser to greater civilization have no merit.

David Levinson

See also Anthropology

Further Reading


Comparative History

Many historians rooted in their fields of time and place defend the uniqueness of the events, institutions, and processes they study. However, sometimes they neglect to recognize the ways in which their explanations and interpretations depend on principles of understanding that connect what they see in their particular cases to other phenomena. The uniqueness asserted by historians is often of a phenomenon that is itself broken down into parts that we understand because they resemble familiar ideas and practices from other times and places. The explanations and interpretations in all case studies depend in various ways on certain general principles that are themselves distilled from comparisons among other historical experiences. What is known as comparative history involves more explicit comparison that consciously identifies similarities and differences.

The European Context

One of the first historians in the twentieth century to stress the importance of the comparative historical method was Marc Bloch, the great French scholar of medieval and early modern Europe. In an essay entitled “A contribution towards a comparative history of European societies,” published in 1928, Bloch identified two main contexts in which comparisons are an important tool for historians. First, he noted that in widely separate places in early history there seemed to be similar practices among what he called “primitive peoples.” Studies of early cultures conducted in the 1920s interpreted such similarities as signs of a common universal history. The second context for using a comparative method, and the one to which he devoted most of his attention, involves areas close to one another where mutual influences or common origins for ideas and institutions are obscured by linguistic differences and national historiographical traditions. Bloch argued that the study of feudalism and manorial organization, for example, must span Europe generally rather than just one European nation, since the similarities and differences among practices suggest a range of related practices common to many places. According to this view, focusing only on French or German cases might lead the researcher to look for local explanations for practices that in fact were the result of more widely applicable factors in European society.

In another essay, “A problem in comparative history: The administrative classes in France and Germany,” also published in 1928, Bloch analyzes feudal political relationships and uncovers both similarities and differences, in the process identifying what he considers features of German law that are significantly different from other legal systems in Central and Eastern Europe.

The Global Context

More recent scholarship on both political and economic history has employed comparative methods to analyze historical change within Europe and on a more global scale. Some scholars have looked at particular categories of complex events, like revolutions. Theda Skocpol’s widely read States and Social Revolutions (1979) presents a series of similarities and differences among the French, Russian, and Chinese revolutions to argue that revolutions, although each arises out of a distinctive historical situation, share certain traits that account for their dramatic political changes. Another text, Jack Goldstone’s Revolution and Rebellion in the Early Modern World (1991) identifies a series of common problems in England, France, China, and the Ottoman Empire that create similar crises from which emerge distinct patterns of rule. Large revolutions are few in number, and plausible comparisons are therefore limited. Larger numbers of comparisons become possible when political changes more generally are studied.

Charles Tilly (1975, 1992) explains the formation and transformation of European states since roughly 1000CE according to the relative abilities of rulers to amass resources and make war. Beginning amid a tremendous diversity of political units, in Tilly’s account, some states stress mobilizing commercial revenues while others are better able to build armies by taxing the land.
By the seventeenth and eighteenth centuries, the most successful states are those that can both gain wealth and monopolize the use of force. Tilly’s work suggests variations among European states in a dynamic process of political transformations.

Another influential approach to the formation of modern states highlights the changing bases of political authority in societies with hereditary rulers and in societies in which rulers appeal to their subjects for legitimacy. Reinhard Bendix (1978) has studied changing authority relations between states and subjects as the key axis along which to observe the turn toward modern states in which people achieve popular sovereignty. Like Tilly, Bendix portrays variations among countries that all undergo parallel processes of political change. However, both scholars also recognize connections among their cases: Tilly’s polities are all part of a larger European state system, and Bendix tracks the spread of ideas and institutions basic to modern states from their points of origin to other places. Bendix’s approach takes him beyond his European cases of England, France, Germany, and Russia: he analyzes Japan as an example of a country to which political concepts first forged in Western Europe subsequently spread.

In contrast to studies that remain within Europe or explore the export of practices from the West to other regions, Victor Lieberman (1997, 2004) has suggested that similar processes of change were taking place between the mid-fifteenth and mid-nineteenth centuries across the East-West divide; he compares Burma, Siam, and Vietnam with France, Russia, and Japan, arguing for similar processes of political, economic, and cultural changes in each case. Lieberman’s identification of parallel dynamics of political and social change within and beyond Europe has been an important contribution to reframing the discussion about European historical change.

Complementing Lieberman’s insights is another approach to the particularities of European state formation that contrasts the European examples with the dynamics of political evolution in another major political system, the Chinese agrarian empire. R. Bin Wong has shown that the challenges faced by state-makers in Europe were in many ways distinct from those confronting Chinese rulers. According to Wong (1997, 2002), the responses to these challenges were influenced in Europe by the claims elites could make upon their rulers, whereas in China they were guided by the common commitments rulers and elites made to sustain social order.

Overseas colonial empires represented yet another kind of state that defined a set of relations between a metropole and its periphery. Nineteenth-century colonialism suggests a different way in which European states reached other parts of the world: not as the benign purveyors of political principles and models of government, but as overlords who divided up large parts of Africa and Asia as an extension of state competition in Europe. According to Lauren Benton (2002), these competing colonialisms produced a range of similar developments, including the introduction of various forms of pluralism as a means to accommodate cultural differences—sometimes in ways that led to an acceptance of colonial rule in many nineteenth-century colonies.

Learning from European colonization programs, the Japanese state began to build its own colonial empire in the late nineteenth century. The Japanese results, however, were different from the colonial empires of Western powers, which had their colonies spread over vast distances. The Japanese colonial empire, beginning with Taiwan and Korea and later Manchuria, was viewed by many in the Japanese government as a tightly knit regional political and economic order designed to support Japan and secure it from threats posed by Western powers. From an East Asian perspective, the Japanese empire represented the creation of a new kind of political order replacing the much looser symbolic order of tributary relations centered on the agrarian empire. In place of ritual presentations of tribute and commercial exchanges under the tributary order, colonial empire imposed legally defined and bureaucratically organized control over subject populations who were subjected economically to extractive and unequal relationships to the colonizer. Both Chinese agrarian empire and Japanese colonial empire differed...
from European empires in two ways—first, Europeans competed with each other and divided territories among themselves in different world regions; and second, the distances from imperial center to periphery were far longer for Europeans than in East Asian cases. Neither the Chinese world order nor the Japanese colonial empire that succeeded it were simply subordinated to a Europe-centered system of international relations; rather, a unique and evolving system of regional political relations persisted among East Asian states even as they became more connected to the powerful political and economic system centered on both sides of the Atlantic. Such hemispheric distinctions suggest that interpretations of modern political change as exclusively or even primarily the expansion of a Western system of international relations are incomplete and misleading.

Assessing the Europe-centered Approach

These interpretive difficulties notwithstanding, much influential work in world history has been done by tracing the expansion of European power across the globe—in fact, historians have tended to view nineteenth- and twentieth-century international relations as the most recent chapter in a story of Western political and economic domination. Most all interpretations of large-scale changes largely build upon directly or indirectly the work of Karl Marx and Max Weber. The systemic features of this European expansion form the basis of Immanuel Wallerstein’s modern “world-system” (1974, 1980, 1989). Wallerstein’s seminal work, inspired by Marxist insights, makes brief comparisons between the international system centered on the European world from the sixteenth to the mid-nineteenth centuries and systems in place elsewhere in the world, before asserting that by the end of the nineteenth century, any fundamental East-West distinctions were subordinated to what had become the modern, Western-dominated world-system. Therefore, most analyses inspired by Wallerstein’s work focus on the Europe-centered system and its expansion, without much attention to the dynamics of change within other systems.

Part of the intellectual foundation of Wallerstein’s world-system is the work of French historian Fernand Braudel, one of whose major writings, the three-volume Civilization and Capitalism: 15th–18th Century (1992), identifies the distinctiveness of European capitalism through comparisons with merchants and markets in different parts of Asia. Such comparisons follow a long tradition of efforts by seminal thinkers to explain the distinctiveness of Europe and its patterns of political and economic transformation by identifying contrasts with non-European parts of the world. In the nineteenth century most observers, including revolutionary figures like Karl Marx, believed that outside Europe lay stagnant societies with unchanging economies. Most educated Westerners exposed to cultures in Africa and Asia regarded these places as inferior to the West; while some were recognized as descendants of great and powerful ancient civilizations, on the whole they were seen as shallow and broken remnants of their past greatness.

Max Weber, the early-twentieth-century master of historical comparisons, looked to religion and ethics as the arena in which different attitudes toward money and markets took shape. He noted that in the Christian West, these attitudes formed in a way that led to the rise of capitalism, while in other religious traditions they did not (1958). Weber’s famous observations about a “Protestant work ethic” have been qualified, however, by more recent scholarship documenting what appear to be functionally similar beliefs in other religious traditions (e.g. Bellah, 1957; Rodinson, 1974). Comparisons of a broader and more general kind between Europe and other parts of the

---

**A Parable**

If all you know is maple trees, your concept of “leaf” looks exactly like a maple leaf, a green thing with pointy lobes. Then you meet an oak leaf. And you adjust your previous conception. A “leaf” in your mind is now a green thing with lobes, but the lobes are not necessarily pointy. Then you encounter an elm leaf, and discover that the lobes can be reduced to mere serrations around the edge of the green thing.

world have continued to highlight differences, whether formulated within a clear Weberian framework (Hall, 1985) or presented in a more ad-hoc and storytelling manner (Landes, 1998).

Marxist interpretations have also argued for distinctive European political and economic practices, as shown in two influential works of the 1970s. Perry Anderson’s two-volume study of European state formation, *Passages from Antiquity to Feudalism* and *Lineages of the Absolutist State* (1974), went back to classical antiquity to give a long-term view of how absolutist states were formed centuries later; his appendices on China, Japan, and the Ottoman Empire reviewed much of the available research to suggest how a Marxist analysis of these cases could be fashioned to complement what he had done for Europe. Robert Brenner also wrote an influential study comparing English agrarian social relations with those on the European continent (1976); he argued that it was English social relations that made possible increased agricultural productivity and surpluses that financed the formation of commercial capitalism. After his conclusions were challenged by English, French, and Dutch data, Brenner shifted his arguments from class relations to the late medieval state (1982) and later to an explanation specifically of Dutch materials (2001). More recently, in work with Christopher Isett (2002), Brenner has returned to his initial formulation about agrarian class relations and gone well beyond Europe to look at an economically active part of eighteenth-century China, attempting to argue that differences in social relations cause differences in agricultural productivity.

The Brenner-Isett effort is part of a debate with Kenneth Pomeranz over explaining what he has called the “great divergence” between Europe and the rest of the world (Pomerantz, 2001). Pomeranz shows similarities in the performance of the advanced agrarian economies in Asia, especially China, and in Europe; in order to explain the subsequent divergence in economic fortunes, he stresses Europeans’ economic gains, especially in terms of resources, from the particular ways in which they developed production in the Americas. On the other hand, where Brenner and Isett affirm different agrarian social relations as basic to differences in trajectories of economic change, David Landes stresses what seem largely cultural factors. Together Brenner, Isett and Landes affirm the continued contemporary appeal that the ideas of Marx and Weber have for historians who make broad comparisons among large parts of the world.

A distinct addition to these comparisons is highlighted by Andre Gunder Frank, who aggressively argues (1998) for connections among the world’s economic regions and asserts that China was at the center of the world’s economy between 1500 and 1800, taking in large amounts of silver to fuel its expanding commercial economy. In contrast, R. Bin Wong suggests that the economic links made possible by the silver trade did not encourage the kinds of division of labor and movements of capital and labor that would come to characterize international trade after the mid-nineteenth century; he argues that a comparison of the early modern world economy with what follows offers important differences as well as parallels (Wong 2002).

**Beyond the East-West Divide**

Many uses of the comparative method in historical studies occur across the East-West divide of Eurasia. But there have also been comparisons that set this vast land mass off from still other continents. The anthropologist Jack Goody has argued that societies across Eurasia, from Japan to England and most points in between, shared structurally similar kinds of kinship systems, demographic regimes, and social structures. For him the major divide globally is between Eurasia and sub-Saharan Africa, where kinship and social structures differed from those of Eurasia largely due to small populations relative to land and the implications of this situation for techniques of economic production and social control (1971, 1976). Within this broad framing he has repeatedly criticized ideas about European uniqueness (1990, 1998).

Jared Diamond has drawn a related contrast between Eurasia and other continents in *Guns, Germs, and Steel*
(1997), suggesting that Eurasia had a geography well-suited to farming and animal domestication; this in turn supported more densely populated areas where more complex governments, sophisticated systems of communication, and increased resistance to diseases all developed. Diamond has very little to say, however, about the causes of variations within Eurasia, the terrain across which historians making comparisons have usually moved. The great sweep of Diamond’s history across space and through time depends on some basic comparisons between environmental and biological traits of Eurasia and other continents. Many books on environment and biology in world history, like Alfred Crosby’s Ecological Imperialism, stress connections made by European expansion rather than comparisons among different cases. Yet, common themes in environmental history can be seen through comparisons, as John Richards demonstrates in The Unending Frontier (2003). This history of the environment of the early modern world includes comparisons of agricultural settlement patterns on Taiwan, mainland China, and Russia; land use patterns in the Americas; and the hunting and fishing industries.

Comparative methods have been used implicitly or explicitly in historical studies for a long time. Explanations and interpretations of a particular phenomenon depend on comparing the case at hand with more familiar examples of the same or at least similar phenomena. Among historical works that are explicitly comparative, certain European experiences have often been taken as a benchmark against which to measure performance elsewhere. Whether Marxist or Weberian, this approach has motivated the search for similarities and differences between European patterns of political, economic, and social change and those in Africa, the Americas, and Asia. Many such efforts stress the differences that make Europe the historical paradigm, while others argue, in a related fashion, that historical change elsewhere in the world influenced by European principles and practices tends to result in comparable outcomes. Critics of what is usually a cheerful view of convergence often contend that Western expansion has been destructive, putting many populations into subordinate economic and political conditions. Yet, many recent historical comparisons have also moved beyond simple dichotomies, highlighting in more nuanced ways both similarities and differences and the way they interact to produce unique historical outcomes.

R. Bin Wong

Further Reading

Mechanical Predecessors

Programmable digital computers were developed just before the middle of the twentieth century, but the more general history of devices that help people think goes back to prehistoric times, when someone first carved marks on a stick to count the cattle in a herd or mark the days in the phases of the moon. Complex additions and subtractions were done in ancient days by arranging pebbles in piles on the ground, and our word calculate derives from the Latin word *calculus* or pebble. The most complex known “computer” of classical civilization is the remarkable geared Antikythera device, which apparently was designed to predict the motions of the sun, moon, and planets. Found in a shipwreck on the bottom of the Mediterranean Sea, it is believed to date from about 80 BCE.

Computers have transformed work, communication, and leisure activity, and they promise future changes of equal magnitude. For many years, computer technology was dominated by groups in the United States, because that nation had the largest single market and its government invested heavily in military applications and fundamental science and engineering. But many nations contributed to the technological basis on which computing arose, and with the development of the World Wide Web computing became a global phenomenon.
father of computing because around 1835 he designed a mechanical calculator that could be programmed with punched cards. Science fiction writers William Gibson and Bruce Sterling wrote a novel imagining that Babbage succeeded in building it, launching a golden age of British scientific and technological dominance but magnifying social problems. However, in reality Babbage failed, and historian Doron Swade estimates that his influence on the development of electronic computers was insignificant.

The first comprehensive digital data-processing system using cards was developed by the American engineer Herman Hollerith, who began patenting his ideas in the 1880s. By 1902, when his machines were used to process the vast sea of information collected in the 1900 U.S. census, they already incorporated electric relays that could do conditionals (if-then operations).

**The Mainframe Era**

There is considerable debate among historians over which programmable, electronic digital computer was first or most influential. By 1941, professor John Atanasoff and graduate student Clifford Berry had created a demonstration machine at Iowa State University, but they did not develop it further. In Britain, a special-purpose electronic computer called Colossus began cracking German codes in 1943, but its design was kept secret for more than three decades. Perhaps the most influential early electronic digital computer was ENIAC (Electronic Numerical Integrator and Computer), completed at the University of Pennsylvania in 1946 by a team headed by physicist John W. Mauchly and engineer J. Presper Eckert.

ENIAC’s primary job was calculating accurate artillery firing tables for the U.S. Army. In the frenzy of World War II, many new models of long-range guns were being produced, and soldiers in the field needed complex tables to tell them how to aim to hit a target at a certain distance under various conditions. It was impossible to fire the guns under all the likely conditions, so data from some judiciously chosen test firings were used to anchor elaborate sets of mathematical calculations. Vannevar Bush, who was the chief science advisor to President Roosevelt, had a huge mechanical analog computer, the *differential analyzer*, built for this purpose in 1930. In theory, an electronic computer would be much faster and more accurate, but there were serious questions about whether it could be sufficiently reliable, because before the development of transistors they were built with vacuum tubes that tended to burn out. ENIAC weighed 30 tons, covered 1,800 square feet, and contained 18,000 vacuum tubes.

ENIAC’s data input and output employed Hollerith’s punch cards, a method that remained one of the standard approaches through the 1970s. However, programming was done manually by setting hundreds of rotary switches and plugging in wires that connected electronic components. Mauchly and Eckert designed a successor that could store a program in its memory. They formed a small company, launched a line of machines called UNIVAC, and then sold out to a private company in 1950. This example typifies mid-twentieth-century computing. The technology for large and expensive mainframe computers was developed with government funding for military purposes and then transferred to the civilian sector where it was used by large corporations for
financial record-keeping and similar applications. Much of the research work was done at universities, and the availability of a few mainframe computers on campus gave scientists the chance to adapt them to many research purposes.

**The Personal Computer**

The birth of the computer industry involved nothing less than development of an entire computer culture, including programming languages and compilers to control the machines, networks and input-output devices to transmit information between users and machines, and new courses in universities leading to the emergence of computer science and engineering as a distinct field. For years, the dominant model was expensive mainframe computers with batch processing of data—computer runs that were carefully prepared and then placed in a queue to await time on the mainframe—although there were some experiments with time sharing in which several individuals could use a computer simultaneously in real-time. Then, in the mid-1970s, both inside information technology companies and outside among electronics hobbyists, the personal computer revolution offered a radically new concept of computing.

In April 1973, Xerox corporation’s Palo Alto Research Center ran its first test of the Alto, the prototype desktop personal computer. Alto innovated many of the technologies that would become standard for home and office computers, including the mouse, windows and icons on the screen, desktop printing with many different fonts, incorporation of images and animations, and local area networks that allowed individuals to send files back and forth between their machines. Xerox was not able to exploit the technology at the time, because of the high cost and low performance of microelectronics. In the 1960s, Gordon Moore, a founder of the Intel computer chip corporation, propounded what has become known as Moore’s Law, the observation that the performance of computer chips was doubling every eighteen or twenty-four months. Alto’s technology finally hit the home market when the first Apple Macintosh was sold in 1984, soon followed by Microsoft’s Windows operating system.

Before any of the big information technology companies offered personal computers to the public, hobbyists were building their own from kits, notably the Altair first announced in the January 1975 issue of *Popular Electronics* magazine. A technological social movement, drawing on some of the cultural radicalism of the 1960s, quickly spread across America and Western Europe, although in retrospect it is difficult to estimate how much this radicalism contributed to the rapid advance of the computer revolution. It is true that Apple was founded in a garage
by two friends, and Bill Gates dropped out of college to help his buddies found Microsoft. For a few years after the Apple II computer appeared in 1977, an individual could write a commercially viable software program and start a small company to market it. But the greatest advances after the mid-1980s again required the combination of massive government funding and large corporations.

### Internet and the World Wide Web

Internet was born in 1969 as ARPAnet, a research network funded by the Advanced Research Projects Agency of the U.S. government that connected computers at the University of California at Los Angeles, the Stanford Research Institute, the University of California at Santa Barbara, and the University of Utah. In 1972 it was first demonstrated to the public, and in the same year it began carrying e-mail. More and more educational institutions, government agencies, and corporations began using the Internet—and finding new uses for it—until by the end of the 1980s it was an essential tool for research and had begun to demonstrate its value for business and personal applications. For example, in 1978 Roy Trubshaw and Richard Bartle invented the first online fantasy game or MUD (Multiple-User Dungeon) at Essex University in England, and in 1989 Alan Cox at the University College of Wales released his own version onto the Internet.

In 1990 at the high-energy physics laboratories of the Conseil Européen pour la Recherche Nucléaire (CERN) near Geneva, Switzerland, Tim Berners-Lee developed the first hypertext browser and coined the term World Wide Web. Early in 1993, University of Illinois student Marc Andreessen at the National Center for Supercomputing Applications, funded by the U.S. National Science Foundation, programmed the first version of Mosaic, the easy-to-use browser that would introduce millions of people to the Web. Both the Netscape and Microsoft Internet Explorer browsers were based on Mosaic, and it is estimated that more than 10 percent of the world’s population used the Internet in 2002.

The mainframe-timesharing concept of the 1970s has evolved into a client-server architecture. A server is a dedicated computer, often large, that houses centralized databases (in companies, universities, or government agencies) or connects directly to the Internet. Originally, clients were dumb terminals with little or no computing power of their own, but today they are powerful personal computers connected to the server and able to access its...
resources. A very different approach has arisen recently, called **peer-to-peer architecture**—for example, the music-
file-sharing programs like Napster that link personal computers over the Web, in which each computer simultaneously functions as both server and client. The **grid computing** concept distributes big computation jobs across many widely distributed computers, or distributes data across many archives, eroding the distinction between individual computers and the Internet.

**The Era of Ubiquitous Computing**

Computers today are found nearly everywhere, embedded in automobiles and grocery store checkout counters, or packaged as pocket-sized personal digital assistants that allow a user to send e-mail or surf the Web from almost anywhere. They have begun to take over the roles of traditional devices such as telephones and televisions, while other devices have become accessories to computers, notably cameras and music players. Old forms of computing do not die, but expand. Children’s toys now have vastly greater computing power than ENIAC, but ENIAC’s direct descendents are supercomputers capable of doing dozens of trillions of calculations per second.

Computer science continues to advance, and nanotechnology promises to sustain Moore’s Law for perhaps another twenty years, halting only after the smallest electronic components have shrunk to the size of a single molecule. Two decades of doubling every eighteen months means improvement by a factor of 8,000. That would imply the computing power of today’s desktop computer packaged in a shirt button and costing a dime. What will people do with such power?

In 2003, the Interagency Working Group on Information Technology Research and Development of the U.S. government identified the following “grand challenges” that computing could address in the following decade:

- Knowledge environments for science and engineering;
- Clean energy production through improved combustion;
- High confidence infrastructure control systems;
- Improved patient safety and health quality;
- Informed strategic planning for long-term regional climate change;
- Nanoscale science and technology: explore and exploit the behavior of ensembles of atoms and molecules;
- Predicting pathways and health effects of pollutants;
- Real-time detection, assessment, and response to natural or man-made threats;
- Safer, more secure, more efficient, higher-capacity, multimodal transportation system;
- Anticipate consequences of universal participation in a digital society;
- Collaborative intelligence: integrating humans with intelligent technologies;
- Generating insights from information at your fingertips;
- Managing knowledge-intensive dynamic systems;
- Rapidly acquiring proficiency in natural languages;
- SimUniverse [educational computer simulations]: learning by exploring; and
- Virtual lifetime tutor for all.

*William Sims Bainbridge*

See also Mass Media

**Further Reading**


Interagency Working Group on Information Technology Research and Development. (2003). *Grand challenges: Science, engineering, and
Confucianism

Confucianism, more a social and ethical philosophy than a religion, originated with Confucius (551–479 BCE), whose name represents a Latinization of Kong Fuzi, meaning Master Kong. With Daoism and Buddhism, it was one of the three ways of thought in traditional China. The era in which Confucius lived was one in which other major philosophers and founders of religious traditions also lived, including Siddhartha Gautama (the Buddha, c. 563–c. 483 BCE) in India, Zoroaster (c. 628–c. 551 BCE) in Iran, the Hebrew prophets in Palestine, and Thales (627?–547 BCE) in Greece. He shares with these figures the role of defining the classical heritage of the subsequent civilizations in those regions. In response to conditions of large-scale warfare, diasporas, and rapid social change, all five eras produced humankind’s first conscious responses to factors of global impact. The responses were ethical in nature and shared a human-centered belief in the human ability to forge new answers. The parallelism of developments in these five areas, constituting as it does a distinctive world epoch (which the philosopher Karl Jaspers called the Axial Age) intrigues the historical imagination to this day.

Early Confucianism

Confucius first sought ministerial rank in Lu, one of numerous states constituting a not-yet-unified China. Failure at that turned him toward teaching. It is as a teacher that he was remembered, and a philosophy of statehood (sponsored by the state) formed around his teachings. He initiated three traditions: teaching any who would learn (the democratic temper), being a private teacher (education for its own sake), and valuing the transforming influences of history, arts, letters, and music (liberal education).

Confucius wrote no books, but his teachings are collected in the Analects (Lunyu), a collection of 479 sections of sayings attributed to him by three generations of students and disciples. Disparate in subject, timeframe, and personal nuance, the work is unified by the fact that all its utterances have to do with Confucius. This work stands at the center of the Confucian tradition not only in China but in the entire East Asian context. The seventeenth-century Japanese Confucian thinker Ito Jinsai called it the most profound book in the universe.

Basic Principles

The three principal ideas in the Analects are ren, yi, and li. Ren means interpersonal humane regard, from which flows the entire Confucian social philosophy, in which a person sees his or her own humanity in another person. Yi is the impulse to do the right thing, to be ren. Li is the composite of all decorum and manners from the mundane to the loftiest of rites, the outward manifestations of ren and yi. These qualities underlie the Confucian interpersonal philosophy, and, along with the important qualities of trustworthiness (xin) and loyalty (zhong), give life to his view of state and society as consisting of the five cardinal relationships: ruler-ruled, father-son, husband-wife, elder brother-younger brother, and friend-friend. Confucius viewed the family as the microcosm of the state and the state as the macrocosm of the family. His philosophy is this-worldly. When queried about his view
of religion and the spirits, he said, “Not yet serving humans, how can one speak of serving the spirits” (Lunyu (analects), xianjin chapter).

Mencius and Xunzi
Early Confucianism had two other philosophers: Mencius (c. 371–c. 289 BCE) and Xunzi c. 298–c. 230 BCE), disciples of Confucius who lived some two hundred years after the master. Each with a work carrying his name, the two propounded the idealistic and realistic tendencies, respectively, inherent in the master’s teachings. Both works are examples of elegant Chinese prose. Mencius argued philosophically that human nature was innately good. From this premise, the Mencian program for humanity valued persuasion over coercion, exemplary action over dictated rules, and moral factors over utilitarian motives. Mencius appreciated the people as arbiter of moral rule, and in a three-tier order of importance, ranked them above the agrarian economy and the ruler. From this ordering, subsequent generations derived justification for a right of the people to rebel.

Mencius’s contemporary, Xunzi, on the other hand, argued that human nature was rapacious and untrustworthy and that morality was acquired by imposing the strictest rules of decorum and control. Good action was to be ritually coerced. Xunzi’s teachings encouraged a view of Confucius as a transmitter of ancient norms rather than as a moral exemplar. This realistic strain of Confucianism lends encouragement to Legalism, another philosophy that flourished in China at this time. Legalism, however, demanded strict laws and harsh punishments without hesitation.

State Confucianism
With the Qin dynasty (221–206 BCE), China went from a multi-state arrangement of power based on private and personal loyalties to centralized, bureaucratic rule based on public law. With the changeover from the Qin dynasty to the Han dynasty (206 BCE–220 CE), early Han rulers needed a reason of state different from the brutal legalism on which the Qin was based. The first Han emperor (Han Gaozu, reigned 206–195 BCE), a powerful and illiterate wielder of power, had the acuity to ask the Confucian scholar Lu Jia (d. 170 BCE) to discourse on why the Qin failed and Gaozu had succeeded. Lu Jia presented him with twelve lectures (Xin Yu, or New Discourses), the burden of which was that the Qin ruled with inhumanity and that Gaozu could enjoy a long rule by observing moral scruples. In 195 BCE, Gaozu paid a ceremonial visit to the grave of Confucius, a symbolic union of brute power and Confucian reasoning. Another Confucian scholar, Jia Yi (201–168? BCE), was asked by the Han emperor Wen (Han Wendi, reigned 179–157 BCE) to propound on the same theme. Jia Yi’s efforts (Xin Shu, or New Writings) brilliantly discussed the faults of the Qin and a vast range of topics on the art of ruling. Thus Confucian ethics and moral behavior entered Chinese politics of state. The grand fusion of moral and political power came when Emperor Wu (Han Wendi, reigned 179–157 BCE), listening to Dong Zhongshu (179–104 BCE), fully instituted Confucianism as a state religion. Dong’s work (Chunqiu fanlu, or Luxuriant Dew of the Spring and Autumn Annals) expounded on the role of the scholar in government, whom he claimed was the only appropriate person—not the priest and not the people—to know the
ways of heaven, earth, and man. Dong envisaged the ruler, advised by the scholar, as the link between those three realms. He incorporated ancient *yin-yang* thought (a system based on complementary opposites, as in positive-negative or male-female) into the emerging Han intellectual universe, giving Confucianism properties of a secular religion. The Chinese son of heaven (the emperor), as the first scholar of the land, from then on performed solemn Confucian rites of state. For the next two millennia, by virtue of such institutions as the civil-service examination system, censorial admonition, and imperial universities, the Chinese government fully deserved the adjective *Confucian*.

China after the Han was divided, politically and geographically. The north supported Buddhism, and the Confucian state could only survive in the south, and there only intermittently. China was reunited under the short-lived Sui dynasty (581–618), which favored Buddhism. The Sui, which reunified China in the name of Confucianism, exhibited strong Buddhist features in its ideological outlook. For six hundred years, from the late Han to the Tang dynasty, Buddhism and Daoism permeated Chinese life. Intellectual, aesthetic, and religious impulses were greatly stirred by these two outlooks, which competed robustly with Confucianism. In those centuries, these three persuasions together shaped the eventual Chinese cultural outlook: Confucianism supporting a successful public life, Buddhism supporting a religious life of compassion, and Daoism satisfying a psyche freed for imaginative excursions. But in the late ninth century, with the success of the Tang state and government, attention was focused once again on Confucianism.

**Neo-Confucianism**

Beginning with such late Tang thinkers as Han Yu (d. 824) and Li Ao (d. 844), philosophical attention turned to human nature. Centuries of Buddhist and Daoist influences awakened within Confucianists an interest in the languages of metaphysics and metempsychosis (the movement of the soul after death into a new body). A series of thinkers appeared during the Song dynasty (960–1279) to take up the task of explaining the universe, a task that had hitherto been the province of Buddhism and Daoism. Song thinkers like Zhou Dunyi (1017–1073), Shao Yong (1011–1077), Zhang Zai (1021–1073), the brothers Cheng Yi (1033–1107) and Cheng Hao (1032–1085), Lu Jiuyuan (1139–1193), and finally Zhu Xi (1130–1200) excited their age with intellectual vigor and perspicacity. Two schools emerged in Neo-Confucianism. One, the Cheng-Zhu named for Cheng Yi and Zhu Xi, who did the most for it, saw a phenomenal world of disparate objects and appearances, which they labeled *qi* and a noumenal world of ultimate organizing principles (*li*) behind the *qi*. The other school (*xin*), led by Cheng Hao and Lu Jiuyuan, viewed the universe as a organism, whole in itself, with the organizing principle of *qi* (matter-energy or mind; a different word from the previous *qi*) explaining micro- and macrolevels of human existence. The first school propounded a dualism that explained the seeming disparities between phenomena and their ultimate principles; the latter dispenses with the dualism and offers the mind, or matter-energy, as the means of uniting the knower and the known, thereby stressing human intuitive faculties. The two schools are known also as the *li* (principle) and *xin* (mind) schools.

Song philosophical efforts gave Confucianism a metaphysics and a way to explore one’s mind and psyche. Buddhist and Daoist influences ebbed, and Neo-Confucianism supported Chinese state and society for the next seven hundred years. Metaphysics and metempsychosis, however, were not the real goal of this Confucian revival, which aimed primarily at appropriating elements of Buddhism and Daoism to buttress its emphasis on human ethics. Using the new dualism, Neo-Confucianism could now point to individual human nature (*qi*) and ideal human nature (*li*), thus exhorting moral action throughout Chinese society toward higher ideals. At all levels of Chinese society, whether manifested in village rules or in the imperial civil-service examinations, and in all intellectual endeavors, whether literary composition or historical inquiry, there was now a Confucian norm to emulate. Thus, while Neo-Confucianism was dynamic in the making, it produced subsequent centuries of intellec-

*Hold faithfulness and sincerity as first principles.*

- Confucius (551–479 BCE)
tual, ideological, and pedagogical formalism in China, and its influences were pervasive in Korea, Vietnam, and Japan.

**Modern Fate and New Confucianism**

As China met the onrush of modern civilization from mid-nineteenth century on, Confucianism came under attack for having supported the entire Chinese body politic and social hierarchy. Intellectuals such as Hu Shi (1891–1962), Chen Duxiu (1879–1942), Wu Yu (1872–1949), and Lu Xun (1881–1936) called for its abolition, chanting “Crush the Confucian Establishment (Dadao Kongjiadian)” and hailing “Science” and “Democracy.” This iconoclasm produced in reaction a twentieth-century neo-traditionalism, nurtured by the call of Zhang Zhidong (1837–1909) in 1898, when China was at the nadir of national strength in face of foreign encroachments, to preserve Chinese culture for substance (ti) and exploit Western culture for application (yong). While the logic of this saying is faulty in reserving for one culture only morality and for another only instrumentality, it was eminently satisfying emotionally. Chinese who feared and bewailed the passing of Confucian efficacy embraced the sentiment. Thinkers in the twentieth century such as Liang Soumin (1893–1988) and Xiong Shili (1884–1968) constituted the first generation of the New Confucianism (Xin rujia).

After 1950, a second generation of New Confucianists arose in Hong Kong in contradistinction to intellectuals both on the Communist mainland and in Nationalist Taiwan. Amidst manifestos and educational endeavors, scholars such as Tang Junyi, Xu Fuguan, and Mou Zongsan envisaged a new Confucian synthesis combining Confucian moral life with Western modes of living. Their message brought forth a third generation of intellectuals, mostly university professors who wrote in the public sphere from the 1970s. This trend coincided and sometimes coalesced with the rise of an enthusiastic belief that Confucianism was compatible with capitalism. Economic leaps in Korea, Taiwan, Singapore, Hong Kong, and Japan—all nations historically touched by Confucianism—gave them the sobriquet of tigers or dragons of capitalist success. The position was that they were successful capitalist economies because of Confucianism. Whether mainland China for two millennia did not develop capitalism in spite or because of Confucianism has not been satisfactorily answered by the claimants. The bursting of the economic bubble in the late 1990s somewhat shook their faith in this belief.

As modern society’s rampant individualism has taken its toll on the collective conscience, New Confucianism has gained adherents who defend its collective ethic against individualism and debate its merits with proponents of individualistic human rights. The debate continues.

*Daniel W. Y. Kwok*

**See also** Confucius; Mencius

**Further Reading**


Confucius (551–479 BCE)
Chinese teacher and philosopher

Confucius, or Kongzi as he is called in Chinese, was an itinerant scholar, teacher, and sometime minor official in his home state of Lu during the latter part of the Zhou dynasty (1045–221 BCE), when the Chinese culture area was divided into a large number of competing states.

The very limited success he had as a political and moral reformer in his own lifetime contrasts sharply with the enormous influence his teachings had in future centuries, not only as the philosophical basis for official government doctrine and basic social morality in the unified Chinese empire after the second century BCE, but also in the surrounding area of Chinese cultural influence, notably in Korea, Vietnam, and Japan.

After the establishment of systematic contact with Europe in the seventeenth century, he became a world figure under the Latinized version of one of his honorific names in China, Kong Fuzi. Europeans saw in Confucius a distant inspiration and corroboration for the rational humanism of the Enlightenment. More recently, with a new wave of Confucianism carrying the sage to academies, classrooms, and business schools in the West, he has become both an Eastern contributor to global cultural synthesis and the presumed root cause for the cultural dynamic behind the so-called East Asian economic miracle of the late twentieth century.

Clearly these later reincarnations relate more to Confucianism than to the historical person, but however much they partake of the spirit and historical needs of later times, Confucius, the very human, nonmessianic man of the fifth century BCE, is the starting point.

There is an enormous amount of lore and legend about Confucius’s life, but most of it is historically unreliable. The contemporary textual evidence is limited to quotes from the Master and anecdotes about his life that were compiled by his students into a fairly short book, the Lunyu, or Analects. Less reliably, his thought may also be reflected in a history of his home state of Lu, the Chunqiu, or Spring and Autumn Annals, which he allegedly authored, and in several early Zhou dynasty texts which, because of his supposed editorship, became known as the Five (Confucian) Classics.

Certainly these earlier texts, five centuries old in Confucius’s time, influenced his thought. He was a self-professed traditionalist, holding up the supposed unity and virtue of the early Zhou dynasty and its de facto founder, the Duke of Zhou, as models for Confucius’s own dissolute time of constant interstate warfare and a disintegrating social order. On that point, it is important to note that Confucius came from a social stratum that had fallen from its original position as a warrior aristocracy to become scribelike functionaries for the increasingly powerful independent states of the later Zhou period. As ritual specialists based on their knowledge of the early Zhou texts, men of Confucius’s class preserved and cultivated the cultural unity of China in a time of political disintegration. For Confucius, li (social ritual) was the essential civilizing basis for the social and political order; only through li could the individuals realize their basic humanity. The patriarchal nature of the social order embodied in li was taken for granted.
In all of this Confucius appears to have been a conservative or even reactionary thinker who wanted to go back to an idealized past in which members of an educated elite had both status and power. But a call to revive the past can be a charge to the present. In some ways, Confucius was a remarkable innovator.

First, there was his emphasis on morality and concern for the welfare of the common people, a theme further developed by his most famous posthumous disciple, Mencius (or Mengzi, c. 372–c. 289 BCE). Politically, this was expressed in the famous “mandate of Heaven,” which made the ruler of “all under Heaven”—that is, of a politically unified Chinese culture area—responsible to a nonanthropomorphic supreme deity or cosmic principle (Heaven) for maintaining social harmony though nonselfish virtuous rule. Failure to do so could terminate a ruling house through the people’s exercise of the so-called “right of rebellion,” further explicated two centuries later by Mencius.

This was Confucius’s first check on tyrannical rule. The second, and ultimately more important, was his emphasis on cultivating knowledge and morality through education. Confucius fundamentally undermined the hereditary principle in a stratified society by taking poor as well as rich students. We can assume that his more impoverished students were the children of good families fallen on hard economic times rather than common peasants, but in the long run this practice of offering a literate, moral education to train people for political leadership laid the social foundation for the political order of imperial China. The ultimate product of such an education was the junzi, originally a term for hereditary noblemen, but for Confucius a term that signified an educated, cultivated, and morally centered “noble man.”

Confucius’s teachings, carried on and developed as the Ru school in the centuries after his death, were made the official doctrine of the imperial state during the Han dynasty (206 BCE–220 CE), partly as a backlash against the harsh absolutism of the short-lived Qin dynasty (221–206 BCE). Though much changed in subsequent periods, Confucius’s moral emphasis would form the basis for personal self-cultivation and social harmony in the world’s most enduring political structure and cultural formation—not a bad legacy for a frustrated politician turned teacher.

See also Confucianism

Further Reading


Congo

See Kongo

Congress of Vienna

The Congress of Vienna was a series of meetings involving most of the European heads of state held in Vienna, the capital of the Austrian empire, between September 1814 and 9 June 1815. The purpose of the Congress was to redraw the map of Europe after years of chaos resulting from the Napoleonic and French revolutionary wars (1792–1814). Its proceedings were initially dominated by the four powers of the victorious
allied coalition that had defeated Napoleon. Britain was represented by foreign secretary Viscount Castlereagh (Robert Stewart). Prussia was represented by foreign secretary and chancellor Prince Carl von Hardenberg, Russia by Czar Alexander I (1777–1825), and Austria by Prince Klemens von Metternich (1773–1859), who emerged as the architect of the Congress. The defeated French were represented by Charles-Maurice de Talleyrand (1754–1838).

Although Metternich acted as host, there was no formal opening of the Congress, and meetings began in September as delegations arrived. While the major states debated the key issues, delegates from lesser European states dealt with issues such as navigation rights and attended lavish receptions held by the Austrian government. The Congress dissolved after the signing of the Final Act, 9 June 1815.

**Preliminaries**

With his armies defeated Napoleon Bonaparte resigned as emperor of France on 11 April 1814 and went into exile on the Mediterranean island of Elba. Allied armies occupied Paris and the prerevolutionary Bourbon dynasty was restored to the throne of France. Louis XVIII (brother of the beheaded Louis XVI) became king, with Talleyrand as foreign secretary. The four allies signed a peace treaty with the new French government on 30 May 1814 known as the First Peace of Paris. Under the terms of the treaty France’s borders were rolled back to what they had been in 1792. The final clause in the treaty also specified that all states engaged in the current war should meet in Vienna to resolve outstanding territorial issues.

**Territorial Arrangements**

Metternich’s major objective at the Congress was to ensure that France was surrounded by states strong enough to contain any future French attempts at expansion. Metternich wanted to create a balance of power in Europe that would maintain stability. The Congress of Vienna went on to formalize many territorial arrangements previously agreed upon by the four major allied states. The Kingdom of the Netherlands, which included Belgium and Holland, was created as a strong state on France’s northeastern frontier. The Italian state of Piedmont-Sardinia played a similar role on France’s southeastern frontier. In central Europe Napoleon’s Confederation of the Rhine was abolished and replaced by thirty-nine German states grouped loosely together as the German Confederation, with its capital in Frankfurt. The Confederation included German-speaking areas of Prussia and Austria. It also superseded the three hundred-plus German states that had existed under the auspices of the Holy Roman Empire prior to the French revolution. Prussia was given land on the west and east banks of the Rhine river in order to garrison an army that could march quickly on France in case of an emergency. Austria was meant to have the dominant role in the German Confederation and the Austrians were given presidency of the Confederation. Austria was also to be the dominant power on the Italian peninsula. Austria retained possession of the wealthy northern Italian province of Lombardy and was granted control over the neighboring and equally wealthy province of Venetia. Members of the Austrian royal family, the Habsburgs, were placed on most of the thrones of the remaining Italian states to ensure Austrian dominance and keep the French out.

The Congress recognized British possession of several important overseas territories conquered during the Napoleonic wars. Britain gained the island of Helgoland in the North Sea, Malta in the Mediterranean, the Cape Colony of southern Africa, the island of Ceylon off India’s southern tip, the islands of Mauritius, Seychelles, and Rodriguez in the Indian Ocean, and the islands of Saint Lucia, Trinidad, and Tobago in the Caribbean. Many of these possessions were economically lucrative and gave Britain control over key shipping routes.

The Congress acknowledged the status of Switzerland as an independent and neutral state. Finally, territorial changes were undertaken in Scandinavia. The king of Denmark, too long an ally of Napoleon, lost his possession of Norway to Sweden. Sweden, in turn, was forced to give Finland to Russia.

---

*The skill of making, and maintaining commonwealths, consisteth in certain rules, as doth arithmetic and geometry; not, as tennis-play, on practice only; which rules, neither poor men have the leisure, nor men that have had the leisure, have hitherto had the curiosity, or the method to find out.* • **Hobbes (1588–1679)**
The Poland–Saxony Dispute

A disagreement over eastern Europe very nearly disrupted the Congress. Alexander I made clear that he wanted to gain control over all of Poland, including Polish provinces previously ruled by Prussia. By way of compensation, the Prussians were to be given the wealthy German kingdom of Saxony. The Austrians and British protested, fearing the growth of Prussian and Russian power in central and eastern Europe. The dispute soon escalated to serious proportions. Talleyrand saw an opportunity to split the victorious alliance and regain French influence in Europe. He sided with the British and Austrians, and on 3 January 1815, the three powers signed a secret alliance. Each signatory pledged 150,000 troops in the event of war. However, Europe had suffered enough war and a compromise was found. Russia gained most, but not all, of Poland. Prussia gained about 40 percent of Saxony, with the rest remaining independent.

The Final Act and Long-Term Impact

In late February Napoleon escaped from exile and landed in France on 1 March 1815. Napoleon forced Louis XVIII to flee Paris, raised an army, and went to war again with the allies. However this had little impact on the Congress of Vienna. The Final Act was signed on 9 June, and Napoleon was defeated for the last time at the Battle of Waterloo on 18 June 1815.

Most historians agree that the Congress of Vienna created a durable peace in Europe. Although wars broke out among individual European states in the nineteenth century, there was no general war until 1914, a reflection of the fact that no one power left Vienna with unresolved grievances. Britain was arguably the big winner, having won dominance over shipping routes all around the globe, setting the stage for Britain’s remarkable imperial expansion in the nineteenth century.

Paul W. Doerr

See also Austro-Hungarian Empire; Napoleonic Empire

Further Reading


Constantine the Great

(reigned 306–337 ce)

Roman emperor

Though not baptized as a Christian until he lay upon his deathbed, for the bulk of his reign Constantine favored Christians by promoting them into the Imperial administration and giving them a variety of tax breaks and financial incentives—all to the disadvantage of members of other religions (notably the pagans); by presiding over their Ecumenical Councils and settling doctrinal disputes among them—including the first state-sponsored persecutions of Christian “heretics”; by restoring and building churches (such as the original St. Peter’s in Rome and the Church of the Nativity in Bethlehem, both
Now it was made in the following manner. A long spear, overlaid with gold, formed the figure of the cross by means of a transverse bar laid over it. On the top of the whole was fixed a wreath of gold and precious stones; and within this, the symbol of the Saviour’s name, two letters indicating the name of Christ by means of its initial characters, the letter P being intersected by X in its centre: and these letters the emperor was in the habit of wearing on his helmet at a later period. From the cross-bar of the spear was suspended a cloth, a royal piece, covered with a profuse embroidery of most brilliant precious stones; and which, being also richly interlaced with gold, presented an indescribable degree of beauty to the beholder. This banner was of a square form, and the upright staff, whose lower section was of great length, bore a golden half-length portrait of the pious emperor and his children on its upper part, beneath the trophy of the cross, and immediately above the embroidered banner.

The emperor constantly made use of this sign of salvation as a safeguard against every adverse and hostile power, and commanded that others similar to it should be carried at the head of all his armies.


Selection from Eusebius: The Conversion of Constantine

The son of the Western Emperor Constantius Chlorus (reigned 305–306 CE), Constantine was acclaimed emperor by the legions in Eboracum (modern York, England) after his father’s sudden death. A series of civil wars ensued, ending with Constantine in sole control of the empire by 324 CE. In 330 he founded a new—and overtly Christian—capital in the ruined city of Byzantium, renaming it “Constantinopolis” (Constantinople, now Istanbul) after himself, which proved strategically important; in fact, it protected medieval Christendom from Islamic conquest. In 337 on his way to attack the Persians, Constantine died of natural causes at about the age of fifty-two near ancient Nicomedia, and was buried as a Christian in Constantinople.

Though his mother (canonized as St. Helena) had long been a Christian convert, before the Battle of the Milvian Bridge (312 CE), Constantine and many of his soldiers seem to have been devotees of Mithraism, a pagan mystical religion associated with sun worship but holding some doctrinal and ritual similarities to Christianity, including the symbol of the cross. Accounts differ somewhat, but on the eve of battle with his rival Maxentius at the Milvian Bridge, Constantine claims that he saw a cross against a bright sun and the words “In hoc signo vincit” (“By this sign shall you conquer”). Instructing his soldiers to affix this cross symbol to their shields, Constantine won the battle—and the Western empire.

Somewhat later, under the influence of his mother and her confessor, the Christian bishop Eusebius, Constantine became persuaded that his vision came not from Mithras but from Jesus Christ, the Christian god. The resulting Edict of Milan (313 CE) granted Christianity official toleration and marked the end of the pagan Roman empire. Though Constantine’s vision has often been seen as a cynical ploy to gain Christian favor, the very small number of Christians in the empire, especially in the western half (about 5 percent of the empire’s overall population was Christian, and most of lived in the eastern half), suggests that the vision and conversion should be seen instead as a bit of clever politicking on the part of the then-persecuted Christians to gain favor, if not ascendancy, in the empire. In this Constantine did not disappoint.

Besides promoting Christians into all levels of the Roman administration, Constantine issued a variety of edicts and orders giving Christians financial rewards and legal immunities not enjoyed by others. He also prohibited gladiatorial games and animal sacrifices, and in 330 CE, to finance the building of his new capital of Constantinople, ordered the ransacking of the pagan temples of
their treasures—bronze doors, gilt idols, and even their gold-shingled roofs—which disastrously affected the pagan cause. He even engaged in the first persecution of non-Christians by Christians. Between this clear favoritism and instructing his children in the new faith, Constantine sent the message that the route to power, influence, and riches now lay through Christianity.

To his horror, Constantine found that rather than a universal monolithic hierarchy, the Christian “church” consisted of mostly independent house-churches loosely confederated with no standardized doctrine, ritual, or scripture. As reported by Eusebius, Constantine considered himself a bishop, a new kind of Christian Pontifex Maximus, or priest-king, charged with the protection and promotion of Christianity—an example followed by his successors for the next millennium and more. To this end, as soon as he gained control of the whole empire, he called Christian leaders to a council at Nicaea (325 – 326 CE), where his insistence on standardizing beliefs and practices defined “orthodoxy” and pushed Christianity into a monolithic hierarchical autocracy; his insistence on standardization also led to the first state-sponsored persecution of Christians (the “Donatists”) by Christians, setting yet another dubious example for his successors.

Constantine was both the best and the worst thing that ever happened to Christianity. Without him, Christianity would never have become the critical cultural, political, and religious force that it did, since nowhere has it become a majority religion without state-sponsored favoritism and persecution. Constantine’s insistence on hierarchical autocracy, an orthodoxy of ritual and doctrine, and the persecution of nonbelievers ensured Christianity’s triumph (and some of its greatest crimes). It also laid the foundation for three critical events in European and world history—the Papal Revolution, the Crusades, and the Protestant Reformation. Without Constantine’s conversion, the modern world as we know it would not exist.

Jerome S. Arkenberg

See also Byzantine Empire; Roman Empire

Further Reading

Consumerism

Consumerism involves a devotion to the acquisition of goods not needed for basic, or even embellished subsistence. It is further associated with a desire for novelty, even a commitment to faddism, rather than contentment with established styles sanctioned by tradition. The spread of consumerism, socially and geographically, is one of the most significant developments in world history over the past two to three centuries. Growing commitments to consumer culture represent not only a sign of economic change and growing prosperity, but also a significant shift in values.

Beginnings
Consumerism is not, of course, entirely modern. Elites in various societies indulged in aspects of consumerism from the advent of civilization if not before. Bursts of consumerism occurred, for example, at various points in Chinese history, as wealthy landowners and aristocrats built houses with showy furniture and fancy gadgets, and showed off a parade of eye-catching costumes. The passion of Roman elites for Chinese silks was an example of consumerism, and so was the domestic indulgence in jewelry common in wealthy Muslim homes in the Middle East.

There were, however, several constraints on consumerism in traditional societies. One was the poverty of the
majority of the population, which precluded significant consumerist commitments. Even elites frequently shied away from full-blown consumerism, particularly in the sense of avid interest in novelty as opposed to established styles. Religious objections often surfaced, and many societies devoted surpluses to glittering religious expenditures more than personal consumerism. Many societies periodically enforced sumptuary laws, which punished displays that were nontraditional or that threatened established social boundaries. Leading consumerists in China were sometimes actually put to death by a government intent on maintaining traditional styles and values. Consumerism, in other words, was not an automatic result of wealth.

Modern Consumerism

Until fairly recently, historians treated consumerism (if they paid any attention at all to what was sometimes seen as a frivolous topic) as a result of industrialization. As output and living standards rose, people were encouraged to use surplus to buy new goods. While this relationship retains partial validity, major discoveries in the past two decades locate the effective origins of fully modern consumerism in Western Europe in the seventeenth and eighteenth centuries. A craze for buying new things and keeping up with the latest fashions spread widely in Western society, affecting urban populations particularly but creeping into the countryside as well—as with domestic manufacturing workers in eighteenth-century Switzerland who defied village customs by indulging in urban-style clothing. Massive markets for secondhand clothing developed, for people who had the consumerist urge but not the money to follow through easily, and thefts of fashionable clothing rose as well. Not only clothing but household furnishings and tableware reflected growing consumerist interests, and there were also some intriguing sidelights, like the frenzy for tulip buying (including paintings of tulips) that swept through Holland in the second quarter of the seventeenth century.

This modern consumerism had three characteristics. First, it was cross-class. While social distinctions were not obliterated, one of the joys of modern consumerism involved buying the same kinds of styles as one’s betters—if perhaps of lower quality. Many social critics noted this feature, bemoaning (and exaggerating) the loss of the

Consumer Movement: Ralph Nader

Ralph Nader has become one of the most controversial figures in U.S. politics. As a law student at Harvard in 1958, Nader penned “The Safe Car You Can’t Buy,” an article that was published in the Nation, a prominent journal. He wrote:

It is clear Detroit today is designing automobiles for style, cost, performance, and calculated obsolescence, but not—despite the 5,000,000 reported accidents, nearly 40,000 fatalities, 110,000 permanent disabilities, and 1,500,000 injuries yearly—for safety.

Nader soon moved on to Washington, where he began his career as a consumer advocate. In 1965, he published Unsafe at Any Speed, a bestselling indictment of the auto industry and its poor safety standards. Largely because of his influence, Congress passed the 1966 National Traffic and Motor Vehicle Safety Act. Nader was also influential in the passage of 1967’s Wholesome Meat Act, which called for federal inspections of beef and poultry and imposed standards on slaughterhouses, as well as the Clean Air Act and the Freedom of Information Act, which allows citizens access to much of the information held by the U.S. government.

Nader has not been alone in his fight. Nader’s principles caught on, and soon activists, known as “Nader’s Raiders,” joined his modern consumer movement. They continue to press for protections for workers, taxpayers, and the environment and fought to stem the power of large corporations. Though no doubt controversial, Nader has been a strong force for social change that benefits millions of citizens.

ability to tell a person’s social station by looking at his or her clothes. Consumerism also crossed gender lines. Women were often unduly blamed for frivolous consumerism—men participated heavily as well—but it was true that women found considerable self-expression in consumerism. New interests in tea sets and silverware, for example, followed from women’s new authority to regulate mealtimes in the family, and furniture and clothing often sparked interest.

Second, modern consumerism involved a new apparatus of shops and commercial inducements. Scholars have found the basic elements of consumerist apparatus present in places like Britain in the later eighteenth century. Not only did shops spread, but owners became adept at arranging goods in enticing window displays; they offered loss leaders to lure people in for bargains as a result of which they would also end up buying other goods; they advertised widely, often using aristocrats to testify to the qualities of products like razors or teas. Josiah Wedgwood, a leader in pottery production in eighteenth-century Britain, kept careful track of the shops that sold his goods, experimenting with new styles but with enough market research to learn what ones were catching on, what ones should be pulled back. There were even early signs of consumerist leisure: Commercial circuses, for example, began in France in the late seventeenth century (though they had been known earlier in Asia). By the late eighteenth century otherwise traditional rural festivals were beginning to import entertainers from the cities.

Third, modern consumerism acquired new meanings for the people involved. Of course it reflected Europe’s growing prosperity (for those with some property—not yet for everyone). It also reflected new levels of international trade. Mass enthusiasm for imported sugar has been labeled the first instance of modern Western consumerism, while the seventeenth- and eighteenth-century interest in tea and coffee helped support the larger enthusiasm for new tableware. But cultural change was involved as well. For many people, religious focus was declining, and consumerism was an outlet for growing secularism. A more commercial society blurred class lines, while population growth jeopardized established place. Many children, for example, could no longer count on inheriting land or artisanal shops from parents. They might do all right financially—working for wages in domestic manufacturing for instance—but they did not have access to conventional social markers. Consumerism, as a means of showing a new kind of identity and success, could play a crucial role in this context. Growing interest in romantic love, another current of the eighteenth century, also contributed to the commitment to acquisition, particularly, of course, in personal apparel. Additionally, modern consumerism involved a new desire for personal comfort. The use of umbrellas, for example, provided shelter from bad weather, though some British stalwarts objected to this “unnatural” indulgence as umbrella purchases became common in the eighteenth century. Historians debate the precise mix of factors involved, but they agree that consumerism reflected serious values changes, and not simply the imposition of new lures by greedy shopkeepers.

It is clear, finally, that modern consumerism preceded industrialization in the West, helping in fact to promote it through heightened demand for products like clothing. Growing enthusiasm for cotton cloth, one of the motors of early industrialization, reflected not only its cheapness but also the ability to dye it in bright colors, catching the eye of eager consumerists.

Industrialization and Social Critiques

Consumerism and industrialization combined to promote further changes in commercial apparatus. A cluster of shops in Paris merged in the 1830s to form the world’s first department store, and the spread of this kind of outlet marked the further progress of consumerism on a global basis. By the 1860s and 1870s, scientists and popularizers were also noting a brand-new consumerist disease, kleptomania, both in Western Europe and the United States, with middle-class women the most common victims. Here was a sign, if a deviant one, of the
The poverty of our century is unlike that of any other. It is not, as poverty was before, the result of natural scarcity, but of a set of priorities imposed upon the rest of the world by the rich. Consequently, kind of personal passion that modern consumerism could entail. Emotional definitions changed. Envy had traditionally been criticized as a debasing emotion, but by the late nineteenth and early twentieth centuries it began to be praised as a motivation for healthy consumerism.

Modern consumerism made many people uncomfortable, which is not surprising given the magnitude of change involved. From the late eighteenth century onward, criticism dogged the phenomenon. Religious authorities objected to secularism—though by the late nineteenth century some mainstream Christian groups came to terms with consumerism, noting that a good appearance was one of God’s blessings. Social critics of course attacked the presumptions of the lower classes and the weaknesses of women. Emile Zola’s novel *Germinal* was a long harangue against department stores and women’s frailty, which distorted family budgets and led to ruin. Medical authorities might get into the act, noting the bad health effects of too much indulgence (particularly, of course, in food and drink). Socialists sometimes opposed consumerism in the name of purer proletarian tastes; but sometimes they merely insisted that workers be given the means to join in consumerism. Anticonsumerism was also an element in anti-Semitism in Western Europe, with Jews blamed for department stores and other lures to depraved taste. While some of these reactions eased over time—there was less anticonsumerism in the West by the later twentieth century—they remain a factor.

**Global Consumerism**

Modern consumerism began to spread beyond Western Europe during the nineteenth century. The United States followed European fashions in its imports of clothing and food from the 1840s onward, though there had been some signs of consumerist interest earlier. The purchase of watches in rural New York, in the 1820s, has been traced to a desire to copy English fashion, only later leading to an actual interest in keeping more accurate track of time. Department stores spread to major Russian cities by the 1850s, indicating a new upper-class interest in stylish consumerism. Japan’s opening to the West involved quick assimilation of many consumer interests. Department stores began to mark the fashionable Ginza district in Tokyo by the 1890s. The same kinds of outlets showed up in Western-influenced Shanghai by the early twentieth century. These geographical extensions of consumerism were not automatic. Asian department stores often mixed traditional displays with Western-style consumerism. They offered concerts and other lures to demonstrate that consumerism was culturally acceptable. Even with this, many locals stayed away, convinced that there was nothing in these outlets that they wanted; and of course there was massive criticism of consumerism not only along the lines already present in the West, but on grounds of its debasing foreignness. As before, the spread of consumerism involved really new values, including an interest in challenging existing social lines and power structures, and the process did not occur overnight.

The spread of consumerism also brought new possibilities for protest. A number of boycotts developed, seeking to use denials of consumerism as a means of attacking foreign intervention or other issues. The Boston Tea Party, before the American Revolution, was a consumerist protest of sorts. By the 1920s Indian nationalists and others frequently used boycotts of foreign products to attack British imperialism, with some success. African Americans employed boycotts in places like Baltimore during the interwar period to protest racial injustice. Boycotts were involved in attacks on apartheid in South Africa in the 1980s. By this point, also, human rights groups frequently spurred boycotts against multinational companies accused of shoddy labor practices in Third World countries. Other kinds of consumer movements in the twentieth century sought protection against fraud and poor quality.

**The Twentieth Century and Beyond**

Consumerism intensified in the twentieth century. Again, both apparatus and motivation were involved. Advertising became slicker, using new imagery and technology and appealing more deeply to emotion. The first real
advertising agency arose in the United States, in the 1870s; the phenomenon spread to Europe during the early twentieth century. Not only growing prosperity but also growing discontent with work promoted new levels of consumerist interest. Many factory workers, bored or nervous on the job, turned to consumer pleasures to compensate. The same pattern could affect middle-class people, increasingly employed in large, faceless bureaucracies and unable to claim traditional satisfactions in personal entrepreneurship.

The new wave of consumerism, from the late nineteenth century onward, fueled by these developments, involved the increasing commercialization of holidays like Christmas. It involved the growing participation of children, surrounded from infancy with store-bought items like teddy bears (named for the American president). Experts began to urge parents to use toys and other consumer items to encourage good behavior. Consumerism also spread widely to the field of leisure, as most mass leisure came to involve purchased pleasures and spectatorship, from sports to movies.

Western leadership in twentieth-century consumerism increasingly involved American initiatives, as the United States became the world’s leading consumer society. By the 1990s, however, Japan claimed a share in pioneering consumer fashions, as the sale of “cool” products became the nation’s large single export category.

By the later twentieth century, also, consumerism increasingly intertwined with a global youth culture. Many young people found participation in consumer fads a means of expressing themselves against parental and other adult control. Again, consumerism had meanings, in terms of power relationships and personal expression, that went beneath the surface. The idea of participating in cosmopolitan styles, and being seen in the process, provided significant incentives for many young people.

The geographical spread of consumerism continued, of course. Soviet Russian society attempted to “co-op” consumerism, with state-run department stores like GUM; but the merger never entirely worked, and consumerist dissatisfaction with communism played a role in the collapse of the system. Urban African participation in consumerism began at least by the 1920s; Chinua Achebe’s novel No Longer at Ease, set in 1920s Nigeria, deals with the inroads of consumer culture on traditional family values. Latin American participation increased: by the later twentieth century a trip to Disney World in Florida, complete with shopping spree, was a standard expression of family success and doing right by one’s children. The idea of Christmas shopping spread to Muslim Istanbul, while the purchase of gifts and cards was increasingly added to the religious celebration of Ramadan.

Access to consumerism remained uneven, of course. Many rural areas in Asia and Africa were barely touched, and this fact added to the increasingly important rural–urban divide in countries like China. Outright resistance continued as well. The rise of religious fundamentalisms from the 1970s onward represented in part a protest against consumerist values, including their frequent association with sensuality and sexual license. Many post-communist Russians resented consumerist displays by the “new Russian” middle class, partly, of course, from envy but partly from an older belief that community sharing should take precedence over individual expression. The process of assimilating consumerism has continued into the early twenty-first century.

Peter N. Stearns

Further Reading


Containment

A policy aimed at containing, or restricting, a hostile or potentially hostile power through use of diplomacy and possibly force is referred to as containment. Historical examples of containment include the coalitions designed to contain French power in Europe during the eighteenth and early nineteenth centuries, or Chinese attempts to contain Vietnamese and Soviet influence in Southeast Asia after 1975. Containment can also be seen in the actions of Britain on the eve of World War II. During the mid-to late 1930s the British government pursued a diplomatic strategy known as appeasement in dealing with Nazi Germany. However Hitler proved unappeasable and uninterested in long-term peaceful solutions. The Nazi occupation of Czechoslovakia on 15 March 1939 meant the end of appeasement. Instead the British resorted to containment by issuing a series of territorial guarantees to countries in Eastern Europe, most notably Poland. According to the guarantee, should Poland find itself attacked by Germany, Britain would come to its defense. In this manner, the British were attempting to contain German power in Europe. The Germans attacked Poland on 1 September 1939 and Britain declared war on Germany two days later. The term “containment” has many historical examples but is usually associated with the policy followed by the United States toward the USSR during the Cold War.

Origins of Cold War Containment

The months immediately following the end of the World War II saw deterioration in relations between the Western powers and the Soviet Union, who had formerly been allies in the war against the Axis states. British and American statesmen watched in alarm as the Soviets solidified their control over Eastern Europe. The Soviets seemed to be threatening Turkey and Iran, while a Communist insurgency in Greece steadily gained force. The Americans and British also blamed the Soviets for the slow pace of talks over the future of occupied Germany. An atmosphere of mistrust and unease settled over East-West relations.

George Kennan and Containment

On 22 February 1946 George Kennan (b. 1904), a staff member of the American embassy in Moscow, and long-time Soviet expert, sent a document analyzing Soviet policy to his superiors in Moscow. Kennan’s analysis became known as the “Long Telegram,” and was published in 1947 in the influential American journal Foreign Affairs. The journal editors attributed the article to “Mr. X,” even though it was generally known that “Mr. X” was actually George Kennan. Kennan’s analysis of Soviet foreign policy found widespread support in Washington and soon became the theoretical basis of containment.

Kennan believed that the USSR, for ideological and historic reasons, was an inherently expansionist power. In order to justify their tyranny, Kennan argued, the Soviet leaders had to convince their people that the USSR was threatened by hostile capitalist powers. The Soviets would seek to expand territorially because that had been the pattern of Russian history. Surrounded by hostile nomadic tribes, living on an open, vulnerable plain, Russian rulers had found security in conquest. As well, Communist ideology demanded that workers in foreign countries be “liberated.” Kennan noted that if the Soviets were confronted at one point they would simply retreat and seek to expand somewhere else. Kennan thought that the Soviets could not be trusted in negotiations. They might agree to tactical concessions but would never give up on their historic mission. However, Kennan did not believe that the Soviets wanted war, since they took a long-term view and were content to wait for historical trends to play themselves out. Since the collapse of capitalism was inevitable, according to Communist theory, there was no need to take dangerous risks. Kennan recommended that the United States pursue “a policy of firm containment, designed to confront the Russians with an unalterable counter-force at every point where they show signs of encroaching upon the interests of a peaceful and stable world” (Kennan 1947, 581). Kennan speculated that if
the USSR were unable to expand then long-term internal pressures would force drastic changes in the Soviet system.

**Critics of Containment**

Kennan’s views, although popular in the government, provoked some criticism when made public. Walter Lippmann, a popular syndicated newspaper columnist and foreign affairs commentator of the time, wrote that containment would involve the United States in numerous conflicts around the globe. The resources of the United States would be overextended and worn down. Others on the political left criticized containment on the grounds that they opposed any confrontation with the USSR. Henry Wallace, a member of Truman’s cabinet and a former vice president under Roosevelt, publicly broke with Truman and said that Soviet policy was driven not by expansionism but rather by fear. Containment would only worsen the situation. In 1948 Wallace ran against Truman in the presidential election, but finished a poor fourth.

**Containment Strategies**

Kennan’s views provided the basis for many American policies toward the USSR in the years to come. Early in 1947 the British government informed Washington that it would be unable to continue aid to the government of Greece, which was then fighting a bitter civil war against the Greek Communists. Since it was assumed that the Soviets were supporting the Greek Communists, Washington feared that the fall of the Greek government would bring Soviet power to the shores of the Mediterranean. On 12 March 1947 President Harry Truman, in a bid to gain Congressional support for a $400 million aid package to Greece and Turkey, proclaimed what has come to be known as the Truman Doctrine. Truman said that he believed that “it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures. I believe that we must assist free peoples to work out their own destinies in their own way” (Dunbabin 1994, 83). Truman added that American help should focus on economic and financial aid.

At the same time concern in Washington over the growth and popularity of West European Communist parties led to the conclusion that a slow economic recovery from the war was contributing to the appeal of the Communists. Accordingly on 5 June 1947 United States secretary of state George Marshall announced a program of extensive economic aid to European states in need. Formally known as the European Recovery Plan, it is more popularly remembered as the Marshall Plan. The USSR and its satellite states refused to participate, stating that they were not about to open their economies and societies to U.S. trade and U.S. auditors. Over the next four years most Western European states requested Marshall Plan assistance, with totals reaching more than $17 billion. The Marshall Plan was fundamental to the West European economic recovery of the postwar era, although Communist parties in France and Italy remained popular for many years.

Although Kennan had emphasized nonmilitary economic and diplomatic strategies for containment, and had participated in the drawing up of the Marshall Plan, the intensification of the Cold War meant that military containment came to the fore. In August 1949 the USSR successfully tested an atomic bomb, breaking the United States monopoly on atomic weapons. In October 1949 the Chinese Communists, led by Mao Zedong, came to power in China. Finally, on 25 June 1950 the armies of Communist North Korea invaded South Korea. Although South Korea had never previously been seen as vital to United States strategic interests, Truman decided that he could not stand by. The United States entered the war on the side of the South Koreans and soon became bogged down in a bloody three-year stalemate.

Earlier in 1950 the United States government had undertaken a comprehensive review of its global defense strategies. The review, completed by September, was obviously influenced by the events of 1949 and the Korean War. Known as NSG-68, the review recommended a massive buildup of American atomic and conventional defense forces. The document almost certainly marked a turn toward a military emphasis in containment. Kennan later protested that by “counter force” he
had meant more than just military force, but such distinctions were quickly lost in the heated atmosphere of the Cold War.

Truman did not run in the 1952 presidential election, which was won by Republican Dwight D. Eisenhower. During the campaign the Republicans bitterly criticized containment for abandoning the people of Eastern Europe to a tyrannical political system. John Foster Dulles, soon to be Eisenhower’s secretary of state, promised to “roll back” Soviet influence in Eastern Europe. But Dulles recoiled from the idea of war, and so could do little more than continue containment after 1952. Dulles knew that a direct attempt to intervene in the Soviet Eastern bloc would provoke full-scale war. Instead, Dulles assumed, especially after Stalin died in 1953, that forces of nationalism in Eastern Europe would do the job in bringing down the Soviet system. Yet another review of American defense strategy, carried out in 1953, came to the same conclusion. However, the Americans did escalate the propaganda war by improving the broadcast capabilities of Radio Free Europe.

**Containment after Korea**

The Korean War also posed continuing serious questions about what exactly containment meant. Was the United States to become involved in every single conflict around the globe where Communism was perceived to be a threat? Were some areas of the globe more valuable to the United States than others? Some commentators, such as Henry Kissinger, have pointed out that containment was essentially a defensive, reactive policy that conceded the initiative to the other side. Others have argued that proponents of containment grossly overrated the Soviet military threat, which in the early 1950s was still minimal in terms of atomic weapons. Containment was also said to have underestimated the usefulness of long-term negotiations in solving East-West problems.

During the 1950s supporters of containment conjured up the metaphor of a row of dominoes to illustrate what might happen if containment failed in any given area. The successful toppling of the first domino means the whole row will fall. A successful Communist takeover in any one country might prompt a whole series of takeovers, resulting in an eventual direct threat to the United States itself. The logic of containment resulted at least partially in American involvement in the Vietnam War in the early 1960s. Some feared that the loss of South Vietnam would topple other Southeast Asian states, so the United States became involved in a second major land war in Asia since 1945. The result was a costly and bitter conflict, deep social division in the United States, and the eventual military defeat of South Vietnam in 1975.

With military containment discredited, U.S. presidents still had to struggle with how to respond to perceived Soviet gains in what was seen as the zero-sum nature of the Cold War. In Angola and southern Africa in the late 1970s, and in Afghanistan and Central America in the 1980s, Washington relied on proxy forces to combat Soviet influence. The United States found dissident groups and organizations opposed to Soviet-backed Marxist states. Such organizations were then armed and supported by the U.S. Examples include the Contra rebels in Nicaragua, the mujahideen resistance factions in Afghanistan, and the UNITA movement in Angola.

The obvious decline of the USSR in the late 1980s prompted much retrospection on Kennan’s original ideas and the ways in which they had been used, or misused. In 1987 *Foreign Affairs* reprinted Kennan’s article in its entirety. Some saw Kennan as a far-sighted and perceptive observer of the USSR, while others decried what they felt was the distortion of his ideas and the high cost of military containment over the years.

Historically containment, in the context of the Cold War, will be remembered as a doctrine that did much to define the ‘battle lines’ of the Cold War. The wars fought under the banner of containment had a tremendous impact of the peoples of Asia and Africa. However, containment will also remain an important diplomatic tool in the new century and in the near future will most likely be applied to perceived ‘rogue’ states.

*Paul W. Doerr*

See also Diplomacy
Contraception and Birth Control

The history of birth control enables us to understand the global reverberations of an agenda for wider dissemination of contraceptive information in the early twentieth century. For most part, advocates of birth control in countries such as India, Japan, South Africa, Canada, Great Britain, and the United States came from privileged social, cultural, and economic backgrounds. Advocates of birth control found eugenic, Malthusian, and demographic arguments most compelling in making a case for national and international support for birth control and contraception. Some advocates also linked the demand for birth control to improved maternal health and national well being.

No history is complete without a set of historical actors; important participants in the debates on birth control dating from the 1920s onwards included such players as Mary Burgess, Kamaladevi Chattopadhyay, Raghunath Dhondo Karve, A. R. Kaufman, Edith How-Martyn, Eileen Palmer, Narayan Sitaram Phadke, Aliyappin Padmanabha Pillay, Margaret Sanger, Ursala Scott, Kato Shidzue, Marie Stopes, and Elsa Woodrow. As the above list—which does not purport to be complete—suggests, far from being a solely Western phenomenon, the demand for birth control was a complex intercontinental movement, with an active cohort that supported and sometimes competed with one another’s work across national boundaries. This cohort of activists collectively created a global propaganda effort to gain acceptance for their controversial demand both within and beyond their nations.

Domestic resistance and political realities made it important for many advocates to seek a larger global platform to win support for their cause. For instance, international prominence and recognition greatly facilitated the work of Margaret Sanger, a U.S. activist, since she faced strong opposition against birth control in the United States due to the Comstock Act (1871), which forbade any dissemination of contraceptive knowledge through the postal system. A similar law banning birth control was passed in Canada in 1892 and was not repealed until 1969. There were no legal bans imposed on birth control in India, Japan, or Great Britain during this time.

International Conferences and Publications

The early advocates of birth control worked on a global platform and were in dialogue with one another from as early as the 1920s, exchanging and borrowing ideas. Their modes of intellectual exchange included organizing international conferences such as the International Birth Control Conference, held in London in 1922 and in New York in 1925. Indian advocates such as Gopaljee Ahluwalia attended both these conferences, as did many other participants from across the globe. Another large
population conference was organized in India in 1936; Sanger was among those invited.

The early advocates also published journals that became important intellectual sites for international exchange and discussion on the subject of contraception and birth control. Some of the important journals published from London, New York, Madras, and Bombay (now Mumbai) in the 1920s and 1930s were Birth Control News (United States) Birth Control Review (United States), Madras Birth Control Bulletin (India), and Marriage Hygiene (India). Again, this is not a comprehensive list, but one that makes clear the rich international variety of publication on the subject. Advocates solicited articles for these journals internationally, and many of these journals carried specific information on birth control work and clinics around the world.

Birth control advocates also published a large number of monographs and books on the subject, which circulated globally. Books by Sanger and Marie Stopes (a British activist) were read by birth control advocates in India, South Africa, Japan, Britain, and United States. Besides being read by a large body of birth control advocates, these books were also read by lay people seeking to control their own fertility. Many private individuals in India and South Africa who read books by Sanger and Stopes wrote to them asking for further clarification on the methods discussed in their books. Stopes’s Married Love and Wise Parenthood: The Treatise on Birth Control for Married People, both published in 1918, circulated widely in South Africa and other parts of the British empire. Sanger’s books Motherhood in Bondage and The New Motherhood were popular around the world. International birth control activists also endorsed one another’s books; Sanger, for instance, wrote a forward for Narayan Sitaram Phadke’s 1927 Sex Problem in India which gave this book greater credibility in the eyes of domestic readers in colonial India.

Financial and Technological Support
Birth control activists sought financial support for their work from donors across the globe. Stopes, for instance, wrote letters to Indian princes in 1927 asking them to support her clinical work in London, while the Indian advocate Aliyappin Padmanabha Pillay requested financial help from the London Eugenic Society to continue the publication of his journal Marriage Hygiene. Sanger wrote to C. P. Blacker, of the London Eugenic Society, to request funds for her India visit in 1935. Sanger’s visit to Japan in 1922 was financed by the Japanese magazine Reconstruction. For her part, Kato Shidzue, a Japanese birth control advocate, went to the United States in 1937 to raise money for her work in Japan. She toured in the United States speaking about birth control.

Besides financial networks that crossed national boundaries, reproductive technologies were also transported globally. Stopes supplied contraceptives to South Africans in the 1930s. Stopes’s Society for Constructive Birth Control and Racial Progress (SCBC) offered to train birth control activists from India and South Africa. Many advocates also visited Sanger in the United States hoping to gain technical training on the subject. Elsa Woodrow, from the Cape Town Mother’s Clinic Committee in South Africa, contacted Stopes in 1931, seeking advice on how to set up a clinic and the costs associated with it. Her organization associated itself with the SCBC and ordered contraceptive supplies from Stopes. The Mother’s Welfare Society of South Africa got financial support from Stopes in 1938–1939. On her various visits to India, Sanger and her assistant Edith How-Martyn carried contraceptive technology with them, which they distributed to the various clinics in India. They also presented advocates with gynecological plaques, which were used by doctors and advocate to demonstrate the use of different contraceptive methods.

Discursive Parameters
Early advocates of birth control drew upon a range of intellectual ideas to make a strong case for the dissemination of contraceptive information. Many advocates found it beneficial to deploy a numerical argument, relying heavily upon census figures that were increasingly becoming available in most countries during the early twentieth century. For instance, the colonial census of
1931 in India revealed a sharp rise in population. This data was used to promote a Malthusian argument for birth control as a remedy for controlling spiraling demographic growth. Nationalist advocates of birth control were also quick to draw a connection between national poverty and size of the nation's population. None of the early advocates of birth control called for resource redistribution to alleviate national poverty, however. Interestingly enough, Mohandas Gandhi, who strongly opposed the use of any chemical and mechanical contraceptive device, appears to have been one of the first to call for resource redistribution as a solution to India’s growing population problem. He was strongly opposed to birth control on moral and philosophical grounds, and debated with Sanger on the subject in 1936.

Indian feminists such as Kamaladevi Chattopadhyay joined Sanger and Stopes in making a case for birth control as a means of improving women’s maternal health. Lower maternal and infant mortality figures, it was argued, were important indicators of national well-being. Birth control activists also argued that lower fertility figures were a sign of modernity, especially for non-Western nations, which were seen to have higher fertility figures than Western nations such as France and Canada. Fertility figures in France and Canada had been declining from the late nineteenth century onwards, which led to a strong opposition to birth control in those countries.

**Tension between Rhetoric and Technology**

Examining the writings of the various advocates of birth control would leave one with the impression that they had something concrete to offer in terms of contraceptive technology. However, on a closer examination it seems that the international birth control movement was long on rhetoric but short on technology, especially before the invention and testing of the contraceptive pill in 1960.

In the period between 1930 and 1950 birth control activists greatly differed among themselves about the most appropriate contraceptive technology. Sanger and Lydia DeVeilbiss were promoting a spermicidal douche.
powder that had been tested in Britain. The powder was in use in some of the southern states in the United States. It was marketed in India too. There were complaints against the powder, however; in India women complained about vaginal irritation and also about the difficulty in using this method given the lack of privacy in their working-class homes. In the face of these complaints, Pillay recommended condoms as the most reliable form of contraceptive. Stopes, in the meantime, claimed that she had discovered the ideal method for working-class women of London and for poor women in India and South Africa. The method Stopes was promoting was a cotton waste pessary dipped in olive oil. This method was not endorsed by Indian doctors and advocates.

In India, practitioners of Ayurveda, a traditional Indian system of medicine, advertised their products in vernacular magazines such as Madhuri and Sudha in the 1930s, while biomedical journals such as The Indian Medical Gazette carried advertisements for various commercially marketed contraceptives. Most of these advertisements provided addresses of local chemists who carried these products, but some advertisements in Indian medical journals gave only a London address, which indicates that birth control technologies circulated globally and that consumers shopped in a global market. However, it should also be pointed out that consumers of these global products, especially in countries such as India, were primarily members of social and economic elites who could afford to pay for the product and its international postage cost.

Counterhistories of Birth Control

In the late twentieth and early twenty-first centuries, scholars have shifted their focus away from celebrating the work of birth control pioneers and have begun examining how this work was experienced by less powerful social and economic groups in different countries. Native American groups in the United States have spoken out against contraceptive technologies, which they argue have been used to police their sexuality rather than to empower native women to make informed reproductive choices. The history of birth control movement in India has bought to light the call of the Indian feminist leader Begum Hamid Ali for the sterilization of the “unfit” in her enthusiasm for controlling India’s population. Likewise Puerto Rican scholars tell a sad history of Puerto Rican women who, without knowing and without giving consent, became the guinea pigs used for testing the contraceptive pill in the 1950s. These revisionist histories force us to examine the real human costs that underwrote the efforts to manage human fecundity.

Future Agenda for Reproductive Health

Feminist scholars working on reproductive health issues are constantly asking themselves what the future agenda for reproductive health should look like. Feminist researchers, policy makers, and activists all agree that the success of contraceptive technology in the future will lie in democratic approaches, attentive to local needs and beliefs, seeking to empower women in making informed choices.

Sanjam Ahluwalia

See also Women’s Reproductive Rights Movements

Further Reading


Contract Law

Contract law is the body of law which regulates and enforces promises and exchanges, for either immediate or future performance, between two or more consenting parties and provides legal remedies if one or more of the parties break these agreements. As such, contract law fulfills a moral, social, and economic function. The moral function of contract law is rooted in the premise that promises made are to be kept, which is almost universally recognized in customary law, as well as to varying extents in positive law. Socially, contract law is a means for regulating and defining social relationships, such as in the case of marriage contracts, or contracts between different social orders or castes. Economically, contract law facilitates commerce by providing a form of legal guarantee of remedies for broken contracts, which facilitated the development of long-term trade, as well as the use of negotiable instruments, such as letters of credit and bills of lading.

The Moral Function of Contracts

The legal scholar Harold J. Berman wrote that the Western ideal of contract law began with the theory that “a promise created an obligation to God” (Berman 1986, 112). Not only does the canon law of the Jewish, Islamic, and Christian faiths affirm this idea, nearly all cultures have a form of contract premised on the moral notion that promises are to be kept. In traditional India and China, contracts were often adjudicated in terms of moral principles (dharma in Hinduism; li in Confucianism); a contract which violated general rules of morality or equity could be ruled invalid, even if the acts were otherwise licit. Roman law mandated that contracts be “clothed,” that is, parties must have had a tangible purpose or reason (causa) for entering into a contract. Therefore, Roman law emphasized the binding nature of the promises made between parties, and in determining the legality of a contract, jurists in the Roman law tradition privileged the ends, or the reasons for creating the contract over the means by which the contract was created. Medieval canonists added an element of Christian morality to contract law which held that the final purpose of a contract, regardless of the intermediate expectations of the parties, must conform to moral principles. The Civil Code of Napoleon (1804) mandated that a valid contract was one to which parties voluntarily agreed, and that was done for licit purposes; the form of the contract was secondary to the ends. In Anglo-American common law, principles of equity applied as well, and the doctrine of unjust enrichment meant that courts could order quasi-contract actions, which are court ordered adjustments to contracts that are meant to restore equity between the parties, to recover sums from those unjustly enriched on behalf of plaintiffs.

The Social Function of Contracts

For most of the history of traditional China and Japan, there was no formal contract law, although other laws, such as imperial or feudal laws, could be used to seek legal protection and remedies in contract disputes. Moreover, customary law in China and Japan served the purposes of
Contract Law: A Brief Overview

Contracts are promises between two parties that are legally enforceable. The law provides remedies if a promise is breached (not honored) and recognizes the performance of a promise as a duty. Contracts arise when a duty does or may come into existence, because of a promise made by one of the parties. To be legally binding as a contract, a promise must be exchanged for adequate consideration. Adequate consideration is a benefit or detriment that a party receives which reasonably and fairly induces them to make the promise. For example, promises that are purely gifts are not considered enforceable because the personal satisfaction the grantor of the promise may receive from the act of giving is normally not considered adequate consideration. Certain promises that are not considered contracts may, in limited circumstances, be enforced if one party has relied to his detriment on the assurances of the other party.

In the United States, contracts are governed primarily by state statutory and common (judge-made) law, as well as by private law. Private law principally includes the terms of the agreement between the parties who are exchanging promises. This private law may override many of the rules otherwise established by state law. Statutory law (in the form of codes) may require some contracts be put in writing and executed with particular formalities. Otherwise, the parties may enter into a binding agreement without signing a formal written document. The Uniform Commercial Code, whose original Articles have been adopted in nearly every U.S. state, represents a body of statutory law that governs important categories of contracts. Contracts related to particular activities or business sectors may still be highly regulated by state and/or federal law.


Benjamin S. Kerschberg

Roman law considered “like” contracts (obligationes ex quasi contractu), such as the giving of gifts, to be a source of legally binding relationships. Even in modern business practice, as Stewart Macaulay has observed, contracts are less a means of regulating exchange than a method of building relationships, and a breach of contract is a serious break which “often results in a ‘divorce’ ending the ‘marriage’ between the two businesses, since a contract action is likely to carry charges with at least an overtone of bad faith” (Macaulay 1963, 65).

The Economic Functions of Contracts

The English legal scholar Henry Maine wrote that a shift from “status to contract” was fundamental to the creation of modern social and economic systems (Maine 1917, 100). In other words, modern (i.e., Western) legal systems, contractual relationships, and economic systems depended on the social equality of the parties, the ability to freely enter into exchanges, and the confidence the law would enforce these exchanges. In ancient Greece, by comparison, although Athenian contract law allowed substantive contract law. This customary law was closely bound to the social structures of each society: the Confucian familial and clan hierarchy in China and the feudal system of traditional Japan. In China, the Confucian ideal of the family, which dictated strict obligations between individual family members, relationships of whole family units to each other, and to the society as a whole, superseded any individual contractual relationships. In other words, contractual relationships were bound first by the Confucian system, and only secondarily by the individual agreement. Traditionally in China, recourse to the courts was considered the very last resort in a contract dispute; arbitration was almost always preferable, because an irresolvable dispute signified a small breakdown in the traditional Confucian order. Similarly in Japan, contract disputes were almost always subject to mediation, except that where in China the family or clan formed the basis of arbitration, in Japan the feudal village more than the family was the operative unit. In the West, contract law formed part of a broader law of obligations which similarly defined social relations. The intricacies of the Roman system of patronage meant that...
for absolute freedom to enter into contracts, in practice this only applied to citizens of the polis. In the seventeenth century, English jurists began to emphasize the concepts of “consideration” and the “bargain,” which, although similar to the Roman concept of *causa*, differed in that English common law generally did not consider either the ends of a contract nor the status of the parties involved. Instead, English law concentrated on the bargaining between parties from which a consideration, an act or promise by which one party acts in consideration of a reciprocal action, creates a binding agreement. English common law also developed the doctrine of “strict-liability,” which placed an absolute binding obligation on the parties regardless of the reason for nonperformance. In *Paradine v. Jane* (1647), a lessee was still bound to pay rent to his landlord, although the defendant’s lands and crops had been destroyed during the English Civil War, because the court ruled that contracts are entered into freely by the parties involved. This seemingly harsh measure, however, has been undeniably important in the development of commerce and trade by making negotiable instruments, such as letters of credit, checks, and bills of exchange (all of which are essentially contracts which promise future payments), a more efficacious way of transferring large sums of money, because no matter how many parties that negotiable instrument has passed, the recipient could expect payment because “strict liability” still bound the original issuer to the original contract.

**Further Reading**


**Corvée Labor**

*See Labor Systems, Coercive*

**Creation Myths**

*Creation myths are stories, or collections of stories, that tell of the origins of all things: of communities and landscapes, of the earth, its animals and plants, of the stars, and of everything that exists. They represent what*
“history” has meant for most human communities. Creation myths appear to have existed in all human societies and are deeply embedded within all the major world religions. By offering answers to questions about origins, creation myths provide maps of reality within which people can learn about their place in the cosmos and the roles they are expected to play. As Barbara Sproul has written: “[C]reation myths are the most comprehensive of mythic statements, addressing themselves to the widest range of questions of meaning, but they are also the most profound. They deal with first causes, the essences of what their cultures perceive reality to be. In them people set forth their primary understanding of man and the world, time and space” (1991, 2–3). Marie-Louise von Franz writes: “[Creation myths] refer to the most basic problems of human life, for they are concerned with the ultimate meaning, not only of our existence, but of the existence of the whole cosmos” (1972, 5).

This article will discuss creation myths and the many striking parallels that exist between traditional creation myths and the foundation stories of modern societies, which are embedded within modern science and historiography. Are modern accounts of origins fundamentally different from those of traditional societies? Or can they, too, be regarded as “creation myths”? Such questions are worth pursuing because they raise important questions about the nature of the truths that can be attained within modern historiography, particularly when, like world history, it aspires to a coherent account of the past on many scales.

A Creation Myth Example

Creation myths have taken many different forms. The Genesis story within the Judeo-Christian-Islamic religious tradition counts as a creation myth. So do the origin stories found in the oral traditions of societies without written traditions. Appreciating the full significance of creation myths is difficult because, like so many cultural traits, their meaning is obvious to those brought up with them, but opaque to outsiders. So the creation myths of others are almost invariably experienced as strange, exotic, and wrong. As the definition of myth in the Encyclopaedia Americana points out, “a myth is understood in its own society as a true story. (It is only when it is seen from outside its society that it has come to acquire the popular meaning of a story that is untrue)” (Long 1996, 699). The difficulties of understanding a creation myth from outside can be appreciated from the following extract. It comes from the account of a French anthropologist, Marcel Griaule, who is summarizing his conversations with Ogotemmeli, a wise man of the Dogon people of Mali. Ogotemmeli had been authorized to reveal something of his society’s cosmology, but it is clear from the conversation that he was aware of speaking to an outsider, who might not understand or fully appreciate all he said, and Griaule himself was acutely aware of the difficulties of this complex process of translation.

The stars came from pellets of earth flung out into space by the God Amma, the one God. He had created the sun and the moon by a more complicated process, which was not the first known to man but is the first attested invention of God: the art of pottery. The sun is, in a sense, a pot raised once for all to white heat and surrounded by a spiral of red copper with eight turns. The moon is in the same shape, but its copper is white. It was heated only one quarter at a time. Ogotemmeli said he would explain later the movements of these bodies. For the moment he was concerned only to indicate the main lines of the design, and from that to pass to its actors. He was anxious... to give an idea of the size of the sun. “Some,” he said, “think it is as large as this encampment, which would mean thirty cubits. But it is really bigger. Its surface area is bigger than the whole of Sanga Canton.” And after some hesitation he added: “It is perhaps even bigger than that.”

The moon’s function was not important, and he would speak of it later. He said however that, while Africans were creatures of light emanating from the fullness of the sun, Europeans were creatures of the moonlight: hence their immature appearance... The god Amma, ... took a lump of clay, squeezed it in his hand and flung it from him, as he had done with the stars. The clay spread and fell on the north, which is the top, and from there stretched out to the south, which is the bottom of the world, although the whole movement was horizontal. The earth lies flat, but the north is at the top. It
extends east and west with separate members like a foetus in the womb. It is a body, that is to say, a thing with members branching out from a central mass. This body, lying flat, face upwards, in a line from north to south, is feminine. Its sexual organ is an anthill, and its clitoris a termite hill. Amma, being lonely and desirous of intercourse with this creature, approached it. That was the first occasion of the first breach of the order of the universe.

Ogotemmeli ceased speaking. He had reached the point of the origin of troubles and of the primordial blunder of God. “If they overheard me, I should be fined an ox!”

At God’s approach the termite hill rose up, barring the passage and displaying its masculinity. It was as strong as the organ of the stranger, and intercourse could not take place. But God is all-powerful. He cut down the termite hill, and had intercourse with the excised earth. But the original incident was destined to affect the course of things for ever; from this defective union there was born, instead of the intended twins, a single being, the Thos aureus or jackal, symbol of the difficulties of God...

God had further intercourse with his earth-wife, and this time without mishaps of any kind, the excision of the offending member having removed the cause of the former disorder. Water, which is the divine seed, was thus able to enter the womb of the earth and the normal reproductive cycle resulted in the birth of twins. Two beings were thus formed. God created them like water. They were green in color, half human beings and half serpents. From the head to the loins they were human: below that they were serpents. Their red eyes were wide open like human eyes, and their tongues were forked like the tongues of reptiles. Their arms were flexible and without joints. Their bodies were green and sleek all over, shining like the surface of water, and covered with short green hairs, a presage of vegetation and germination. These figures were the Nummo twins, water gods who later play a crucial role in the creation of the earth. (Sproul 1991, 50–51, citing Griaule 1975, 16–40)

Features of Creation Myths

These brief extracts, from the start of a long and complex story, illustrate several features of creation myths in general. First, Ogotemmeli’s account is told as a story. This may be simply because narrative is the most powerful and memorable way of explaining and transmitting complex, important truths. “Like myth, memory requires a radical simplification of its subject matter. All recollections are told from a standpoint in the present. In telling, they need to make sense of the past. That demands a selecting, ordering, and simplifying, a construction of coherent narrative whose logic works to draw the life story towards the fable” (Samuel and Thompson 1990, 8).

Second, origins are explained as the result of conscious actions by spirits or gods. That spiritual entities created the basic structures of the world is a default hypothesis in many traditional cosmologies. However, it is not universal. Many origin stories rely on metaphors of birth, positing the existence of a primordial egg or a primordial sexual act, whose meaning can be understood more or less literally. Some origin stories explain creation as an awakening from sleep, a reminder that our own personal origin stories all have the quality of awakening from pre-consciousness. Some creation myths face the paradoxes of origins squarely, positing a realm preceding that of the gods, which was balanced precariously between existence and nonexistence. According to the Rig Veda, the ancient sacred hymns of northern India, “There was neither non-existence nor existence then; there was neither the realm of space nor the sky which is beyond. What stirred?
Where? In whose protection? Was there water, bottomlessly deep? There was neither death nor immortality then. There was no distinguishing sign of night nor of day. That one breathed, windless, by its own impulse” (O’Flaherty 1981, 25). Such language hints at the paradox present in all stories of ultimate origins—how can something (whether a god or an entire universe) come out of nothing?

Third, all creation myths are more complex than they may seem at first sight. Because they deal with ultimate realities, with truths so complex that they can only be referred to using richly metaphorical or poetic language, their tellers are usually well aware of their paradoxical, even provisional nature. At one point, Marcel Griaule was puzzled by a detail in Ogotemmeli’s story, according to which large numbers of creatures appeared to be standing on a single step, only one cubit deep and one cubit high. How was that possible? Ogotemmeli replied: “All this had to be said in words, but everything on the steps is a symbol, symbolic antelopes, symbolic vultures, symbolic hyenas. Any number of symbols could find room on a one-cubit step.” Griaule adds that the word Ogotemmeli used for symbol literally meant “word of this (lower) world” (Sproul 1991, 64).

Fourth, embedded within cycles of creation myths there is generally much hard empirical information about the real world, information about animal migrations, about technologies of hunting and farming, information that younger members of society needed to learn. Such information is often of little interest to outsiders, who may thereby miss the practical, empirical nature of most cycles of myth, but it helps explain their fundamental role in informal systems of education. Ogotemmeli’s story, for example, contains a long list of important animals, much lore about procreation and sexuality, details of the major grains farmed in his region, and symbolic accounts of human anatomy and the world’s geography.

Finally, partly because they contain so much familiar information, creation stories have the feeling of truth for insiders, just as modern science does for those educated in the early twenty-first century. To those brought up with them, particular creation myths represent the best available guide to reality and much of what they say fits in well with commonsense experience. This does not mean that creation stories are necessarily treated uncritically by insiders—it is always possible to argue about details of a creation story or express skepticism or even confusion about certain aspects of the story. As Griaule comments of Ogotemmeli, “Ogotemmeli had no very clear idea of what happened in Heaven after the transformation of the eight ancestors into Nummo” (Sproul 1991, 59). But it does mean that familiar creation myths are felt to be the best available guides to reality and therefore to conduct; in some sense, they hold society together. And this makes them extremely important, not to be told lightly or carelessly, and to be treasured and passed on with care by those who keep the knowledge they contain. Creation myths contain potent information, which is why Ogotemmeli lowers his voice when discussing the first blunder of the God Amma.

**Similarities and Differences**

This partial list of the features of traditional creation stories suggests some of the main similarities and differences between creation myths and modern, “scientific,” accounts of the past. Both modern and traditional accounts of origins play an important educational role because, as we have seen, traditional creation stories also contain much carefully tested information about the real world. Like creation myths, modern accounts of the past can also be passed on best in narrative form, which is still the dominant form for history-writing and much popular science. Modern accounts of origins also struggle with the problem of ultimate origins, something that is clear in the case of modern big bang cosmology, which can say nothing precise until just after the moment of creation. Indeed, like many traditional creation myths, modern physics sees non-being (the vacuum) as a state of potentiality, a realm of emptiness out of which things can appear. Further, when the epistemological going gets tough, even modern science has to fall back on complex and paradoxical concepts whose full significance may remain somewhat obscure. In this sense, concepts such as
gravity or black holes or quantum uncertainty play roles similar to those of gods or other mythic creatures in traditional creation stories. Finally, to an educated person today, modern origin stories have the same feeling of truth that traditional creation myths had for those brought up within them. Because of these many similarities, it seems reasonable to suggest that modern “scientific” historiography, particularly in the form of world history, can play many of the roles that creation myths played in the past.

Yet there are also important differences. It is tempting to claim that modern scientific accounts of the past are truer than those of traditional creation stories. Such claims may be true, but they need to be made with care. Even modern origin stories are anchored in time and place, so in the future they will undoubtedly seem naive and primitive in some respects, as traditional creation stories do today. Furthermore, all creation stories have something to teach outsiders as they offer different ways of thinking about reality. For example, many environmentalists have argued that modern societies need to recapture the sense of being a part of the natural world that is so pervasive in the creation stories of foraging societies. A clearer difference is that scientific origin stories (like modern science in general) aim at universality. They expect to be believed not just by a single culture, but by all educated people on earth. To earn such universal respect, they require a flexibility and openness that was lacking in many creation stories, for they have to appeal to intelligent people from many different cultural backgrounds, and they have to be able to incorporate new information. This requires a constant testing of hypotheses and details to avoid the parochialism of most traditional creation myths. Because modern scientific historiography (like science in general) appeals to a global audience, the tests to which it is subjected are numerous and thorough. (Unlike Ogotemmeli, we now know from direct experience what the moon is made of and how large it is.) Modern creation stories can claim to be truer than traditional creation myths insofar as the information they contain has been more carefully tested, and as a result they feel true to a much wider audience. The universality and openness to testing of modern scientific accounts of the past explain a final, crucial difference: their unwillingness to invoke anthropomorphic or spiritual explanations for origins. Such explanations are ruled out by modern science because they are too flexible to provide rigorous, refutable explanations, and therefore cannot be subjected to the strict rules of testing that underpin modern science.

As this discussion suggests, world history is perhaps not so different from traditional creation myths. It, too, represents an attempt to tell the story of origins. But its audience is global, and to generate the feeling of “truthfulness” that all creation myths aspire to from a worldwide audience it must try to tell its origin stories without any taint of cultural bias, and with careful testing for rigor and objectivity.

David Christian

See also Universe, Origins of

Further Reading


Crusades, The

The word “crusade,” derived from the Old Spanish cruzada, is best translated as “an undertaking marked by a cross” and most commonly means a Christian holy war. The original goal of the Crusades was the
liberation of Jerusalem and other sites in the Middle East sacred to Christendom, but by the early thirteenth century the crusade had evolved into an institution of the Roman Catholic Church with a more general mission: upholding and extending Christian order against all enemies everywhere. As a result, western Europe came into conflict not only with the Islamic world but also with the Byzantine empire and the peoples of the Baltic. Crusading zeal and objectives also impelled the Roman church to send diplomats and missionaries to Mongolia and China between the mid-thirteenth and mid-fourteenth centuries and played an equally significant role in propelling Europe’s transoceanic voyages of discovery of the fifteenth and sixteenth centuries. Likewise, Catholic Iberia’s overseas policies in the Americas, along the coastal shores of Africa, and in South and East Asia were colored by crusading values.

Historians debate the dates encompassed by the Crusades and the crusaders’ theaters of operation. One school, known as the “traditionalists,” limits the Crusades to the period 1095–1291, from the calling of the First Crusade in 1095 to the destruction of the last crusader strongholds on the mainland of Syria-Palestine in 1291. Traditionalists further limit the Crusades to holy wars fought between western Christians and Muslims in the Middle East and North Africa during these two centuries. For the traditionalists, true Crusades had Jerusalem and the rest of the Holy Land as their exclusive focal points. The other school, known as the “pluralists,” which is in current ascendancy in scholarly circles, has a broader view. Pluralists count as Crusades the Spanish Reconquista, holy wars launched against pagans and other perceived enemies in the Baltic and eastern Europe, and wars called by the papacy against heretics and political enemies in western Europe. They also greatly expand the chronological limits of the Crusades, finding proto-Crusades well before 1095 and a vibrant crusading tradition well after 1291. Some take the Age of the Crusades down to as late as 1798, when Napoleon captured the island of Malta from the Order of the Hospital of Saint John, a religious order that assumed military functions in the twelfth-century crucible of the Crusades. The perspective of this essay is pluralist. Crusading, as ideal and reality, was in constant flux. As an idea and an institution, the crusade took a century to develop into full theoretical and institutional form. Even after it had achieved this level of coherence, crusading continued to respond to new stimuli and challenges.

Despite such evolution, certain crusade constants were in place from the beginning and remained an integral part of crusading to the end. These were: (1) the belief that a crusade was a holy war waged on behalf of Jesus Christ and given legitimacy by the Roman papacy; (2) the fact that its participants, women as well as men, enjoyed a special, quasiclerical status by virtue of their crusade vows; (3) the belief that engagement in this undertaking earned spiritual merit, chief of which was a plenary indulgence, or full remission of the penance due for sins; (4) and the obligation and right to wear a cross, thereby becoming a crucesignatus—one signed with a cross.

### The Reconquista: Iberia’s Crusades

The Crusades can be said to have roots in the struggle in Iberia between Christians and Moors. In April 711 an Islamic force crossed the strait separating Africa and Spain, and by 715 most of the peninsula, except for the Northwest, was in Muslim hands. However, Christian counterattack was underway by century’s end. These earliest battles were not crusades, but they were the opening rounds of the Reconquista, a series of Iberian wars between Muslims and Christians that became official Crusades in the early twelfth century and lasted down to 1492. These early struggles, particularly those of the eleventh century, provided a model for the First Crusade. In 1064 an army of Spaniards and French captured and plundered Barbastro, with the support of Pope Alexander II, who offered the soldiers a plenary indulgence for their efforts.

As Spain was the land that gave the papacy inspiration for the crusade, it was fitting that in 1118 Pope Gelasius II granted unambiguous crusader status to an expedition against Muslim Saragossa. For the almost four hundred years that followed, Christian crusaders, both Spanish
and foreign, waged holy war against a variety of Islamic powers in the peninsula. In the process, crusading left a deep imprint on Iberian Christian culture. Finally, on 2 January 1492, the combined crusader forces of the Catholic Monarchs, Ferdinand II of Aragon and Isabella I of Castile, captured Granada, the last Moorish stronghold on the peninsula.

One of the witnesses of the Catholic Monarchs’ triumphal entry into the city on 6 January was a Genoese sea captain who understood that now, with the dream of the reconquest of Spain realized, the Catholic Monarchs might fund his enterprise to reach the court of the Mongol Great Khan of Cathay by sailing west. For he claimed that reestablishing direct contact with the Great Khan would be a positive step toward the recovery of Jerusalem—a natural extension of the victory at Granada.

The Jerusalem Journey
In response to pleas for help from the Byzantine emperor, Alexius I, whose lands in Anatolia (modern Asiatic Turkey) were being lost to Seljuk Turkish advances, Pope Urban II delivered a sermon at Clermont in France on 27 November 1095 calling upon the knighthood of the West to aid the Christians of the East and also to liberate Jerusalem. Convinced that “God wills it,” the pope offered everyone who made the journey to the East a full indulgence. Thus was born the First Crusade in 1096, phenomenon that many western contemporaries referred to as the “Jerusalem journey” and saw as a special type of penitential pilgrimage—an armed pilgrimage with military as well as spiritual objectives.

Between 1096 and 1101 three major waves of crusaders, each numbering in the tens of thousands, marched east. The first and third waves met with disaster, but the second wave, known also as the Crusade of the Great Lords, managed to capture Jerusalem on 15 July 1099.

Jerusalem and a number of other key sites captured by the second wave became the nuclei for four crusader states: the county of Edessa (1097–1150); the principality of Antioch (1098–1268); the kingdom of Jerusalem (1099–1291); and the county of Tripoli (1109–1289). Although free of control from any mother country in Europe, the four states are often cited as examples of early European colonialism. Whatever they were, the four states were western Christian enclaves in lands where the populations were predominantly eastern Christian and Muslim.

Some intermarriage and cultural exchange on a personal level took place, as was evident in the Franks (as all
Ibn Jubayr’s Description of Muslim Life under the Franks

In 1184 Ibn Jubayr, a native of Muslim Spain, spent thirty-two days in the Latin kingdom of Jerusalem while traveling home from a pilgrimage to Mecca. In his journal, which he kept on an almost-daily basis, he recorded his perceptions of how Muslims fared under their Frankish masters.

Our way lay through continuous farms and ordered settlements, whose inhabitants were all Muslims, living comfortably with the Franks. God protect us from such temptation. They surrender their crops to the Franks at harvest time, and pay as well a poll-tax of one and five qirat [about \(\frac{1}{32}\) of an ounce of gold] for each person. Other than that, they are not interfered with, save for a light tax on the fruits of trees. Their houses and all their effects are left to their full possession.

All the coastal cities occupied by the Franks are managed in this fashion, their rural districts, the villages and farms, belonging to the Muslims. But their hearts have been seduced, for they observe how unlike them in ease and comfort are their brethren in the Muslim regions under their (Muslim) governors. This is one of the misfortunes afflicting the Muslims. The Muslim community bewails the injustice of a landlord of its own faith, and applauds the conduct of its opponent and enemy, the Frankish landlord, and is accustomed to justice from him. He who laments this state must turn to God.


western, or Latin, Christians were known to easterners who were born and raised in the crusader states. Called derisively poulains (young colts) by newcomers from the West, these native-born colonists were often indistinguishable in dress and manners from their non-Frankish neighbors.

Italian maritime cities, most notably Genoa, Pisa, and Venice, established huge trading emporiums in such crusader port cities as Acre and Tyre, from which they transported to Europe eastern goods in unprecedented quantity. The textiles, spices, dyes, slaves, and sugar that flowed into Europe not only enriched and made possible the growing power of these three commercial giants, they also sharpened the European taste for the goods of Asia.

One taste that knew no limits was the desire for sugar. Western colonists learned from their Muslim neighbors how to grow sugarcane on large slave plantations and how to refine it. In the late fifteenth century and following, Europeans would create sugar-producing slave plantations and mills off the west coast of Africa and in the Americas, thereby radically altering the demographic and ecological faces of these lands.

Despite poulains, Italian merchants, and sugar production, the crusader states were not major avenues for cultural exchanges between Europe and the Levant. The great influx of Islamic learning that entered western Europe in the twelfth and thirteenth centuries, for example, originated in Spain and Sicily and not in the crusader East.

One of the most significant consequences of the crusader states is that all four, but especially the principality of Antioch, brought their Frankish lords into direct competition with the Byzantine empire, whose emperor claimed lordship over lands now occupied by westerners. In one of world history’s most ironic turn of events, the Crusades, which began as an effort to aid eastern Christians, ended up dividing the Byzantine and western branches of Christendom.

On their way to the Holy Land, early crusaders passed through Byzantine territory, and the presence of often-disorganized crusader forces in an alien land resulted in a series of misunderstandings and conflicts, some quite bloody. The result was that by the Third Crusade (1188–1192) the emperor of Byzantium, Isaac II, entered into an apparent conspiracy with Saladin, sultan of Egypt and Syria, to harass and destroy German forces crossing Anatolia. Isaac’s plan failed, and the Holy Roman Emperor, Frederick I, chose not to attack Constantinople. The imperial capital was not so fortunate a little more than a decade later. Due to unforeseen circumstances, the
army and fleet of the Fourth Crusade (1202–1204) found itself attacking, capturing, and pillaging the city on 12–13 April 1204. This act, and the establishment of the Latin empire of Constantinople, which held the city until August 1261, completed the rupture between the churches and peoples of Byzantium and the West.

One of the many significant results of the Fourth Crusade was the conquest of most of Greece and the Greek islands by western crusader forces and the establishment of the Venetians (and later the Genoese) in the Black Sea, which became the West’s point of entry into the markets of central Asia and beyond. Portions of mainland Frankish Greece, as occupied Greece is often called, remained in western hands until the mid-fifteenth century, and some Greek islands were western possessions until the end of the seventeenth century.

Meanwhile, Islam and the Christian West continued to struggle in the Holy Land and Egypt. Muslim conquest of Edessa in 1144 occasioned the Second Crusade (1147–1149), which failed to achieve any success in the East but which also became the opportunity for the crusader West to expand the scope of enemies against whom it waged holy war.

**Crusades in the Baltic**

Soldiers of the Second Crusade fought on three fronts: Iberia, where they participated in the capture of Lisbon in 1147; the Middle East, where they failed miserably; and the Baltic, where Christian Europe began a series of crusades of conquest, colonization, and conversion that lasted from 1147 to 1525. During these almost four hundred years, German and Scandinavian crusaders waged war against various pagan and Christian peoples along Europe’s northeastern frontier. Unlike the Crusades in the Middle East, the Baltic Crusades contained an overt missionary purpose. Also, unlike the Crusades in the Levant and the Reconquista, the Baltic Crusades were not fought to recover land previously held by Christians. These were wars of conquest and expansion, although they were often justified as defensive reactions to cross-border incursions. Unlike the crusader states of the Latin East, lands conquered along the Baltic were systematically settled and culturally transformed, at least to the point that their indigenous peoples were converted to Latin Christianity. First Wends, Livs, Letts, and Estonians, and later Prussians and Finns, underwent conquest, dispossession, colonization, and conversion.

Not all of the Baltic Crusades ended in success. Due to intensified animosities between Rome and Constantinople, by the early thirteenth century the Roman church considered all Christians who followed the Byzantine rite, including Russians and Ukrainians, to be schismatics who rejected the God-ordained authority of the Roman pope. Consequently, in 1240–1242 Swedish, Danish, German, and Estonian crusaders participated in a series of papally authorized expeditions against Christian Russia. Led by Prince Alexander Nevsky of Novgorod, the Russians threw back the invaders in 1242.

**Jerusalem Reconquered**

On 2 October 1187 the armies of Saladin retook Jerusalem and came close to driving the Franks totally into the sea, thereby occasioning the Third Crusade (1188–1192), the Crusade of the Kings, so-called because of the involvement of King Richard I Coeur de Lion (Lion-Hearted) of England, King Philip II of France, and Emperor Frederick I of Germany and Italy. The Crusade was unable to recapture Jerusalem, but it did reconquer significant portions of the Syrian-Palestinian coast, thereby giving the truncated crusader states another century of life. The capital of the kingdom of Jerusalem now shifted to the port city of Acre.

**The North African Campaigns**

By the end of the Third Crusade, western strategists understood that Jerusalem could not be rewon without first conquering Egypt, the heart of the empire bequeathed by Saladin to his heirs. The Fourth Crusade (1202–1204) was headed for an assault on Egypt before it was diverted to Constantinople. The Fifth Crusade (1217–1221) reached Egypt, where it enjoyed early success, but then ended in disaster. The same was true of the Seventh Crusade (1248–1254), whereas the Eighth
Crusade (1270–1272), the West’s last major Crusade before the fall of the crusader states, ended anticlimactically after the death in Tunis of its principal leader, King Louis IX of France, the thirteenth century’s most celebrated crusader, whom the Roman Catholic Church canonized as a saint in 1297.

**Strange New Types of Crusades**

The only thirteenth-century crusades to the East to succeed in rewinning Jerusalem were the Sixth Crusade (1227–1229), in which Emperor Frederick II successfully negotiated the transfer of Jerusalem into Frankish hands (1229–1239), and the so-called Barons’ Crusade (1239–1241), in which crusader leaders again negotiated the return of Jerusalem, which Islamic forces had taken back in 1239. This time Christians held the city for only three years. In 1244 Muslim mercenaries out of central Asia, the Khorezmian Turks whom the Mongols had driven west, recaptured Jerusalem in a bloodbath, and the city remained in Muslim hands until 1917.

**Crusades at Home**

In the early thirteenth century the Roman papacy began to employ full-fledged crusades to fight enemies at home —heretics, such as the Cathars of southern France (the Albigensian Crusade of 1209–1229), and political enemies who threatened papal secular authority in Italy, such as Emperor Frederick II and his descendants (1240–1269). Crusades such as these continued well into early modern times, in such incarnations as the five Anti-Hussite Crusades (1420–1431) and various Holy Leagues formed by the papacy in the sixteenth century.

**The Mongols**

On another front, the thirteenth-century papacy sought first to launch crusades against and then to ally with a new force from the East—the Mongols, who overran large portions of Christian eastern Europe in a campaign that lasted from 1236 to 1242. Fortunately for the West, the Mongols withdrew back to the Volga in 1242. This withdrawal took place, however, only after they destroyed a combined Polish and German army and then a Hungarian army.

Tales of atrocities convinced western Europeans that the Mongols were the forces of the Antichrist as foretold in the Book of the Apocalypse. In response, Pope Gregory IX called a Crusade against them in 1241, and his successor Innocent IV renewed it in 1243, but both were futile gestures. Western Europe was too engaged with internal struggles, namely papal Crusades against Frederick II, to rouse itself against a foe, even a demonic foe, that had mysteriously retreated.

Fearing the Mongols would return, the pope and King Louis IX of France dispatched several missions to them. Beginning in 1245 and lasting to 1255, the embassies were charged with discovering Mongol intentions and converting these so-called devil’s horsemen to Catholic Christianity. The envoys, who were mainly Franciscan friars, encountered only Mongol indifference. To the Mongol mind, the West had only one option: submission.

Following the Mongol capture of Baghdad in 1258, these horsemen from the steppes of inner Asia drove as far west as northern Galilee (in modern Israel), where an Egyptian army defeated and turned them back at the Battle of Ayn Jalut in 1260. Given this setback, the Mongol il-khans (subordinate rulers) of Persia were now willing to discuss an alliance with the Christian West against Islamic Egypt. Because the Mamluk sultans of Egypt were placing increasing pressure on the rapidly deteriorating crusader states, the West was willing to ally with the Mongols against Islam, provided they converted to Christianity. With this dream in mind, King Louis IX of France set off on his ill-fated Eighth Crusade, confident that he would link up with the Mongol il-khan of Persia, and together they would liberate Jerusalem.

In 1287 the il-khan of Persia dispatched an ambassador to the West to offer yet another alliance proposal. Known as Rabban (Master) Sauma, the envoy was a Turkish monk and native of northern China who belonged to a branch of Christianity known as Nestorianism. Sauma met with the kings of France and England, as well with Pope Nicholas IV, and received warm expressions of encouragement from all three. Sauma left Rome...
in April 1288 with several papal letters for the il-khan. Shortly thereafter, in 1289, the pope sent Friar John of Montecorvino to the il-khan’s court. Before anything could come of these negotiations, the il-khan, Arghun, died, and his successor embraced Islam in 1295. All hopes for a Mongol-Latin crusade were dashed.

Rebuffed by the Mongol il-khan of Persia, Friar John set off for the court of the Great Mongol Khan in China in 1291, arriving there, by way of India, in 1294 or 1295. Too late to meet Kubilai Khan, who died in 1294, the Franciscan friar set up a mission church in the Mongol capital of Khanbalik (Beijing), which enjoyed imperial protection until the Chinese evicted the Mongols in 1368. Although the succeeding Ming dynasty (1368–1644), which reasserted native Chinese rule, was hostile to all foreign elements associated with the hated Mongols, this mission church probably continued to exist until the late fourteenth or early fifteenth century.

After 1294–1295 the Mongol empire underwent substantial changes for the worse, and before the fourteenth century ended, the empire was dead. Christian Europe, however, was unaware of the Mongol empire’s fate and never forgot the dream of linking up with the Great Khan. Many motives drove Columbus to sail west toward the Indies, but certainly one of them was the dream of a crusade alliance with the Mongols against Islam.

**Early Modern Explorations and Colonization**

Similar crusade motives helped drive Portuguese explorations along the African coast. Prince of Portugal Henry, known as the Navigator (1394–1460), used the resources of the Order of Christ, a Portuguese crusader-military order founded in 1319, to finance the fleets that he sent out. The prince, who crusaded in North Africa in 1415, 1437, and 1458, justified this use of crusade-dedicated resources because, as his contemporary biographer, Gomes Eannes de Azurara, noted, he wanted to know the extent of the lands held by the Muslims, and he sought yet-unknown Christian princes who would ally with Portugal in the struggle against Islam.

In like manner, although the Spanish conquistadors who conquered major portions of the Americas and the Portuguese adventurers who sailed though the Indian Ocean were driven by many motives, not least of which was a desire for gold and glory, it is not difficult to find in their accounts crusading themes and sentiments that were already more than four hundred years old.

*Alfred J. Andrea*

See also Byzantine Empire; Islamic World; Warfare—Europe; Warfare—Islamic World

**Further Reading**


Cultural and Geographic Areas

Human cultural groups, however defined, can always be historically traced to particular places and generally remain associated with specific geographical areas. Such cultural areas can be defined at a broad range of spatial scales. In tribal social formations, a distinctive cultural group might encompass no more than a single village, whereas in complex societies an identifiable cultural group can extend across millions of square miles. Far-reaching cultural areas, however, can always be divided into smaller (sub)cultural regions. By the same token, small cultural groups can usually be agglomerated to yield larger, if less coherent, cultural areas. As a result, no unambiguous criteria for fixing the scale of cultural and geographical areas have ever been established. How such areas are defined and bounded depends on the context.

Historically, the most important criteria for differentiating cultural areas have been affinities deriving from language, religion, kinship, and subsistence practices. Often, these different attributes of social life reinforce each other, giving rise to more or less holistic cultural assemblages. In other circumstances, however, they may run counter to each other. A linguistic community, for example, may be split by differences of faith, whereas a region united by religion may be divided by language. The multifaceted nature of human culture thus confounds the delineation of discrete cultural and geographic areas.

Even relatively nonambiguous cultural groups may be difficult to geographically bound. Cultural patterns usually morph gradually over distance, and even if the change is abrupt, border zones typically have their own personalities. Both the constitution and the distribution of cultural groups, moreover, transform over time, owing to such processes as migration, diffusion of ideas and practices, and intermarriage. Disjunct cultural assemblages, in which a single group occupies a number of separate territories, may result. Conversely, in cosmopolitan environments, a single city may contain a welter of distinctive cultural communities, which may or may not occupy identifiable neighborhoods.

As a result of such complexities, the delineation of geographically bounded cultural areas is always a matter of approximation. Different authors can construct divergent but equally valid regionalization schemes, and even a given author might map dissimilar cultural areas in the same place depending on the issues being considered. Further complications result from the fact that the peoples under investigation may employ their own systems of cultural classification and geographical division.

Cultural and Natural Regions

In earlier decades, scholars often linked cultural groups tightly to their physical environments, delineating distinctive regions that were purportedly definable by both human and natural criteria. The underlying postulate was that different climates demanded different ways of life, giving rise to distinctive cultural assemblages. This form of analysis was carried out most fully in regard to pre-Columbian North America, where ethnographers mapped a series of extensive, environmentally determined cultural regions. The mild, humid area extending from northwestern California to southeastern Alaska, for example, was identified as the province of the Northwest Coastal Indians. Here, an abundance of wood and salmon, coupled with a paucity of most other resources, led to a distinctive maritime way of life. The constituent tribes of this region spoke languages belonging to a number of unrelated families, indicating origins in distant
places. Coming together in this particular environment, where they faced the same challenges, they were thought to have necessarily developed a common cultural system, albeit one marked by localized particularities. Similar arguments were made about the culturally similar inhabitants of the other natural regions of North America.

One key question remained open: Were the cultural similarities that characterized such areas the result of adaptation to particular natural environments, or had they arisen less systematically from proximity and exchange? In some parts of pre-Columbian North America, groups belonging to distinct cultural traditions inhabited the same places, casting doubt on the environmental determinism implicit in the “cultural and natural areas” model. In the Southwest, for example, the agricultural “Pueblo” Indians belonged to one cultural complex while the hunting and gathering Apaches, who were more recent immigrants, belonged to another. Later scholarship, moreover, tended to question whether the cultural unity of these naturally defined areas extended much beyond narrow issues of subsistence.

**Cultural and Linguistic Areas**

In certain circumstances, the spread of a single population over a large territory can give rise to a relatively coherent cultural area. Since the expanding population carries its language with it, cultural areas of this type are linguistically marked. A notable example is Polynesia, which covers a vast expanse of the Pacific, from New Zealand in the southwest to Hawaii in the north to Easter Island in the southeast. All Polynesians are descended from a single ancestral population, all have similar (although not identical) cultural patterns, and all speak closely related languages. But while Polynesia is one of the world’s clearest examples of a cultural region, even it has some fuzzy boundaries. Polynesian “outliers,” for example, are encountered on a few small islands that lie within the bounds of the so-called Melanesian cultural realm, whereas in the case of Polynesian Tonga and neighboring Melanesian Fiji, cultural interchange has resulted in striking hybridity.

Large cultural groups established by descent from a common ancestral population tend to fade over time in the absence of unifying institutions or political systems. Social intercourse with neighboring peoples along the frontiers, the drift of cultural evolution, and the challenges of living in different natural environments result in gradual divergence. Linguistic families, which by definition derive from single ancestral groups, therefore seldom form coherent cultural areas. While one can, for example, map a family of Turkic languages over vast expanses of Eurasia, it is difficult to correlate this with any sort of distinctive cultural patterns—although politically motivated attempts to do so, under the guise of pan-Turkism, have
This map shows the Plains culture area of indigenous North America. By the time this culture area was designated by anthropologists in the twentieth century, the Plains culture no longer existed.

been made. One group of Turks, the Sakha (or Yakuts), for example, left their pastoral Central Asian homeland long ago for the forests of central Siberia, where they came into contact with the Evenki and other taiga dwellers. Although aspects of a proto-Turkic culture are found among the Sakha, their cultural attributes in general are quite distinctive from those of other members of their linguistic family. The Sakha are further differentiated from most other Turkic peoples by the fact that they did not adopt Islam and were never influenced by the cultural norms of Persian civilization. Among most Central Asian Turks, on the other hand, Persian and Islamic influences were strong enough to generate, according to Robert L. Canfield (1991), a distinctive Turko-Persian cultural sphere.

As the “Turko-Persian” example shows, among state-level societies common political or religious institutions can cement together previously distinct peoples, spanning linguistic and environmental divides to generate novel agglomerations. Due to the presence of such integrating mechanisms, complex societies often span larger cultural areas, and more stable ones, than small-scale social orders. Yet even in the case of well-integrated, complex societies, cultural areas change their contours and structures over time. The historical geography of human civilization reveals a continual melding and reconfiguring of cultural assemblages over space.

Cultural Areas in the Ancient World

Lower Mesopotamia, the world’s first locus of urbanism, provides a good example. In this well-demarcated area, independent Sumerian-speaking city-states initially formed a coherent cultural sphere. Over time, however, aspects of Sumerian civilization (including urbanism, literacy, and religious ideas) spread to neighboring peoples, such as the Elamites and the Akkadians, who spoke non-Sumerian languages. Eventually, Sumerian itself disappeared, but many elements originally associated with Sumerian culture, such as cuneiform writing, had diffused over a broad zone, extending from the eastern Mediterranean to the Iranian Plateau. As a result, the Bronze Age Near East can either be depicted as encompassing a single cultural area or as being divided into numerous smaller regions. Ancient Egypt, on the other hand, partially isolated by intervening deserts and usually unified politically, formed a more stable cultural zone. But even in this case, not all cultural boundaries were clearly marked. Nubia, for example, situated up the Nile River beyond several imposing cataracts, shared many aspects of Egyptian culture while developing along its own political lines.
As the ancient Greeks borrowed extensively from both the Egyptians and the Phoenicians, one can place the classical Greek world within the ambit of an “Eastern Mediterranean” cultural sphere. At a finer scale of analysis, however, the Greeks occupied their own cultural area. They were unified by a common language and literature, by common religious ideas and cultic practices, and by common institutions, such as the Olympic games. Although they often stressed their own division into dialect-based subcultures (Ionians, Dorians, Aeolians, and so on), supposedly descended from separate ancestral groups, the Greeks also emphasized their cultural unity. The cultural area associated with Greek civilization was, from a land-based perspective, geographically discontinuous, spread over much of the northern and part of the southern Mediterranean littoral, as well as the Black Sea. The territorial boundaries of the Greek world were never without controversy. Debates raged, and still occasionally flare, over whether nonurban peoples speaking Greek dialects, such as the Macedonians, should really be considered Greek. The position of non-Greek but extensively Hellenized areas, such as Caria in Asia Minor, also remained ambiguous.

The Greek world, for all of its cultural bonds, was never politically united. Virtually all of it, however, would later be subsumed within the Roman empire. The Roman empire in its heyday lacked the linguistic, cultic, and quotidian features that unified the Greek sphere. But common political institutions, culminating with the granting of Roman citizenship to all free males across the empire in 212 CE, did forge a kind of unity, and it would do injustice to the empire to deny it status as a cultural area. Cultural union deepened with the spread of Christianity even as political cohesion faltered in the fourth and fifth centuries. At the same time, the diffusion of Christianity outside of the empire, and its subsequent adoption as the religion of state in Nubia, Ethiopia, Armenia, and Georgia, enlarged while simultaneously diluting this cultural domain. The division of the empire into Eastern and Western segments in the fourth century, followed by the divergent political and religious trajectories of Rome and Byzantium, gradually reconfigured the cultural geography of the entire area. Some scholars argue that the main cultural divide in Europe today is that separating the West of Catholic and Protestant Christian heritage from the East of Orthodox background—a division that is sometimes dated to the fourth-century partition of the Roman empire.

**Asian Cultural Areas**

In East Asia, an extensive cultural area emerged through a combination of political might and the diffusion of literacy and ideology. Confucianism, Mahayana Buddhism, and a belief in the preeminence of the Chinese imperial system were key features of this emergent sphere. As the Chinese state expanded south of the Chang (Yangzi) Valley during the Han dynasty (206 BCE–220 CE), these cultural patterns spread with it, as far south as northern Vietnam. Although Vietnam was to reclaim its independence in the tenth century CE, it remained within the orbit of “Confucian Civilization,” continuing, for example, to employ the Chinese ideographic writing system until colonized by France. To the east, Korea came under the influence, both political and cultural, of China, especially during the Tang dynasty (618–907 CE). Although Japan never succumbed to Chinese rule, it too adopted many aspects of Confucianism, the Chinese writing system, and a host of other ideas and practices of Chinese provenance. The cultural commonalities so generated have proved long lasting. Today, many scholars depict an East Asian cultural area composed of China Proper (excluding Tibet and Xinjiang), Korea, Japan, and—in some versions—Vietnam.

In South Asia, by contrast, an extensive cultural area emerged in the absence of political unification. During the first millennium BCE, the complex of religious ideas and practices now known as Hinduism began to coalesce in the Ganges Valley and then spread across the rest of the Indian subcontinent. By the early centuries of the Common Era, South Asian forms of high culture had diffused through much of Southeast Asia as well. This evolving cultural region was fused together by common spiritual ideas (such as the transmigration of souls), caste ideology and practices, and the use of Sanskrit as a

*It is almost axiomatic that the worst trains take you through magical places.* • PAUL THEROUX (B. 1941)
sacred language of the elite. Many of its key features were to be challenged internally by Buddhism and externally by Islam, resulting in additional rounds of cultural transformation and geographical reconfiguration. Eventually, Southeast Asia was to be largely detached from the field of South Asian cultural influence. Some scholars would argue the same for present-day Pakistan, emphasizing the distinctiveness of its overwhelming Muslim population. Those who regard Pakistan as remaining within a culturally defined South Asian region, on the other hand, point to the fact that many aspects of everyday culture—such as diet, music, and language—continue to tie together the peoples living on either side of the India-Pakistan border.

The Historical Emergence of New Cultural Areas

The spread of Islam during and after the seventh century demonstrates how new cultural areas can emerge explosively, linking together formerly separate regions through both cultural synthesis and the spread of novel ideas. As Islam fused both a legal code and a set of political ideals with religious beliefs and practices, it proved particularly potent for generating a new, dynamic culture area. In the process, the previously distinct Persian zone was substantially merged with that of the Arabic-speaking world, although in many respects Iran retained its cultural distinctions. As Islam expanded, it came into contact with many different cultural traditions, resulting in the development of numerous hybrid forms. Debates are therefore conducted over whether an “Islamic cultural area” should be limited to the historical core of the Middle East and North Africa or whether it should cover the entire Muslim world. Such disputes are made more complex by the contemporary spread of more orthodox forms of Islam into peripheral areas, such as Java, that were formerly marked by profound syncretism.

European imperialism also created in a relatively brief span a number of distinctive cultural areas. Today, for example, Africa is often divided into Francophone, Anglophone, and Lusophone (i.e., Portuguese-speaking) zones, based on the languages of elite and official communication. Similarly, Latin America is usually mapped as its own cultural area. But, as in the case of other culturally defined regions, “Latin America” is not without controversy. Argentines, for example, have often wanted to emphasize their European roots at the expense of a pan-Latin American identity, whereas many scholars now argue that in large portions of South and Central America, the indigenous cultural imprint remains more substantial than the “Latin” one.

Areas or Networks? New Geographical Approaches

As the example of Latin America shows, the mapping of cultural areas is always ideologically fraught and intellectually challenging. As a result, many scholars now prefer to avoid positing discrete cultural areas of any sort, preferring to emphasize cross-cultural networks and patterns of globalization. This is especially true in regard to the contemporary world, supposedly characterized by a postmodern condition of constant flux and the continual transgression of all purported boundaries. Yet even in ancient times, similar processes operated, leaving all cultural areas unstable in content and uncertain in extent. Cultural areas are thus perhaps best thought of as geographic constructions rather than as preexisting entities that can be discovered though empirical analysis.

Martin W. Lewis

See also Africa; Afro-Eurasia; Cartography; Eastern Europe; Europe; Frontiers; Inner Eurasia; Mesoamerica; Mesopotamia

Further Reading

Cultural Ecology

Cultural ecology in a wide sense denotes a concern with the relationship between human culture and the natural environment, and in a narrow sense a particular perspective on this relationship that was first developed by anthropologists such as Julian Steward (1902–1972) and Leslie White (1900–1975) in the late 1940s and the 1950s. Steward and White were both critical of the historical particularism that dominated American anthropology in the early decades of the twentieth century through the influence of Franz Boas (1858–1942), Alfred Kroeber (1876–1960), and their students, who rejected any attempt to explain cultural phenomena by reference to noncultural factors such as evolution or environment. Although the differences between Steward and White were considerable, they converged in the ambition to revive an evolutionist and comparative perspective on culture, and in seeking explanations of cultural forms in technological and environmental factors. Both had a materialist orientation, influenced by Marxism, and tended to regard the social and ideational aspects of culture as accommodations to its technoenvironmental aspects.

Steward emphasized what he called the culture core, i.e., those features of a society most closely associated with subsistence, as an adaptation to specific environmental conditions. He then classified societies with similar cultural cores into categories that he called culture types. Finally, he sorted these culture types into a series of stages based on their complexity, or level of sociocultural integration, that later provided the foundation for his student Elman Service’s (1915–1996) influential evolutionary sequence bands-tribes-chiefdoms-states. Steward offered a theory of multilinear evolution, distinct from nineteenth-century unilinear evolutionism. By this he meant that societies could develop along different paths depending on their environmental circumstances.

White also argued for an evolutionary perspective on culture as a mode of adaptation, but focused on technological advances in the harnessing of energy as the standard by which to measure evolutionary progress. Whereas Steward’s evolutionism was specific and relativistic, White’s was thus general and universalistic.

Steward’s and White’s cultural ecologies prepared the ground for the emergence, in the 1960s and 1970s, of an ecological anthropology influenced by cybernetics, general systems theory, and the rapidly developing science of ecology. Much of the research conducted under this label has been concerned with the relation between local populations and their natural habitats, interpreted in terms of human adaptation to an ecological niche and the maintenance of sustainable energy flows in local ecosystems. Most faithful to the Marxist roots was Marvin Harris’s (1927–2001) cultural materialism, a perspective that viewed seemingly arbitrary cultural phenomena (e.g., the sacredness of India’s cattle) as reflections of an underlying material rationality (in this case, the productive importance of cattle in India), thus representing an extreme...
version of cultural ecology’s ambition to explain culture by reference to nature. A more sophisticated version was Roy Rappaport’s (1926–1997) account of ritual pig slaughter in highland New Guinea as a cybernetic feedback mechanism that maintained ecological equilibrium and cultural stability. In synthesizing influences from materialist cultural ecology, on one hand, and the cybernetics and communication theory informing Gregory Bateson’s (1904–1980) ecology of mind, on the other, Rappaport pioneered a more holistic ecological anthropology that sought to address both material and ideational aspects of human-environmental relations.

Another school of ecological anthropology, represented by neoevolutionists such as Morton Fried (1923–1986), Elman Service, and Kent Flannery (b. 1934), maintained a focus on tracing long-term processes of sociocultural development to explain the origins of increasing social complexity.

Critiques
A number of criticisms have been directed at these various versions of cultural ecology, the most general of which are their inclination toward environmental determinism and their neofunctionalist assumptions of adaptation. It has often been observed that to demonstrate the ecological consequences of a cultural institution is not to explain its existence. Marxist critics also point out that an emphasis on the ecological functions of culture neglects the crucial role of conflict, power, and contradiction in sociocultural processes. White’s Marxist-inspired technological optimism, on the other hand, is difficult to reconcile with world developments since the 1950s. His law of cultural evolution, which ambiguously refers to both the amount of energy harnessed per capita and the efficiency of energy use, did not reckon with the possibility that quantity and efficiency (what his students Marshall Sahlins and Elman Service later distinguished as thermodynamic achievement versus thermodynamic efficiency) may in fact be inversely related in world history. The simpler and less energy-intensive a society is, the more efficient its energy use is likely to be. Nor did White consider the possibility that the expanded levels of thermodynamic achievement (technological development) that he visualized as the foundation of an egalitarian future world might be dependent on an unequal exchange of energy and other resources in global society. In their inclination to focus on local populations and ecosystems, and on technology as a local phenomenon, cultural ecology and subsequent proponents of ecological anthropology have generally underestimated the role of global or even regional systems and processes in shaping local economy and culture. The recently expanding field of political ecology, however, is a promising antidote to such parochialism and political naivety. In addition to exploring applied environmental issues such as sustainable development, environmental justice, ecological economics, and the tragedy of the commons (i.e., the overuse of common property resources by people pursuing their individual interests), political ecology has generated new theoretical frameworks for understanding how environmental issues, power, and inequality are intermeshed.

In recent years, the label environmental anthropology has been used in a general sense for anthropological studies of human-environmental relations, including those whose concerns transcend the questions traditionally asked by cultural ecology and ecological anthropology. This more inclusive label should arguably be extended to the ethnoecology pioneered in the 1950s by the cognitive anthropologist Harold Conklin (b. 1926). A subfield of ethnoscience, this method uses linguistic analysis of native (emic) categories to map a group’s own view or knowledge of their natural environment. Environmental anthropology would also include the symbolic ecology launched in the 1990s by Philippe Descola (b. 1949), building on the structuralist perspectives of Claude Lévi-Strauss (b. 1908). Apparently sharing Lévi-Strauss’s position that nature and culture are universal cognitive categories, Descola has redefined animism and totemism as mirror images of each other, metaphorically transferring meanings from society to nature and from nature to society, respectively. Symbolic ecology shares with ethnoscience a focus on the cultural construction of the environment, rather than on how the environment shapes culture. Finally, also in the 1990s, Tim Ingold (b. 1948)
has developed an approach to human-environmental relations, inspired by, for example, phenomenology, ecological psychology, and Gregory Bateson, that he calls relational-ecological-developmental. Ingold rejects the universality of the distinction between nature and culture by showing that such categories are generally alien to hunter-gatherers. He also rejects the view that knowledge of the environment is either a representation or a construction of reality, in favor of Bateson’s view that knowledge is a relation that shapes both the knower and the known, both subject and object. Ingold challenges all notions of cultural or biological inheritance, arguing instead that humans are constituted (as indissolubly persons and organisms) through practical enskilment and engagement in specific environments. As for Bateson and Rappaport, the thrust of this effort is to transcend the conventional dualism in Western thought that separates material and ideational aspects of human-environmental relations.

Alf Hornborg

See also Anthropology

Further Reading


Culture

The concept of culture occupies an important place both in academia and everyday usage. Since culture means so many things at once, it is hard to define in simple terms. In fact, one 1960s text noted that there were at least 150 definitions of the term in use. The term has for long been used in a variety of contexts to describe the activities, beliefs, institutions, and artifacts produced out of the interactions among human beings. Culture understood in terms of meaningful actions can be located among both human and nonhuman species. Among humans, culture can be located at many levels of human interaction, from the smallest of human groups (such as a nuclear family) to successively larger units of human organization (communities, tribes, ethnicities, societies, nations, and civilizations). It is culture that imparts a sense of identity to human beings.

Perhaps it is the discipline of modern anthropology that has been expressly concerned with defining the term. Over the past hundred years or so anthropologists have debated the relevance of this term and generated a variety of definitions on both sides of the Atlantic. Some, like David Schneider, Claude Levi-Strauss, and A. R. Radcliffe-Brown, despite differences, tended to view culture in terms of underlying structures whose order could be uncovered. Others like Ruth Benedict and Margaret Mead associated culture with personality types. After World War II, greater attention began to be focused on the changing and disorderly aspects of culture that had for long been ignored by most anthropologists. Scholars like Clifford Geertz and the Comaroffs began to study culture in terms of the meanings and symbolic actions of human beings over time.

Today, there is a general consensus that cultures are profoundly shaped by history, that is, they are subject to constant change over time. Cultures are shaped by environmental forces, political struggles, and social inequalities. Cultural features might be widely shared among human populations. At the same time, they may also exhibit human meanings and actions that are contradictory,
ambiguous, and disorderly, and which resist easy categorization.

**Culture and the Study of World History**

The concept of culture occupies a prominent place in the writings of world historians. So pervasive is the presence of this concept in the study of world history that even if not explicitly used or defined, it usually forms the basis for the understanding of many associated concepts such as society, nation, civilization, regime, and world system. World historians frequently use culture to highlight the unique features, achievements, and activities that characterize these human groups. The term has also been extended to distinguish broad patterns of sustained interactions between societies. Obviously, much depends on the particular focus, method, objectives, and audiences of the writers in question. However, despite the widespread use of the term, world historians have yet to subject it to sustained theoretical reflection. In general, depictions of culture in world history tend to take shape within three broad types of writings, namely, universal histories, themed world histories, and microlevel world histories.

**Universal Histories**

Universal histories have found expression in a number of works since the nineteenth century. Such works have typically been interested in developing grand-scale interpretations about the rise and fall of civilizations in human history. Borrowing extensively from such fields as archaeology, cosmology, economics, geology, politics, and sociology, writers such as Oswald Spengler (1880–1936) and Arnold Toynbee (1889–1975) produced synoptic histories of the world that transcended national histories. These writers were primarily concerned with uncovering laws that governed the rise and fall of civilizations. Their accounts of the history of the world became the study of birth and demise of organic and bounded units called civilizations.

In these universal histories, culture often became equated with the political, intellectual, and artistic achievements that defined civilizations. Oswald Spengler made distinctions between civilization and culture, indicating that the former represented the latter in its last stages prior to its plunging into decline. For others, the role of culture was subordinated to the influence of the economy and class struggle (in the case of Karl Marx and Friedrich Engels) or to abstract notions of a progressively advancing universal human spirit (in the case of G. W. F. Hegel). Given the scale of interpretation and the sweeping generalizations being made, it is hardly surprising that there was little explicit theorization of culture. The minute details of cultural production and transformation were invariably ignored in favor of making broad statements about the characteristic features of civilizations. Europe and the elite classes received a greater share of attention than did other parts of the world or more oppressed populations. Although treatments of culture remain to be fully developed in such accounts, ambitious world histories of this genre continue to be written, and with impressive (though sometimes controversial) results. Notable instances of such work can be found in Max Weber's work on the connections between the Protestant ethic and the rise of a capitalist ethic in western Europe. More recently the works of David Landes and Samuel Huntington continue in this idealist vain with 'culture' driving economic development and political conflict on a world historical scale.

**Themed Histories**

Following World War II world historians began increasingly to concentrate on specific themes of world historical significance. They examined specific human activities and patterns of interactions (political conquests, long-distance trading, nomadic migrations, the spread of religions) that could be discerned over long periods of time and vast regions of the earth. The focus was on themes of global significance rather than on constructing grand accounts of the world that tried to explain the whole of human history within a single intellectual framework.

One set of writings tried to gauge the production, transmission, and experiences of social and economic inequality between nations. In the 1960s and early 1970s, a number of scholars took up projects that tried
to explain the rise of the West and the continued modernization (or lack thereof) of the world’s nations through economic development. The treatment of culture in such accounts was uneven. In some writings culture became a residual category, where activities pertaining to the arts, literature, and the intellect, were deposited. In others, the role of culture was subordinated to the study of political and economic forces. Once again, there was an excessive focus on Europe.

Over the past decade or so the terms of this debate have changed considerably as scholars began to write more sophisticated and non-Eurocentric studies examining why Europe’s history diverged so drastically from that of the rest of the world. Greater economic agency and centrality have been given to other parts of the world, especially Asia. These historians have usually given primacy to political and economic factors when explaining the great divergence in the development of European and non-European societies since the eighteenth century. Few writers give preeminence to culture as an important determinant of the great divergence between Europe and the rest of the world (but see David Landes’s 1998 *The Wealth and Poverty of Nations*). In this genre of writings culture has come to stand for attitudes, ideologies, and values that distinguish one society from another.

In the 1970s another genre of world-historical writings began to emerge that focused on world-systems analysis. Operating on many levels and over many time periods, these scholars tried to map the economic connections that linked vast regions of the globe. The emphasis once again was on the role of political, social, and economic factors in the formation of global patterns of economic exchange. In Wallersteinian world-system studies, it is the nature of the world system that shapes culture, which usually leaves culture as the ideological by-product of capitalism (see Immanuel Wallerstein’s 1991 *Geopolitics and Geoculture: Essays on the Changing World System*).

Another focus of world-history studies has been cross-cultural encounters. These writings examine processes that transcend geographical and political boundaries to connect societies or cultures spread over vast distances and times. Some of the most interesting writing on culture in contemporary world history has its roots in this influential body of work. These writers convincingly argue that cross-cultural connections have been one of the principal agents of change, with far-reaching consequences for our planet’s history. Over millennia, such cross-cultural flows have resulted in the movement of peoples, ideas, objects, and even microbes over vast regions of the planet, connecting and transforming diverse societies. Studies have examined ecological exchanges, technology transfer, trade networks, migrations, religious conversions, circuits of pilgrimage, processes of imperialism and globalization, and frontiers as zones of exchange. The works have moved from simple explanations of one-sided diffusion to two-way processes of mutual exchange and transformation. Yet while the phrase *cross-cultural interactions* finds frequent expression in world historical writings, there is little discussion about what is cultural about these interactions. In many writings *culture* becomes a synonym for *society*. In others, the term *culture* may be used to refer to human activities, such as migration and conquest, through which ideas, objects, and peoples are exchanged. However, while the interactions between cultures are mapped in detail, most world historians have hesitated to provide conceptual clarifications for the term *culture* that take into account wider debates in other fields (though there are exceptions).

This is not to say that engagements between disciplines

This Japanese print from the mid-1800s shows the mix of cultures as an Englishman dances to music supplied by a Japanese woman playing a *shamisen*. 
such as history and anthropology have yet to take place. After the 1970s, the traditional boundaries between anthropology and history began to dissolve as scholars realized that culture and history could not be separated. Historians began to read the works of cultural anthropologists, works in which culture was seen in terms of the meanings embedded in human interactions. In the decades that followed there was considerable debate about the politics of ethnographic writing, and even about the salience of the term *culture*. This brought the concept of culture to the center of academic debate and writing. These developments, along with borrowings from poststructuralist and postcolonial writings in the 1980s and 1990s, served to bring about a democratization of history and anthropology that resulted in the inclusion of the voices of women, minorities, and oppressed peoples. Sensitive accounts of the dynamics of culture, power, history, and resistance followed. The combined result of this intellectual ferment was the emergence of a new genre of sophisticated writings that is sometimes called the “new cultural history.” Culture was no longer seen as static and organic but as highly factor-centered, ordered, even intuitive, and yet prone to moments of disorder and flux. In these new writings there is increased emphasis on microlevel studies of the creation, transmission, and experience of culture within specific historical contexts.

**Microlevel Histories**

The rise of the new cultural history has allowed the emergence of a third genre of culturally oriented scholarship in world history, one that explores world-historical themes through microlevel analyses that show the interpenetration of global and local forces. Unlike in past scholarship, global forces are not seen as occupying some higher level of existence that is separate from local forces. The new approach proposes that global forces manifest themselves in local situations in the everyday lives of people within specific historical contexts; the study of culture becomes the study of the interpenetration of the global and the local. Writings of this genre have focused on themes such as conversion, colonialism, globalization, and capitalism. They provide sophisticated treatments of culture—now viewed as a shifting arena of meanings and actions shaped in a variety of historical
contexts. The emphasis is on revealing the complex ways in which human beings come to terms with the conditions of existence that shape their lives.

**Culture and Other World Historical Traditions**

The study of culture in world history will undoubtedly gradually extend to societies outside Europe that have developed their own rich understandings of the human condition. Orally and textually preserved worldviews from non-Western societies around the world have focused on such subjects as civilizations, jurisprudence, trade, science, philosophy, politics, theology, literature, and geography. Hindu and Buddhist cosmographies, for example, constructed their own world systems based on multiple realms of heavens, hells, and various kinds of beings that interacted with human beings. Royal historians, travelers, intellectuals, and common folk from around the world have spoken and written on topics that reflected their own understandings of culture, power, and history. For instance, the fourteenth-century Islamic scholar Ibn Khaldun (1332–1406) observed in his universal history, the *Muqaddimah*, that the study of human social organization formed an essential part of the scientific study of civilization. While such works might be termed ahistorical by the standards of modern historical scholarship, there is an increasing awareness that such accounts need to be explained on their own terms, separate from Western traditions of historical analysis.

**The Future of Culture in World History**

Culture has been variously defined in relation to communities, societies, states, nations, empires, and civilizations and world systems. The descriptions of culture have ranged from the simple to the complex. While it is generally recognized that culture finds its best expression in detailed local and regional histories, there has been little discussion about the use of the term at the level of global or planetary studies. Even today, many world histories treat culture as a residual field of human activities and artifacts that cannot be labeled political, social, or economic. On other occasions it has signified the presence of broad patterns of interactions between human collectives, with little clarification on what was “cultural” about these interactions. For these reasons, a number of questions remain for world historians. Is the concept of culture even appropriate for universal histories, with their broad sweep and general focus? Do world historians need to develop another term? What distinguishes the concept of culture from, for example, the concept of society?

Questionable too is the continued anchoring of culture to continental and area-studies schemes of world geography. More recently there have been attempts to revise these metageographical schemes and construct regions that are more representative of the cultures they claim to represent. Ultimately, the question of culture will depend on where one wants to locate the world in world history—at the level of the global, in the manifestation of broad interactions and processes, or at the level of the local. Either way, world historians writing in the twenty-first century will increasingly strive to deploy a concept of culture (or its associated terms) that attempts to represent both the particular and the general as they write about the connections that have bound human beings to one another and to their environments for millennia across this diverse planet. Culture continues to be relevant to world history, and world historians are beginning to engage the term with increasing rigor.

*Bernardo Michael*

**Further Reading**


## Cyrus the Great

(c. 550–530 BCE)

**King of Persia**

Cyrus the Great belonged to the Pasargadae tribe who immigrated to the Iranian Plateau during the first millennium BCE and settled in the area known as “Persis” or Persia, which is the southwestern portion of the Iranian Plateau along the Persian Gulf. During the sixth century BCE the Persians took control of the areas of Anshan and Susa (in modern Iran) and installed Persians as local rulers. Cyrus himself claimed that he was king of Anshan (he became king in 559–558 BCE) and that his forefathers were kings of the same area that is now identified with Marv Dasht. Three legends are attached to Cyrus and his upbringing. The first states (from the ancient Greek historian Herodotus) that he was the son of Cambyses, son of Cyrus I. His mother was Princess Mandane, who was the daughter of Astyages, the last king of the Medes, an Iranian people. Because Astyages had been warned by omens that the boy would take his throne some day, he decided to have the boy killed. Cyrus had been given to Harpagus, a Mede, to kill, but Harpagus was not able and gave Cyrus to a shepherd, who raised Cyrus as his own son. According to Herodotus, Cyrus displayed the genius of leadership in his youth that is ultimately derived from native Persian legends. Finally Cyrus’s true identity was discovered, and he was sent to Persia, where he was able to unify the Persian tribes and create a kingdom for himself.

The second legend states that Cyrus was left in the forest and that a female dog suckled him and protected him from wild beasts. This legend clearly demonstrates Indo-
European elements (compare the legend of Romulus and Remus, the founders of the city of Rome). The third legend (by Nicolaus of Damascus) states that Cyrus’s father was a bandit, who was given to a wealthy and noble family of the Median court to raise.

In 550 BCE Cyrus met Astyages in battle and won a major victory in which many of the Median forces defected to him. Now ruler of a confederation of Median-Persian forces, Cyrus set out to conquer the neighboring regions. He moved onto Anatolia (in modern Turkey) and faced the rich kingdom of Lydia with its famous King Croesus with his capital at Sardis. The oracle of Delphi had warned Croesus that if he fought Cyrus, he would destroy a great kingdom, which, in fact, would be his own. Sardis and Croesus fell into the hands of Cyrus in 547 BCE. This event was followed by the conquest of Mesopotamia with its chief city, Babylon, in 539 BCE. The Babylonian king Nabonidus was despised by the local population for neglecting the New Year festival and especially for neglecting the temple of the great Mesopotamian god Marduk. Cyrus entered the city almost unopposed and, as part of his policy of respecting local people and their religion and culture, made his way to the temple of Marduk. There he made offerings and paid homage to the great Mesopotamian god, presented himself as a servant of Marduk, and made arrangements for the rebuilding of the temple. This tactic on the part of Cyrus would pay off in many parts of the soon-to-be Achaemenid Persian Empire (550–330 BCE). Unlike the Assyrians, who used brute force to subdue the local population, the Persians allowed local traditions to survive and the provinces to be autonomous, providing security and collecting taxes. At this time the Hebrews who had been held captive in Babylon (the period in Jewish history known as the “Babylonian Captivity”) were also freed and allowed to go back to their homeland. According to the Bible (Ezra 6:2–5), Cyrus decreed that the Temple of Jerusalem be rebuilt and that what had been taken away by Nebuchadnezzar (Chaldean king of Babylon) be brought back to Jerusalem. Hence, the Old Testament (Isaiah, Ezra) remembers Cyrus and the Persians kindly. In Isaiah 45:1–3 the respect and compact between Cyrus and Yahweh, the Jewish god, are mentioned, again suggesting the king’s religious liberality.

Cyrus the Great also left us a firsthand account of his tolerance and worldview, which is known as the “Cyrus Cylinder” in the Akkadian language (Semitic language common in Mesopotamia at the time). This account also reveals aspects of his royalty. He was presented with all the titles of the Mesopotamian kings, such as “a great king, king of kings, king of the Four Corners of the world.” He stated that the people had the freedom to practice their religion and live as they wished, which we could consider as the first human rights declaration. By the time of his death at the hands of nomadic Iranian people known as “Sakas” in 530 BCE in central Asia, Cyrus had established an empire that spanned from the Iranian Plateau to the Mediterranean Sea. His tomb is at Pasargadae, the location where he defeated the Median king and where Cyrus had his stronghold. The Achaemenid Persian Empire would further expand and last for two centuries.

Touraj Daryaee

See also Persian Empire

Further Reading

Engaging in community dance and/or military drill by moving rhythmically together for lengthy periods of time is a very effective way of arousing shared and friendly feelings among the participants. This effect is reinforced by music and voicing, all the way from band music and choral singing to drill sergeants’ shouts of “Hut, Hip, Hip, Four.” Somehow moving muscles together in time, with voices backing up the rhythmic beat, makes people feel good, wipes out old grudges, and smooths over personal rivalries. Even when the immediate excitement subsides, such exercises leave a residue of fellow-feeling and readiness to cooperate. This had important effects in times past and still exhibits itself in religion, war, politics, and innumerable social settings where people dance, sing, and keep together in time.

Exactly how shared feelings are aroused when we dance, sing, and march is not accurately known. Hormones and the sympathetic nervous system are surely involved; so are parts of the brain. Suffice it to say that such behavior and their results are both unique to and universal among human beings. Only humans engage in community dancing and music-making; and all known human societies do both. Only a few, however, harnessed this human response to keeping together in time for military purposes, though those that did so profited from the superior cooperation and morale of soldiers who drilled regularly for long periods of time.
Origins
When rhythmic dancing and music-making first arose among humankind is unknown, but must have been very early, perhaps before *Homo sapiens* emerged and before language developed among our ancestors to make us fully human. Whenever the habit established itself, the advantage of greater cooperation among larger numbers arising from dancing together must have been enormous, since only dancers survived. Recent observations of our closest animal relatives, the chimpanzees of Africa, suggests why this was so. In 1969, the band of fifteen adult males that Jane Goodall and her helpers were studying split into two rival groups, and in the next two years each of the seven seceding males was hunted down and killed by their rivals, who thus regained the whole of their original territory and the females who had seceded. Very slightly superior numbers (and perhaps stronger cohesion) among the core members of the old band thus prevailed. Obviously, if dancing together allowed our ancestors to overcome the sort of individual frictions that split that chimpanzee band apart, it is easy to imagine how larger numbers of more cooperative individuals could expand their territory against neighbors who had not yet learned to dance—thus making that form of behavior universal within a few generations.

Thereafter different human groups elaborated the possibilities of rhythmic movement in innumerable different ways. Until very recently, the principal historical importance of dancing was to knit local communities together. Participants were well aware of its emotional effect. In the twentieth century, for example, Greek villagers told an anthropologist that they felt “light, calm, and joyful” when they danced; and Kalahari hunters reported to another observer: “being at a dance makes our hearts happy.” Such feelings made conflict like that which ravaged Goodall’s chimpanzees far less likely, and allowed larger numbers of persons to live together peacefully year after year. Although important emotional cohesion and cooperation, induced by dance, may have been among our ancestors, nothing like a history of community dancing can be written. Such behavior was simply taken for granted, and before anthropologists started work, about a hundred and fifty years ago, evidence for dancing among hunters, pastoralists, and farmers remained exceedingly sparse.

Spiritual and Religious Importance of Dance
Records are more substantial for a more specialized, eventually professionalized, kind of dancing intended to consult and/or please powerful spirits and gods. Around such rituals, organized religions eventually emerged. Later on, in urban settings, expert exhibitions of dancing (and song) honoring a god also became public entertainment for spectators, as surviving texts of Greek dramas attest. Simultaneously, excited, participatory dancing among believers remained a growing point for religions, as is clear from biblical references to how Saul and David danced before the Lord and founded the Hebrew kingdom, largely on the strength of enthusiastic bands of young men who danced with them, honoring Yahweh. Early Christianity also was hospitable to dancing, though the practice soon fell under suspicion when bishops and priests set out to restrain and ritualize public worship. Enthusiasts and heretics who often (but not always) danced, continued to
Dance is a cultural universal that translates well across cultures. In this photo Morris dancers perform at a community festival in a small town in New England.

challenge church authorities from time to time; and in the sixteenth century, Protestants bound their congregations together by rhythmic movement while standing up and singing hymns and psalms. A long series of subsequent religious enthusiasts—Methodists, Quakers, Mormons, Shakers, Pentecostalists, Russian Old Believers and others—used similar methods to arouse cohesion and commitment among their followers. African Christians (and a variety of heretical faiths) have been particularly successful in using song and dance, borrowed directly from village customs, to consolidate their converts.

Song and dance kept other world religions in ferment in much the same fashion. Among Jews, Hasidic enthusiasts sang and danced, attracting a large following in Poland and nearby lands, beginning in the eighteenth century.

Among Muslims, dervish associations of restless young men proliferated widely beginning about 1000 CE, chanting, dancing, and sometimes achieving ecstasy. Across the centuries, many Buddhist sects also engaged in rhythmic exercises, appealing usually to poor and discontented groups.

Recent examples include the so-called Boxer rebels in China (1900–1903), and a similar Buddhist sect of dancers who began to attract official persecution in the 1990s. In Japan, the Soka Gakkai, founded in 1930, was persecuted by the imperial government until 1945, but burgeoned after that date through daily rhythmic exercises conducted outdoors in urban settings to become a significant factor in national politics.

Tension between enthusiasm generated by dance and song and the authority of established priesthoods and legally defined systems of belief was persistent throughout religious history. Whenever social strains were acute, enthusiastic sects arose to express and relieve popular discontents, and nearly always relied on dance and song to keep their followers together. The process continues worldwide today, with diverse, sometimes angry, so-called fundamentalist movements vigorously challenging conservative religious authorities everywhere and sustaining themselves, more often than not, as much by communal rhythmic exercises as by words or ideas.

Bonding Communities and Combatants

The role of dance and song in disturbing established religious routine and ritual is second only to its importance in sustaining local village and migratory communities throughout human history. Perhaps it is worth pointing out that such sects flourished most vehemently when substantial numbers of persons found themselves unable to live satisfactory lives in traditional ways in local communities because of overpopulation or some other obstacle. Sometimes, as happened among the bands of prophets in ancient Israel and among sixteenth and seventeenth-century Protestants in parts of Europe and America, religious protest precipitated new and successful institutional adjustments. More often, sects decayed from within when expectations were disappointed, and/or forcible repression dispersed their followers.

Armies rivaled religious sects in relying on rhythmic exercises to influence human behavior. Infantry soldiers trained to march together in time and reinforce muscular
bonding by shout and song were capable of maintaining a solid shield front in battle and could overwhelm less organized enemies with comparative ease. The earliest known evidence of such tactics comes from Lagash in Sumer about 2450 BCE in the form of a stone carving showing armored spearmen marching in step behind their commander. Early Chinese warfare also relied mainly on infantrymen who maneuvered in unison, to drumbeat.

After about 750 BCE, however, when cavalrymen learned to shoot arrows from horseback, faster moving horsemen could outflank infantry and attack with arrows from a safe distance. Accordingly, wherever steppe cavalry raiders were the main threat they had to face, civilized armies of Eurasia de-emphasized infantry, put foot soldiers behind walls, and let military drill decay.

In Greece and Rome, however, where steppe raiders seldom penetrated, drill and dance became essential elements of military training after about 650 BCE; and citizen armies, marching together and keeping time by shouting, dominated Europe’s Mediterranean battlefields for several hundred years thereafter. As a result, intense commitment by ordinary farmers to public affairs and war went along with citizenship in ancient Greece and republican Rome, providing a model for modern democracies when they arose in Europe and America in the eighteenth century. Emotional responses to keeping together in time undergirded and made such behavior possible.

Elsewhere in the world, war and dancing were intimately connected. Among Amerindians, Polynesians, Africans, and elsewhere warriors prepared for battle by dancing together ahead of time. Such behavior presumably consolidated fellow-feeling and assured better cooperation even when the combatants did not array themselves in fixed ranks or learn to maneuver together. Horses of course cannot keep time, so cavalry was different. Drill was ineffective, and whatever control commanders were able to exert over attacking cavalrmen was more by personal example than through prearranged formations.

In the sixteenth and seventeenth centuries both Chinese and European and generals discovered that pikes, crossbows, and handguns, wielded by well-drilled infantry units, could withstand and repel cavalry charges. This altered long-standing military balances within Eurasia, making the superior numbers of civilized armies effective against steppe horsemen as never before. China and Russia were the principal beneficiaries and by 1757 the last steppe nomad confederacy was reduced to dependence as their expanding Imperial frontiers came together. Almost
simultaneously British, French and Dutch agents established extensive overseas empires in Asia and eventually in Africa as well, thanks to victories won by surprisingly small, well-drilled forces, fruited in large part among local populations, and obeying European commanders. The psychological effect of drill was never more clearly demonstrated than when Indian, African, and Indonesian recruits, moving together in unison, learned to obey European commanders. Older social ties were almost wholly superceded among them by a new collective solidarity that made men of diverse backgrounds into obedient instruments of utterly alien European intruders.

Meanwhile, similar armies, recruited from city slums and impoverished rural communities, strengthened European governments at home, sustaining the aristocratic and privileged urban classes of Europe’s old regime.

The French Revolution of 1789–1815 expanded the role of army drill among Europeans, creating citizen armies on the model of the Roman republic. The French example proved contagious, so by 1914 almost all European governments drafted young men for a year or more of military training and assigned them to reserve units throughout their active years. Such military training involved long hours of drill and patriotic exhortation that proved very effective in superceding village ties with new national identities. Accordingly, during World War I, national rivalries sustained mass armies, numbering in the millions, through four years of military stalemate, before ending with the sudden collapse of Germany and its allies when hastily trained American soldiers arrived on the Western Front to reinforce the flagging French and British. World War II (1941–1945) turned into an even more destructive disaster for Europe; and transformed Asia and Africa by making European empires unsustainable. In every theater of war the power of drill to create obedient soldiers manifested itself; and as Asians, Africans, and Americans began to participate actively in the two World Wars, new national identities took hold among them, thus ending Europe’s temporary dominance. Economic and demographic changes worked along parallel lines; but military drill among Asians, Africans, and Americans was what triggered this worldwide shift of power.

**Dance as a Tool for Society**

Among many peoples, dance of course has never been restricted to religious and military affairs. Urban populations were too large and diverse to dance together, as villagers continued to do; but subgroups could and did dance privately among themselves. Dancing perhaps always played a role in selecting mates; and continued to do so in urban settings. In Renaissance Italy, for example, dancing among the urban upper classes became a way of showing off fine clothes, good manners and sexual attractiveness. This Italian style of ballroom dancing then spread across northern Europe in early modern times. In addition, dancing could express and exhibit the grandeur of a king, as Louis XIV of France (reigned 1643–1715)
well knew. As a youth he participated personally in exhibitionistic dances; then settled for watching as professional dancers developed what became ballet, as the art is known today. More recently, social dancing divided between theatrical exhibitions of unusual skill and grace on the one hand, and on the other, turned into an expression of the mating game among the young.

As for public affairs, after the French Revolution, marching and rhythmic shouting became important ways of political mobilization. German and Czech nationalists used gymnastic exercises, for example, to foster new sentiments by coordinating muscular movements among hundreds or thousands of participants. Marxists soon followed suit, when Victor Adler in Vienna modeled annual May Day parades on traditional Catholic Corpus Christi Day processions. Marxists elsewhere imitated the Viennese example, as Stalin’s May Day parades in Moscow illustrated. Massive gymnastic exercises took especially strong root among Chinese and Korean Marxists, where Buddhist sects had obviously prepared the way for muscular demonstration of their new, secular sort of religion. Meanwhile in Austria, the youthful Adolf Hitler, repelled and fascinated by watching the Marxists’ May Day parade, subsequently used marching, uniformed party members to reclaim the streets of Germany and Austria for the Nazi party that he created. Unquestionably, the popular, emotional support these and other political parties and revolutionary governments attained in the twentieth century rested very largely on muscular bonding aroused by march, song, and dance. Restless and rootless young men were especially attracted to such behavior, and everywhere remain an especially volatile element in human society.

Political parties and movements in more stable civil societies, like the United States, also resort to marching and rhythmic chanting on occasions of unusual excitement, like election rallies. More surprising was the dismantlement of apartheid in South Africa, accomplished after 1990 by dancing urban crowds of Africans, who drew directly on village customs of community dancing. Less well coordinated rhythmic muscular protest also sustained the agitation in Teheran that brought Ayatollah Khomeini to power in 1979; and in 1990–1991 the collapse of Communism in Russia also provoked improvised rhythmic crowd behavior in the streets and squares of Moscow. Sporadic and more or less spontaneous resorting to moving together in time may also be observed among crowds attending athletic events throughout the world.

Obviously, our capacity for arousing common feeling by dancing, shouting, and marching together is as varied and vigorous as ever. It is sure to persist, and seems likely to remain politically and religiously important in times of crisis, even though older, localized community-wide dancing on festival occasions is in general decay, and may eventually vanish.

William H. McNeill

See also Festivals; Military Training and Discipline

Further Reading


Daoism

One of the “Three Teachings” (sanjiao) of China (the others being Confucianism and Buddhism), Daoism is perhaps the most difficult to define. Strictly, Daoism is a religio-philosophical system developed during the Warring States period (475–221 BCE); broadly characterized, it is simultaneously an attitude toward life and a soteriological (salvation-oriented) tradition based on harmony with the *Dao* (the Way), the immanent
source of all existence and the path it lays for man to follow. Daoism encompasses often-contradictory beliefs and practices, such as shamanism, alchemy, and martial arts. Traditionally, scholars distinguish between an original Daoist philosophy and a later Daoist religion, the former given greater legitimacy than the “superstitions” of the latter. More recently, this division has been challenged, and the development of Daoism is now described as a cumulative process integrating commonly held teachings and fundamental notions, particularly the unity of man and the natural order. The integrative character of Daoism and the unofficial nature of many of its sects make current estimates of its worldwide membership range widely, from 20 million to 55 million.

Most Daoist concepts come from Daoism’s foundational book, the Daodejing (Classic of the Way and Its Power). Although more likely a compilation developed over centuries and only finalized in the third century BCE, it has traditionally been attributed to Laozi (sixth century BCE), an archivist at the Zhou court. According to China’s first universal history (second century BCE), after observing the dynasty’s decline, Laozi headed west. Before leaving the empire, he was convinced to record his precepts. Only five thousand characters in length and divided into two parts, the Daodejing lays out Laozi’s definition of Dao and his prescription for a “right” society in accord with it. It is a series of cryptic, short teachings, meant as a handbook for rulers in the art of governing in harmony with the universal order. Laozi’s teachings were expanded by Zhuangzi in an eponymously titled book (c. 330 BCE) that first presents Daoism as a philosophy for ordinary individuals. Using parables to demonstrate the relativity of all knowledge and values, the Zhuangzi levels social difference and, in contrast to Laozi, rejects all participation in society. It harks to a primitivist society where, free from the ethical dangers of the world, ultimate harmony with nature can be achieved. Together, the Daodejing and Zhuangzi outline Daoism as a metaphysical rather than man-centered philosophy, in which the ultimate end is wu (nonbeing), an emptiness through which Dao can work unimpeded.

As a philosophy of life, Daoism is ingrained in Chinese culture, bridging the more rational Confucianism and the more metaphysical Buddhism. Daoism’s influence is clear in Chinese science and medical knowledge, which draw on its emphasis on harmony with nature and its practitioners’ belief that to understand nature is to glean insight into the universal order. Daoism has also shaped Chinese literary and aesthetic sensibilities. Its ideas have been acculturated into other Asian cultures, particularly those of Japan, Korea, and Taiwan, where they have influenced autochthonous traditions. It has also become influential in the West, offering an alternative spirituality through practices like taijiquan (tai chi) and feng shui.

**Daoism and Chinese Syncretism**

Though the division into the Three Teachings is practical for appreciating the differences between Confucianism,
Buddhism, and Daoism, the boundaries between them have never been sharply drawn. Rather, they are seen as complementary, pointing to the same goals: man’s full possession of his humanness and his immortality through harmony with *Dao*. The Chinese share singular conceptions, most clearly that of *Dao*, which means “road” or “way,” though it is also understood as “way to follow” or “rule of conduct.” The fluidity of the term allows for each of the Three Teachings to nuance its definition. However, the concept shares a common cosmology, which describes the universe as a hierarchically organized mechanism in which the parts correspond to the whole. The world is divided into three spheres (Heaven, Earth, and Man), each with its own *Dao*, mirroring one another in a macrocosm-microcosm relationship. Communication and harmony between these spheres is crucial to maintain a universal order constantly under threat. Chinese thinkers also see the natural order as manifested in simultaneously antithetical and complementary aspects, known as yin and yang, each of which cannot be defined without the other. Yin and yang encapsulate the relativity of all things, because any one thing can be either yin or yang in relation to another.

The complementarity of the Three Teachings’ foundational concepts is made apparent by efforts throughout Chinese history to integrate the Teachings into a single movement. However, this complementarity must not be overstated; deep-seated rivalries for influence at court and over the masses existed among Confucians, Daoists, and Buddhists. Their differences were more than political; while sharing basic concepts, each adopted a distinct attitude toward life, society, and nature. Confucianism, for example, concentrates on creating an ethico-political system to shape a “right” society through propriety. Buddhism abjures Confucian social values, while espousing beliefs, like the illusory nature of the physical world, diametrically opposed to Daoist doctrine. For its part, Daoism represents a more personal and spontaneous approach to life than Confucianism, and a metaphysics more firmly grounded in nature than Buddhism. It builds upon collective concepts, elaborating them into a distinct “way.”

**Basic Concepts of Daoism**

*Dao*, as defined by Laozi, is a metaphysical principle, both the ultimate order of the cosmos and the source from which everything emanates. The term itself is a mere approximation, as Laozi admits: “I do not know its name; I call it the Way. If forced to define it, I shall call it supreme” (*Daodejing* chapter 25; these and subsequent quotations are from the Beck translation). Although the term was originally used to convey an object’s place in a hierarchical order, *Dao* itself is outside that order. Not a creator, it is nonetheless the origin of all things in the hierarchy. For example, *Dao* is not God (*Tī*), but God originates in *Dao*. One of its essential attributes is spontaneity. Although it is the ordering principle of the universe, “[t]he Way never interferes, yet through it everything is done” (chapter 37).

Closely related to *Dao* is the concept of *de*. Usually translated as “power,” *de* refers to the Way’s efficacy in the realm of the tangible. *De* is also “virtue,” not moral action but the power which the Daoist acquires by living in harmony with the universal order. Daoists approach *de* in three distinct ways: one aims, through meditation, at the conservation of the *Dao*’s power as it flows through the body; the second, in contrast, seeks to increase *de* through various programs of movement, such as *taiqijuan* or kung fu exercises, which unblock the *qi* (life force or breath) and rejuvenate the body; the last offers the help of priests in managing *de*, because Daoist practices are efficacious only if consistently performed. Thus, Daoist priests, who understand the flow of *qi*, help the untrained to unblock its flow.

In the concept of *de* we see the interaction between *Dao* and man. As a microcosm of the universal order, the body mirrors the plan of the cosmos; and the same forces flow through both. To Daoists, the metaphysics of *Dao* and *de* explain and shape human ethics. The ethical ideal of Daoism is self-suppression—*wu*, or inner emptiness.
As there is no thing other than emptiness at the core of the Way, so it should be in the human mind. One should be moved by instinct, not rational thought, like a child, embracing the spontaneity inherent in Dao. Wu is outwardly manifested in wu wei, or nonaction, a concept that refers not to absolute inaction but to the absence of self-determined action for particular ends. Daoists use the metaphor of a river, malleable yet powerful enough to erode rocks, to explain the above. Wu wei is intrinsically tied to the concept of yin and yang, which makes it intelligible: Since each action inevitably leads to its opposite, every deliberate intervention ends in failure. In contrast, nonaction leads to success. Even in following the Way, men should not consciously endeavor to do so, for striving results in straying from Dao.

Daoists seek a return to a past prior to the corruption of civilization, advocating a primitivist society that follows the rhythms of nature. According to Daoists, since the golden age the unity of the universal order has declined, a fact elucidated by the short lifespan of man, who in the past supposedly lived hundreds of years. Zhuangzi explains that, attempting to stem the decline, rulers unsuccessfully interfered with the flow of Dao, resulting in defiled purity and a useless search for knowledge. Two main doctrines follow: the espousal of laissez-faire government and the rejection of education. Laozi most clearly elucidates Daoist social ideals: “the more restrictions there are, the poorer the people; . . . the more clever cunning, the more contrivances . . . Do not interfere, and people transform themselves. . . . Do not intervene, and people prosper” (chapter 57). The king’s wu wei must extend to the rejection of education. Laozi condemns even the desire for knowledge, because it leads to competition over status and profit. The ideal society has neither schools nor books; its people are simple in their true nature. Zhuangzi goes further: Law and virtue must be excised, since good and evil, inevitably reverting to each other, are relative concepts. This relativity points to an emerging Daoist skepticism and leveling of moral distinction.

Historical Development

Daoism originated from the shamanic practices of the third millennium BCE. Exhibiting themes such as the search for harmony and immortality, in the first millennium BCE shamanism became associated with the fang-shi, respected healers and diviners. During this period, Laozi’s mystical politics and anarchic ideals also developed, together with Zhuangzi’s emphasis on subjectivity and disregard for external behaviors. During the Qin and Han dynasties (221–206 BCE; 206 BCE–220 CE), the Huang-Lao masters, adherents of Laozi’s precepts and his ideal government, gained influence at court. Although the emperor Han Wudi (156–87/86 BCE) established Confucianism as the state’s official doctrine, rulers privately practiced Daoism, seeking to emulate the semimythical Yellow Emperor.
Emergence of Religious Daoism

During the first century BCE, a messianic Daoism developed that was utopian in outlook and aimed at establishing an era of “great peace.” It inspired the Rebellion of the Yellow Turbans (184 CE), who sought to overthrow the Han dynasty. Although the rebellion was defeated, messianic tendencies remained within Daoism. The second century CE saw the emergence of religious Daoism in a new organization that brought temporal and spiritual powers together under the control of the Tianshi (Celestial Masters). In 142, the now-deified Laozi is said to have given Zhang Daoling the definitive, “orthodox” doctrine to replace people’s contemporary religious practices. The doctrine sought, through rituals like confession, to expiate sins that resulted in disease. In 215 the Celestial Masters sect was constrained to submit to Cao Cao, founder of the Wei dynasty (220–265 CE). The result was the official recognition of the Celestial Masters, who helped legitimize both the Wei and the succeeding Western Qin dynasty (265–316 CE).

The fall of the Western Qin to northern barbarians led to a migration southward, where the Wu dynasty (222–280 CE) arose. In the period of the Southern Dynasties, Daoism was influenced by the traditions of the lower Chang (Yangzi) River, particularly the belief in zhenren, pure immortals immune to the world’s decay. The immortals became models of attained agelessness, the realization of which was seen as possible through alchemy and magic. By the fourth century, this synthesis of the Daoism of the Celestial Masters and preoccupation with immortality led to the development of a competing sect, the Mao Shan school. In general, Daoism gained official support but not sole recognition in the South, while in the North it became the official religion of the Northern Wei dynasty (386–534), whose rulers claimed to be deputies of Lord Lao.

Daoism from the Seventh Century

Daoism’s greatest success came with the reunification of China under the Tang dynasty (618–907 CE), as it spread throughout the empire. The founder of the dynasty was believed to be Laozi’s messianic descendant, a notion which became part of official state ideology. Numerous temples and monasteries were built, and the Daodejing joined the Confucian classics as part of the civil-service exam. During this time, Daoist scriptures also attracted the attention of foreign rulers and were translated into other languages. During the Song dynasty (960–1279), the Daoist canon was expanded and printed for the first time. However, with the decline of the first (Northern) portion of Song dynasty (1126), Daoism lost its place as the official religion. In the fray, several new sects developed. Of these, the Zhuangzhen (Complete Perfection) sect, noted for its ethical teachings, gained the favor of the Mongols and was thus able to challenge the Celestial Masters’ preeminence. The sect’s emphasis on asceticism and hygienic techniques to prolong life became one of the most important and prevailing currents in Daoism.

During the Yuan dynasty (1279–1368), Daoists used their prominence in the north to lead a persecution against Buddhism, hoping to diminish its growing influence. However, the tide turned, culminating in the state-sanctioned burning of Daoist apocrypha in 1281. In the south, meanwhile, the Celestial Masters’ influence

not regarding one’s companions:
thus one may manage to walk in the middle.
• I Ching

The Lantern Pagoda with fifty lanterns is hung on New Year’s in China to honor various gods and bring light, which symbolizes prosperity.
continued unabated, although challenged by newly developing currents in Daoism. These new currents embraced Neo-Confucian beliefs, which gained them the support of conservative officials and intellectuals.

During the Ming dynasty (1368–1644), the elite became estranged from Daoism, and Daoism’s social status dwindled. The Ming elite held double standards in respect to Daoism: They still drew on its notions to justify their rule, but put the religion under strict control, inhibiting its independent development. Stifled by the ruling class, Daoism flourished among underground religious sects. The rulers of the Qing dynasty (1644–1912) saw Daoism as potentially seditious and started to suppress it, withdrawing most of its privileges. However, the religion continued to develop among minorities and the lower classes.

**Spread and Influence**

With the exception of Taiwan, which saw an influx of Daoists in the seventeenth and eighteenth centuries as part of mass migrations from Fujian province in the southern mainland, Daoism has not spread systematically to other areas of the world. However, its doctrines and practices were absorbed into local traditions across East Asia and are now making inroads in the West. The seeming lack of an exclusive mythology, historical contexts, and personal references in Daoist scriptures has helped give them universal appeal.

**Korea and Japan**

Daoism arrived in the Korean Peninsula in 624, when it was at its height at the Tang court. The emperor sent emissaries bearing the *Daodejing* and *Zhuangzi* to the three Korean kingdoms, two of which fully welcomed their teachings. In the kingdom of Koguryo, Daoist priests’ influence was such that many local Buddhist temples were made Daoist. The kingdom of Shilla sent scholars to China to learn more about the religion and included the *Daodejing* in the Shilla civil-service exam. Although a Daoism stressing self-discipline was popularized at all levels of Korean society, by the fourteenth century Daoism was in decline as Buddhism resurged. Further suppression came with the Japanese invasion of 1592, after which the vitality of Daoism as an independent religion faded. Yet Daoism’s influence in Korea is evident in traditional gardening and in the country’s flag, the central symbol of which is the Taeguk, representing the correspondence between heaven and earth.

The Japanese first encountered Daoism in the seventh century. Early on, Daoism’s affinities with the animism of Japanese Shinto eased an acculturation of Daoist doctrines into Shinto traditions. The introduction of specific Daoist practices dates to the Heian period (794–1185), when “Masters of Yin and Yang”—diviners learned in the occult—gained influence at court. In the eighth and ninth centuries, practitioners of Shingon Buddhism adopted Daoist physiological practices and the belief in the immortals. Tendai Buddhists embraced Daoist magical arts and techniques for prolonging life. Daoist mysticism made its strongest inroads in Japan through its influence on the Zen schools of Rinzai and Soto, which were introduced from China in the twelfth and thirteenth centuries and are still active today.

**Daoism in the West**

Western opinions of Daoism have changed from the days when the Italian Jesuit Mateo Ricci first visited China in 1582. Seeing Daoism as an obstacle to the spread of Christianity, Ricci allied himself with court Confucianism and decried Daoism as perverted paganism. This negative attitude persisted into the nineteenth century, when philosophers such as G. W. F. Hegel deemed it a throwback to philosophy’s infancy. However, popular nineteenth- and early twentieth-century writers such as Leo Tolstoy and Franz Kafka brought it to a broader audience, while thinkers such as the philosopher Martin Heidegger and the psychologist Karl Jung embraced its tenets as confirmation of their own subjective philosophies.

The Western interest in comparative studies has brought Daoism to the forefront. Daoist theories have infiltrated discussions of scientific subjects, while its doctrines serve environmentalists as an alternative philosophy with which to criticize Western attitudes toward nature. Daoism’s questioning of traditional authority
looking at animals, might be looking at old friends or ancestors. In the East the wilderness has no evil connotation; it is thought of as an expression of the unity and harmony of the universe. • William O. Douglas (1898–1980)

and the substantial presence of women in institutionalized practice have also made it appealing to certain strands of feminism, which see in the interdependence of yin and yang a less divisive way to conceptualize gender. Daoism has also attracted attention at the popular level, its prescription for a simplified life appealing to those who seek to lessen the effects of technological dependence. For example, feng shui is used as a means to harmonize urban living with the energies of nature.

**Daoism Today**

With over eighty-six sects worldwide, Daoism is one of five sanctioned religions in the People’s Republic of China—the others being Buddhism, Islam, Protestantism, and Catholicism. However, its relationship with the government is uncertain at best, since only two sects are officially recognized: the school of Complete Perfection and that of the Celestial Masters. Although the greatest number of Daoists live in China, Taiwan is the center of official modern Daoism and has been since 1949, when the sixty-third Celestial Master, Zhang En Pu, took refuge there. With millions of adherents practicing **taijiquan**, visiting Daoist temples, and studying Daoist healing methods both on Taiwan and on the mainland, the ultimate influence of Daoism in modern Chinese culture is unmistakable.

*Maritere Lopez*

**Further Reading**


**Darwin, Charles**

(1809–1882)

**English naturalist**

Charles Robert Darwin was born in Shrewsbury, England, on 12 February 1809, the son of Robert Darwin, physician, and Susannah Wedgwood Darwin, of the Wedgwood pottery dynasty. Charles started work on a medical degree at Edinburgh University, but, repelled by the sight of surgery performed without anesthetics, did not finish his studies. He went later to Cambridge University in preparation for becoming a clergyman in the Church of England.

In 1831 he took the post of “naturalist” aboard the H.M.S. *Beagle* on its surveying voyage to South America, and the Pacific and Indian Oceans, under the command of Captain (later Admiral) Robert Fitzroy (1805–1865). On his return Darwin published an account of
the journey, as the third volume of Fitzroy’s *Narrative of the Surveying Voyages of the Adventure and Beagle* (1839). Over the next four years he oversaw the publication of various reports, by experts of the day, on the mammal, bird, fish, and reptile specimens he had collected. He also wrote an important book on coral reefs and several monographs on fossil and living barnacles. When his travelogue was reissued in an enlarged edition as the *Journal of Researches into the Natural History and Geology of the Countries Visited during the Voyage of H.M.S. Beagle Round the World* (1845) he received more widespread and popular acclaim.

Darwin had long pondered the variety of life. He was influenced by the geologist Charles Lyell (1797–1875), who outlined the idea that geological changes to the earth had happened over millions of years, rather than the thousands of years deduced from the biblical account of Genesis and the great flood. The economist Thomas Malthus (1766–1834) had also written an influential book, *An Essay on the Principle of Population* (1798), in which he argued that the population of the earth could not expand forever and that at some point starvation, disease, pestilence, war, and other “natural” causes would prevent further increase.

During his travels, famously including those through the Galápagos Islands, Darwin had regularly come across unusual groups of very closely related species, which he likened to variations on a theme. Meanwhile through his gentlemanly pursuits he had come across bird, dog, and horse breeders who had created new breeds that differed from one another as much as wild species might differ from each other. These discoveries stimulated Darwin to construct his theory of evolution by natural selection.

Darwin had been working on a manuscript for many years when, in June 1858, he received an essay from a fellow world traveler and naturalist, Alfred Russell Wallace (1823–1913). Wallace had independently arrived at exactly the same conclusion as Darwin’s: that the vast reproductive ability of living organisms, subtle variation within species, and the struggle for survival would result in the selection of any slight advantage and the inheritance of that advantage in future offspring.

Darwin was a famous naturalist while Wallace was younger and less well known, but Darwin knew he would have to publish or forfeit credit for the originality of his ideas. Through the support of his close colleagues Charles Lyell and the botanist Joseph Hooker (1817–1911), Darwin and Wallace presented a joint paper to the Linnean Society of London, and a year later, in 1859, Darwin’s most famous book, *On the Origin of Species*, was published.

The book soon generated a storm of controversy. At the beginning of the nineteenth century, the study of natural science was intricately intertwined with an appreciation of the wonders of God’s creation—many of the most important naturalists of the day were clergymen. It was assumed that species were fixed, created by a divine hand and therefore immutable.

With Darwin and Wallace came, for the first time, an explanation of how species might change—an explanation that was coherent, plausible, and readily acceptable to the scientific community. It was not, however, acceptable to the clergy. They took Darwin’s book to suggest that the world had not, after all, been created in a week, that mankind had not been created in God’s image but had begun as something more primitive. To them, Darwin’s book reduced the story of Creation, and of Adam and Eve, to a myth.

Darwin died in 1882, without any formal state honor or recognition. Today, however, Darwin is recognized as one of the most important figures in the history of science and, with Wallace, is credited with producing the theory that still underlies all of biological science. Every aspect of the study of living things, from ecology to genetics, is underpinned by their original concept of evolution by natural selection.

*Richard A. Jones*

**See also** Human Evolution—Overview

**Further Reading**
Dating Methods

Archaeologists can be likened to journalists who focus not on the events of recent days but on activities that transpired in human antiquity. Like newspaper reporters who are instructed to find out the who, what, where, how, why, and, of course, the when of their story, archaeologists must ask and attempt to answer these same questions in their effort to paint a comprehensible picture of the human past.

In attempting to find out when events happened, archaeologists employ a broad array of techniques collectively called dating methods. These methods are applied directly to objects in order to determine their actual age or to situate them accurately in a chronological sequence. The dates so derived on individual items may then be associated with and applied to the archaeological sites from which they were recovered. By a further extrapolation, the dates of these sites are then used to answer general questions concerning the timing and tempo of significant events or developments in the history of humanity: the evolution of upright walking, the earliest toolmaking, the controlled use of fire, humanity’s geographic expansion beyond its African evolutionary nursery to the rest of the world, the origins of agriculture, the development of metallurgy, the invention of writing, the appearance of urban civilizations. Our understanding of the origins of these and myriad other important steps in the evolution of human societies often is based, ultimately, on our ability to accurately and precisely date objects associated with these developments.

Dating methods employed in archaeological analysis can be divided into two general categories: relative methods and absolute (sometimes called chronometric) procedures. Relative dating involves placing objects, sites, or events in a chronological sequence, without reference to an actual date, year, or even to a broad range of years. Absolute dating techniques produce actual dates or age ranges.

Relative Dating Methods

Among the relative dating procedures employed by archaeologists, the most commonly used involves sequencing objects, occupations, and sites on the basis of the soil levels in which cultural remains have been found.

As long ago as the late eighteenth century, the British geologist William Smith recognized that Earth’s history is written as a metaphorical book whose pages are represented as a series of soil layers, one laid down upon another in a sequence across a vast expanse of time. Smith’s analysis of these layers—the stratigraphy of buried geological deposits—provided scientists with a sequential natural history in which each layer contained fossil evidence of the types of life forms that dominated during the period in which the layer was deposited.

Archaeologists soon realized that stratigraphic analysis could similarly be applied to human history. Human-made objects and the remains of other materials whose context in the soil was the result of human activity were, like fossils of plants and animals, deposited in soil layers being laid down during the period in which those objects were lost, discarded, or deposited for safekeeping. Archaeologists recognized that cultural materials, like fossils, could themselves be sequenced on the basis of their relative position in a succession of strata.

Further, because human activity itself can produce layers of deposit, cultural stratigraphy can be read to determine a relative chronological sequence of occupations of the same spot. For example, so-called tells in the Middle East are artificial hills produced by the frequent reoccupation by human beings of the same locations. Each occupation results in the deposition of materials lost and discarded and, in so doing, contributes to the formation of the mound, with the materials left behind by...
each subsequent occupation located on top of previous deposits. For example, the tell of Hazor (Tel Hazor) in Israel is an artificial hill produced by the remnants of some twenty-one separate occupations of the same location, with the remains of each successive occupation overlying each previous one.

**Absolute Dating Methods**

In most cases, the application of a relative dating procedure like stratigraphic analysis represents a preliminary step in archaeological dating. The hope always is to go beyond merely sequencing and to determine a site’s age in a chronometric sense. One of the most important chronometric procedures archaeologists employ is radiocarbon dating (also called carbon dating or C-14 dating), one of a series of so-called radiometric techniques. Radiometric dating methods, including carbon dating, potassium-argon dating, argon-argon dating, and uranium series dating all rely on the existence of what amounts to natural clocks or calendars in archaeological and geological specimens. These natural calendars are produced by the fixed and measurable pace of the decay of radioactive (unstable) isotopes (varieties) of elements that occurs naturally in raw materials used by ancient human beings.

**Radiocarbon Dating**

In 1946, University of Chicago chemist Willard Libby predicted the existence of carbon 14 in living matter and by 1949 had measured contemporary levels of this unstable variety of carbon and assessed its half-life—in essence he began the process of calibrating this natural clock. Soon thereafter, he began to apply the method to dating archaeological specimens. With radiocarbon dating, the known rate of decay of a radioactive variety of carbon called C-14 (carbon 14) for the fourteen particles (six protons and eight neutrons) in its nucleus (as compared to the twelve particles—six protons and six neutrons—present in the stable and abundant variety of carbon) provides the archaeologist with a natural calendar.

Just like carbon 12, carbon 14 combines with oxygen in the atmosphere to produce carbon dioxide. Plants respire—in essence, they breathe—and, through photosynthesis, break apart the bonds between the carbon and oxygen atoms in carbon dioxide. Plants exhale the oxygen and retain the carbon, from which they manufacture their leaves, stems, roots, fruits, bark, and so forth. Carbon 14 is incorporated into plant materials in the same proportion as it appears in the atmosphere. When animals ingest plant materials, their bodies use the ingested carbon in the plant to produce bone, muscle, sinew, and so on, and the carbon 14 provided by the plant is incorporated into the animal’s body in the same proportion as was present in the plant. When a carnivore eats a plant-eating animal, it incorporates carbon 14 into its body in the same proportion as was present in its prey. In this way, all living things, as long as they are alive, breathing, and eating, are in equilibrium with the atmosphere.

Because carbon 14 is unstable, it constantly undergoes radioactive decay at a steady and measurable rate. Radioactive decay rates are expressed as half-lives, the length of time it takes for half of the radioactive material present in a substance to decay to a stable form. The half-life of carbon 14 has been measured at 5,730 years.

As long as an organism is alive, the carbon 14 that is disappearing through that process of decay is constantly being replenished (by plants as they breathe and by animals as they eat). Death breaks that cycle. After death, the decaying carbon 14 is no longer replenished, and its loss becomes calculable. It is the constant, steady, and measurable decay of carbon 14 that provides a natural chronometer in substances containing carbon—essentially, anything that was once alive.

Scientists can precisely calculate the amount of carbon present in a specimen about to be dated; they also know how much carbon 14 would be present in the material if it were entirely modern—in other words, if it were alive today. If the amount actually present in the object is less than would be expected in a modern material, the amount of time it must have taken for the proportion of C-14 to decline to its current measure can be calculated, providing an age for the material.

Radiocarbon dating, by its nature, can be applied only to organic materials such as bone, wood, charcoal,
seeds, fruit pits, roots, hair, and hide. The half-life of radiocarbon also places restrictions on the application of carbon dating. Any specimen less than a few hundred years old usually is too young to date, as not enough of the radioactive isotope has decayed for an accurate age determination. In practice, any specimen much older than about seven half-lives (approximately forty thousand years) has so little of its original carbon 14 remaining, dating accuracy diminishes dramatically and the technique becomes unreliable.

Finally, it should be added that the accuracy of carbon dating depends on there being a constant amount of carbon 14 in Earth’s atmosphere through time. This turns out not to be precisely the case. In a workaround that depends on another dating procedure (dendrochronology) discussed below, carbon dates can be calibrated to better reflect the actual age of an object.

**Radiation Damage Techniques**

Another class of radiometric techniques relies on the statistically predictable nature of radioactive decay in an indirect way. These procedures fall into a subcategory of radiometric dating called radiation damage techniques. These techniques, which first were used in the 1950s, take advantage of the fact that radioactive decay may leave measurable damage on archaeological specimens, damage that accumulates regularly through time. The amount of damage, therefore, is proportional to the amount of time that has passed. For example, the fired clay in a ceramic object deposited in the ground is buffeted by radioactive decay that originates in the surrounding soil. The energy released through that decay is captured by the ceramic object, trapped in the atomic lattice of the object in an amount proportional to the amount of time the object has been in the soil. This trapped energy can be released by heat in a procedure called thermoluminescence or by light in the application called optically stimulated luminescence, and its amount measured. Once the rate at which the radioactive material in the soil is releasing energy—the so-called background radiation—is calibrated, the rate at which energy is trapped by a ceramic buried in that soil can be calculated and, by inference, the age of the artifact can be determined. Dating techniques that are based on the rate of energy capture in archaeological materials are applicable to raw materials that possess a structure that, in fact, acts to trap such energy. These materials include ceramics, as well as some minerals, coral, teeth, and shell. Luminescence dating had a wide range of applicability; it has been used successfully to date ceramic objects just a few hundred years old, calcite deposits more than 250,000 years old, and heated flints up to 500,000 years old.

Electron spin resonance, which measures the amount of energy trapped in shells, corals, volcanic rock, and tooth enamel, is another radiation damage technique. Here again, the amount of trapped energy present in an archaeological specimen is a function of time; once the amount of trapped energy is measured and the background radiation calculated, the amount of time since the rock, shell, coral, or tooth formed can be computed. Electron spin resonance has been applied successfully to objects as young as 1,000 years and as old as one million years of age.

Fission track dating, a third radiation damage technique, makes use of the fact that radioactive decay may leave microscopic tracks in a material. These tracks accumulate at a regular rate through time. When this rate can be estimated and the number of tracks counted, an estimate of the age of an object can be calculated. Fission track dating has been used to date materials as young as a few thousand years old; from a human standpoint, there is no effective upper limit to the applicability of this procedure.

**Dendrochronology**

Biology also supplies the archaeologist with an important natural calendar in the form of the annual growth rings of trees. It is commonly the case that trees add a single growth ring for each year that they are alive. In many cases, the thickness of a growth ring is a factor of a measurable aspect of the environment during the year the ring was added; for example, mean temperature or amount of precipitation. This correlation between tree ring width and yearly climate fluctuations actually was recognized in
the fifteenth century by Leonardo da Vinci. In the first three decades of the twentieth century, University of Arizona astronomer A. E. Douglass, attempting to assess a possible correlation between sunspot activity and climate change, examined fluctuating tree ring width and is credited with recognizing the potential of tree ring analysis in archaeological dating. In the American southwest, where tree ring dating, or dendrochronology, has been particularly useful in archaeological application, the width of an annual tree ring is proportional to the amount of rainfall that fell in the year the ring grew; thick rings are added in years when precipitation is abundant, rings of intermediate width are added when rainfall amounts are intermediate, and thin rings develop during years when rainfall amounts are meager.

This yearly variation in tree ring width allows researchers to extend a tree ring sequence back in time. Dendrochronologists accomplish this by developing what is called a master sequence for a region by beginning with a living tree. That tree, like all trees, exhibits a non-repeating, more or less random succession of thick, medium, and thin rings reflecting the non-repeating pattern of high, medium, and low yearly rainfall amounts during its lifetime. This tree’s sequence of ring widths will be a close match to that exhibited by all the other trees of the same species growing in the region since they were all subjected to the same rainfall amounts as these varied from year to year. The living tree anchors the master sequence in time, as the dendrochronologist knows the precise year in which each of its rings were created simply by counting backwards from the outermost, most recently grown ring, which represents the current year.

Next, the sequences of tree rings exhibited by a number of dead trees are compared with the rings of the living tree in the search for a substantial, matching series of tree ring widths. If the lives of the living and any of the dead trees overlapped in time, their ring width sequences will match for that period of overlap. For example, if the succession of varying widths of the innermost ten rings of the living tree match in size and order the outermost ten ring widths of a dead tree, in all likelihood those two trees were both alive during that same ten-year period. Because we know the precise year each of the living tree’s rings correspond to, we can now fix the dead tree in time; its final ring was added in the tenth year of the living tree’s existence, and we know what year that was. By repeating the same procedure numerous times with successively older trees overlapping in time, dendrochronologists have developed master tree ring width sequences that reach back more than ten thousand years. When an archaeological specimen of wood is found—for example, a log beam in an ancient pueblo or a fragment of log used in a prehistoric palisade—its ring width sequence is examined by computer and its fit along the master sequence is determined. In that way, the actual year in which the archaeological specimen died or was cut down can be established. If we assume that the log was used soon after it died or was cut, that year can be associated with the archaeological site in which it was found. Different master sequences have been worked out and are constantly being expanded and refined for various reasons all over the world.

**Dating with Style**

New technologies are constantly replacing old ones, and styles come into fashion and then fall out of favor. Most of us are familiar with the progression of technology and the vicissitudes of fashion in our own culture. Most would have no trouble guessing the approximate date of an automobile with lots of chrome and sharp fins (styles popular in the 1950s) or a photograph in a college catalogue showing male students with long hair and faded, torn jeans (the late 1960s and early 1970s).

Archaeologists may accurately determine an artifact’s age in much the same way. If a unique style of making spear points or pottery has previously and consistently been dated to a particular point in time, then when another spear point or potsherd is found that matches the known object’s form and style, archaeologists propose that the newly found artifact dates to a similar period. For example, when confronted with a long, narrow spear point with a shallow channel running up less than half the length of each face of the point, a New World archaeologist will confidently conclude that the
For a script to be deciphered, it must first have gone out of use and been completely forgotten—along with the entire culture it supported. The language it wrote may or may not have survived, and related scripts may still be in use, but the script itself is the focus. Thus Etruscan is not a candidate for decipherment, since its alphabet, midway between the Greek and the Latin, is unproblematic. Nor, when an unknown Egyptian tomb is discovered, are its inscriptions deciphered, for they are written in a script that yielded its secrets nearly 200 years ago. A decipherment is a discrete event, though subsequent generations of scholars may spend decades refining it.

The Semitic Consonantal Scripts

The first successful decipherment was achieved literally overnight in 1754 by Jean-Jacques Barthélemy, an abbé and classical scholar who was numismatist to King Louis XV of France. Explorers brought back from the ancient city of Palmyra accurate copies of brief inscriptions displayed in pairs, Greek and Palmyrene, and it was an easy assumption that they represented the same content. Comparison of proper names yielded the pronunciations of the unfamiliar letters, and with hindsight both script and language could be seen to be similar to those of the closely related ecclesiastical literary Aramaic language, Syriac. Over the next few years Barthélemy was also able to interpret the more ancient but related numismatic and inscriptive Aramaic and Phoenician scripts as well. (The Phoenician language is closely related to Hebrew; along with Aramaic, they are Northwest Semitic languages.)

Further Reading

Unfortunately from the point of view of historians, these materials virtually without exception are brief and uninformative, mainly funerary. Edward Gibbon in *The Decline and Fall of the Roman Empire* (1776) makes no use of them, for example, in his account of the fall of Palmyra and its queen Zenobia (chap. xi). Barthélemy himself, who spent thirty years preparing an immense picturesque didactic novel detailing *The Voyage of Young Anacharsis* (a fictional Phrygian traveler in mid-fourth-century Greece and environs), published in 1788, does not cite the inscriptions there.

Only in the second half of the nineteenth century did explorers and archeologists begin to encounter longer (mainly annalistic and dedicatory) inscriptions in these scripts, which began to provide alternative accounts of episodes known only from the Bible—the first, longest, and for a long time the earliest (c. 850 BCE) is the Mesha inscription (discovered 1868, in Moabite, very like Hebrew), which relates puzzlingly to 1–2 Kings; the Siloam Tunnel inscription (discovered 1880, in Hebrew) spectacularly illuminates 2 Kings 20:20. A handful of inscriptions (they continue to be found) in Aramaic from small Aramaean kingdoms scattered around the northeast corner of the Mediterranean offer almost all that is directly known about these buffer states, located between the alternately surging Assyrian, Egyptian, and Hittite empires.

Antoine Isaac Sylvestre de Sacy’s decipherment in the late 1780s of the scripts of the Middle Persian languages of the Parthian and Sasanian empires also did not yield much. From their coins and their meager inscriptions, we learn little beyond the names of the kings and the fluctuating extents of their domains. Emil Rödiger’s decipherment of the South Arabian (“Himyaritic”) script a half-century later provided little information to historians. Inscriptions in the four languages involved, notably Sabean, are numerous, and some are lengthy, but they are almost impossible to date, and they are concerned far more with local hydraulic projects than with affairs of state.

Cuneiform

By far the most important decipherment—not only in sheer quantity of materials made available, but in their quality as well—was of the complex of scripts known as cuneiform. Again it was a question of accurate copies, this time brought from Persepolis by the Danish explorer Carsten Niebuhr and published beginning in 1772. Each Persepolitan inscription appeared in three guises: three scripts differing in complexity. It was an easy surmise that they represented the same text in three languages; the crucial step in their decipherment was taken by a German gymnasium (grade school) instructor, Georg Friedrich Grotefend, who in 1802 conjectured that the most prominent in each example, which also happened to be the simplest of the three, probably represented the principal language of the Persian (Achaemenid) empire. Guided by de Sacy’s texts, he expected to find formulas like “Xerxes, great king, son of Darius, great king, son of Hystaspes” (who was not a king)—the names known from the Greek of Herodotus. Indeed he found suitably repetitive patterns, and he knew enough of Iranian languages to point the way for specialists, some of the pioneers in Indo-European studies, including two other Danes, Rasmus Rask and Christian Lassen, to bring the decipherment to completion over the next few decades.

The Persepolis inscriptions proved to be singularly unenlightening as to political history, while theology and imperial ideology emerge more clearly. The only quasi-annalistic inscription, an immense one placed by Darius I on a cliff near Behistun, Iran, which was copied with great difficulty and aplomb by a British military diplomat stationed in Baghdad, H. C. Rawlinson, offers endless opportunities for the disputations of historians. Its 1848 publication, however, was too late to be of use in the decipherment of cuneiform; Rawlinson’s work on the Old Persian version seems to have independently replicated that of Grotefend over a generation earlier. The second of the three official Achaemenid languages, now known as Elamite, remains little understood (the initial
interpretation was by yet another Dane, N. L. Westergaard). The third language—with by far the most complicated script ever deciphered—was the real historical bonanza. Though credit for its decipherment is usually assigned to Rawlinson, especially by his partisans toward the end of the nineteenth century, it is now clear that it was done by Edward Hincks, a Church of Ireland (American) clergyman, whose better-known father was a professor in the university in Belfast and whose younger brother was Premier of Canada in the 1850s. His work was mainly published in the Transactions of the Royal Irish Academy in the late 1840s.

The inscribed materials in the third script that were available to Hincks had been brought from Mesopotamia to England as curiosities earlier in the nineteenth century, often identified by the names of their owners—the Bellino Stone, the India House Inscription—or had been published by explorers—notably a long inscription in a language now called Urartian from near Lake Van. An important tool in the decipherment was the presence in these inscriptions of repeated formulas that were spelled slightly differently (so as to fit in the available space, for instance). And the reason for repetitive formulas was that these long inscriptions turned out to be annals, with the events of successive years of a king’s reign laid out in stereotypical form. The language of the Mesopotamian inscriptions (and the third Persepolitan variety) was soon identified as Semitic; it is now known as Akkadian. (Essentially the same writing system, devised for Sumerian, serves Akkadian, the Indo-European language Hittite, the not very well known Urartian and its only relative Hurrian, and the aforementioned Elamite, as well as other languages of which only a few words are recorded.) True to the preoccupations of the time, in one of the very first editions of an ancient monument, the so-called Black Obelisk of Shalmaneser, Hincks was the first to recognize the name of a biblical personage, Omri, king of Israel (1 Kings 16:16–28), among those paying tribute.

Throughout the 1840s the first excavations of sites in Mesopotamia—at ancient Nineveh—were carried out by Austen Henry Layard for the British Museum and Paul Émile Botta for the Louvre. Layard in particular had the good fortune to come across both a palace whose walls were covered with impressive reliefs and lavish inscriptions and an extensive library, that of the Assyrian king Assurbanipal. Much of this material was shipped back to London, and the cuneiform tablets—shaped lumps of clay impressed by a stylus with characters composed of wedge-shaped indentations—comprising the library that formed the nucleus of the British Museum’s unsurpassed collection. (The Iraq Museum in Baghdad may possess more tablets, since it is the repository for all materials excavated in that country over the past many decades, but as the events of spring 2003 made clear, they are far from fully catalogued, and the damage the collection may have sustained has not been fully assessed.) Because it was a royal library, the inventory was skewed toward items of lasting value—literary, scientific, and historical texts. Initially, and at least through the end of the nineteenth century, biblical concerns drove the new field of Assyriology. Sensational was the discovery of a myth of a Deluge in accord in several details with the story of Noah’s Flood (Genesis 6–8); some of the Laws of Hammurapi (discovered 1902) paralleled nearly word for word portions of the legal texts in Exodus 20–22; and so on. This era peaked with the “Babel and Bible” controversy, when in a public lecture (also 1902) before the emperor of Germany, the Assyriologist Friedrich Delitzsch proclaimed that the heart of Christian theology could be read from a Babylonian cylinder seal.

Thereafter secular Assyriology gradually prevailed, and now it is the tens of thousands of mundane ephemeral documents—business records, personal letters, property transfers—uncovered over a century and a half of excavation that command the attention of most specialists. From these small clay tablets, which survived because they were imperishable so long as they did not get wet or were not crushed, detailed pictures of two millennia and more of civilizations can be reconstructed.

Hieroglyphs

Alongside the wealth of Mesopotamian materials, the yield of the next most important decipherment, of Egyptian hieroglyphs, seems downright paltry: carvings and
This and the following pages show the decipherment and translation of The History of the Creation of the Gods and of the World. Version A. from Egyptian Hieroglyphics.

paintings on monumental edifices and tombs, which reflect the concerns of their aristocratic patrons (mighty deeds and eternal salvation, basically), and such papyrus documents as were sufficiently highly valued to be immured in watertight tombs with their owners (intellectual property, again largely religious, but not much that was quotidian). The principal name here is Jean-François Champollion, from Grenoble, France, probably building on an insight of the Englishman Thomas Young. The Rosetta Stone alone did not suffice. The only king whose name is preserved in its hieroglyphic portion is Ptolemy, and though it was identifiable because it was enclosed in an oval cartouche, not until Cleopatra’s name was found on an obelisk that had been taken to England was it possible to match up signs with sounds. But Champollion’s true insights were the recognition that the hieroglyphs did in fact record sounds—were not mystical symbols—and that the clue to the ancient Egyptian language was the modern Coptic language still used in the liturgy of Egyptian Christians. His results were first published in 1822.

Again it was not until the turn of the twentieth century that the decipherment of Egyptian could really pay off for historians, when the American James Henry Breasted methodically explored the Nile Valley, copying, translating, and publishing every historical inscription he could find. But boasts of “mighty deeds” are not all that useful to historians, who appreciate greater detail and welcome opposing points of view. Despite a generation’s head start, knowledge of Egyptian political history still lags behind that of the many lands that used cuneiform, even though the native texts can be supplemented by annals in, primarily, Akkadian and Hittite.
Eastern Mediterranean Scripts

A twentieth-century decipherment whose importance to historians is perhaps on the level of the Parthian/Sasanian is that of the “Hittite” hieroglyphs (actually they record the related Luvian language) used in Anatolia for the millennium or so after 1500 BCE. After fifty years of false starts, it was put on a sound footing by I. J. Gelb and many others beginning in 1931.

Simultaneously a consonantal script akin to the familiar Phoenician, but written like Mesopotamian cuneiform by impressing wedges into clay, which had been discovered in 1929 at ancient Ugarit on the Syrian coast, was deciphered by three scholars working independently. The corpus to date (excavations continue) amounts to only a little over 1,000 tablets, but among them are diplomatic materials that illuminate conditions in the fourteenth century BCE in the Levant; of significantly greater interest are a number of texts that, like some of the early Mesopotamian materials, bear directly on the Bible. The Ugaritic language is nearly a direct ancestor of Hebrew, and the Canaanite gods and religious practices invoked and described—not to mention the poetic styles—correspond closely to many biblical passages that had previously been obscure.

The most recent decipherment of materials pertaining directly to Western civilization was that of Linear B, used on clay tablets at several sites on southern and western Aegean lands. Such tablets were first found at Knossos, Crete, beginning around 1900, and subsequently at Mycenae and other mainland locations dating to the fifteenth century BCE. An obstacle to the decipherment was
the assumption that they had to represent the language of a pre-Greek people; after much preliminary work, in 1952 Michael Ventris had the insight that the language of Linear B was not Etruscan-like, or anything even less well known, but an early form of Greek. Translation of the available materials proved disappointing: They are nothing but economic documents—probably nothing else was ever written down in the script, since the extensive and elaborately painted palace walls are devoid of inscriptions—and the main importance of the decipherment was to demonstrate the presence of Greeks in the region centuries earlier than previously assumed. (In the early 1870s, George Smith and Moriz Schmidt had deciphered the Cypriote syllabary, in which Greek was written on Cyprus about the same time the Greek alphabet was being devised: from the eighth century BCE. Materials are meager; one inscription apparently dating from centuries earlier suggests a connection with Linear B.)

## South and Inner Asia Scripts

Turning to the East, only three Asian scripts had been so thoroughly lost as to need decipherment. The first two, the Brahmi that is ancestral to a vast range of scripts in South and Southeast Asia, contemporary with India’s King Ashoka in the mid-third century BCE, and its slightly earlier predecessor the Kharoshthi, succumbed to James Prinsep in 1837 and 1838 respectively. Brahmi opened up Ashoka’s own decrees, which commended Buddhist principles to readers of a variety of Prakrits (early colloquial Indo-Aryan languages; it would not be usual to write Sanskrit for several centuries), and established the starting point for the immense variety of Indian inscriptive scripts (the later forms of which could still be read by the pandits anyway). Kharoshthi was devised for the Gandhari language in northwestern India. But both scripts spread along the Silk Road, in both mundane texts and texts providing insight into the development of Buddhism; Brahmi came to be used for some Iranian languages, as well as the defunct Indo-European language family Tocharian.

The other Asian decipherment, of the Turkish or
Orkhon runes by Vilhelm Thomsen in 1893, revealed a handful of inscriptions attesting to the presence of Turkic speakers in Mongolia in the eighth century CE, but little more. (The key to the script was an accompanying Chinese paraphrase.)

Scripts from Elsewhere
The most recent decipherment brings us to the only writing system created in the Western Hemisphere in antiquity: the Maya glyphs of ninth-century CE Mesoamerica (a number of similar-looking graphic complexes of earlier date are known, but they are understood little or not at all). The principal names are Yuri Knorosov and Floyd Lounsbury, Soviet and American, who published their results in 1952 and 1973 respectively. Maya monuments commemorate key dates in the lives of rulers of cities; what can so far be interpreted of them has shed light on chronology and ritual. Details continue to be worked out.

A few scripts can be read while their languages remain obscure: the Etruscan of ancient Italy, the Meroitic south of Egypt, the most ancient Iberian in Spain. There are three scripts with corpora large enough that decipherment remains a possibility, but with no texts likely to provide more than minimal economic data: Linear A of the ancient Aegean, Proto-Elamite of Iran, and the Harappan script of the Indus Valley. Greater potential is offered by the variety of Mesoamerican scripts. But there is little hope that such ill-attested graphic systems as the Phaistos Disk (from Crete) or rongorongo (Easter Island) will ever be read—if they are even ways of writing language.

Further Reading


Decolonization

Not many years ago decolonization was a Cinderella subject in international relations, the poor sister to the study of the Cold War. For historians, it was the “inevitable” terminus to the history of empire, a sort of punctuation mark before the new history of postcolonial states got under way. In a world in which the division
between the communist and noncommunist worlds still seemed the most important issue in world politics, and the great fissure of 1917 the real beginning of modern history, this was perhaps inevitable. Even so, it was always a curiously Atlantic-centered view of the world. It disregarded the fact that for most of the world’s peoples, the most important political fact after 1945 was the dismantling of the apparatus of colonial rule or semicolonial domination that had extended over so much of the world, and its replacement by around 150 independent states. There was always a powerful case for saying that the "headline story" of world history between 1945 and 1990 was decolonization.

**Toward a Definition**

Part of the difficulty, of course, was definition. Like "imperialism," "decolonization" is a slippery, elusive term that historians and others frequently use without defining the meaning that they want to attach to it. But to think about decolonization, its significance, and its causes is necessarily to ponder its meaning. We can hardly explain it, or decide when it began, without being sure what it is. Typically it has been used in a narrow and restrictive way to mean the moment at which sovereign independence is granted to a former colonial territory. On occasions, this has been extended to include the process, or series of events, by which independence is reached. In other words, the term has usually been confined to those countries that were formally subordinated to an imperial power (by annexation, settlement, conquest, or protectorate status), and to the political and legal stages whereby they gained sovereignty. Defined in this way, it is easy to see why decolonization has often seemed no more than a brief and predictable epilogue to the age of imperialism.

There are two reasons why this conventional definition is of little use if we want to grasp the real nature of the change that took place. First, it takes no account of those countries where foreign domination in less formal (and less obvious) guise was the dominant fact in their external relations. The list is a long one: it would include China for much of the period from 1842 until 1949; Egypt from 1882 until 1956; Iran from the late nineteenth to the mid-twentieth century; and the "mandate" countries of Syria and Iraq until after 1945. It might include parts of South America between the 1880s and the 1940s, or even later. It ought to include those parts of the former Soviet empire that were complacently regarded by the outside world as willing members of the Soviet Union. In other words, a legalistic definition of decolonization drastically reduces the scale of the phenomenon, and ignores the reality of foreign control in many countries where its overthrow after 1945 (or since 1989) has been the most powerful influence on their international attitudes. Second, decolonization as the gaining of sovereignty is an unhelpful guide to the substance of freedom and independence. Canada, Australia, New Zealand, and South Africa all received full sovereignty by the Statute of Westminster in 1931. Each became free to pass its own laws, change its constitution, and conduct its foreign policy. But all remained part of the British empire and freely accepted the British Crown as head of state. When were they decolonized? Indeed, Australia and New Zealand became more dependent upon Britain for defense than they had been before 1931. Similarly, Egypt was declared independent after the wartime British protectorate was given up in 1922. But no realistic observer would have doubted that the wishes of the British ambassador were a cardinal factor in Egyptian politics.

Decolonization is more usefully thought of as the demolition, slow and gradual in some places, more rapid in others, long-delayed in some, of a global regime that had existed in several dimensions since the 1880s, and which had largely disintegrated by 1960. The most obvious aspect of this regime was the partition of large parts of the world into the imperial possessions of the European powers (including Russia) and their junior partners, the United States and Japan. Second, these powers also claimed rights of "informal empire," through extraterritoriality and "unequal treaties" in theoretically independent states (nineteenth-century China is the best example). Third, they asserted a legal "norm" that conferred the right to intervene in states whose "standard of civilization" fell below their own—a right usually exercised on behalf
of their own citizens. Fourth, this global regime assumed a division of labor in which imperial states made manufactured goods, or supplied capital, while colonies and semicolonies produced the raw or semifinished commodities with which they were exchanged. Enforced free trade, like that imposed on China by treaty, was the means to achieve this beyond the frontiers of imperial rule. Fifth, there was a demographic face to this global system. It was the mass emigration of Europeans to places of permanent settlement or (where their numbers were less) social mastery in the extra-European world; and a much-smaller-scale migration of Afro-Asian labor as transients with few rights and little prospect of citizenship in the lands that they settled. Finally, undergirding the whole was the pervasive notion of a cultural hierarchy (often expressed in terms of “race”). Those cultures not rooted in northwest Europe might be sighed over for their beauty, admired for their subtlety, or envied for their spiritualism. But they lacked what the late Victorians called “social efficiency”: the capacity for the “moral and material progress” on which the British rulers of India sent an annual report to the parliament in London.

This broader and more realistic definition may allow us to think more precisely about the causes of the change that decolonization brought. It has become fashionable recently to claim that empire has revived—or perhaps...
never gone away. But if the criteria above are accepted, it is clear that although empires still exist, and perhaps will always exist in some form, empire as the organizing principle in international affairs, governing the ethos of interstate relations, was a historical phenomenon that gave way around 1960 to a new world order in which its characteristic features were largely obliterated. Indeed, one useful way to think about decolonization is to see it as the successor phase in global politics between the end of empire and the onset of the new international conditions that set in after 1990.

**Conditions of Decolonization**

If decolonization is defined in this way, what were the conditions that brought it about? Typically, historians have elected to emphasize one main cause. Much the most popular has been the irresistible rise of anticolonial nationalism, forcing the imperial powers to abandon their unequal privileges and concede national sovereignty to an emergent group of nationalist politicians. It is possible to find cases where this holds true, but as a general explanation it is defective. It ignores the extent to which, before World War II, colonial rulers had invariably been able to divide or outmaneuver their colonial opponents and keep overall control of the political process. This was what had happened in India, where the nationalist movement was stronger than anywhere else in the colonial world. For colonial rulers to lose their footing required the intervention of some exogenous force. A second school of historians has seen the decisive change as a loss of interest among the colonial powers, as new domestic priorities (financing the welfare state), new international concerns (the turn toward closer European unity), or more democratic values forced a drastic reappraisal of the imperial “burden.” But this claim is weakened by the fact that after World War II almost all the colonial powers showed a heightened interest in the exploitation of their colonial possessions. For colonial rulers to lose their footing required the intervention of some exogenous force. A second school of historians has seen the decisive change as a loss of interest among the colonial powers, as new domestic priorities (financing the welfare state), new international concerns (the turn toward closer European unity), or more democratic values forced a drastic reappraisal of the imperial “burden.” But this claim is weakened by the fact that after World War II almost all the colonial powers showed a heightened interest in the exploitation of their colonial possessions. Third, it is often argued that the rise of the superpowers after 1945 handed global dominance to two states who agreed about little except their opposition to the survival of a Europe-centered colonial order. But this argument, too, must be treated with caution. American attitudes to European colonialism were at best ambivalent before the later 1950s, and superpower dominance before around 1960 is easily exaggerated. It is worth bearing in mind that the smallest and weakest of Europe’s colonial powers, Portugal, did not abandon its colonies until 1974.

The solution is not to retreat into a catchall explanation in which every plausible suspect plays an ill-defined part. What precipitated the fall of the imperial order that had imposed varying degrees of subordination on so much of the world was the astonishing course of World War II, which saw the catastrophic defeat of one of the two greatest colonial powers (France) and the virtual bankruptcy of the other (Britain). It was hardly surprising that the political controls, ideological norms, and economic structures over which they presided, and to whose legitimacy they gave strength, would be drastically if not terminally weakened. The most obvious symptom of this loss of power was the rapid postwar withdrawal of Britain from India, the colony whose military resources had underwritten much of the British imperium in the Afro-Asian world. To all intents, the imperial order was over by 1945. It was rescued by the Cold War, which allowed the old colonial powers, with American help, to recover some of their prewar position, and to offset their losses by accelerating the development of their remaining possessions. But the strain of this effort and the hostility it roused among colonial populations imposed heavy costs, both political and financial. It was aggravated by the partial (but irrecoverable) breakdown of the old order in East and South Asia and the Middle East in the postwar turbulence after 1945. When the superpower rivalry for influence became global in the late 1950s, the remaining apparatus of European colonialism was quickly demolished. By that time, its ideological legitimacy, cultural authority, and economic system had already largely vanished.

Decolonization, then, cannot be reduced to the achievement of sovereignty by former colonial states in a sequence that began in 1947 and was largely completed by the late 1960s. Decolonization was a much

---

*First they ignore you, then they laugh at you, then they fight you, then you win.* • **Mohandas Gandhi** (1869–1948)
larger process that made sovereign independence possible for many small weak states, and made it much more real than the nominal sovereignty enjoyed by China or Egypt in the interwar years. Decolonization was a transformation of the international system that occurred under conditions of a gradually intensifying bipolar rivalry. It was slow, untidy, and incomplete—leaving a Portuguese empire until the mid-1970s, two white minority “settler” states in southern Africa until 1980 and 1994, and a Soviet empire until after 1990. As a phase in world history, decolonization may be considered at an end. Empires will survive (there is a Chinese empire in inner Asia, and a Russian empire in the Caucasus). New empires may appear, not necessarily in the form of territorial dominion. But the Europe-centered world order that decolonization dismantled has gone for good.

John G. Darwin

See also Colonialism; Postcolonial Analysis

Further Reading


Deforestation

Deforestation is a wide-ranging term to cover the cutting, using, and elimination of trees. Subsumed under it are other activities like fire, domestic heating and cooking, smelting metals, making ceramics, construction of shelter and implements, and the creation of new land for cultivation and grazing. Deforestation is so basic that it is woven into the very fabric of human existence, and hence of world history. Ever since the emergence of Homo erectus some 500,000 years ago the quest to provide shelter, food, and warmth has resulted in the use and abuse of the earth’s mantle of forests.

There is much uncertainty about the pace and locale of deforestation during past (and even present) ages. This revolves around the multiple meanings given to three basic questions. What exactly is a forest? What was the extent and density of trees at any past given time? And what constitutes “deforestation”? Pragmatically one may say that a forest can range from a closed-canopy tree cover to a more open woodland, which affects density. “Deforestation” is used loosely to mean any process which modifies the original tree cover, from clear-felling, to thinning, to occasional fire. However, it should not be forgotten that forests regrow, often with surprising speed and vigor, and forest regrowth has occurred whenever pressures on it have been relaxed. This was observed after the Mayan population collapse around 800 CE, after the Great Plague in Europe after 1348, after the initial European encounter with the Americas in 1492, and with agricultural land abandonment in post-1910 eastern United States and post-1980 Europe.
The Premodern Age
(to 1500 CE)
Because crop domestication and the increase and spread of people occurred in largely forested environments, ancient societies everywhere had a cumulatively severe impact on forests. In Europe Mesolithic cultures (c. 9000–5000 BCE) set fire to the woodland edges to facilitate hunting. The succeeding Neolithic agriculturalists (c. 4500–2000 BCE) had a far greater impact as they felled forests on the fertile loessic soils with stone and flint axes in order to engage in intensive garden cultivation and extensive wheat growing. In order to vary diet they also ran large herds of pigs, sheep, and especially cattle in woodland and cleared pastures for their meat, milk, blood, and possibly cheese. It was a stable, sedentary society that made full use of the many products of the forest, one calculation being that on average it needed 20 hectares of forest land to sustain one person in fuel, grazing, constructional timber, and food.

In Asia, complex and highly organized societies flourished in the forests of the south and southeast parts of the continent. Rotational cutting and cultivation followed by abandonment (swiddening) in forests was accompanied by intensive garden culture for fruit, spices, and vegetables, and the peculiar and highly innovative development of wet rice cultivation, a technique that stopped erosion and leaching of the soil in the cleared forest in heavy rainfall areas. Stock, particularly cattle and pigs, were integral to all parts of the economy.

The evidence for similar processes is unfolding for the Americas. Earliest were the swiddens in the equatorial upland rain forest areas from as early as 12,000 BCE, and from the tropical Gulf of Mexico lowland civilizations of the Olmec and Maya to the less organized tribal groups of the Amazon basin, rain forest was being chopped, burnt, and changed or eliminated. Large patches of the Amazon forest were altered irrevocably by the selection and propagation of useful trees and by different cycles of cultivation, so that the mighty rain forest may be one large cultural artefact. In North America, the earliest food-growing settlements (c. 10,000 BCE) were in the rich bottomlands of the continent’s rivers in the South and the Southeast. Similar to the practice of the European Neolithics, flood plains and lower river terraces were cleared, and lower slopes altered as intensive cropping expanded, but unlike the Neolithics, hunting loomed much larger in the economy. The vast eastern temperate woodlands were settled later (after c. 800 CE) but the same imprints are evident, resulting in a mosaic of intensively cultivated cleared lands, abandoned fields with early forest succession, and thinned and altered forests. The great difference between the Americas and Eurasia was the absence of grazing animals in the Americas, which had an effect on the Eurasian forests by preventing regrowth and making clearing/firing worthwhile to promote pasture.

Knowledge about deforestation in Africa is sparse, and with the exception of settlement in savanna-woodland and adjacent belts in west Africa, it may not have been very extensive.

The conclusion is that the impact of early humans on the forest was far greater than expected; it may have been one of the major deforestation episodes in history, and left anything but the pristine forest that is such a feature of the romantic imagination of the past and the environmental rhetoric of the present.

The classical world of the Mediterranean basin provides, for the first time, rich literary detail of wood consumption for ship-building, urban heating and construction, and metal-smelting, but it is tantalizingly...
silent about clearing for agriculture (always the greatest cause of deforestation) that must have gone on everywhere. This was to be a common story in later ages too. The chopping down of trees as a prelude to farming and providing food was so commonplace that it simply did not warrant a mention, but settlement patterns and crop figures show how extensive it must have been.

The Middle Ages in western and central Europe were entirely different. Here an energetic, inventive, and rapidly expanding population left ample records of forest clearing through charters, rent rolls, court cases, field patterns, and place names. Clearing was motivated by a strong religious belief that humans were helping to complete the creation of a divine, designed earth and a desire by lay and ecclesiastical lords to expand rental revenues by encouraging settlement on the forest frontier. Also, individuals wanted to achieve social freedom, property, and emancipation by breaking free of the rigid feudal ties.

Undoubtedly three technical innovations helped raise agricultural production. First, the dominant system of two fields with one fallow was replaced by a three-field system, thus shortening the fallow period. This was possible because new crops like oats and legumes helped to fertilize the soil and supplemented animal and human nutrition. Second, the development of the wheeled plow with coulter and moldboard allowed cultivation to move from the light soils onto the heavy moist soils that were usually forested. Third, plowing efficiency was improved by the invention of the rigid horse collar and nailed horseshoes, increasing speed and pulling power, thus favoring the horse over the ox. A major underlying driving force was a sixfold increase of population between 650 and 1350 and the need of more food to avert famine.

Cultivation rose from about 5 percent of land use in the sixth century CE to 30–40 percent by the late Middle Ages. The forests of France were reduced from 30 million hectares to 13 million hectares between around 800 and 1300 CE. In Germany and central Europe, perhaps 70 percent of the land was forest-covered in 900 CE but only about 25 percent remained by 1900.

The various elements interlocked to produce what Lynn White, historian of medieval technology, called “the agricultural revolution of the Middle Ages” (1962, 6), which asserted the dominance of humans over nature. It also shifted the focus of Europe from south to north, from the restricted lowlands around the Mediterranean to the great forested plains drained by the Loire, Seine, Rhine, Elbe, Danube, and Thames. Here the distinctive features of the medieval world developed—a buildup of technological competence, self-confidence, and accelerated change—which after 1500 enabled Europe to invade and colonize the rest of the world. In that long process of global expansion the forest and the wealth released from it played a central part.

Massive deforestation must also have happened in China but the detail is murky. The population rose from about 65–80 million in 1400 CE to 270 million in 1770, and land in agriculture quadrupled. Large swaths of the forested lands in the central and southern provinces were certainly engulfed by an enormous migration of peoples from the north.

The Modern World (1500–c. 1900 CE)

During the roughly 400 years from 1492 to about 1900 Europe burst out of its continental confines with far-reaching consequences for the global forests. Its capitalistic economy commoditized nearly all it found, creating wealth out of nature, whether it be land, trees, animals, plants, or people. Enormous strains were put on the global forest resource by a steadily increasing population (c. 400 million in 1500 to 1.65 billion in 1900), also by rising demands for raw materials and food with urbanization and industrialization, first in Europe and, after the mid-nineteenth century, in the United States. In the mainly temperate neo-European areas, settler societies were planted and created. Permanent settlement began in earnest by the 1650s after the near elimination of the indigenes by virulent Old World pathogens, like smallpox, measles, and influenza. The imported Old World crops and stock flourished wonderfully. The dominant ethos of freehold tenure, dispersed settlement, “improvement,”
and personal and political freedom led to a rapid and successful expansion of settlement, although much environmentally destructive exploitation also occurred. Tree growth was considered a good indicator of soil fertility in all pioneer societies, and the bigger the trees the quicker they were felled to make way for farms. The United States was the classic example. The pioneer farmer, through “sweat, skill and strength,” (Ellis 1946, 73) was seen as the heroic subduer of a sullen and untamed wilderness. Clearing was widespread, universal, and an integral part of rural life; about 460,300 square kilometers of dense forest were felled by about 1850 and a further 770,900 square kilometers by 1910. “Such are the means,” marvelled the French traveller, the Marquis de Chastellux in 1789,

by which North-America, which one hundred years ago was nothing but a vast forest, is peopled with three million of inhabitants. . . . Four years ago, one might have travelled ten miles in the woods . . . without seeing a single habitation (Chastellux 1789, 29).

It was one of the biggest deforestation episodes ever. A similar process of the pioneer hacking out a life for himself and family in the forest occurred in Canada, New Zealand, South Africa, and Australia. In Australia, for example, nearly 400,000 square kilometers of the southeastern forests and sparse woodland were cleared by the early twentieth century.

In the subtropical and tropical forests, European systems of exploitation led to the harvesting of indigenous tree crops (e.g., rubber, hardwoods), and in time to the systematic replacement of the original forest by “plantation” crops grown by slave or indentured labor. Classic examples of this were the highly profitable crops of sugar in the West Indies, coffee and sugar in the subtropical coastal forests of Brazil, cotton and tobacco in the southern United States, tea in Sri Lanka and India, and later rubber in Malaysia and Indonesia. In eastern Brazil, over half of the original 780,000 square kilometers of the huge subtropical forest that ran down the eastern portions of the country had disappeared by 1950 through agricultural exploitation and mining. In Sao Paulo state alone the original 204,500 square kilometers of forest were reduced to 45,500 square kilometers by 1952.

Peasant proprietors were not immune to the pressures of the global commercial market. Outstanding was the expansion of peasant cultivation in lower Burma (encouraged by British administrators) between 1850 and 1950, which resulted in the destruction of about 35,000 square kilometers of imposing equatorial (kanazao) rain forests and their replacement by rice. Throughout the Indian subcontinent the early network of railways meant an expansion of all types of crops by small-scale farmers, often for cash, that led to forest clearing everywhere.

Uncolonized Asian societies exploited their forests just as vigorously, commercially, and uncaringly as did their European counterparts. There is evidence from, for example, southwest India and Hunan province in south central China from the sixteenth century onward to show that the commercialization of the forest was well established. In the former, permanent indigenous agricultural settlements existed side by side with shifting cultivation, and village councils regulated forest exploitation by agriculturalists. The forest was not regarded as a community resource; larger landowners dominated forest use locally. Scarce commodities such as sandalwood, ebony, cinnamon, and pepper were under state and/or royal control. In Hunan, a highly centralized administration encouraged land clearance in order to enhance local state revenues so as to increase the tax base and support a bigger bureaucracy and militia. State encouragement was also given to migrations into the forested hill country of south China later on. Simply, forests everywhere were being exploited and were diminishing in size as a response to increasing population numbers and increasing complexity of society. In the subtropical world change was just slower than that unleashed by the Europeans with their new aims, technologies, and intercontinental trade links, but no less severe. Measures of destruction are hard to come by, but in South and Southeast Asia between 1860 and 1950, 216,000 square kilometers of forest and 62,000 square kilometers of interrupted or open forest were destroyed for cropland.
During these centuries deforestation was also well underway in Europe itself, which was being colonized internally. This was particularly true in the mixed-forest zone of central European Russia, where over 67,000 square kilometers were cleared between around 1700 and 1914.

The insatiable demand in all societies for new land to grow crops and settle agriculturalists has been matched by a rising demand for the products of the forest themselves. For example, the European quest for strategic naval stores (masts, pitch, tar, turpentine) and ships’ timbers made major inroads into the forests of the Baltic littoral from the fifteenth century onward and those of the southern United States after about 1700. Alternative construction timbers like teak and mahogany were utilized from the tropical hardwood forests since the beginning of the eighteenth century.

The Last Hundred Years
The pace of transformation increased during the first half of the twentieth century. In the Western world demands for timber accelerated. New uses (pulp, paper, packaging, plywood, chipboard) and relatively little substitution of other materials boosted use, while traditional uses in energy production, construction, and industry continued to loom large. The indispensable and crucial nature of timber in many Western economies gave it a strategic value akin to that of petroleum in economies today. In the tropical world the massive expansion of population by more than half a billion on a base of 1.1 billion resulted in extensive clearing for subsistence, accompanied by an expansion of commercial plantation agriculture. In all perhaps 2.35 million square kilometers of tropical forest were lost between 1920 and 1949. The only encouraging feature in the global picture during these years was the reversion of farmland to forest. This had begun in the eastern United States with the abandonment of “difficult” and hard-to-farm lands in New England in favor of easier-to-farm open grasslands, and continued with the abandonment of some cotton and tobacco growing lands in the southern States. A similar story unfolded in northern Europe with “marginal” farms.

The most publicized deforestation—the deforestation everyone thinks of when the word is mentioned—occurred after 1950. Since then the temperate coniferous softwood forests have about kept up with the demands of industrial societies for supplies of timber and pulp. But the focus of deforestation has shifted firmly to the tropical world. Here, better health and nutrition have resulted in a population explosion and an additional 3.5–4.0 billion people. These are often landless people who have moved deeper into the remaining forests and farther up steep forested slopes. They have no stake in the land and therefore little commitment to sustainable management. In addition chain saws and trucks have moved felling from the province of the large firm to the enterprising individual. Since 1950 about 5.5 million square kilometers of tropical forests have disappeared, Central and Latin America being classic examples. In addition, the tropical hardwood forests are being logged out for constructional timber at a great rate, while wood is cut for domestic fuel in prodigious quantities in Africa, India, and Latin America. Globally fuel wood—cutting now roughly equals saw timber extraction—about 1.8 billion cubic meters annually compared to 1.9 billion cubic meters. Cutting wood for fuel is forecast to rise rapidly in line with world population increase.

The Future
The history of deforestation is long and complex, and is a significant portion of world history. It is one of the main causes of terrestrial transformation, whereby humankind has modified the world’s surface, a process that is now reaching critical proportions. One thing is certain: with an ever-increasing world population (another 2–3 billion by 2020), many will want to exploit resources and the process of deforestation will not end. Others will want to
restrict forest use and preserve it. The tensions between exploitation and preservation will be intense.

Michael Williams

Further Reading

Delhi Sultanate

The Delhi sultanate (1192–1526) was established with the victory in 1192 of Muhammad of Ghor (d. 1206), a Turkic ruler, over the Rajput king Prithviraj Chauhan, the ruler of Ajmer and Delhi; it represented the emergence of a ruling power that was not indigenous to the region. A new religion (Islam) and culture began to pervade the northern portion of Indian subcontinent as the Delhi sultanate came to control major areas of present-day India, Bangladesh, and Pakistan. Gradually, Indian culture, which was pluralistic in nature, was enriched by this new cultural infusion. It would be wrong, however, to think of the period of rule by the Delhi sultans as a period of Muslim rule, as categorizing historical periods according to the ruler’s religion is against historical norms and as in any case the whole of the Indian subcontinent was never controlled by the sultans.

History
The lure of wealth, religious zeal, and a desire for territorial aggrandizement were factors behind the Turkic conquest from Central Asia. The Turks’ advanced military technology, lack of unity among the regional powers, prevailing social tensions, and the apathetic attitude of the common folk facilitated the Turkic conquest. Muhammad of Ghor was succeeded by his slave and general, Qutb-ud-Din Aybak (d. 1210), and because a number of former slaves ruled during the period 1206 to 1290, this period is sometimes called the slave dynasty, though in reality no sultan was a slave at the time he became ruler, and there were actually three dynasties during this period (1206–1290).

Under the third sultan, Iltutmish (reigned 1211–1236), a permanent capital was established at Delhi; he also expanded the territory controlled by the sultanate. Iltutmish bequeathed a strong form of military despotism to his successors. Raziya Sultana, his worthy daughter and the first Muslim woman ruler of India, became embroiled in the conspiracy of the Group of Forty, a group of Turkic nobles who wished to control the throne. The latter held sway until the coming of Ghiyas-ud-Din Balban (reigned 1266–1287), who destroyed the Forty ruthlessly, strengthened the army, and suppressed any form of dissent.

The establishment of the Khalji dynasty marked the beginning of the ascendancy of Indian (as opposed to Turkic) Muslims. The most important ruler of the dynasty, ‘Ala’-ud-Din Khalji (reigned 1296–1316) extended the boundary of Delhi sultanate into southern India. His market reforms, taxation policy, and military administration earned him recognition as one of the efficient rulers of the period. By contrast, the ill-fated experiments of Muhammad ibn Tughluq (reigned 1325–1351), one ruler of the Tughluq dynasty, which included attempting to shift the capital from Delhi to Daulatabad and introducing token currency—copper coins, which the Sultan made as legal tenders. Although without intrinsic value,
their value was kept at par with gold and silver coins. These experiments brought misery to his subjects.

The Mongol chief Timur (1336–1405) invaded Delhi in 1398, leaving a trail of devastation and weakening the sultanate. The Delhi sultanate was finally overthrown by Babur (1483–1530), founder of India’s Mughal dynasty (1526–1857), at the first battle of Panipat in 1526.

**Administration and Culture**

In the beginning, the Delhi sultanate was divided into units called *iqta*. The owner (*iqatadar*) of each *iqta* collected revenue and supplied army contingents to the sultan. The *iqatadars* became hereditary owners and afterward, abuses crept into the system. Later, a different administrative set-up came into being, with the sultan at its head. The sultan was head of the state enjoying absolute power. The sultan’s vizier was the prime minister, and there were several different ministries. Religious scholars enjoyed special privileges, and Hindus, as non-Muslims, had to pay a special tax. Despite that burden, the Hindu upper classes led a comfortable life. Although there were conflicts between the Hindu and Muslim ruling elites, common people of both religions lived in harmony, and the aristocracy enjoyed a life of luxury. There was growth of urban centers, and the volume of trade with western Asia, Southeast Asia, and China increased. The sultanate was very much a part of international trade, and Muslim traders from the region helped spread a liberal brand of Islam to Southeast Asia.

The Delhi sultanate oversaw the flourishing of a new cultural era. A new style of architecture emerged that incorporated both Hindu and Muslim motifs. Notable contribution of the Delhi sultans to architecture include the Quwat-ul-Islam mosque, the Qutab Minar, the Siri fort, Alai Darwaza, the cities of Tughluqabad and Firuzabad, and the tomb of Firuz Shah Tughluq (reigned 1351–1388). Nor did the art of painting die out; it was at home in the murals, painted textiles, and manuscripts of the period. Music was patronized by some sultans and provincial rulers; the most important figure in Indian music during this period, who is also considered one of India’s greatest Persian-language poets, was Amir Khusrau (1253–1325). Credit goes to him for introducing several forms of singing and new ragas. Linguistically, amalgamation of dialects of Hindi and Persian resulted in beginning of the Urdu language. The contemporary historical writings of Minhaj-us-Siraj, Amir Khusrau, Ziauddin Barani, Shams Siraj Afif, and Yahya bin Ahmad Sirhindi are important source materials for studying different aspects of the Delhi sultanate.

The Sufi (Islamic) and bhakti (Hindu devotional) saints of the period dedicated themselves to the cause of humanity and emphasized the cooperation between the two religious communities. Both preached equality and were against rituals and a caste-based social system. Bhakti saints such as Kabir (1440–1518) and Caitanya (1485–1533) stressed the union of the individual with God through acts of devotion. This period also saw the establishment of a new religion, Sikhism, formalized by Guru Nanak (1469–1539). The Sufi religious mystics offered a common meeting ground for Muslims and non-Muslims. Striving for Hindu-Muslim unity, they created a liberal atmosphere. Their tombs still attract people of both religions.

In sum, the period of the Delhi sultanate was important for Indian history, culture, and society. The new, composite culture that began to emerge laid the groundwork for the cultural achievements of the Mughal period.

**Further Reading**


Democracy, Constitutional

As an organizing principle, constitutional democracy designates a large political community and defines it as inclusive, open, and free. Nations governed by such a democracy are bound by widely accepted guidelines through a written public consensus. The shared core values include civil liberties, pluralism, tolerance, and wide access to expression in all forms of the media. Sometimes entrepreneurial markets and social rights are also embraced. Constitutional democracy is the most sensible countermeasure to authoritarian and dictatorial regimes, which owe their legitimacy to dynastic tradition, affirmation by religious establishments, or sheer coercion.

How best to conduct the public affairs of human societies has been a challenge throughout history. Whether such affairs are conducted through providential inspiration, dictatorial rule, or a social contract, no system has been perfect. Any system that has emerged has needed reform to cultivate the goodwill of those governed in a dynamic world in which challenges and needs always change. The most effective way of quantifying public opinion is through popular elections held periodically in a free and fair manner. These elections sanction delegates through a widespread mandate to discuss and resolve important contemporary political, social, and economic issues of power and authority.

Democracy is rule by the people who reside in a particular political unit (such as the city-state, the Greek polis, especially during the eighth through fourth centuries BCE). However, if democracy is taken to its logical conclusion, a majority of those people assembled in a meeting can reverse long-held traditions or, in extreme cases, arrest and even kill those people who oppose the will of the preponderance of participants. Therefore, the shared interest of free people, especially in entrepreneurial and peaceful settlements, dictates the establishment, in a document, of a set of fundamental principles that legitimizes and secures the continuity of liberty and civil, political, social, economic, and cultural rights and serves as the foundation of a viable state. Such a document articulates the standards and goals of a defined community with a publicly expressed affinity to certain human values and philosophical norms.

The viability of constitutional democracy is dependent on a deliberative body, for example, a congress or a parliament. In such a body the citizens of a country have representatives—in at least one legislative branch for each level of government within federal or unitary states—who are elected in free, fair and periodic elections and vested with the essence of sovereignty. This deliberative body engages in debates that routinely decide the level of taxation, allocation of budgets, domestic measures, security concerns, foreign relations, and all other matters of public policy. Constitutional democracy also endorses lobbying and petitioning of those people who hold elected positions.

Constitutional democracy is an antidote to both the oppressive, nondemocratic nature of rule by decree apparent in authoritarianism and the unlimited control inherent in unchecked forms of democracy such as majoritarianism (the practice according to which decisions of a group should be made by a numerical majority of its members). Constitutional democracy is a tolerant and pluralistic framework that prevents laws from depriving minorities or individual citizens or circumventing moral norms through positive law—statutes and ordinances that govern a state. Fundamental rights—such as freedoms of opinion, association, expression, religion and worship, due process in trial, and the ability to pursue personal choices—are guaranteed. This guarantee is made without discrimination on the basis of gender,
Advantages
British Prime Minister Winston Churchill (1874–1965) famously said that democracy, for all its faults, is still better than other political systems. Constitutional democracy is a manageable alternative to the chaos necessitated by bringing every decision to the scrutiny of numerous people and also is an antidote to the potential tyranny of decrees issued by kings, queens, or presidents without the advice and consent of those in whose name they presume to govern. The balancing act of parliaments and the judiciary check the absolute powers that executive privilege might otherwise confer upon rulers.

In a constitutional democracy a legitimate regime can rightfully claim a monopoly on the publicly accepted use of coercion, including violence. Societies in which parliamentarianism prevails are governed by a relatively open political culture with elections contested by multiple parties and individuals. (In parliamentarianism, the executive branch’s political party must have a working majority in the legislature to remain in power.) Compromise is preferred over confrontation. Rules of conduct and debate and respect for fundamental human rights facilitate basic civil rights such as freedoms of expression, speech, assembly, ideology, affiliation, and religion.

John Locke
John Locke (1632–1704), an influential English political theorist of the Enlightenment (a philosophic movement of the eighteenth century marked by a rejection of traditional social, religious, and political ideas and an emphasis on rationalism), argued that the proper function of societies and states must be based on compromise and freedoms, that is, civil equality. Deeming human civilizations as having emerged voluntarily from an idyllic state of nature, he would not lend credence to coercion or dynastic authority. Government originates in the consent of the people it presumes to lead and for their benefit alone; its legitimacy is dependent on continuous adherence to such principles.

Locke thus advocated sovereignty based on reciprocal equality—a balance of powers and jurisdiction between...
the judicial, legislative, and executive branches, prohibiting the subordination of any branch. He opposed violence that merely enhances the authority of oppressive rulers rather than protect public order. These ideas, being the modern foundations of constitutional democracy, affected subsequent practices in the Western world, including British, French, and U.S. practices.

**History**

Since people first assembled in their poleis during the Archaic Age (800–500 BCE) in Greek colonies to decide matters of public policy, people have faced the dilemma of how best to maximize participation while introducing a convenient forum for managing affairs efficiently. Direct democracy sounds ideal. Reality, however, may be quite different. A deliberative, representative polity (political organization) may gain viability by establishing an institutional body for regular legislation by a limited amount of members, elected periodically and fairly.

**Athens**

In Greece the Athenian lawmaker Solon (c. 630–560 BCE) presented an early version of a participatory constitutional democracy, blended with elements of social justice, in a commercial and cultural center. Earning his distinction as a poet, he purported to correct the excesses of exclusive and oppressive aristocratic control of government. Wealthy landowners used their leverage to exploit a severe economic crisis to deprive poorer town dwellers and peasants of their property and freedom or to force them into exile. Solon was chosen as a chief magistrate with broad authority in 594 BCE by the ruling class that he subsequently challenged. His reforms aimed to improve a flawed system, with roots in the Draconian code (a severe code of laws held to have been framed by the Athenian lawmaker Draco) of 620 BCE, by limiting the absolute power of the upper class.

Solon introduced a more humane and balanced legal code to help debtors and curtailed the influence of the rich. By enhancing the Assembly of the People by creating the Boule (a multiethnic council of middle-income citizens), he limited the influence of the aristocratic Council of the Best Men (Areopagus) and enabled all adult male Athenians to vote and be elected. This partial empowerment was a compromise between various classes and contesting interests and was in contrast to the conservative ways of Athens’s main rival, Sparta. Nevertheless, because he did not please a certain constituency, Solon became so controversial that he left Athens, and tyranny prevailed for decades.

Cleisthenes (c. 570–507 BCE) continued Solon’s constitutional reorganization. He made the Assembly of the People the sole legislative body, subordinating magistrates to its jurisdiction, increased the influence of the Boule, deprived the Areopagus of effective power, and ensured wide and deep participation in public life. Cleisthenes made Athenian government more accountable to an inclusive, active political community and thus a role model for subsequent civilizations.

**Britain**

Centuries later Britain’s Westminster tradition involved unwritten conventions, coupled with the constitutional monarchy variant of parliamentarianism. Beginning with the Magna Carta of 1215–1225 and culminating with the Glorious Revolution during the seventeenth century, a growing degree of universal suffrage for the middle class, independent judiciary, civil rights, and more open political practices replaced the rule of the monarchy and the aristocracy.

From a system prevailing only in Western countries, British (and, to a much lesser extent, Dutch, French, Portuguese, and Spanish) colonialism spread constitutional democracy in communities of European settlers to North America, Oceania (lands of the central and south Pacific Ocean), and southern Africa, although indigenous residents were usually deprived of its benefits. European colonialism also introduced constitutional democracy to Africa, Asia, and Latin America. However, due to the hardships of economic exploitation endured by the colonized, ideas of freedom and human rights reflected by constitutional democracy were tinged by suspicions of hypocrisy.
The formative era of the U.S. version of an effective constitutional democracy is identified primarily with Thomas Jefferson (1743–1826). His agenda of civil nationalism emphasized individual freedoms and the separation of church and state. The core of the 1776 Declaration of Independence was “life, liberty and the pursuit of happiness.” The apex of the formative era was the drafting of a constitution in 1787. The Constitution vested sovereignty in the U.S. people (excluding nonwhites, whose ability to be citizens was in doubt well into the twentieth century) through a hybrid of federal authority and individual states, created the presidency, and granted the federal government the ability to tax citizens and command troops.

The 1791 Bill of Rights assured individual rights and civil liberties such as freedoms of speech, peaceful assembly, and due process. The balance of powers (checks and balances) between the three branches of federal government (executive, legislative, and judicial) was consolidated in 1803 with the Marbury v. Madison decision rendered by the Supreme Court. That decision enshrined the doctrine of judicial review in U.S. law, providing an impartial judiciary with the ultimate authority.

In Canada the Charter of Rights and Freedoms of 1982 shows how a country with more than a century of openness and liberty transforms its legal mechanism to address a political crisis. Canada has had a semblance of a constitutional democracy since the 1867 British North America Act. That act ushered in a degree of sovereignty, which gradually strengthened to amount to a full authority of the Canadian government, within a federal structure, ending British colonial rule. Nevertheless, during the 1970s a secessionist movement in Quebec, a primarily...
French-speaking province, challenged the legitimacy of Canada, a primarily English-speaking country, for allegedly excluding French-speaking citizens from basic rights on linguistic and ethnic bases.

On the eve of the 1980 referendum that would have allowed Quebec to commence on a path of independence, Canadian Prime Minister Pierre Elliot Trudeau (1919–2000) felt compelled to promise all Canadian citizens, especially those living in Quebec, that he would initiate comprehensive constitutional reforms that would enshrine a form of pluralistic democracy. Indeed, in 1982 Trudeau’s government revised substantially the Canadian constitution, guaranteeing federally, through the Charter of Rights and Freedoms, all basic civil liberties while allowing provinces a strong degree of provincial autonomy. To date, this strategy has helped maintain Canadian unity.

India
Postcolonial India, the most populous country ever to have a constitutional democracy, is an example of how constitutional democracy can shape an emerging nation. After a painful struggle with the British and a war with Islamic communities, India rose to independence in 1947. Jawaharlal Nehru (1889–1964) was India’s first prime minister (1947–1964). Although Nehru deployed military force against opponents, he championed an inclusive, pluralistic, polyethnic, multicultural state. Nehru largely endorsed the nonviolent practices of the Indian nationalist Mohandas Mahatma Gandhi (1869–1948).

By proclaiming a constitutional democracy, Nehru positioned himself, and the Congress Party he led, as the custodian of federal identity, mediating between contesting castes and ethnic, religious, and regional constituencies. The guarantee of freedoms played a major role in securing India’s viability in the face of internal separatist ethnic nationalism and external adversity. In particular Nehru tried to enlist the support of vulnerable groups of people such as women and untouchables through written rights that improved their legal status, although practical changes were slow to come.

Nehru’s daughter, Indira Gandhi (1917–1984), served as prime minister from 1966 to 1977. Concerned about India’s population growth, she pursued harsh sterilization policies. That pursuit led her to subvert democracy by introducing a state of emergency in 1975. Nevertheless, trying to legitimize her deeds, she felt compelled two years later to call parliamentary elections, which she lost. Gandhi surrendered power freely to her opponents; she returned to office in 1980. She was murdered in 1984 by Sikh extremists who purportedly acted to avenge the desecration of their holy sites in her fight to assert her control over all segments of Indian society.

United States after September 11, 2001
As part of the U.S. war on terrorism after the terrorist attacks against New York City and Washington, D.C., on September 11, 2001, the U.S. Congress in November 2001 enacted the controversial Patriot Act. The act curtailed civil liberties for a limited time because of national security concerns, causing some people to be concerned about the long-term impact on constitutional guarantees of freedom of speech and expression. The United States also attempted to introduce constitutional democracy to Afghanistan and Iraq after liberating the two nations from oppressive rule in 2001 and 2003, respectively.

Itai Sneh

See also Parliamentarianism; Revolution—United States

Further Reading
Descartes, René  
(1596–1650)  
French philosopher

René Descartes was the leading French philosopher of the seventeenth-century scientific revolution. Although now best known, and commonly vilified, for his defense of mind/body dualism and for his quest for certainty in the theory of knowledge, Descartes was primarily interested in studying the natural world and the human body. His global influence as the intellectual point of origin of modern Western subjectivity, the evil demon of modern philosophy, is undeniable; but it masks the stranger work of the historical figure, who was as puzzled by meteors and by medicine as by metaphysics and method, and more interested in passion, psychosomatics, and perception than in rationality and the soul.

Born in La Haye (now Descartes) in Touraine, and educated at the Jesuit college of La Flèche, Descartes decided in his early twenties on a life of inquiry after studying mechanics and music, and after a series of powerful dreams. He developed a systematically mechanical account of nature, modeling his cosmology and physics on the behavior of fluids, which also play a key role in his remarkable physiological theories. Descartes settled in Holland in the late 1620s; by 1632 he was in Amsterdam, “dissecting the heads of various animals,” to “explain what imagination, memory, etc. consist in” (Descartes 1985–1991, 40). But when he heard of Galileo’s condemnation in 1633, Descartes abandoned plans to publish works on the nature of matter and the body.

Descartes definitively rejected the Christian-Aristotelian idea that biological matter has intrinsic powers or built-in ends, claiming that its capacities, rather, arise from the complex configurations and combinations of physical particles in motion. He was concerned to defend the orthodox picture of the soul as nonphysical and immortal, but denied that life was also due to immaterial powers. His posthumous work L’homme (the Treatise on Man) describes a fictional world of soulless “earthen machines,” mobile automata like the hydraulic statues in “the gardens of our kings.” Descartes’ physiology relied heavily on “animal spirits,” fast-moving but material fluids that flow through the nerves and the pores of the brain.

Descartes notoriously claimed that the human soul interacts with the body-machine by way of the pineal gland, swaying on its supporting network of arteries and directing the flow of animal spirits through the tubes of the brain tissue. Even in creatures without souls, he posited, ordinary cognitive processing involves the construction and reconstruction of patterned traces on the surface of this gland. Descartes had seen in dissection that nonhuman animals also had a pineal gland. So although he did argue that beasts are machines, he thought that these machines are capable of representation, memory, and even sentence and dreams. Despite the old story that he vivisected a dog on his kitchen table, Descartes offered no justification for cruelty to animals. Far from exclusively privileging the rational soul, his work substantially restricted its role and scope. The bodies of the Cartesian automata are not mere objects cut off from the world, responding passively to the whim of the soul, but are fully and holistically embedded in the buzzing whirl of the fluid-filled cosmos.

Many readers encounter Descartes only through his writings on metaphysics and epistemology. In the Discourse on the Method (1637) and the Meditations (1641), Descartes concocts a sequence of radically skeptical scenarios to challenge our trust in traditional beliefs, and to conclude that he can know with certainty his own existence as a “thinking thing” (res cogitans). These works have considerable literary and psychological power: the Discourse offers an autobiographical fable about Descartes’ individualistic path to knowledge, while the Meditations brilliantly uses the jargon of scholastic
Aristotelian philosophy against itself, in making theological space for the ongoing mechanistic investigation of the natural world.

In the seventeenth and eighteenth centuries Cartesianism was attacked less for its incoherent dualism than for the specter of atheistic materialism that both conservatives and enthusiasts read into it. One story, circulated in the eighteenth century to blacken Descartes' reputation, concerned his illegitimate daughter Francine: having allegedly conceived the child with a housemaid in order to study reproductive processes at close quarters, after Francine's death from scarlet fever (which the historical Descartes called the greatest sorrow of his life), the philosopher built and carried around a doll in the form of a life-size automatic replica of the child.

In the 1640s, Descartes continued to work on recalcitrant problems about physiology and human nature. He constructed a sophisticated but bizarre embryology, and, under persistent questioning from his correspondent Princess Elizabeth of Bohemia, further developed his views on psychosomatic interaction. In The Passions of the Soul (1649) he linked medicine and morality by attending to the individualized dynamics of the emotional life and the union of mind and body. Descartes had long been fascinated by schemes for prolonging longevity, but died after a harsh Swedish winter tutoring Queen Christina.

Philosophers of many distinct persuasions have since defined their projects in opposition to a vision of Cartesianism as a philosophy of exact order, reason, and pure subjectivity; but modern scholarship strongly suggests that Descartes himself was not that kind of Cartesian.

John Sutton

See also Science—Overview; Scientific Revolution

Desertification

Desertification is the process of land becoming desert, as from human mismanagement or climate change. It remains a controversial issue with regard to definition, nature, rate of spread, irreversibility, and causation. Nonetheless, it is a serious example of land degradation in dry lands. Deserts have repeatedly expanded and contracted during the last few millions of years in response to climate changes, but their margins are now being affected by a suite of increasing human pressures that depletes soil and vegetation resources.

Desertification was first used as a term, but not formally defined, by a French forester named “Aubreville” in 1949, and for some years the term desertization was also used, as, for example, by Rapp, who defined it as “the spread of desert-like conditions in arid or semi-arid areas, due to man’s influence or to climatic change” (Rapp 1974, 3).

Different experts have defined desertification differently with respect to causation. Some definitions stress the importance of anthropogenic (human-caused) actions. Dregne says, “Desertification is the impoverishment of terrestrial ecosystems under the impact of man. It is the process of deterioration in these ecosystems that can be

Further Reading


measured by reduced productivity of desirable plants, undesirable alterations in the biomass [the amount of living matter] and the diversity of the micro and macro fauna and flora, accelerated soil deterioration, and increased hazards for human occupancy" (Dregne 1986, 6–7).

Other experts admit the possible importance of natural climatic controls but give them a relatively lesser role. Sabadell and associates define desertification as "the sustained decline and/or destruction of the biological productivity of arid and semi arid lands caused by man made stresses, sometimes in conjunction with natural extreme events. Such stresses, if continued or unchecked, over the long term may lead to ecological degradation and ultimately to desert-like conditions" (Sabadell, Risley, Jorgensen, and Thornton 1982, 7).

Other experts are more even-handed with respect to the balance of anthropogenic and natural causes. Warren and Maizels say: “A simple and graphic meaning of the word ‘desertification’ is the development of desert like landscapes in areas which were once green. Its practical meaning...is a sustained decline in the yield of useful crops from a dry area accompanying certain kinds of environmental change, both natural and induced” (Warren and Maizels 1976, 1).

Experts are not sure how extensive desertification is or how fast it is progressing. The lack of agreement on the former process makes determining the latter difficult. As Grainger has remarked, “Desertification will remain an ephemeral concept to many people until better estimates of its extent and rate of increase can be made on the basis of actual measurements” (Grainger 1990, 145).

The United Nations Environment Programme (UNEP) has played a pivotal role in the promotion of desertification as an environmental issue, as is made evident by this statement by Tolba and El-Kholy: “Desertification is the main environmental problem of arid lands, which occupy more than 40 per cent of the total global land area. At present, desertification threatens about 3.6 billion hectares—70 percent of potentially dry lands, or nearly one-quarter of the total land area of the world. These figures exclude natural hyper-arid deserts. About one sixth of the world’s population is affected” (Tolba and El-Kholy 1992, 134).

However, Thomas and Middleton have been critical of UNEP’s views on the amount of land that is desertified. They state: “The bases for such data are at best inaccurate and at worst centered on nothing better than guesswork. The advancing desert concept may have been useful as a publicity tool but it is not one that represents the real nature of desertification processes” (Thomas and Middleton 1994, 160).

Rates of Desertification
Experts have conducted relatively few reliable studies of the rate of desert advance. In 1975, Hugh Lamprey attempted to measure the shift of vegetation zones in the Sudan in Africa and concluded that that portion of the Sahara Desert had advanced by 90 to 100 kilometers between 1958 and 1975, with an average rate of about 5.5 kilometers per year. However, on the basis of analysis of remotely sensed data and ground observations, Helldén (1984) found limited evidence that this advance had taken place. One problem is that substantial
fluctuations in vegetation production may take place from year to year. Meteorological satellite observations of green biomass production levels on the southern margins of the Sahara Desert have revealed such fluctuations.

The International Soil Reference Center in the Netherlands conducted a global assessment by soil degradation (GLASOD) on behalf of UNEP during the late 1980s and early 1990s. The center used a Geographical Information System to analyze data collected through a clearly defined, but largely qualitative, methodology. Despite its flaws, the GLASOD provided a database through which experts could assess susceptible dry land soil degradation in terms of spatial distribution, contributory degradation processes, and relationships to land use.

The GLASOD estimated that during the late 1980s and early 1990s approximately 1 billion hectares, equivalent to 20 percent of the susceptible dry lands, had experienced accelerated soil degradation caused by human activities. Water erosion was identified as the major physical process of degradation in 48 percent of this area and wind erosion in 39 percent. Chemical degradation (including salinization) was dominant in just 10 percent of the area, and physical changes such as compaction and crusting in just 4 percent. The severity of degradation was described by the GLASOD as strong or extreme in 4 percent of the susceptible dry lands. This figure relates to lands that have had their original biotic (relating to living organisms) functions of the soil destroyed and that are irreplaceable without major restorative measures.

The spatial character of desertification is also the subject of controversy. The spread of desert-like conditions is not, as popularly supposed, an advance over a broad front in the way that a wave overwhelms a beach. Rather, it is like a “rash” that tends to be localized around settlements. Fundamentally, as Mabbutt has explained, “the extension of desert-like conditions tends to be achieved through a process of accretion from without, rather than through expansionary forces acting from within the deserts” (Mabbutt 1985, 2). This distinction is important because it influences perceptions of appropriate remedial or combative strategies.

Experts have debated whether desertification is irreversible. In many cases where ecological conditions are favorable because of the existence of such factors as deep, sandy soils, vegetation recovers after excess pressures are eliminated. The speed of recovery depends on how advanced deterioration is, the size of the area that is degraded, the nature of the soils and moisture resources, and the nature of local vegetation. Much desert vegetation is adapted to drought and to harsh conditions and often has inbuilt adaptations that enable a rapid response to improved circumstances.

Nonetheless, elsewhere long-term monitoring tends to reveal that in certain circumstances recovery is so slow and so limited that it may be appropriate to talk of “irreversible desertification.” For example, in southern Tunisia tracks made by tanks and wheeled vehicles during World War II are still apparent on the ground and in the devastated and unregenerated vegetation.

Causes of Desertification

The causes of desertification remain controversial. Experts have asked whether it is the result of temporary serious droughts, long-term climatic change, or human actions degrading the biological environments in arid zones. No doubt severe droughts do take place, and their effects become worse as human and domestic animal populations increase. The devastating drought in the Sahel (the semidesert southern fringe of the Sahara Desert) from the mid-1960s caused greater ecological stress than the droughts of 1910–1915 and 1944–1948, largely because of increasing anthropogenic pressures.

Experts have discredited the concept that climate is deteriorating through postglacial progressive desiccation. However, numerous studies of meteorological data (which in some cases date back as far as 130–150 years) do not allow experts to reach any firm conclusions on systematic long-term changes in rainfall, and the case for climatic deterioration—whether natural or aggravated by humans—is not proven. Indeed, Rapp wrote that after consideration of the evidence for the role of climatic change in desertification his conclusion was “that the
reported desertization northwards and southwards from the Sahara could not be explained by a general trend towards drier climate during this century” (Rapp 1974, 29).

Woodcutting is a serious cause of vegetation decline around almost all towns of the area to the south of the Sahara. Many people depend on wood for domestic uses, and the collection of wood for charcoal and firewood is especially serious in the vicinity of large urban centers. Likewise, the recent drilling of wells has enabled rapid multiplication of domestic livestock numbers and large-scale destruction of the vegetation in a radius of 15–30 kilometers around them. Given this localization of degradation, amelioration schemes such as local tree planting may be partially effective, but ideas of planting massive belts as a cordon sanitaire (protective barrier) along the desert edge (whatever that is) would not halt deterioration of the land beyond this belt. The deserts are not invading from without; the land is deteriorating from within.

Clearly, therefore, a combination of human activities (e.g., deforestation, overgrazing, and plowing) with occasional series of dry years largely leads to presently observed desertification. The process also seems to be fiercest not in desert interiors, but rather on the less arid marginal areas around them. The combination of circumstances particularly conducive to desert expansion can be found in semiarid and subhumid areas—where precipitation is frequent and intense enough to cause rapid erosion of unprotected soils and where humans are prone to mistake short-term economic gains under temporarily favorable climatic conditions for long-term stability.

These tendencies toward bad land-use practices partly result from the imposition of state boundaries on many traditional nomadic societies, restricting their migration routes, or from schemes implemented to encourage the nomads to become sedentary. Some of their traditional grazing lands have been taken over by cash-crop farmers. The traditional ability to migrate enabled pastoral nomads and their stock to make flexible use of available resources according to season and yearly variations in rainfall and to move away from regions that had become exhausted after a long period of use. As soon as migrations are stopped and settlements imposed, such options are closed, and severe degradation occurs.

People have suggested not only that deserts are expanding because of human activity, but also that the deserts themselves were created by human activity. People have proposed, for example, that the Thar Desert of northwest India is a postglacial and possibly a postmedieval creation, and Ehrlich and Ehrlich have suggested that the vast Sahara Desert itself is largely human made. This proposal is not accurate. The Sahara, although it has fluctuated in extent, is many millions of years old, predates human life, and is the result of its climatic situation.

Possibly the most famous case of desertification associated with soil erosion by deflation was the Dust Bowl of the 1930s in the United States. In part the Dust Bowl was caused by a series of unusually hot, dry years that depleted the vegetation cover and made the soils dry enough to be susceptible to wind erosion, but the effects of this drought were worsened by years of overgrazing, poor farming techniques, and the rapid expansion of

An abundant supply of water is pumped from an artesian well in North Africa to irrigate the fields. Adequate irrigation in this arid region is an important factor in buffalo breeding.
wheat cultivation in the Great Plains. The number of cultivated hectares doubled during World War I as tractors (for the first time) were employed in the thousands. In Kansas alone the wheat area increased from less than 2 million hectares in 1910 to almost 5 million in 1919. After the war wheat cultivation continued apace, helped by the development of the combine harvester and government assistance. Over large areas the tough sod, which had exasperated earlier homesteaders, had given way to friable (easily crumbled or pulverized) soils of high erosion potential. Drought, acting on damaged soils, created the “black blizzards.”

Dust storms are still a serious problem in parts of the United States. Thus, for example, in the San Joaquin Valley of California in 1977 a dust storm caused extensive damage and erosion. More than 22 million metric tons of soil were stripped from grazing land within a twenty-four-hour period. Although the combination of drought and a high wind (as much as 300 kilometers per hour) provided the predisposing natural conditions for the stripping to occur, overgrazing and the general lack of windbreaks in the agricultural land played a more significant role. In addition, broad areas of land had recently been stripped of vegetation, leveled, or plowed up prior to planting. Other quantitatively less important factors included stripping of vegetation for urban expansion, extensive denudation of land in the vicinity of oilfields, and local denudation of land by vehicular recreation. Elsewhere in California dust yield has been considerably increased by mining of dry lake beds and by disturbance of playas (flat-floored bottoms of undrained desert basins that become at times shallow lakes).

A comparable acceleration of dust storm activity occurred in the former Soviet Union. After the “Virgin Lands” program of agricultural expansion during the 1950s, dust storm frequencies in the southern Omsk region increased on average by a factor of 2.5 and locally by factors of 5 to 6.

Desertification is not restricted to heavily populated lands with large agricultural and pastoral populations. As the examples of the U.S. Great Plains and California illustrate, high technology, nonlabor-intensive land, and water use can also cause severe degradation.

Human-induced desertification is not new. Although people often focus on the Dust Bowl years of the 1930s and the current degradation of the Sahel, desertification has been the subject of great interest in the Mediterranean area since classical times. Likewise, some evidence indicates that more than four thousand years ago Mesopotamia was suffering from chemical degradation of soils and crop yield reductions as a consequence of the adoption and extension of irrigation. Nevertheless, land degradation is not the inevitable consequence of increasing population densities and land-use intensification, and many techniques are available for desert reclamation.

Andrew S. Goudie

Further Reading

Détente

Détente, in the field of international relations and diplomacy, means relaxation of tensions between two or more hostile powers. Détente may lead to further rapprochement, or improved relations, and may culminate in an entente, or understanding, and possibly even an alliance. In French the word détente means relaxation or slackening. During the classical period of European diplomacy, usually seen as the nineteenth and early twentieth centuries, détente had a very specific and exact technical meaning. However, during the period from 1963 until the late 1980s the term entered into the mainstream of public debate and was used in the context of relations between the Cold War superpowers, the Soviet Union and the United States.

**Détente and Classic Diplomacy**

Diplomats of the nineteenth century saw détente as the first stage in improvement of relations between states. Détente usually implied informal or formal contacts between statesmen and diplomats of rival countries with the objective of gaining preliminary agreement on ways to resolve outstanding grievances. A prime example can be found in the successful détente that took place between Britain and France during the years from 1898 to 1904. Historically France and Britain had been bitter rivals and had fought many wars, most notably the French revolutionary and Napoleonic wars of 1792 to 1815. Imperial rivalry between the two countries continued throughout the nineteenth century. In 1898 France and Britain came close to war during the Fashoda incident, a confrontation over possession of the African territory of Sudan. The crisis was resolved only when the French decided that war with Britain was not in their national interest. Soon after the crisis the French indicated their desire for improved relations to the British. Progress was very slow, and the next step was taken only in May of 1903, when King Edward VII of Britain visited Paris. Soon after, the president of France, Émile Loubet, paid a return visit to London. Behind the scenes diplomats had been negotiating to resolve outstanding disputes between the two countries. The efforts of the diplomats culminated on 8 April 1904 when France and Britain signed the Entente Cordiale, which marked a new beginning in relations between the two historic rivals. Between 1904 and 1914 Britain and France drew steadily closer together, primarily because of the perceived threat from Germany. The British were reluctant to enter into a formal alliance with the French, but military staffs from the two countries held secret talks and discussed war plans. By 1914 Britain and France were effectively allies. But the first step had been taken during the long process of détente from 1898 to 1904.

**Détente and the Cold War**

During the Cold War the term détente was used to describe a policy pursued by President Richard Nixon (1913–1994), first elected in 1968, and his chief foreign policy adviser Henry Kissinger (b. 1923) toward the Soviet Union. The détente advocated by Nixon and Kissinger had earlier echoes. The 1963 Cuban missile crisis convinced many in both the USSR and the United States that tensions between the two superpowers had to
Détente: Nixon and Kissinger Broker
Strategic Arms Limitation Talks (SALT I)

President Richard Nixon’s great successes came in the arena of international politics, where he and his Secretary of State, Henry Kissinger, achieved working relationships with both the USSR and China (and even contributed to the Sino-Soviet split that resulted in a cooling of the relationship between those two great communist powers). The Nixon-Kissinger initiatives resulted in the signing of a host of agreements during Nixon’s time in office. The most important agreements were signed in May 1972 during a summit meeting in Moscow between Nixon and Soviet president Leonid Brezhnev. The two leaders signed the Interim Agreement on the Limitation of Strategic Offensive Arms, known popularly as SALT I (Strategic Arms Limitation Talks), which limited the number of intercontinental ballistic missiles that each side could possess. An additional agreement placed restrictions on antiballistic missiles. Excerpts from the SALT I treaty are below.

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Convinced that the Treaty on the Limitation of Anti-Ballistic Missile Systems and this Interim Agreement on Certain Measures with Respect to the Limitation of Strategic Offensive Arms will contribute to the creation of more favorable conditions for active negotiations on limiting strategic arms as well as to the relaxation of international tension and the strengthening of trust between States,

Taking into account the relationship between strategic offensive and defensive arms,

... Have agreed as follows:

Article I
The Parties undertake not to start construction of additional fixed land-based intercontinental ballistic missile (ICBM) launchers after July 1, 1972.

... Article III
The Parties undertake to limit submarine-launched ballistic missile (SLBM) launchers and modern ballistic missile submarines to the numbers operational and under construction on the date of signature of this Interim Agreement, and in addition to launchers and submarines constructed under procedures established by the Parties as replacements for an equal number of ICBM launchers of older types deployed prior to 1964 or for launchers on older submarines.

be reduced. In the late 1950s Soviet premier Nikita Khrushchev had promoted a form of détente that he referred to as “peaceful coexistence.” Today, however, détente is most often associated with Nixon and Kissinger.

Nixon and Kissinger wanted to reduce Cold War tensions by engaging the USSR in a series of agreements on a wide range of issues. They hoped that the Soviets would find a greater incentive in maintaining good relations with the United States and the West than confronting and challenging American interests around the world. The Nixon-Kissinger initiatives resulted in the signing of a host of agreements during Nixon’s time in office. The most important agreements were signed during a summit meeting between Nixon and Soviet president Leonid Brezhnev in Moscow in May 1972. The two leaders signed the Interim Agreement on the Limitation of Strategic Offensive Arms, known popularly as SALT I (SALT is an acronym for Strategic Arms Limitation Talks), which limited the number of intercontinental ballistic missiles that each side could possess. An additional agreement placed restrictions on antiballistic missiles. Nixon and Brezhnev also agreed to begin talks aimed at scaling back nuclear weapons in Europe and endorsed a document outlining general principles of their new relationship. Later in 1972 a major trade deal led to the sale of American wheat to the USSR. Nixon resigned office in 1974 in the wake of the Watergate scandal but Kissinger continued as secretary of state under the new president, Gerald Ford. In July 1975 the Helsinki Final Act, the keystone of détente, was signed by thirty-five countries. Under the terms of the Final Act the Soviets promised to
Article IV
Subject to the provisions of this Interim Agreement, modernization and replacement of strategic offensive ballistic missiles and launchers covered by this Interim Agreement may be undertaken.

Article V
1. For the purpose of providing assurance of compliance with the provisions of this Interim Agreement, each Party shall use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law.
2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.
3. Each Party undertakes not to use deliberate concealment measures which impede verification by national technical means of compliance with the provisions of this Interim Agreement. This obligation shall not require changes in current construction, assembly, conversion, or overhaul practices.

respect human rights in exchange for Western recognition of post-1945 territorial boundaries in Eastern Europe.

However détente was already under attack from hardliners in the United States who refused to trust the Soviets. They believed that the Soviets were only using détente to lull the West into a false sense of security while continuing to seek advantages wherever and whenever they could. Critics of détente in the United States pointed to perceived Soviet gains in Africa and continued Soviet human rights violations. The Soviets charged that the United States was trying to shut them out of the Middle Eastern peace process. The presidency of Jimmy Carter, who held office from 1976 to 1980, saw the deterioration of détente, despite the conclusion of SALT II in 1979. The Soviet invasion of Afghanistan in 1979, followed the next year by the election of Ronald Reagan as president of the United States, marked the end of détente. Détente was revived as a policy late in the 1980s as Mikhail Gorbachev of the USSR, along with his counterparts in the White House, Ronald Reagan and George H. Bush, sought to end the Cold War. By that point the term détente was seldom used publicly by any of these leaders, since it was so strongly associated with Nixon, Kissinger, and the 1970s.

Détente has gone from being a technical term used by diplomats to a term associated with a contentious phase of the Cold War. Although seldom heard in public debate any longer because of its controversial past, détente in fact forms a crucial component of international diplomacy.

Paul W. Doerr

See also Cold War

Further Reading
has changed substantially over the centuries. A recent scholarly debate over just how widely the term can be applied has not reached a satisfactory conclusion.

**Early Use of the Term Diaspora**

Over two millennia ago, the Greek historian Thucydides used *diaspora* to describe those driven from their homes during the Peloponnesian War (431–404 BCE). But for other Greek speakers, the term had a much broader meaning. It referred to the dispersion of Greeks around the Mediterranean and into western Asia between 800 and 600 BCE. These were not refugees but merchants and colonizers who formed distinctive Greek settlements amidst peoples of other cultures. The word *diaspora* suggested that like seeds, migrants could travel great distances, yet once they took root, they would grow into familiar forms: Greeks scattered outside Greece nonetheless remained culturally Greek and proud of their origins.

Perhaps because the term *diaspora* appeared in Greek translations of the Bible, describing the exile of Jews, the meaning of the term subsequently narrowed. Hebrew speakers initially preferred the term *galut* (exile) to describe Jews forced into exile after the destruction of the Temple of Jerusalem in 586 BCE. But over the centuries, the term *diaspora* was applied so often, so consistently, and in so many European languages to Jews who had scattered while escaping from persecution that the earlier, broader Greek meaning of the term seemed almost completely forgotten.

Theorists have used other terms for minority groups formed by forced migrations, calling them involuntary migrants, exiles, or refugees. They have suggested that the social, psychological, and cultural dynamics of ethnic group formation among forced migrants differ significantly from the dynamics among those who leave home voluntarily. In particular, forced migrants are believed to nurture especially strong connections to their homelands and to hope for their eventual return there. Such characteristics were central to the concept of the Jewish Diaspora.

In the past two centuries, scholars have recognized a limited number of other forced migrations—notably enslaved Africans in the sixteenth, seventeenth, and eighteenth centuries, Armenians threatened with genocide in Turkey after World War I, and displaced Palestinians—which have also been called diasporas. Occasionally, too, reference has been made to an Irish diaspora, the result of poor Irish farmers being forced from home by the devastating potato blight and the threat of mass starvation in the 1840s and 1850s. Nevertheless, for the most part it was the Jewish experience of exile, homelessness or statelessness, and attachment to a lost home that defined diaspora.

**The Jewish Diaspora**

The destruction of the Temple of Jerusalem and the subsequent Babylonian exile became central to Jewish life, culture, and identity. Memories of this experience were passed from generation to generation, obscuring the fact that a significant contingent of early Jewish exiles restored the Temple in 515 BCE. At least since classical times, more Jews lived in scattered communities in Egypt and Anatolia (peninsular Turkey) than in the Jewish homeland around Jerusalem. The crushing of a Jewish revolt against the Romans in 70 CE, the second destruction of the Temple and a second exile, and, somewhat later, Christian assertions about Jews’ supposed role in the killing of Christ helped to solidify images of Jews as wanderers, persecuted wherever they traveled and never permanently settled anywhere.

In later periods, however, there is little evidence that the large populations of Jews living in the Catholic or Orthodox Mediterranean or in Muslim North Africa or western Asia were substantially more mobile than majority populations: Most Jews settled permanently in cities. Their reputation for tenacious commitments and for emotional attachment to their ancestral homeland was in part a product of social and economic discrimination that prevented them from ever belonging fully to host societies, whether those societies were Catholic, Orthodox Christian, or Muslim.

Persecution sparked important Jewish migrations, especially between 1000 and 1500. In Catholic Europe the Crusades heightened anti-Semitism; eventually
anti-Semitism led to the expulsion of Jews from Spain in 1492. Within the Muslim world, where Jews lived as constrained minorities in self-governing enclaves, trade may have motivated more Jewish mobility; certainly trade was one motivation for those Jewish merchants who first ventured into the Atlantic world and the Americas.

By the early nineteenth century, Jewish migrants resembled other central and western Europeans in traveling to the Americas in search of work, commercial advantage, or educational opportunity. Even later in the century, Jewish migrants to the United States were almost as likely to leave those countries that had begun to open opportunities for full citizenship to them as they were to leave places such as the Russian empire, where the threat of violent peasant attacks (pogroms) and levels of discriminatory practices in military service, schooling, and landownership remained very high.

Over the centuries, Jewish communities reached long-term and relatively peaceful accommodations with the Catholic, Orthodox, Protestant, and Muslim majority populations in the lands where they settled. Thus when opportunities to return to their homeland opened with the creation of Israel in 1947, most Jewish North Americans did not choose to relocate. The vast majority of Jews worldwide still live in the Diaspora. Nevertheless, memories of persecution and the possible necessity of renewed flight have been elements of Jewish life for millennia, elements that were reinforced by the horrific genocide—that occurred in Europe during World War II.

The Armenian and African Diasporas

Like those of the Jewish faith, Armenians trace their exile to an early date. Armenians regard their homeland as Mount Ararat, a mountain in the east of present-day Turkey, near the border with Iran. There, according to the Bible, Noah’s Ark landed and repopulated the earth with people and animals. Armenians, whose Christian beliefs differed from those of their Orthodox rulers and neighbors, were first deported in large numbers in 578 to Macedonia, Cyprus, and other locations in the eastern Mediterranean, and subsequently most lived as minorities under the rule of Muslims. Armenians resisted conversion and, as traders, traveled far afield.

A revolutionary movement in pursuit of an independent Armenian state led to the murder of thousands of Armenians in the Ottoman empire and the deportation of some 1.75 million Armenians in 1915. Perhaps half the Armenian population either starved or were killed during the course of the deportation. Of those who survived, many sought refuge in the Americas and Europe. Today about 2 million Armenians live in Europe, western Asia, and the Americas; roughly another 2 million live in the Central Asian republics of the former Soviet Union, and approximately 3 million live in an independent Armenian republic in their regional homeland.

If many Armenians stayed relatively close to their ancestral home, even when dispersed forcibly, an African diaspora formed far from the African continent—but only in the Americas. At least since the time of the Roman Empire, slave trading had scattered Africans across the Sahara and the Mediterranean and into the Muslim world of western Asia. After 1500, the numbers of slaves sent across the Atlantic to serve as laborers on plantations came to outnumber those sent elsewhere along older Old World slave routes. The culture and identities of Africans in the New World were a product of the complex intermingling of the customs of many African ethnic groups and of animist African, Muslim, and Christian religious beliefs. Separate African languages disappeared but contributed to the creation of hybrid pidgin dialects that blended African, English, Spanish, and Portuguese elements.

As African slaves in the Americas gradually acquired their freedom between 1830 and 1889, small numbers did return to Africa, notably to Liberia. But the much larger group remained in the New World, where they identified with biblical stories of Jewish captivity, exile, and longing for home. Many regarded Africa—and especially the independent nation of Ethiopia (the only African area not colonized by Europeans in the nineteenth century)—as the symbol of a lost homeland.

In the early twentieth century, the development of
Pan-African movements among New World residents of African descent focused on ending European colonialism in Africa and racial oppression in the Americas. These movements linked activists in the Caribbean, the United States, and Africa. Even after the collapse of Europe’s empires in Africa after World War II and the abandonment of legal and institutionalized forms of racial discrimination in the United States and South Africa, experiences of racial prejudice continue to nurture an attachment to Africa among persons of African descent. Few have any intention of returning to Africa, however, even though the formation of independent African nations after 1950 made that option more plausible than ever before.

Recent Changes in the Meaning of Diaspora
In a controversial development, scholars in recent years have begun to consider the possibility that other migrations, too, can create diasporas. In part this change reflects scholarly appreciation of the difficulties of distinguishing definitively between forced and free migrations even in the African, Armenian, Jewish, Palestinian, or Irish diasporas. Scholars have acknowledged that elements of coercion and choice figure in the lives of most mobile persons. The willingness to use diaspora for analysis of a broader range of migrations also reflects the recognition that attachment to a distant homeland is not limited to exiles and refugees. The fact that many in the Jewish and African diasporas have shown little interest in returning to their ancestral homelands also suggests how problematic it is to distinguish vigorously among descendants of forced and voluntary migrants.

In the mid-1990s, the sociologist Robin Cohen sought to summarize changing use of the term by suggesting a typology of diasporas. Cohen distinguished between victim diasporas—such as the Jewish and Armenian diasporas—and those formed as people voluntarily left their homeland to look for work (labor diasporas), establish colonies (imperial diasporas), or engage in commerce (trade diasporas). Cohen encouraged scholars to debate the characteristics shared by all diasporas and to identify those characteristics that differentiated diasporas.
from other ethnic groups formed through long-distance migrations.

Trade Diasporas
At least since 2000 BCE, the desire for trade has encouraged merchants to form communities abroad without abandoning their loyalties or connections to their home-lands and without abandoning their native cultures. The ancient Minoans scattered throughout the Aegean, and the Phoenicians spread throughout the eastern Mediterranean. Greek merchants established colonies even more widely, especially in Sicily and western Asia.

In the years between 500 and 1500, Arab, Jewish, Armenian, and Genoese and Venetian merchants formed self-governing commercial enclaves in western Asia, around the Black Sea, in caravan towns through Central Asia, and along the coasts of Africa.

Similarly, Chinese merchants who lived in large numbers in many parts of Southeast Asia and the Philippines showed few signs of abandoning their Chinese culture or identity, and generally they intended to return home eventually. Most considered themselves sojourners in foreign lands, even if their communities persisted for centuries. After 1500, as European empire builders arrived in Asia, they often encouraged the expansion of Chinese trading communities because Chinese merchants served as effective cultural and economic mediators between the impossibly foreign-seeming Europeans and local populations and institutions.

In the modern world, trade diasporas continued to form. Lebanese traders from Syria scattered around the Mediterranean and to North and South America during the nineteenth century. Many worked as peddlers before opening shops; in much of Latin America, Lebanese merchants played an important role in the creation of modern industries as well. Rates of return to Lebanon have been high, though as many as two-fifths of all the people who consider themselves Lebanese today live outside Lebanon. Although rarely analyzed as diasporas, the far-flung communities that U.S. multinational corporations create are self-consciously American and English-speaking. They often maintain considerable social and
cultural distance from host societies and are viewed as unwelcome expressions of U.S. imperial power by local populations.

Imperial Diasporas
As in the case of the Greek Mediterranean two millennia earlier, mobile merchants often functioned as the vanguard of empire building in the European empires formed after 1500. Dutch, Spanish, Portuguese, German, French, and British colonists created settlements around the world that reproduced their own cultures rather than adapting the customs and languages of the natives among whom they lived.

Diasporas formed through empire building often had significant state support, with the government organizing, directing, and financing migrations of their citizens to strengthen some of their colonies demographically. From the seventeenth century onward, actions taken by the British state—land policies that forced poor Scots or Irish from their fields and crofts, export of prisoners, sponsored migration of female spinsters—encouraged migration to its colonies, especially in Canada and Australia. Its military and government bureaucracies also organized the migration of soldiers, civil servants, and teachers to work in Africa, India, and other parts of Asia. While many so employed expected to return home again, and cultivated a pride in their Britishness that held them aloof from colonized populations, imperial migrants did sometimes also acquire an attachment to their new homelands and settle more permanently. This was true for colonialists from other European countries as well. In both French Algeria and British Rhodesia, settlers who had come as empire builders stayed on and violently opposed independence under native African rule after World War II, a fact that suggests the complex relationship between imperial culture, home, and host societies in imperial diasporas.

Proletarian or Labor Diasporas
The emancipation of slaves and the industrialization of cities in Europe and the Americas in the nineteenth century provoked vast new migrations that continued into the twentieth century. As many as 65 million Europeans migrated to the Americas, and as many as 40 million Chinese and Indians left their home countries between 1815 and 1930. Most of the Indian migrants and a substantial minority of the European and Chinese migrants traveled under some form of indenture, labor contract, or debt peonage. The so-called proletarian mass migrations are nevertheless considered voluntary. Workers followed the money in a global labor market that as often offered temporary and seasonal employment as opportunities for permanent settlement, especially by the latter years of the twentieth century.

Chinese, Indian, and southern and eastern European migrants were especially likely to consider themselves sojourners who intended to return home again. Perhaps as many as 90 percent of Chinese and Indian laborers returned from New World, Asian, or Africa plantations or mines. Among Italian laborers in agriculture and industry, rates of return were typically over 50 percent. Male laborers in all these groups left home, returned, and then departed again, often several times over the course of their lives. Recent research suggests that the constant circulation of mobile men, along with the often violently hostile reactions of native workers and host societies, reinforced sojourners’ attachment to their homelands. Between 1880 and 1930, laws passed in Canada, the United States, and Australia to exclude or limit the migration of all contract laborers, to prevent the settlement of Chinese and Indians, and to limit the number of workers entering from Italy, Greece, and the Balkans had the same effect. The result was heightened ethnic and racial consciousness among even the descendants of workers who settled permanently abroad. Many have maintained distinctive ethnic identities and a continued awareness of their foreign origins over several generations. Some scholars now refer to these groups, too, as diasporas, although that labeling is controversial.

Debates about Migration, Ethnicity, and Diaspora
Few scholars would argue that every migration generates a diaspora. Many, however, accept a wider and more gen-
and sustain powerful myths about their homelands, which they typically idealize. These memories in turn generate dreams of a return to that homeland. Diasporas are thus characterized by strong group consciousness that is sustained over many years, generations, or even centuries. Diasporas typically have somewhat difficult relationships with the societies in which they make their homes, and their members typically maintain at least a minimal sense of solidarity with their co-ethnics or coreligionists in other parts of the world. Diasporic consciousness also seems to be positively associated with cultural creativity; the distinctive music, art, or literature of a diaspora may be regarded positively by majority populations and at the same time may reinforce the sense of distinctiveness of those creating it.

In short, diasporas seem to be characterized not so much by the experience of forced migration as by a will to survive and to resist full assimilation into host societies, even when that option is open. A strong sense of shared history—often reinforced by experiences such as exile, persecution, or local hostility—can be reproduced over time within families, ethnic institutions, and through cultural production. This sense of shared history allows people in North America to feel a sense of solidarity with people of similar origins who may live in South America, Australia, Europe or Asia. Ultimately, then, diasporas are products of history. It is the passage of time that determines which mobile populations and which ethnic groups will become and remain diasporas.

Donna R. Gabaccia

See also Asian Migrations; Expansion, European; Global Migration in Modern Times; Migrations; Pacific, Settlement of

Further Reading
Dictionaries and Encyclopedias

Dictionaries and encyclopedias are outgrowths of the human urge to decipher, systematize, explain, and learn. From cuneiform tablets to the World Wide Web, dictionaries have defined, standardized, and influenced the use of human language, while encyclopedias have mirrored and shaped knowledge.

During their long history, dictionaries have reflected the history and origins of language, in addition to offering definitions, etymologies, pronunciation, and spelling standards. But they have also been criticized for contributing to ethnocentrism and linguistic conformity. For their part encyclopedias have provided classification concepts to organize world knowledge, while simultaneously offering a snapshot in time of that knowledge. They have fostered learning by educating as well as edifying the reader. However, encyclopedias have also been grounded in contemporary biases and superstitions.

Rudimentary forms of dictionaries and encyclopedias have been used since ancient times. Compilations of bilingual word lists began as early as 3000 BCE in Sumerian culture and were later adopted by their conquering neighbors, the Akkadians, then spread to peoples from other parts of the Middle East. The Western tradition can be traced to the Greek glossai, which were used to interpret the classic literary works of Homer and the ancient law (Green 1996). The concept of the enkyklios paideia, the “general” or “rounded” education, goes back to Plato and Aristotle. In fact the first recognizable “encyclopedic” work is considered to be a collection of Plato’s writings by his nephew Speusippos that were used for instruction at Plato’s Academy.

Dictionaries

In addition to the Greek glossai, there is an early tradition of lexicography in Sanskrit, as well as in Chinese, Arabic, and Japanese. As early as 300 BCE, lexicons were written to aid in understanding the Vedas, or sacred Hindu texts. Related to these is the later classic of Sanskrit lexicography, the Amarakosha by Amarasimha (650 CE). The Chinese tradition stems from early glosses like the Shuo wen jie zi compiled by Hsü Shen around 120 CE was the first etymological Chinese dictionary. While Arabic wordlists and vocabularies pre-dated it, the first Arabic dictionary is considered the Kitab al’ Ain by Al-Khalil ibn Ahmad written in the late 700s CE. But it is the Šiḥāḥ by al-Jawharī (d. 1003) that set the standard for the classic Arabic dictionary and the Tāj al-ʿarūs by al-Murtada al-Zabīdī (d.1791) that incorporated numerous previous works and represents the culmination of a thousand-year tradition. There is a long history of Japanese lexicography stretching from the Heian period (794–1185) to the end of the Muromachi period (1338–
1573). However, the beginning of the modern Japanese dictionary is traced to the Rakuyōshū, published by the Jesuits in 1598 (Bailey 1960).

Beside the Jesuit influence on Japanese dictionaries, there is an undeniable legacy of Western influence on non-Western dictionary making. Dictionaries of many African and Asian and Pacific languages are relatively recent and bear the imprint of Western contact. Many of the first to study these languages and write dictionaries were missionaries and social workers. While making a significant contribution in being the first to record these languages, often their work was didactic and moralizing. In addition early missionaries like Alexandre de Rhodes compiled dictionaries using Romanized scripts, further portraying the native language through Western eyes. The same holds true for African languages with the later, more formal efforts of organizations like the International Institute of African Languages and Cultures, founded in London (1926), and the Instituto de Estudios Africanos, founded in Madrid (1939). And today, modern Arabic lexicographers, inspired by E.W. Lane’s Madd al-Qāmus, Arabic-English Lexicon (1863–1893), follow Western methods and principles.

**English Dictionaries**

The first purely English dictionary was Robert Cawdrey’s *Table Alphabeticall* in 1604. Consisting of only 2,560 entries, mostly plagiarized from other sources, Cawdrey concentrated on so-called hard words. This “hard word” tradition held sway through the seventeenth century. Attempting to record all English words was left to the remarkable *Oxford English Dictionary* nearly three centuries later.

Dozens of other dictionaries were published after Cawdrey, but it was Samuel Johnson who authored the first great English dictionary. In a sense Johnson’s work was in response to the great continental dictionaries like those of Italy, the Accademia della Crusca’s *Vocabolario* (1612), and France, the *Dictionnaire de l’Académie Française* (1694). Johnson’s *Dictionary of the English Language* (1755) answered the need for an authoritative English language dictionary and “the growing desire to create...a national language” (Green 1996, 226). But instead of being a national project undertaken by an academy of scholars, the work was left to Johnson and six assistants. In all Johnson defined some 40,000 headwords, using approximately 118,000 quotations to support and differentiate meanings.

National impulses also inspired the work of Noah Webster. He realized that American English was distinct from the language spoken in England, and his *American Dictionary of the English Language* (1828) reflected this fact. His dictionary also had a lasting impact on the spelling of American English. But Webster’s work may have faded from view had not George and Charles Merriam purchased the rights from his family. The Merriams improved the quality of the dictionary and published revisions and abridgements on a regular schedule. The
name Merriam-Webster is still one of the most respected
in dictionary publishing.

The greatest of all English dictionaries is undoubtedly
the fabled Oxford English Dictionary. The OED, as it is
often referred to, was conceived as a recorder of actual
historic usage, not as a standard, dictating proper En-
glish (Landau 1989). Under the editorship of the bril-
liant, if eccentric, James Murray, the first volume of the
OED was published in 1884, with the final volume ap-
pearance in 1928. Since that time there have been several
supplements with a twenty-volume, second edition
being published in 1989. Today, it is available online
and in CD-ROM, which allows quarterly updating,
including at least 1,000 new and revised entries. With
its precise definitions, illustrative quotations, variant
spellings, and comprehensive etymologies, the OED is
an indispensable tool for the study of English.

Encyclopedias

The Romans laid the foundation of the written encyclo-
pedia. The Praecepta ad Filium (184 BCE) by the famed
Roman orator Marcus Terentius Cato (Cato the Elder) is
considered the first extant written encyclopedia. Taking
the form of letters to his son, the Praecepta is known to
have included sections on “agriculture, medicine, rhetoric
and possibly law and warfare” (Collison 1964, 23).

Other similar works exist, but two particularly, stand out.
Marcus Terentius Varro (116–27 BCE) was an extraordi-
nary scholar credited with seventy-four separate works in
620 volumes. His Disciplinarum Libri Novem devoted
individual volumes to each of the seven liberal arts, as
well as medicine and architecture, and foreshadowed the
trivium (“the three roads”: grammar, rhetoric, and dialec-
tic) and quadrivium (“the four roads”: mathematics,
geometry, astronomy, and music) of later medieval edu-
cation. Pliny the Elder’s Historia Naturalis (77 CE) con-
sisted of thirty-seven books covering topics as diverse as
metallurgy and the fine arts. In addition he was one of the
first to cite his sources, and his work influenced encyclo-
pedia making up to the Renaissance.

Eastern Traditions

The encyclopedia tradition is as rich in China, as in the
West. Although early Chinese encyclopedias also use
classified arrangements, they are usually collections of sig-
nificant prior works, with dictionary elements. From the
beginning these works were motivated by the need to edu-
cate civil administrators. The first Chinese encyclopedia
appeared around 220 CE. It was entitled Huang lan and
was compiled by order of the emperor. Other early Chi-
nese encyclopedias included the Ch’u Hsüeh chi (700 CE)
and the more influential *T’ung tien* by Tu Yu (801 CE). The *T’ung tien* was the first of three works that formed the *San Tsung*, which in turn was the foundation of a larger group of nine works published as the *Chiu Tsung* in 1747 (Collison 1964). These encyclopedias collectively covered the prior twelve centuries and show the tendency of the Chinese encyclopedias to grow and be augmented, rather than be replaced. Another example is the significant work *Yü-Hai*. Originally composed in 1267, it had evolved into a 240-volume collection by 1738. Throughout the 1600s there was a series of encyclopedias published under the auspices of the emperor with the highly illustrated *San ts’ei t’hu* being published in 1607–1609. The *Hsiao chih lu* finished by Lu Feng-tso in 1804 was unique for its coverage of practical and technical matters. A number of other encyclopedias appeared later in the century with particular strengths in history, biography, and civil service. However, the first truly modern Chinese encyclopedia was the *Tz’u-yüan* published in 1915 and supplemented in 1931. In progress since 1982, the *Chung-kuo ta pai ko chuan shu*, well illustrated with lengthy articles, carries on the tradition.

Arabic encyclopedias also served the purpose of instructing civil servants, but in addition, they sought to inform the typical educated person. The first recognized work, the *Kitāb ‘Uyun al Akhbar* by Ibn Qutayba (828–889) was written with this audience in mind. Another significant Arabic contribution was the *Mafāṭīh al-‘Ullum* (975–997) by the Persian scholar and statesman, al-Khwarizmi. Besides Arab influences, his work reflected an awareness of the more important Greek writings. Around the same time a religious and political party called the Ikhwān as-Safā published the *Rasā’il Ikhwān as-Safā* consisting of fifty-two pamphlets by five authors. (An edition of this work was published as late as 1889.) Later encyclopedias were published in Egypt, including the well-known *Nihāyat al-‘arab fi funun al-adab* by an-Nuwairi (1272–1332), and the important and well organized *Ṣūḥ al-a’sha* (1412), aimed at civil servants. The tradition of Arabic encyclopedias has continued into modern times with the works of Butrus al-Bustani and his family. Their *Da’irat al-Maarif* originally published in Beirut has gone through three editions, the first published from 1875 to 1900 and the last finished in 1956. Today, there are initiatives underway to publish major encyclopedias from the Islamic standpoint. A special scholarly institute has been established in Iran and is at work compiling a multivolume encyclopedia to reflect the Shiite perspective.

**Western Encyclopedias and the Church**

The Western encyclopedia tradition felt Christianity’s influence by the sixth century. Cassiodorus’s two volume *Institutiones divinarum et humanarum lectionum* (560 CE) begins with chapters on scripture and commentary, as well as chapters on the historians and the Fathers of the Church. But Cassiodorus was also responsible for preserving the ancient Latin authors, pointing out "how
The First Turkish Dictionary

It was not until the early eighteenth century that printing in Arabic characters was authorized in the Middle East. Said Effendi, the son of the Ottoman ambassador to Paris, accompanied his father to that city in 1721. He became interested in the art of printing and became convinced that it would be a useful technology in his own country of Turkey. Upon his return to Istanbul, he sought the support of the grand vizier for establishing a Turkish printing press. Ibrahim Muteferrika joined Said Effendi and became the founder and director of the first Turkish operation. He and Said Effendi drafted a memorandum on the merits of printing and, to their surprise, the head of the Muslim religious hierarchy, the Chief Mufti, issued a legal opinion (fatwa) supporting the acceptability of the printing of books in Arabic and Turkish on subjects other than religion in the Ottoman Empire. Within a few short years (1727) an imperial decree (firman) issued by the Sultan authorized the publication of any book in Turkish. Turkish presses were established with help from local Jewish and Christian printers and typesetters already at work in Istanbul, who aided in the development of Turkish fonts. Other equipment was soon imported from Europe, especially Leiden in the Netherlands and Paris, both of which had established Arabic presses.

The first book published in Turkey was a two-volume dictionary printed in 1729. The first volume contains an introduction by the editor, the full texts of the imperial firman authorizing the establishment of the press, and the fatwa declaring the legality of printing, and certificates from the two chief judges and other government dignitaries. These sections are followed by an essay on the usefulness of printing.

David Levinson

The Renaissance into the Modern Era

The greatest contribution of the Renaissance was an encyclopedia that was barely begun and never finished. However, Francis Bacon’s Instauratio magna (1620), with its proposed outline and classification scheme, was revolutionary and its influence lasting. Grounded in scientific method, Bacon covered every known topic of the day and his outline served as checklist for future encyclopedias, including that of Diderot and the great L’Encyclopédie. The seventeenth century also saw the popularizing of the alphabetical arrangement with the publication of Louis Morer’s Le grand dictionnaire historique (1674). This made the encyclopedia much easier to consult for specific facts. John Harris was the first to solicit experts to write articles for his Lexicon Technicum (1704). He also added high-quality illustrations and plates to his work, as well as selected bibliographies. Incorporating many of
Harris's methods, Ephraim Chambers made the encyclopedia accessible to a mass audience by stressing readable articles in his *Cyclopaedia* (1728). He also broadened coverage of the arts and employed a through system of cross-references.

**L’Encyclopédie and the Britannica**

Denis Diderot and Jean le Rond, later known as d’Alembert, changed what started as a translation of the Chambers *Cyclopaedia* into what would become the most famous and storied encyclopedias in history. Under their guidance, particularly Diderot’s, *L’Encyclopédie* (1765) became a revolutionary philosophical undertaking, featuring the writing of luminaries like Voltaire, Turgot, and Rousseau. It rejected much of the past and promulgated the scientific theories and advanced ideas of the Enlightenment. Reason, not the Church, was the source of authority, and traditional learning was criticized for its prejudice and superstition. The *Encyclopédie* was a powerful tool of protest and was subject to censorship and suppression. But because it also reflected the interests of the emerging middle class devoted to commerce and capitalism, it became widely popular and influential.

Two other names dominate encyclopedia publishing following the *L’Encyclopédie*, David Frederich Brockhaus and Pierre Larousse. Their works, the *Koversations-Lexikon* (1811) and the *Grand Dictionnaire Universal* (1876), featured short, accessible articles, alphabetically arranged, which highlighted their use as reference works to be consulted, rather than read. Publishing houses bearing their names continue to publish highly respected encyclopedias today. Another great Continental encyclopedia that has to be mentioned is the *Enciclopedia italiana di scienze, lettere ed arti* (1929–1939). One of the finest national encyclopedias ever published, it is nonetheless international in scope (Collison 1964).

The *Encyclopedia Britannica* ranks in importance with Diderot’s *L’Encyclopédie*. The first edition consisted of three volumes of both fact and fiction, but under the editorship of John Tytler that changed. His second edition (1784) was a ten-volume set with 340 plates and an emphasis on historical articles and biographies. It was revised and changed incrementally until the landmark ninth edition (1888), which along with the classic eleventh edition (1911) is thought the standard in balanced, accessible scholarship. These two editions created the *Britannica*’s reputation. But, the success of the *Britannica* was due to as much to marketing and an increasingly affluent middle class, as to the quality of the set, especially in the United States. By the fourteenth edition released in 1929, the *Britannica* was being published in America and reflected American interests more than British. The fifteenth edition, first published in 1974, is currently available in print, as well as online and CD-ROM.

**Present and Future Trends**

As knowledge grows exponentially, dictionaries and encyclopedias continue to evolve and change. They are no longer solely the domain of scholars. Mass-market dictionaries and encyclopedias, appealing to a far wider audience, are available in supermarkets as well as bookstores. This is particularly true for dictionaries and heightens the tension between their prescriptive and descriptive roles. Dictionaries are asked to be authoritative, yet neutral and objective, and at the same time describe living language as spoken by a broad population. This dichotomy can be expected to grow as dictionaries appeal to an even wider audience via computers and the World Wide Web.

Computer technology also provides timeliness undreamed of by previous dictionary makers. Online dictionaries can be updated immediately and continuously. In addition computers revolutionize the way people search and retrieve needed information. Editors of the *OED Online* note that “complex investigations into word origins or quotations that would have been impossible to conduct using the print edition now take only a few seconds.” And, computers, combined with the World Wide Web, enable collaborative scholarly projects like the Digital Dictionaries of South Asia effort led by the University of Chicago and popular collections of online dictionaries like yourdictionary.com.

Today, the traditional role of an encyclopedia in classifying the world’s knowledge is marginal. Indexes, cross-references, and hyperlinks supplant schema and

*The things I want to know are in books; my best friend is the man who’ll get me a book I ain’t read.* • Abraham Lincoln (1809–1865)
classification. The encyclopedia is no longer read and contemplated; it is consulted for objective facts and background information. And the general encyclopedia is not the dominant form. There are hundreds of subject encyclopedias, including those like the Groves Dictionary of Art and Nature’s Encyclopedia of Life Sciences, that are larger than many general encyclopedias.

As with dictionaries, computers are accelerating the encyclopedia’s transformation. Multivolume sets are becoming databases, searchable by keywords using Boolean logic. Respected encyclopedias like Britannica are available online and in CD-ROM, and searching is not only far easier and more flexible, its results are immediate. The computer also allows the creation of electronic reference collections above and beyond the encyclopedia. Resources like the Britannica Online now provide access to the various Britannica encyclopedias, a dictionary, a thesaurus, an atlas, and vetted websites. On the down side, the computer serves to further fragment information, violating one of the encyclopedias original purposes, organizing knowledge into an understandable whole. The role encyclopedias have played in preserving knowledge is also threatened by the reliance on electronic formats that may not exist in coming decades. And the lack of standards inherent in World Wide Web publishing endangers the aura of authority and reliability attached to both dictionaries and encyclopedias. In short the future holds both exciting promise and troubling pitfalls for these historically valuable reference works.

Tom Gilson

See also Libraries; Mass Media; Writing Systems and Materials

Further Reading

stationed permanent representatives in foreign states in order to obtain reliable information. However, the Venetian system was quickly taken up by the other Italian city-states. During the Renaissance the Italian peninsula was divided into a number of city-states engaged in constant intrigue and bouts of warfare. The need for accurate information encouraged the stationing of agents, or ambassadors, in both friendly and rival states. The use of ambassadors then spread to the kingdoms of Western Europe. The constant stream of reports from ambassadors resulted in the creation of bureaucracies, tiny by modern standards, to process and collate information, and to send out instructions. By the early eighteenth century practically all the states of Europe had foreign offices in order to manage and administer their relations with other states. The head of the foreign office became known as the foreign minister, and foreign ministers soon became key members of the cabinets of all European states, wielding great power and influence. As diplomacy became increasingly systematized, various commentators began offering books of advice on the best way to conduct diplomacy. Niccolò Machiavelli’s *The Prince*, first published in 1513, is only the most famous of many such volumes.

**Early Practice of Diplomacy**

Over the centuries many practitioners of diplomacy have left their mark on history. In the seventeenth century the French cardinal Richelieu, chief minister to king Louis XIII from 1624 to 1642, promoted a doctrine known as *raison d’état*, which held that the good of the state was supreme, and that diplomacy must be conducted free of sentiment, ideology, or religious faith. Alliances must be forged and broken with the interests of the state as the only guide. Contemporaries criticized Richelieu for his alleged lack of morality, but Richelieu replied that protecting the state was the highest form of morality. Richelieu was enormously successful, and by the time of his death France had emerged as the dominant power in Europe, a position it maintained for the next 170 years.

However, France’s dominant position in Europe threatened other European states, leading to the creation of coalitions during the late seventeenth and eighteenth centuries to contain French ambitions. Political observers and commentators of the eighteenth century, such as David Hume, soon began to refer to the concept of the balance of power, under which states, acting in their own selfish interests, would create a balance, or equilibrium, in the state structure of Europe. The emergence in Europe of a network of states encouraged the growth of diplomacy.

Diplomacy in Asia revolved around the concept of a single strong state, China, ringed by tributary states, and the use of emissaries to maintain the system. The major exception occurred during the Southern Song dynasty of the thirteenth century when central authority in China was weakened and something approaching a balance of power emerged temporarily. The Byzantine and Ottoman empires practiced a similar style of diplomacy under similar situations.

**The Early Nineteenth Century**

Following the brutality of the French and Napoleonic wars that began in 1792 and ended in 1815, a new style of diplomacy emerged. The Congress of Vienna, held from September 1814 to 9 June 1815, was intended not only to divide the spoils of war but also to lay the foundations for long-term peace in Europe. The Austrian foreign minister, Prince Klemens von Metternich (1773–1859), masterminded what he hoped would be an enduring state system in Europe. The five major powers of Europe would exist in a balance of power. Rather than acting in their own interests and hoping that a balance would result naturally, they would act in concert, hence the use of the phrase “concert of Europe.” Self-interest would be put aside in favor of the larger good, according to Metternich. The larger good meant the supremacy of the conservative, authoritarian monarchies of Europe, and the struggle to suppress the new forces of liberalism and nationalism. Metternich favored an ideological approach to diplomacy. The Congress (or concert) system was maintained until the Crimean War of 1853–1856. Russia’s defeat in 1856 resulted in its alienation from the concert system and ushered in fifteen years of instability in Europe.
Realpolitik

The years after the Crimean War saw the return of the idea that state interest had primacy in the conduct of diplomacy, a concept now known as realpolitik. But realpolitik was little different from the style of diplomacy conducted by Richelieu. Realpolitik had three prominent practitioners: Count Camillo Cavour (1810–1861), prime minister of the Italian state of Piedmont; Louis-Napoléon (1808–1873, also known as Napoléon III), emperor of France; and most notably, Otto von Bismarck (1815–1898), who served first as chancellor of Prussia, and then later of Germany. All three made and broke alliances, commitments, and understandings according to the ever-changing needs of the state. Their actions frequently appalled contemporaries, but the good of the state was the primary consideration for those who conducted realpolitik. Count Cavour was successful in leading the campaign for Italian unification before his premature death in 1861. Louis-Napoléon was less competent, and met military defeat and humiliation in war with Prussia in 1870. Louis-Napoléon’s nemesis was Bismarck, the most successful diplomat of the nineteenth century. Bismarck orchestrated the creation of a unified Germany under Prussian leadership in 1871. France had been sidelined, and Germany was now at the center of European diplomacy.

The Later Nineteenth Century

Having successfully orchestrated the unification of Germany despite intense pressure both domestically and from other European states, Bismarck was now determined to maintain its central position in Europe. Bismarck feared that Germany was surrounded by potentially hostile states. He established a complex network of alliances designed to ensure that France remained isolated and that the other leading powers of Europe remained bound to Germany in some way. European diplomacy after 1871 was dominated by Bismarck’s alliances and the need to maintain them. Bismarck demonstrated great skill in doing so. He maintained that Germany was a “satiated” power and could act as an honest broker in disputes between powers. In 1884, for example, Bismarck hosted the Berlin Conference, which set the ground rules for European expansion into vast areas of Africa and Asia. European diplomacy always had an impact on the peoples of North and South America, Africa, and Asia in the late nineteenth century. European powers fought not only in Europe, but also for advantage in overseas possessions and territories. But the Congress of Berlin was the most dramatic illustration of the global impact of European diplomacy up to that time. During the nineteenth century attempts by European powers to subjugate Asian and African states became known as “gunboat diplomacy,” or “coercive diplomacy.”

Bismarck left office in 1890. His successors were much less skilled in maintaining his alliances. By 1914 Germany was surrounded by an alliance system known as the Triple Entente, which included Britain, France, and Russia. As a result, Germany headed the Triple Alliance, along with Austria-Hungary and Italy, but Italy remained neutral when war broke out in 1914.

It is common to refer to the nineteenth century as the era of classical diplomacy. Diplomats of all European countries came from similar social backgrounds, usually the aristocracy, shared many common assumptions, and conducted diplomacy largely free from the impact of public opinion and domestic lobby groups.

The New Diplomacy

The trauma of World War I, with 9 million dead, led many to condemn what they referred to as the “old diplomacy,” by which they meant diplomacy conducted by professionals. Allegedly the diplomats, acting often in secret, had created a network of alliances that plunged Europe into a horrific war. In 1918, U.S. president Woodrow Wilson (1856–1924) emerged as the leading spokesman for the “new” diplomacy. Wilson argued that diplomacy should be conducted in the open, and that “open covenants” should be openly arrived at. Instead of secret alliances, Wilson advocated the creation of a League of Nations so that the rule of international law would replace the anarchy of the prewar years. Instead of going to war, nations would submit disputes to the League for resolution. Aggressors that ignored the League would face economic sanctions and possibly military
action. Some of Wilson’s ideas were implemented in the Treaty of Versailles that ended World War I. The Treaty of Versailles contained the charter for the newly created League of Nations.

Wilson, a liberal internationalist, introduced ideology once again into the conduct of diplomacy. Wilson’s ideas were challenged by Vladimir Lenin, who led the Bolsheviks to power in Russia in 1917. As a Marxist, Lenin wanted to transform the war between nations and empires into a class war. His newly appointed commissar for foreign affairs, Leon Trotsky, said that he would issue a few proclamations, then close up shop. Once the worker’s revolution had swept away the old order, the need for diplomacy would vanish. The Bolsheviks also published secret documents drawn up by the Allies during the war for the partition of the Turkish empire, further discrediting the old diplomacy. However, by 1921, it was clear that the worker’s revolution had succeeded only in the Russian empire, renamed the Union of Soviet Socialist Republics (USSR). Lenin’s successor, Josef Stalin (1879–1953), had to maintain the security of the Soviet state, which required a great deal of diplomacy.

Adolf Hitler (1889–1945) came to power in Germany in 1933 determined to destroy the Versailles system. Hitler wanted Germany to obtain Lebensraum, or living space, in Eastern Europe, and did not shy away from the use of war to achieve his goals. Hitler found the traditional mechanism of German diplomacy wanting, and pushed aside professional diplomats in favor of Nazi party appointees such as Joachim von Ribbentrop, German ambassador to Britain in 1936 and, after 1938, Nazi foreign minister.

By the mid-1930s the unity that held nineteenth-century diplomacy together had fractured. Diplomats were divided by ideological differences and increasingly came from differing social backgrounds. Public opinion exerted an unparalleled influence on diplomacy. In Britain the League of Nations Union, formed to ensure that the British government followed League principles in the conduct of its foreign relations, attracted tens of thousands of followers. The old diplomacy had virtually ceased to function. Following the Italian invasion of Ethiopia in 1935, the foreign ministers of France and Britain, Pierre Laval and Samuel Hoare, respectively,
attempted to make a secret deal with Italian dictator Benito Mussolini to end the crisis. Such dealings would have been routine in the nineteenth century. However, details of the agreement, which would have given Mussolini most of Ethiopia, were leaked to the press, forcing the resignations of both Hoare and Laval.

**Summit Diplomacy**
The approach of war in 1938 saw the emergence of summit diplomacy. Heads of state had been expressing frustration with what they felt was the plodding pace of diplomatic activity. Soon after taking power, Neville Chamberlain (1869–1940), prime minister of Britain from 1937 to 1940, said that he wanted to “stir up” the British foreign office. Modern communications and transportation meant that leaders could conduct their own diplomacy, and no longer had to rely on professionals. In September 1938, Neville Chamberlain flew to Germany three times to meet with Hitler in a bid to defuse the crisis over Czechoslovakia. Chamberlain’s actions created a sensation at a time when air travel was still the preserve of the wealthy elite. Chamberlain’s efforts proved futile, but face-to-face meetings of leaders, known as summit diplomacy, proved an enduring innovation. The Allied leaders met repeatedly during World War II to coordinate their efforts. Summit meetings between presidents of the United States and Soviet leaders became a regular feature of the Cold War. During the early 1970s the constant movements of United States secretary of state Henry Kissinger between Middle Eastern capitals, in an attempt to resolve the Arab–Israeli conflict, gave rise to the phrase “shuttle diplomacy.”

**Diplomacy in the New Century**
Summit diplomacy remains the preferred form of diplomacy for world leaders at the dawn of the twenty-first century. Foreign ministries continue to debate foreign policy issues and offer advice to heads of state. Ambassadors are less important than in the past but still play a key role in the functioning of diplomacy. Summit diplomacy will continue to dominate the future of diplomacy, especially as it presents world leaders in a positive light. But diplomacy will also increasingly function in the context of international multi-lateral organizations such as the North Atlantic Treaty Organization (NATO), the G-7 concert of the world’s economic powers, the European Union and the United Nations.

Paul W. Doerr

See also Berlin Conference; Cold War; Congress of Vienna; Containment; Détente; Treaty of Versailles

**Further Reading**

**Disease and Nutrition**

Human infectious disease depends on the interaction of humans with parasites—prions, viruses, bacteria, protozoa, macroscopic worms, and others—that must survive, replicate, and disseminate themselves if they
are to spread infections. It also reflects the interaction of humans with the life cycles of reservoir species that store the parasites and vectors that transmit them, and the limits imposed by microenvironments and broad climate or soil zones in which parasites, reservoirs, and vectors must live. As human behaviors change, parasite reservoirs and vectors, particularly microorganisms, have shown a remarkable ability to adjust or evolve new genetic patterns to adapt to new circumstances.

Human nutrition depends on human interaction with the natural movement of forty to fifty nutrients (carbohydrates, lipids, vitamins, amino acids, energy, minerals, water, and fiber) through soils and through other organisms. It also depends on several other factors: the ability to obtain specific foods; the combination of foods eaten and eaten together; the range of soils exploited; the absence of nutrient antagonists and toxins; food preparation and storage; digestion, absorption, retention, and storage within the body; dissemination to, and utilization by, individual cells; and balanced elimination. And finally, human nutrition involves the avoidance of dangerous overingestion or absorption, since some vitamins and minerals (and, in the modern world, salt, fats, calories, and dietary carcinogens) can occur in excess.

How Nutrition Affects Disease

Nutrition and infectious diseases interact significantly with one another. Infectious diseases tend to exacerbate malnutrition by causing nausea, by consuming nutrients within the human host, by causing diarrhea (the excessively rapid transit of food through the gut that reduces the chances for absorption), and by diverting needed nutrients to fight the infection. Malnutrition facilitates the spread and significance of infection primarily by depressing the host’s immune system and rendering tissues susceptible to parasite attack. This combination can be observed in the interaction of childhood malnutrition and infantile diarrhea.

In a few cases malnutrition may help prevent infectious disease. Low iron stores in the body may limit the ability of iron-dependent bacteria to invade the body. Low iron stores are in fact so important in this regard that the human body may make itself anemic by sequestering iron to deprive invading bacteria. However, some parasites can actually synthesize the nutrients they need.

In addition, infections interact with other infections. One infection—AIDS, for instance—facilitates another by suppressing the immune system or by preparing cells physically and chemically for invasion. However, an infection with some microorganisms, themselves relatively benign, can help the body fight off other parasites.

Malnutrition resulting from the lack of any one nutrient can be affected by the lack or excess of other nutrients. For instance, a low intake of vitamin C or protein from animal sources limits the digestion and absorption of iron, as does a high intake of phytates and oxalates from vegetable sources. The body’s use of calcium depends on the availability of phosphorus.

How Human Behavior Affects Disease

Human behaviors that affect our interactions with nutrients and diseases are partly a result of idiosyncratic behaviors of individuals or groups, and largely a function of a sequence of cultural changes in history and prehistory. The changes obviously overlap one another in time, but a rough sequence is as follows: population growth and spread into new environments; increased population density; the shift from foraging for wild foods to farming or herding of domesticates; sedentism (living permanently in one place); accelerating population growth; increasing size of political units and individual centers of population (towns and cities); increasing size and speed of trade networks; the emergence of civilization (centralized governments reinforcing class stratification by force); the growth of industry; and the emergence of the modern world system.

These trends and their influence on health can be documented partly through historical sources and archaeology and partly through the analysis of skeletons in prehistoric and historic contexts. Trends in health can also be reconstructed theoretically using our knowledge of the chemistry of particular nutrients and the contemporary
epidemiology of infectious agents, reservoirs, and vectors. The trends can also be observed through the experience of living groups with various lifestyles. Each kind of analysis is flawed, but taken together they provide a coherent picture of past health and nutrition.

**Small Foraging Groups**
The earliest and smallest human groups appeared in modern human form about 100,000 years ago, foraging for fresh wild resources in small mobile groups. They accounted for almost all human populations until about 10,000 years ago, when they were progressively displaced or eliminated by the competition of larger societies. (A few foraging groups continued into the twentieth century as outliers of civilizations.)

Despite stereotypes, such groups commonly enjoyed relatively good nutrition and freedom from parasites. They utilized a wide range of fresh foods, both animal and vegetable, minimally processed, and exploited a relatively large range of soil regimes, providing qualitatively balanced diets. Comparatively few nutritional deficiencies are observed in historic remnant populations or in contemporary ones, or in prehistoric skeletons. Historic hunter-gatherers are commonly better nourished than their sedentary, farming, and civilized counterparts and far better nourished and less parasite-ridden than the modern poor. Calories may have been the limiting nutrient. However, because meat was lean, the intake of calories, fats, sugars, salts, and dietary carcinogens was low, and because foragers lived in an environment free of industrial pollutants, they escaped many of the scourges of twentieth-century populations (obesity, heart disease, hypertension, diabetes, and cancers).

Low population density, small group size, and frequent movement tended to minimize the number of parasites that could complete their lifecycles. (Many parasites are density-dependent and reliant on human sedentism, on the size of human communities, and on poverty created by civilization.) And good health among foragers appears to have been commonly accompanied by a reasonably high life expectancy (that is, the average age at death among members of a group) of twenty-five to thirty years, equaling or exceeding that of many European populations of recent history.

Foragers in small and relatively isolated groups connected only by the speed of walking probably suffered two major categories of disease: The first would have been relatively mild chronic diseases, such as yaws or herpes, long-lived in individuals and passed directly from person to person, which can survive in small groups. The second category includes diseases that are zoonotic—that is, they are transmitted primarily among other animals; while they do occasionally attack human beings, they do not rely on people to complete their lifecycles. Examples include tularemia, zoonotic tuberculosis, trichinosis, and occasional bubonic plague and other arthropod-borne diseases such as sleeping sickness and malaria. Such zoonotic diseases, because they don’t depend on human survival for their own survival, are often severe and mortal; on the other hand, they only attack one or a few people at a time because they do not spread from person to person. Some infections maintained in soil can also infect small isolated human groups. Diseases that require high population density, sedentism, large human communities, and transportation networks could not have survived.

**Farming and Larger Groups**
The adoption of agricultural and animal domestication both permitted and necessitated sedentism and larger group sizes. Concentrated food supplies permitted higher population densities and larger settlements. Sedentism had obvious advantages: It assisted the survival of babies, the sick, the wounded, and the elderly by reducing the need for mobility and providing boiled food for the toothless. (Sedentary populations can keep and use pottery but mobile populations cannot.) Stored resources can help mitigate food shortages and crop failures. Sedentism also seems to have increased human fertility and altered birth-control choices, accelerating population growth. (There is little evidence to suggest that life expectancy increased and it may in fact have decreased.) But sedentism also necessitated a heavy investment in seasonal crops, permanent fields, and storage.
Enforced sedentism and farming may have increased the risk of starvation because stored foods may be lost to vermin and rot and are vulnerable to expropriation by other people. A relatively narrow range of cultivated crops in a simplified ecosystem would have been more vulnerable to crop failure than a natural diversified system. Moreover, newly domesticated plants and animals were commonly less hardy than their wild ancestors. Concentrated crops exhaust soil and are subject to their own diseases. Finally, sedentism prevents communities from moving easily in the face of harvest shortfalls or complete crop failure.

Sedentism and farming almost certainly increased problems of poor nutrition. Crops such as cereals and tubers, chosen for their high calorie production and their ability to tolerate storage, are not particularly nutritious and make poor weaning foods. Dry storage results in the loss of vitamins, and excessive reliance on particular crops results in a variety of forms of malnutrition. Low levels of iron in cereals combined with iron-chelating compounds and a relative lack of meat in the diet increase the risk of iron-deficiency anemia. Each major crop lacks some nutrients and contains only incomplete protein (that is, a poor balance of essential amino acids). An over-reliance on specific cereals, particularly when eaten alone or in highly refined states, can produce dietary deficiencies such as pellagra and beriberi. (Some prehistoric farmers, however, developed food combinations that created a balanced protein and vitamin mix—for instance, the Mesoamerican diet of corn consumed with beans.)

Features associated with group size and sedentism, such as garbage accumulation and food storage (and in some cases close and continuous interaction with domesticated animals), would have made many of the infectious diseases carried by foragers more common or more severe. They would also have added new diseases, many of which would in turn have aggravated nutritional problems. Many zoonotic diseases, such as rabies, tapeworms, trichinosis, and malaria, were introduced into sedentary human communities by domestic animals and pets or changes in the natural environment.

Fecal-oral diseases (such as diarrheas) are facilitated by group size and sedentism. Hookworm, which relies both on sedentism and on large group size (because the worms pass from person to person via feces and must mature for a period on the ground), exacerbates anemia because the worms consume red blood cells. Tapeworms, living in the human gut and consuming a portion of all nutrients ingested, result from eating the meat of domestic animals continuously exposed to human feces. Both modern subsistence farmers and the skeletons of those in prehistory commonly suffer from more malnutrition and infection than foragers. For example, signs of anemia are relatively rare in the skeletons of prehistoric foragers but they increase in frequency almost everywhere with the adoption of sedentary farming.

Cities

About five thousand years ago, the rise of population centers in which class privilege was defended by force provided an additional set of reasons for poor nutrition and disease. Cities, essentially dense concentrations of specialists who do not produce food, make it necessary to transport food, often over long distances and packaged and processed accordingly, which results in a loss of nutrients. In the modern world system, transportation has enabled foods to be moved from locations of plenty to areas of need. But transportation often moves nutrients away from areas of need, and unhealthy foods (too rich in sugars and fats or technologically altered) are disseminated instead; in fact, cash crops have been substituted for nutritious ones in many parts of the world. The long-distance transportation of food also spreads diseases from one region to another.

Civilizations have the power to withhold food from lower classes and in that sense are almost certainly responsible for more hunger and malnutrition than existed at any prior time in human prehistory or history. This condition has not changed even in the twenty-first century. Pellagra is primarily a disease of sharecroppers, slaves, or very poorly paid laborers forced to eat only maize without the benefit of bean or meat supplements.

Cities also produce very large concentrations of
garbage, food storage, and human feces. Fecal-oral diseases, particularly severe ones, thrive best in cities. For example, cholera, producing diarrhea so violent that it can lead to death by dehydration, is primarily an urban disease caused by people drinking water in which other people have defecated. Tuberculosis, an occasional disease in a small population, is a major threat in cities. Storage can bring rats in numbers. Bubonic plague, once an occasional disease in the wild, became an urban scourge when cities attracted large populations of rats.

**Transport and Trade**

Perhaps most important, large cities and widespread transport permitted the spread of epidemic diseases. Although most probably originated as zoonoses from domestic animals, many diseases, such as smallpox and measles, mutated forms that could survive only in dense centers of human population connected by trade. They spread directly from person to person by air, water, food, and touch and can live only in people. (They have no other reservoir organisms and no vectors, and cannot live long in the air or on inanimate objects.) They promote powerful reactions in human hosts, which typically result in a struggle to the death: The human host either dies or develops immunity so powerful that the organism is destroyed. Either way, because the organism cannot live long in any one host, its survival is dependent on a very rapid movement from host to host. These parasites burn like forest fires and die out if they run out of fuel. A continuous supply of fuel can be provided only by transportation to new locations, immigration, or a very large community size such that those who are immune produce new babies as fast as the disease-fire burns. Not depending on any one human host, such diseases are commonly exceptionally virulent.

Diseases maintained in urban areas typically strike only children born since the last sweep of the disease, who are aided by parents now immune. The real danger occurs when such diseases arrive in populations where no one has ever had the disease; here the death toll can be exceptionally high, leaving no one to care for—feed or clean—anyone else. These conditions combined with transatlantic shipping doomed approximately 90 percent of the Native American population shortly after the arrival of Europeans.

**New and Greater Risks**

Twentieth-century antibiotics have provided cures for a number of once-dangerous scourges such as bubonic plague and tuberculosis. And vaccinations that produce lasting immunity have protected individuals against many viral infections such as measles and smallpox. But microorganisms are evolving faster than scientists are inventing new preventions or cures. Potentially lethal strains of tuberculosis and *Staphylococcus* bacteria that no antibiotic can destroy have already developed.

Air travel has enormously increased the risk that infections can spread from region to region because persons with infections but no visible symptoms can transport diseases between continents in a single day. Many contemporary epidemiologists believe that we are now at greater risk of new epidemics than ever before.

*Mark N. Cohen*

**See also** Diseases—Overview; Food

**Further Reading**

Diseases—Overview

Disease refers to many kinds of bodily malfunction; some lethal, some chronic, and some merely temporary. Some diseases, like cancer and Alzheimers, increase with age and result from disordered processes within our bodies; others arise from infection by invading germs and afflict children more frequently than adults because we develop immunities after early exposure to them. Symptoms of infectious diseases vary with time and place, owing to changes in human resistance and to evolutionary changes in the germs themselves. Consequently, written descriptions of ancient infections, even when quite detailed, often fail to match up with what modern doctors see. Hence, even when records exist, exactly when a particular infection first afflicted people in a given place is often unknowable. And no one can doubt that major disease encounters also took place among peoples who left no records for historians to examine. Nonetheless, and despite all such difficulties, some landmarks in the history of the human experience of disease are discernible from the deeper past, while in recent times the changing impact of diseases and medical efforts to control them are fairly well known.

Diseases among Foragers and Early Farmers

It is safe to assume that our remote foraging ancestors encountered many sorts of parasites, some of which, like the organism that causes malaria, were seriously debilitating. Sleeping sickness, spread by tsetse flies, was so lethal for human hunters that parts of East Africa remained uninhabited until recently, thus preserving vast herds of game animals that tourists now come to see. All the same, it is probable that our early ancestors were tolerably healthy and vigorous most of the time. That, at any rate, is the case among surviving African foragers as observed by modern anthropologists. Probably infectious organisms and their human hosts were fairly well adjusted to one another, having evolved together in tropical Africa; and diseases of aging scarcely mattered since their lives were far shorter than ours.

Since many of Africa’s tropical parasites could not survive freezing temperatures, infections probably diminished sharply when human bands expanded their range, penetrating cooler climates and spreading rapidly around the entire globe. Leaving African infections behind presumably increased human numbers and helped to sustain their extraordinary geographic expansion.

But infections began to increase again when, in different parts of the earth, a few human groups began to cultivate the soil and settled down in the same place all year round. That was partly because food production allowed more people to crowd together and exchange infections, and more especially because supplies of water were liable to become contaminated by bacteria from human wastes. This increased exposure to infections of the digestive tract. Moreover, wherever farmers resorted to irrigation, wading in shallow water exposed them to a debilitating infection called schistosomiasis (or bilharzia), shared with snails. And whenever cultivators came to depend on a single crop for nearly all their food, dietary deficiencies were liable to set in. A diet of maize, for example, lacks some of the amino acids humans need and provokes a chronic disease called pellagra. Finally, the domestication of animals, though their meat and milk improved farmers’ diets, intensified disease transfers back and forth between humans and their flocks and herds. A large array of bacteria and viruses traveled this path.

Yet intensified exposure to such diseases did not halt the increase in farming populations. Instead more people...
Disease in South Asia

*This account indicates the horrors that awaited many Europeans who traveled to tropical regions of Asia. In India, there was the two-season rule: if one survived two tropical seasons, the chances were good that one would survive in the future.*

The Common Distemper that destroys the most in India, is Feavers, which the Europeans with difficulty escape, especially if they have bold up their Spirits by solemn Repast, and been ingag’d in a strong Debauch. Besides this, the Mordechine is another Disease of which some die, which is a violent Vomiting and Looseness, and is caus’d most frequently by an Excess in Eating, particularly of Fish and Flesh together. It has been Cured by Red-hot Iron clapt to the Heel of him that is sick, so close that it renders him uneasie by its nearness, whereby it leaves a Scar behind it.


cultivated more ground, producing more food to feed more children. Farming villages therefore multiplied and spread from each of the regions where they had initially established themselves, and human beings soon ceased to be rare in the balance of nature, as their foraging ancestors and other top predators, such as lions and tigers, had always been.

All the same, farmers had to labor longer and at more monotonous tasks than foragers did, and faced famine whenever bad weather or an outbreak of plant disease provoked crop failure. Seizure of stores of food by human raiders was another serious risk that increased wherever grain farmers became dense enough to occupy nearly all suitable farmland. And when raiders became rulers by learning to take only part of the harvest as rent and taxes, farmers faced another drain on their resources, and had to work still harder to feed themselves and their new overlords. Life remained short by our standards, so diseases of old age remained exceptional.

Then, beginning about 3500 BCE, rulers and their various hangers-on began to create cities in a few densely inhabited farming regions of the earth, and disease patterns changed again, manifesting diverse and unstable local equilibria. These may be described as regional agrarian disease regimes; they were succeeded after about 1550 CE by an equally unstable global disease regime within which we still find ourselves. The balance of this article will explore these successive disease environments.

**Regional Agrarian Disease Regimes**

When large numbers of persons began to cluster close together in cities, the problem of waste disposal multiplied as never before. Exposure to new infections multiplied as well, since long-distance comings and goings by soldiers, merchants, seamen, and caravan personnel often crossed disease boundaries and spread infections far and wide. Moreover, when urban populations exceeded a critical threshold, a new class of herd diseases began to afflict humans for the first time. These diseases were at home initially among large populations of wild flocks and herds or dense populations of burrowing rodents and other small animals. A distinguishing characteristic of these diseases was that when they were not fatal, they provoked antibodies in their animal or human hosts, so survivors became immune from a second infection. This meant that the germ could only persist when it found enough newborns to feed upon for a few weeks before death or recovery created another crisis of survival for the infection in question.

Just how large the total host population had to be to permit a chain of infection to continue indefinitely depended on birth rates and how closely in contact potential hosts might be. To move from host to host, many infections depended on airborne droplets, set adrift by breathing, coughing, and sneezing, and therefore needed close encounters for successful transmission. In the modern era (from about 1750), for example, measles—a viral disease dependent on droplet propagation—required at least 7,000 susceptible individuals within a community of something like 300,000 persons to keep going. Obviously, then, infections like measles could only persist in urban settings and among villagers in contact with large urban centers.
Some of these, like smallpox and measles, were highly lethal; others like mumps and influenza were milder. No one knows when or where they made good their transfer from animal herds to human hosts, but it is certain that it took place somewhere in Asia, perhaps at several different times and places. It is equally sure that they could only do so in and around cities, thus becoming distinctive new “civilized” diseases.

Their arrival had paradoxical effects. By killing off urban dwellers, they soon made most cities so unhealthy that they needed a stream of migrants from surrounding villages to sustain their numbers. Yet these same diseases also created a new and very powerful advantage for disease-experienced populations in contacts with previously unexposed populations. That was because among peoples who lacked acquired immunities, herd infections spread like wildfire, killing adults as well as children. In the modern era, initial exposure to measles or smallpox commonly killed off something like a third of the entire population in a few weeks, leaving survivors dazed and distraught and quite unable to resist further encroachment by the disease-bearing newcomers. The effect was multiplied when successive civilized diseases followed one another in rapid succession. Smallpox, measles, influenza, and even the common cold could all be, and often were, lethal.

Before that drastic pattern could establish itself generally, different centers of civilization had themselves to survive the arrival of these infections from wherever they first started. Everything about the initial spread of herd diseases within Eurasia and Africa remains unknown, but disease disasters that ravaged the Roman empire between 165 and 180 CE and a second time between 251 and 266 probably register the arrival of smallpox and measles in Mediterranean lands, brought back by soldiers returning from Mesopotamia. Written records also show that China suffered unusually lethal epidemics in 161–162 and again in 310–312.

It looks therefore as though extended contacts within Eurasia, arising from the establishment of the so-called Silk Roads that connected China with Syria, allowed highly lethal outbreaks to occur at both extremes of Eurasia at nearly the same time, inflicting severe damage both on the Roman and Chinese empires. But surviving records say little or nothing about lands in between, and guesswork is useless. By contrast, we know that the Americas were exempt from these herd diseases until the Spaniards arrived, and the same was true of other isolated populations around the globe. Consequently, in the sixteenth century, when European seamen began to encounter people lacking immunities to these diseases, massive die-offs regularly ensued.

By then the agrarian peoples of Eurasia had another twelve hundred years of disease exchange and exposure behind them. One well-known episode came between 534 and 750, when sporadic outbreaks of bubonic plague ravaged Mediterranean coastlands, only to disappear for the next six centuries. The historian Procopius wrote an exact description of the initial onset of that plague, explaining that it came by ship and originated in Central Africa. Other factors were in play, for modern studies show that bubonic plague is spread normally by bites of rat fleas, which transfer to humans only after their normal hosts die of the disease. The domestic rats in question were probably native to India, and in 534 were relatively recent arrivals in Mediterranean coastlands.

The infection itself was at home in underground burrows of various species of rodents in Central Africa and northern India, where it behaved among rats like a childhood disease and became a lethal epidemic only when it invaded inexperienced populations of domestic rats and, of course, humans. But under those circumstances it was indeed highly lethal.

Procopius says that when the disease first struck in 534, ten thousand persons died daily in Constantinople for forty days. Loss of population and wealth were certainly severe and prevented the Byzantine emperor Justinian (reigned 527–565) from reconquering the richest provinces of the western empire, which he had started to do.

Germanic and northern Europe escaped this bout with plague, probably because rats had not yet established themselves there. But in the so-called Dark Ages other serious epidemics, including smallpox, measles, and influenza, did break out in the north from time to
time, and as ships began to travel the northern seas more frequently, all of Europe became more and more tightly tied into the disease pool centered upon the network of Mediterranean cities. Leprosy, tuberculosis, and diphtheria were among the infections that spread more widely during these centuries. But their spread cannot be traced since they did not provoke sudden, massive die-offs as smallpox, measles, and the plague did.

Nothing equally detailed is known about how other centers of civilization in Eurasia and Africa encountered new infections in ancient and medieval times. But two Chinese texts describe an outbreak of bubonic plague along the southern coast in 610, so it looks again as though China’s disease history matched that of Europe quite closely. This is not really surprising, since the ships and caravans that moved back and forth among all the Eurasian civilized lands carried infections with them, and invading armies occasionally exposed thousands of inexperienced soldiers to a new infection all at once.

North and East Africa shared in this homogenizing process, while the African interior, Southeast Asia, and northern Eurasia took more sporadic parts and so lagged somewhat behind. But overall, as disease exposures intensified across the entire Old World, resistance to infections increased, and local populations got used to living with heavier disease burdens. The assortment of prevalent diseases always differed from place to place, since climate set limits to many infections. In general, warmer and wetter conditions favored disease organisms; infections that depended on mosquitoes, fleas, or other insects to move from host to host also fared best under those conditions. Winter frost set limits to the spread of many kinds of parasites, and so did desert heat and dryness. In addition, local customs sometimes minimized disease exposures. In southwestern China, for example, where bubonic plague germs were endemic among burrowing rodents, European doctors in the nineteenth century scoffed at superstitious villagers who fled to higher ground whenever they found dead rats in their houses, yet half a century later, after Europeans had learned how the plague was transmitted, they realized that such behavior was an effective precaution against catching the disease. Some customs, on the other hand, intensified infections. Religious pilgrimage is a prime example, as was ritual foot-washing in Muslim mosques, where the water in the fountains sometimes contained the organisms that cause bilharzia.

Most disease disasters were soon forgotten, which is why so little is knowable about the spread of infections. But the Black Death was an exception. The heavy die-off provoked when bubonic plague returned to Europe in 1346 continued to haunt folk memory and still colors our common speech. About a third of the population of Europe died of the plague between 1346 and 1350, but what kept memory of the Black Death alive was the fact that plague continued to break out from time to time in Europe and North Africa down to the present, even after effective antibiotic cures were discovered in the 1940s. We know something about how this came to pass.

First of all, the vast Mongol empire, extending from China to Russia, permitted rapid, long-range movement throughout Eurasia on a far greater scale than ever before. Plague was only one of several infections that took advantage of this fact to expand their domain. More particularly, a Mongol army invaded the borderland between China and India in 1252, penetrating a region where plague infection was chronic, and seem to have carried the infection back with them to their homeland in the steppes. At any rate, Pasteurella pestis (Yersinia pestis), as the bacterium that causes plague is called, somehow found a new home among burrowing rodents of the northern grasslands and spread across them, where it was discovered by Russian scientists only in the 1890s. This was the reservoir from which the plague of 1346 broke upon Europe and the Muslim world.

Ships spread it swiftly from Feodosiya (or Kaffa) in the Crimea, where it first broke out, to other Mediterranean and north European ports. Then the infection moved inland. Wherever the plague arrived, death came quickly and unpredictably to young and old. More than half of those infected died. In Muslim lands, the disease took a similar toll; China, too, lost about half its population.
from a combination of plague and warfare by the time
the Mongol empire collapsed and the Ming dynasty took
power in 1368.

Plague continued to visit all these lands at irregular
intervals thereafter. The population in Europe continued
to decline until about 1480, when the accumulated resis-
tances among survivors at last permitted population
growth to resume. Population growth accelerated once
the plague disappeared from England and northern
Europe after a final visit to London in 1665, partly be-
cause efforts at quarantining ships coming from plague-
infected ports reduced exposure and partly because slate
roofs, introduced as protection against fire, created much
greater distance between humans and hungry rat fleas
than had prevailed when rats nested overhead in the
thatch. In eastern Europe and Asia, plague continued to
break out until the twentieth century, but little by little
local adaptations reduced its impact everywhere.

Overall, the most enduring change came to the steppes
—the Mongol homelands—where nomadic herdsmen
found themselves permanently exposed to a very lethal
infection. Losses were so heavy that nomads even with-
drew from the fertile grasslands of the Ukraine, leaving
them vacant for agricultural pioneers to encroach upon,
beginning about 1550. This reversed a human tide that
had favored nomad expansion ever since the first millen-
nium BCE, carrying first Indo-European and then Turk-
ish languages across Europe and much of Asia.

Other changes in disease patterns accompanied or
soon followed the sudden expansion of bubonic plague.
The most conspicuous was the retreat of leprosy, empty-
ing thousands of leprosaria that Europeans had built to
isolate lepers in accordance with Biblical injunctions.
Many lepers died of plague during the first onset; but
something else must have been at work to overcome the
various skin infections that medieval Europeans lumped
together and called leprosy. One possibility is Europe’s
reduced population had a proportionally larger supply of
wool with which to clothe themselves, and by wearing
long, warm nightclothes and thereby reducing skin-to-
skin contact between people, they may have cut down on
the transmission of skin diseases. Needless to say, no one
knows for sure.

Ironically, another skin disease, yaws, caused by a bac-
terium indistinguishable from the one that causes
syphilis, may also have been nearly banished from Euro-
pean populations. The epidemic of syphilis that broke out
after 1494 may have been the result of the bacterium
finding a new path of propagation via the mucous mem-
branes of the sex organs. Again, no one can be sure.

Yet all the mingling and transformations of diseases
across Eurasia and Africa before 1500 never erased local
differences. Above all, large parts of the earth remained
unaffected by the rising tide of infection among Old
World peoples, and found themselves correspondingly vulnerable when crossing the oceans became routine and a new, global, disease regime began to emerge.

The Global Disease Regime
The first and overwhelming effect of oceanic navigation was to spread a large array of lethal infections among inexperienced human populations. This process continues in remote Amazon jungles and Arctic shores even today, but by now almost every human population has been at least partially exposed, and the initial shattering effect is past. But when it was new whole peoples disappeared, and vast landscapes in the Americas and Australia were severely depopulated. Immigrants from Europe and Africa—and subsequently also from Asia—were therefore able to supplant the older inhabitants, creating the mixture of peoples we know today.

Native Americans were the largest population exposed to destruction by the new disease regime. The native population of Hispaniola, where Columbus set up his headquarters, disappeared entirely within a few decades, and within the first fifty years of their exposure to new infections, the much larger populations of Mexico and Peru diminished to about a tenth of what they had been in 1500. Millions of smallpox and innumerable other infections until immunities accumulating in survivors’ bloodstreams checked the die-off. In Mexico and Peru the worst was over by 1650. Gradually population growth began again, though in more isolated parts of the Americas local die-offs continued. Warfare and less organized

The Epidemic Ghost

Throughout history humans have always turned to the spiritual world to explain and to gain assistance in preventing and combating disease. The following account tells the tale of a ghost who was thought to be responsible for epidemics in Thailand.

Until the Twentieth Century, Thailand was visited by terrifying epidemics of cholera, smallpox, and other devastating diseases. The physiological and psychological consequences of these sudden epidemics were shattering, and it is not at all surprising that the culture has evolved a specialized ghost which is considered peculiarly responsible for these visitations. Since buffaloes and other farm animals are also of vital importance in the livelihood of the Bang Chan farmer, this same ghost is considered responsible for epidemics of rinderpest and other economically disastrous animal diseases.

One frequently hears the word *haa* (epidemic) in everyday speech, usually of a rough sort. *Taaj haa* means to die of an epidemic disease. *Aaj haa* is an insulting term implying that the person spoken about derives from, or is associated with, the hated and feared *haa* ghosts.

The sole effect of Epidemic Ghost is to inflict sickness in the form of epidemic diseases. Conversely, diseases of epidemic proportions are caused only by Epidemic Ghost, among all the *S*’s [subjects] found in the culture. If a person is stricken by a disease which, at the time, is endemic rather than epidemic or nearly so, then the diagnosis will invariably be rendered in terms of some *S* other than Epidemic Ghost.

Although there are no standardized notions as to the derivation of Epidemic Ghost, it is not surprising that idiosyncratic notions tend to define this *S* as deriving from an out-group. Thus, Monk Doctor Marvin told me that Epidemic Ghost derives from a dead Muslim or Lao—explaining that those ethnic groups like to eat fresh raw meat. The Laos do in fact like raw meat prepared in certain ways. Nai Sin, on the other hand, believes that this *S* derives from a Muslim who, before death, specialized in slaughtering buffaloes and chickens, and who now, as a ghost, continued to indulge in killing those animals. Muslims around Bang Chan do in fact engage disproportionally in slaughtering, a service which they render commercially to their Buddhist neighbors, whose Merit-Moral System includes a firm prohibition against the taking of animal life.

forms of human violence played a part in destroying Native Americans, but Afro-Eurasian diseases always had the principal role.

Caribbean islands and tropical coastlands of the Americas also proved hospitable to malaria and yellow fever from Africa once the species of mosquito that carried them got across the Atlantic on board slave ships. No exact time horizon for the arrival of malaria in the New World can be discerned, but in 1648 a lethal epidemic of yellow fever in Havana announced the arrival of that disease unambiguously. When it subsequently became endemic, survivors acquired a very potent protection against invading armies, since soldiers from Europe regularly fell ill and died of it within about six weeks of their arrival. This allowed the Spanish to overcome British efforts to conquer the sugar islands in the 18th century, doomed Napoleon’s attempt to reconquer Haiti in 1801, and persuaded him to sell the Louisiana territory to Thomas Jefferson in 1803. Quite a political career for a virus from tropical Africa!

Elsewhere, inhabitants of Australia, New Zealand, and other isolated communities experienced approximately the same fate as Native Americans did when disease-experienced Europeans arrived among them. Always the newcomers also brought a rich array of other organisms with them: crops and weeds, together with domesticated animals and pests like lice, rats, and mice. The earth is still reverberating from the ecological upheavals initiated when humans and innumerable other organisms began to cross the oceans, making the biosphere into a single interacting whole as never before.

Disease exchanges ran almost entirely one way, spreading from Afro-Eurasia to other lands. Reverse transmissions are hard to find, though some experts believe that syphilis came to Europe from the Americas. Europeans discovered that disease when it broke out in a French army besieging Naples in 1494; so its connection with Columbus’s return in 1493 is indeed possible. But there is no clear evidence of the prior existence of syphilis in the New World, so no one can be sure.

Another disease, typhus, also invaded Europe in 1490; but it came with soldiers from Cyprus and may not have been new, but only newly recognized by doctors of the day. More recently, other infections have also invaded disease-experienced populations of the earth. AIDS is the most serious and widespread, and may have been transferred recently from monkeys somewhere in the African interior, or perhaps, like typhus, AIDS is much older and remained unrecognized until increasing sexual promiscuity turned it into an epidemic.

Three other new disease exposures affecting industrialized populations in modern times are also worth mentioning. Tuberculosis (TB), a very ancient infection, gained fresh impetus after about 1780 when new factories, powered by coal and steam, began to crowd people together in industrial towns under unsanitary conditions. Its ravages crested in Europe about 1850, shortly before a German professor, Robert Koch, discovered the bacillus that caused it in 1882, thereby inaugurating a new age for preventive medicine. Yet despite modern medical skills, TB remains the most widespread and persistent human infection worldwide, sustained by the extraordinary growth of cities that had carried more than half of humankind into crowded urban settings by 1950 or so.

Cholera, too, was an ancient disease at home in India, where it flourished among Hindu pilgrims who came to bathe in the Ganges. The cholera bacillus can survive independently in fresh water for considerable periods of time, but multiplies very rapidly in the human alimentary tract, and causes diarrhea, vomiting, fever, and often death within a few hours of its onset. Bodily shrinkage from dehydration and skin discolored by bursting capillaries make the symptoms of cholera especially horrible. So when the disease broke through long-standing boundaries in 1819, spreading to Southeast Asia, China, Japan, East Africa, and western Asia, it aroused intense fear and panic even though mortality rates remained rather modest—a mere 13 percent of the total population of Cairo, for instance. Between 1831 and 1833 a fresh outbreak carried cholera across Russia to the Baltic and thence to England, Ireland, Canada, the United States,
and Mexico. Even more important, cholera established itself in Mecca in 1831, where it infected Muslim pilgrims. They in turn carried it home with them, periodically spreading cholera all the way from Mindanao to Morocco until 1912. Then cholera disappeared from Mecca, and Muslim pilgrims ceased to spread it far and wide; but it lived on in India, where Hindu pilgrims continued to be its principal carriers.

European and American responses to this dread infection were strenuous indeed. Reformers in England set out to reengineer the water supply and sewer systems of London and other cities to assure germ-free drinking water. It took years to build new water systems, but as they spread from city to city, many other sorts of infections diminished sharply. Helped by vaccination against smallpox, dating back to the eighteenth century, cities became far more healthful than before. This sanitary effort involved new laws and medical boards of health with mandatory power to enforce preventive measures. It was the first great medical breakthrough of modern times. Bit by bit, vaccination and sanitation spread around much of the globe, changing human experience of infectious disease so fundamentally that we have difficulty imagining times when infant death was a matter of course and adults died of infections more often than from degenerative diseases of old age.

Yet some diseases were little affected by these preventive measures. The viruses that cause influenza, for example, varying from year to year, regularly find receptive human hosts whose immunities from previous years are ineffective against the new variants. In 1918–1919 a new strain of the virus proved particularly lethal, killing about 20 million persons as it spread around the world, which made it far more deadly than World War I. Yet, as so often before, survivors soon almost forgot about their encounter with such a lethal epidemic.

That was partly because a second medical breakthrough, comparable to the sanitary successes of the nineteenth century, came after World War II. Suddenly, use of DDT to poison mosquito larvae almost eliminated malaria from many regions of the earth, while penicillin and other antibiotics became generally available to kill other infections. All at once, instant cures for ancient diseases became a matter of course. On the prevention side, the World Health Organization carried out a successful campaign that eliminated (with the exception of laboratory specimens) smallpox from the earth in 1976. Yet these triumphs did not last very long. While effective against mosquitoes, DDT also poisoned so many forms of life that its use soon had to be abandoned. More generally, infectious agents began to develop resistances to the new antibiotics. As a result, malaria reclaimed some of its old importance, and other ancient infections did likewise.

Then when AIDS was recognized in 1981 and successfully resisted chemical cures, doctors, once so confident of victory over infections, had to admit that their new skills had unexpected limitations. Infections were coming back, and diseases of old age were increasing. All too obviously, and despite all the recent medical marvels, human bodies remain subject to infection and degenerate with age.

Diseases change, and have always done so. Human behavior changes too, affecting how diseases afflict us. Since 1750 or thereabouts, medical knowledge and practice drastically altered the global disease regime and lengthened human life for billions of persons. But all our skills do not change the fact that we remain part of the web of life on Earth, eating and being eaten, everywhere and always.

William H. McNeill

See also AIDS; Disease and Nutrition; Diseases, Animal; Diseases, Plant; Malaria

Further Reading

Every disease that has caused epidemics and changed the philosophical traditions of societies throughout human history has originated in nonhuman animals and “jumped the species barrier” into humans. There is no meaningful separation between animal and human diseases when discussing the impact of disease on human history.

It is important to emphasize that because humans are mammals, diseases found in other nonhuman animals, especially other mammals, often cross readily into humans. The most important diseases are infectious and highly contagious. Noncontagious diseases have had little or no impact on history. By definition, infectious diseases are capable of being spread rapidly from infected to healthy individuals. Infected individuals either die or recover fully within a short period of time; those individuals who recover typically acquire immunity against further infection by the same illness.

The numerically greatest single documented epidemic in human history was an influenza outbreak that killed an estimated 40 million people at the end of World War I. The epidemic having the greatest recorded impact was the bubonic plague that killed over 25 percent of the people in western Europe in the mid-fourteenth century. Despite a lack of documentation, however, the epidemics with the greatest overall impact both on human populations and history were the series of epidemics that spread through the Americas shortly after contact with Europeans and their domestic animals. These epidemics spread through populations previously unexposed to epidemics, typically causing 90–95 percent mortality. Overall, these diseases may have killed as many as 100 million people in the Americas.

Prominent examples of infectious diseases that have crossed from other animals into humans include smallpox, cholera, tuberculosis, bubonic plague, and influenza. Although AIDS represents a major potential health problem in the modern world, it is contagious, but neither infectious nor acute. In recent years there have been panics over other animal diseases such as hoof and mouth disease, Hanta virus, and so-called mad-cow disease, which may not be a disease in the usual sense at all. These pathological conditions are trivial compared with the impact of the other diseases listed, yet they have received more publicity, perhaps because of media-inspired fear and ignorance, combined with the fact that most people do not understand how various diseases are transmitted.

Most infectious animal diseases that jump to humans are caused by bacteria and viruses whose small size renders them highly volatile and transmissible as aerosols, hence more likely to be transmitted from one individual to another, which is the basis of contagion. A few diseases, such as malaria and sleeping sickness, are caused by protistans, single-celled eukaryotic organisms that are much larger than bacteria or viruses. The larger size of protistans means they cannot be transmitted as aerosols and hence are transmitted primarily by injection, for example, through insect bites, rendering them much less infectious.

Most infectious disease organisms co-evolve in interactions with other nonhuman species. These nonhuman species have evolved an immune response to the disease-causing organisms, so they are not serious threats either to health or population numbers in their original host species. What renders most of infectious diseases so virulent in human populations is that when first exposed, humans have no evolved immune response to these pathogens; for example, smallpox is related to bovine pox, which causes minor problems in cattle but is often fatal in its mutated form in humans. Similarly, the AIDS virus is closely related to a viral infection that occurs in African
Animal Diseases and Nationalism

Animal diseases can have enormous economic consequences. For this reason, modern nation-states are reluctant to accept blame for the disease originating in their territory. This text extract concerns a cattle plague or Rinderpest that spread across Britain in the 1860s and shows the reluctance of the investigators to trace it to British soil.

If, for example, the Cattle Plague has spontaneously originated in this country from the way in which our cattle have been housed or fed, we might hope to show how such conditions act; and how they can be removed. If it originates in some wave of poisonous air which spreads over the country, and, after having a regular period of flow has a succeeding period of ebb and disappearance, we must be content with bearing what no care can foresee and no art control. If, however, Cattle Plague has been introduced among our herds by the arrival from infected places of cattle already diseased, and if it spreads entirely by contagion, it is obvious that means may lie used, which, if applied strictly and carefully, will be effectual, to prevent its return.

...We have been able to find no evidence of a spontaneous origin in England. The first known cases were all in animals collected from different parts of England and Holland, brought to the Metropolitan Market on one particular day, the 19th of June; they were purchased by different dairymen, and then taken to five sheds in different parts of London, namely, in Islington, Hackney, Lambeth, and Paddington. As there was no Cattle Plague in the parts of England whence these cattle came, and none in the sheds to which they were taken, and as the length of the incubation period, as well as the absence of any probable cause, negatives the idea of a spontaneous origination simultaneously in these five sheds, the conclusion becomes almost irresistible that the cattle must have caught the disease whilst standing for sale in the Metropolitan Market.

Now this market is certainly the most likely place in England for Cattle Plague to be brought to from abroad, and if not the most unlikely, at any rate an unlikely place for it to spring up in.

Source: Third report of the commissioners appointed to inquire into the origin and nature &c. of the cattle plague; with an appendix. Presented to both Houses of Parliament by command of Her Majesty. (1866). Retrieved from medhist.ac.uk/text/browse/mesh/C0003047L0003047.html

primates, where it only causes mild influenza-like symptoms. Other examples include measles, which is closely related to the ungulate disease rinderpest; tuberculosis, which is closely related to a similar disease in cattle; and influenza, which is actually a complex of viral diseases derived repeatedly from similar pathogens occurring in pigs (swine flu) and birds such as ducks and chickens.

Contagious diseases that manage to cross the species barrier from nonhumans into humans have been a major factor shaping the history of Europe and Asia. A major difference between Europe and Asia as contrasted with the Americas and Africa is that Eurasian cultures domesticated and lived in close association with the animal species that served as the original hosts of these diseases. Domestication of ungulates, especially cattle and swine, set up scenarios whereby humans living on intimate terms with these animals were continually exposed to a wide range of epidemic diseases, which already afflicted the ungulate populations as minor problems. These diseases thrived particularly well in the high densities at which human societies kept cattle and pigs. Farmers are sedentary, living among their own sewage and that of the domestic animals with whom they live in an intimate and symbiotic fashion. In many agrarian societies, farmers traditionally took cattle and pigs into their homes at night, both for warmth and to protect their livestock from predators. These conditions both prolong exposure and increase the likelihood of transmission of bacterial and viral pathogens.

Agriculture sustains much higher human densities than the hunting-gathering lifestyles that agriculture replaced. The large concentrations of humans resulting from increased urbanization provided fertile ground for the rapid spread of infectious diseases that originated in other species. Only within the last century did European cities achieve self-sustaining populations, because so
many city dwellers died from disease that a constant immigration from rural areas was required to sustain urban areas.

**The Black Death and Its Effects**

Development of world trade routes rapidly increased the dispersal rate of epidemic diseases. By Roman times the populations of Europe, Asia and North Africa had become a giant breeding ground for disease organisms that originated in domestic livestock. Smallpox reached Rome in the second century CE, killing millions of Roman citizens as the Plague of Antoninus. The animal-borne disease with the most profound impact on the course of history in Europe and Asia was bubonic plague. Spread by fleas that pick up the plague bacillus from the fur-bearing mammals that are their normal hosts, plague first appeared in Europe as the Plague of Justinian in 542–543 CE. The most devastating impact of the plague (the Black Death), however, occurred in fourteenth-century continental Europe where it killed as many as 25 million people. In the British Isles alone, plague killed nearly 1.5 million people (25–40 percent of the total population). The major vector for the major outbreak of plague appears to have been furs brought from low-population-density areas in central Asia with the intensified traffic on trade routes to China in the mid-fourteenth century.

One important, often unappreciated, consequence of the fourteenth-century plague was its profound impact on European philosophy and science. The prevailing worldview in Europe prior to the mid-fourteenth century was mythic and symbolic, rooted in an idea of cyclical time, placing far more emphasis on links between human and nonhuman aspects of the world than did the worldviews that arose after the Black Death.

When plague arrived and began to have devastating impact on local populations, the knowledge base and techniques of this older philosophical tradition were pressed into service, including prayer, medicine based on sympathetic magic, and scapegoating (e.g., witch burning). None of these methods proved effective, and the lack of ability to deal with the resulting death and devastation created both widespread panic and subsequent culture-wide depression. The impact of massive, inexplicable loss of life on a society cannot be overestimated. Belief in spiritual traditions and ways of understanding how the world works are crushed, leading to a sense of spiritual desolation.

The experience of the plague, described by some historians as the “greatest biological-environmental event in history” and the “equivalent of nuclear holocaust” by others, forced western Europe to develop a new way of organizing its perception of reality. Within Christianity the plague led to loss of faith in a benevolent, heedful Creator, leading to persecution and scapegoating of “heretics,” eventually leading to the beginnings of Protestantism and its images of a vengeful, wrathful God.

From a more scholarly perspective, response to the plague experience may well have led to the development of an intellectual tradition that separated mind from body, objective from subjective, and human from nature. In turn, this intellectual tradition can be linked to the beginnings of the Renaissance and development of the western European “rationalist” scientific tradition, ultimately generating Cartesian Dualism, the machine model/metaphor as a way of understanding nonhuman life, and the Baconian-Newtonian worldview. Thus, the philosophical and spiritual impact of plague led directly to the “modern” rationalist approach in which experimentation and measurement substituted for observation and experience.

This new way of dealing with reality had numerous positive effects. For example, it led to increased sanitation, which reduced background levels of many contagious diseases. This division of reality into separate spheres of mind and matter provided a powerful methodology for the study and understanding of the “outside” world. It was largely inadequate, however, for understanding inner experience, the human mind, and our relationship with the world of our fellow life forms. Thus, although this dualistic view led to improved sanitation, there was no increased understanding of the natural cycle of disease or the evolution of immune responses.
The Old and the New Worlds

The importance of animal diseases in shaping both human history and cultural attitudes toward the environment can be illustrated by comparing the Old World (Eurasia and North Africa) with the New World (North and South America). Many cultures in the Americas developed agriculture, but New World agriculture was based almost exclusively around agronomy, for example, corn, potatoes, squash, and beans, rather than on pastoralism, the herding and domestication of ungulates. The only domestic animals in the Americas were dogs, guinea pigs, guanacos (llama and alpaca), and turkeys. Unlike the domesticated ungulates of the Old World, these New World domesticates were never maintained at high densities, humans did not drink their milk, nor were any of these animals except dogs kept in close proximity to humans, as were livestock in the Old World.

Many New World cultures existed at densities comparable to those found in Europe. The Aztec capital of Tenochtitlán may have been one of the largest cities in the world during its heyday, and there is evidence that in central Mexico human populations surpassed the long-term carrying capacity of the land. Similarly, many other New World communities, such as cities of the Mayans, Incas, and the Mound Builder cultures along the Mississippi and Ohio River valleys, lived at densities comparable to those found in European and Asian cultures. Despite high population densities, epidemic (crowd) diseases appear to be virtually nonexistent in these indigenous New World cultures, which is almost certainly attributable to the absence of domestic ungulates that have been the source of most epidemic diseases (other than bubonic plague) in Europe, Asia, and Northern Africa.

Impact of Animal Diseases on the New World

One of the greatest ironies of the history of animal diseases is that the absence of nonhuman-derived contagious diseases and associated immune responses in New World humans was almost certainly the major factor in the successful invasion of the New World by Europeans and their worldview, which had been dramatically reshaped by their own experience with contagious disease only a few centuries earlier. Europeans sometimes occupied large parts of Africa and Asia, but without the decimating impact of introduced contagious diseases, they did not significantly reduce the indigenous human populations of these areas. As a consequence, as the age of colonialism draws to a close, the indigenous peoples of Africa and Asia have been able to regain social and political control of their own lands because they have remained numerically dominant in their homelands.

In contrast, in the Americas the introduction of animal diseases into susceptible human populations was much more devastating to indigenous human populations than during the plague in Europe, leading to what has been referred to as the first, or microbial, phase of the European conquest of the Americas. It is estimated that 90–95 percent of the indigenous human population of the Americas perished from introduced diseases.

Contrary to popular mythology, this holocaust did not begin with the “discovery of the Americas” by Columbus in 1492 but was initiated some time earlier by Basque whalers, Viking settlers, and English fishermen who began landing along the Atlantic coast of the Americas hundreds of years before Columbus arrived in the Caribbean and other Spanish explorers (conquistadors) arrived in the New World. There is evidence that some tribes originally living along the Atlantic Ocean retreated inland in an effort to escape epidemics that devastated their populations well before the arrival of Cristóbal Colón at the end of the fifteenth century.

Despite the success of supposed conquistadors like Cortez and Pizarro, it was smallpox that really led to the collapse of the Aztec and Inca empires. Cortez’s initial 1519 foray into the Aztec civilization was much less successful than his subsequent 1520 effort after smallpox arrived in Tenochtitlán. By the early seventeenth century, the indigenous population of Mexico had experienced devastation exceeding 90 percent, falling from an estimated 20 million to less than 2 million. The impact of the disease was demoralizing and crushed the ability of the Aztecs to resist Cortez. Similarly, smallpox arrived in Inca
territory in 1526, setting up the opportunity for Pizarro’s successful “invasion” in 1531.

There are well-documented cases of 90 percent or more of indigenous populations being wiped out by these new contagious diseases that arrived with both Europeans and their symbiotic nonhumans. In one well-documented example, the Mandans, one of the most elaborate of the Great Plains cultures, suffered mortality of more than 95 percent of their population after arrival of smallpox on a Missouri riverboat in 1837.

The introduction of alien diseases had a devastating impact on the indigenous peoples of the Americas. If the deaths of 20 to 40 percent of local populations in Europe as a result of plague caused restructuring and rethinking of the philosophical role of humans in the world, it is difficult to imagine the spiritual, social, and philosophical impact of loss of 90 to 95 percent of a population, as occurred in many indigenous peoples of the Americas.

Disease is a major factor in limiting rates of population growth, in fact, populations free of the impact of diseases typically outstrip those subject to disease. Indigenous Americans appeared relatively free of epidemic disease prior to the arrival of Europeans. As a consequence indigenous populations had not evolved any immunity to contagious diseases. They did not lack the ability to produce immune responses, however, the devastation appeared to result from the way in which indigenous populations were exposed to contagion. The major killers of indigenous Americans, smallpox and influenza, were lethal primarily to persons in the age range of 15 to 40 years, hence the most valuable and productive members of a population, both culturally and demographically. These diseases typically arrived in clusters, punctuated by brief interludes of respite. Thus communities might be ravaged by a series of three or four diseases, followed by a period of remission. Then such communities might be hit by another bout with a new disease or set of diseases. This combination of periodicity of events with the plurality of the diseases prevented the ability to evolve immune responses.

This pattern generated extreme psychological and spiritual stress. Unable to prevent disease or care for themselves or loved ones, abandoned by kin and other tribal members fleeing the epidemic, and in the process often carrying the disease to other peoples and communities, many individuals and communities simply gave up hope. Many engaged in activities that only hastened their deaths, such as sweats followed by immersion in cold water. The inability of their traditional holistic methods of treating diseases to contain these contagions caused them to lose faith in their healers and medicine people and also to abandon traditional spiritual practices and ceremonies. Because the European invaders had developed some immunity to these diseases, many indigenous peoples assumed that European spiritual and philosophical traditions were superior to their own, leading to acceptance and adoption of Christianity and its tenets.

The failure of indigenous spiritual traditions, combined with the introduction of new goods and materials, led indigenous peoples to abandon centuries-old traditions of dealing with the natural world, based on respect, connection, and conservation. Some peoples may even have blamed the wildlife and the natural world for the epidemics, because it appears that many indigenous peoples associated disease with wildlife and developed cultural traditions that were assumed to minimize the

---

**St. Vitus’ Dance**

*At the height of the Black Death (1348-1350), a medical condition known as “St. Vitus’ Dance” began to emerge in the Rhineland (Germany). The condition purportedly was an offshoot of the dances people did to protect themselves from the plague. The principal symptoms were ceaseless dancing, hysteria and foaming at the mouth; there was no cure.*

Amidst our people here is come,
The madness of the dance.
In every town there now are some
Who fall upon a trance.
It drives them ever night and day,
They scarcely stop for breath.
Till some have dropped along the way
And some are met by death.

likelihood and impact of disease. For example, the Cherokee assumed that disrespectful treatment of killed deer could lead to crippling illness. Similarly, the Anishnabe (Chippewa, Ojibway) peoples apparently developed the Mediwiwin healing society and related ceremonies in response to diseases they associated with wildlife, but the diseases were more likely the results of pre-Columbian contact with Europeans.

Not only humans suffered as a result of the introduction of these diseases. Many natural populations of animals, including deer, caribou, moose, bison, and beaver, on which indigenous peoples depended as sources of food and clothing, also experienced massive die-offs from west of Hudson’s Bay to the Rocky Mountains during the latter part of the eighteenth century. These deaths probably resulted from disease introduced by Europeans through their domestic animals. It is worth noting that these die-offs were primarily among ungulate populations, which would have been most susceptible to the ungulate-borne contagious diseases characteristic of Europe and Asia. New World carnivores, such as wolves and bears, appeared relatively unaffected by these illnesses but suffered as a result of loss of their ungulate food supplies.

In addition to the impact of disease, additional damage was inflicted upon natural populations of animals when indigenous people began to destroy animal populations because of apparent antipathy toward animals, who were assumed to have broken their covenants with humans by infecting them with disease. Thus, one ironic consequence of the introduction of nonhuman-derived diseases was the destruction of cultural traditions based on respect for nonhumans. Most, if not all, indigenous cultures of North America had philosophical traditions as a part of which nonhumans were regarded as creator spirits, and the concept of relatedness was based upon ecological relationships. It has been argued that the devastating impact of introduced disease on these cultures caused them to turn on their nonhuman relatives, leading some tribes to be willing to wipe out local populations of beaver, deer, bison, and wolves in order to trade furs for European trade goods and metal.

The European Tradition and the Natural World

The invading European tradition, derived primarily from English and Scots cultures, had a very different relationship with the natural world, especially as a result of the Renaissance and the “rationalist” tradition, which worked to separate itself from any association with the natural world, except as a source of resources for exploitation. Protestant Christian sects that appeared in western Europe toward the end of the Renaissance (during the Reformation) developed philosophical traditions that offered no encouragement for investigation into the ways of God’s creatures. God had given humans “dominion” over nonhumans, providing sufficient justification for any action regarding the natural world.

Europeans regarded mountainous country as unpleasant and dangerous, and forests were considered to be even worse. That these places were wild, hence untamed, was sufficient to trigger terror and hostility in Western Europeans. The “wild” (natural world) was so unreasonably fearsome that encroachment of wild creatures into the human domain was highly alarming. A bee flying into a cottage or a bird rapping at the window was enough to frighten people. The English House of Commons rejected a bill in 1604 because a jackdaw flew through the chamber during the speech of its sponsor.

This difference in response to the nonhuman (natural) world continues to manifest itself in contemporary responses to animal-borne disease in the present day. These responses are often extreme in comparison with the actual threat posed. The most egregious response in recent years has been the slaughter of hundreds of thousands of farm animals, particularly in the British Isles, in response to minor outbreaks of hoof and mouth disease and the sporadic and highly unusual occurrence of so-called mad cow disease.

In the case of hoof and mouth disease, the threat is almost exclusively economic. There is little evidence that hoof and mouth disease represents any serious threat to human health. Still the economic threat is deemed sufficient to destroy hundreds of thousands of animals, mostly because the possibility exists that they may have
been exposed to the disease. Can any moral being imagine such a draconian solution if the animals exposed to a potential contagion were Homo sapiens, rather than ungulates? Similarly, wild bison that stray beyond the borders of America’s Yellowstone National Park are summarily slaughtered by agents of the state of Montana on the grounds that these animals might act as reservoirs for the cattle disease brucellosis. The irony in this case is that brucellosis is a disease that evolved in Old World bovids and was introduced into America along with cattle. No bison has ever been demonstrated to show the symptoms of brucellosis, yet the fact that a low percentage of bison test positive for exposure to the pathogen is deemed sufficient reason to kill them.

The response to so-called mad cow disease, more properly called bovine spongiform encephalopathy (BSE), is even more absurd. BSE appears to be one of a group of related pathological conditions that may be caused by prions, which appear to be protein molecules capable of self-replication. Other diseases in this category are scrapie in sheep, and kuru and Creutzfeldt-Jakob syndrome in humans. Such pathological conditions impact the central nervous system (CNS) and gradually destroy the brain. The damage to the CNS is what produces the symptoms that have disrespectfully led to this condition being designated as mad cow. A far better and more accurate term would be acutely distressed cow. These apparently prion-based conditions are not directly communicable and can only be passed through consumption of CNS tissue including brain and spinal cord. The only reason these conditions appeared to spread in the United States and England is because slaughterhouses in those countries use “wastes” remaining after butchering to be ground up and added to cattle feed as a protein supplement.

In humans it is obvious that only through consuming CNS material can humans become infected. Outbreaks of kuru in New Guinea are clearly related to the cultural tradition of consuming the brains of other humans as part of a cannibalistic tradition. In England, BSE-type syndromes have shown up in humans who consumed low-grade commercial hamburgers. It seems obvious that banning use of the waste products of slaughterhouses in both hamburger for human consumption and in cattle feed could stop any possible outbreak, yet commercial pressures have slowed or prevented such moves. Still, the total number of BSE human victims numbers less than twenty, and there is little likelihood of an outbreak or of a human contracting BSE through eating regular beef in the form of roasts or steaks.

Hanta virus is a rodent-borne viral pathogen. There is actually an entire class of Hanta-like viruses in a variety of murid rodents. The one described as Hanta virus appears to have only one species, deer mice, Peromyscus maniculatus, as its primary host, where it does not appear to cause significant health problems. In humans, however, this virus causes pneumonia-like symptoms that result in death about 50 percent of the time. This disease is well known to indigenous peoples of the American Southwest and may be one of the reasons that traditional Dine (Navajo) people destroy a Hogan after a person has died in it. In recent years this disease has caused a minor panic in the United States because deer mice are a widespread common rodent. Hanta does not appear to be transmissible among humans so it is unlikely to ever become a true epidemic. The number of recorded cases in the United States is less than 200 since the Center for Disease Control (CDC) has been keeping records.

To summarize, the major environmental and health-related problems in humans result primarily from close association with domestic animals. This continued proximity has allowed several diseases to jump from their ungulate or avian hosts and cross the species barrier into humans.

Raymond Pierotti

Further Reading
Diseases, Plant

Preliterate peoples as well as some literate peoples believed that spirits cause disease. Greek physicians dismissed this notion and instead insisted that disease had physical rather than supernatural causes. In the fifth century BCE, the Greek physician Hippocrates taught that an imbalance of fluids causes disease in humans, a claim that left inscrutable the cause of disease in plants. In the nineteenth century, the German botanist Anton de Bary, the German bacteriologist Robert Koch, and the French chemist Louis Pasteur swept aside the ideas of Hippocrates De Bary, working with the potato, and Pasteur and Koch, working with cattle, demonstrated that pathogens (parasitic microbes) cause disease. The germ theory of disease is the foundation of modern medicine.

The focus on human diseases should not deflect attention from plant diseases. Despite a perception to the contrary, plants suffer from more diseases than humans do and for an obvious reason. Plants colonized the land 410 million years ago, whereas modern humans made their appearance only 130,000 years ago. The pathogens that attack plants have had some 400 million more years to evolve new types by mutation than those that attack humans.

Plant diseases have shaped history. Even as nomadic foragers, humans depended on plants for sustenance. The rise of agriculture in western Asia some 10,000 years ago and its spread throughout the world have wedded the destiny of humans to that of crops (domesticated plants). Whatever has threatened crops has threatened the health and survival of humans.

Diseases of the Staple Grasses

Wheat Rust

Wheat rust is among the oldest plant diseases. Some scholars believe that a 3,800-year-old passage in Genesis records an outbreak of rust in the Levant that caused famine so severe it forced the Hebrews to migrate to Egypt, the granary of the ancient Mediterranean world. If these scholars are right, this text is the earliest written account of a plant disease.

Only in the fourth century BCE did Theophrastus, a Greek botanist and pupil of Aristotle, coin the term *rust* for this disease because of its reddish hue on the leaves and stem of wheat plants. Theophrastus wrote that wheat planted in valleys and other low ground suffered from rust more often and more acutely than wheat planted on high ground though he could not explain this fact.

That insight came to the Romans. As early as 700 BCE, they identified the reddish hue on wheat plants as the mark of rust. At that time they began to worship Robigus. Historians identify Robigus as the god of rust, a fair statement so long as one remembers the Greek rather than Roman origin of the term *rust*. The idea that a god unleashed rust on the Romans underscores their belief that rust had a supernatural cause. Trade with the Greek city-states led the Romans to abandon a supernatural explanation of plant diseases. In the first century BCE, the naturalist Pliny the Elder made the crucial link between moisture and the onset and spread of rust, writing that rust afflicted wheat grown in areas where fog and dew were common in morning and evening. Pliny’s insight into the role of water in spreading rust was prescient because rust, like all fungal diseases, spreads in wet environments. The rust fungus needs water to produce the millions of spores that are the next generation of fungi. Two centuries later, the agricultural writer Columella warned farmers against staking their livelihood on wheat. The only protection against rust was to grow a diversity of crops. Columella recommended cultivation of the chickpeas and lentils because of their immunity to rust.

Columella had reason to worry: The first three cen-
turies of the Common Era were unusually wet in the lands along the Mediterranean Sea, bringing rust to wheat fields throughout the Roman Empire. Some historians finger rust as a culprit in Rome’s economic decline after 200 CE and in the dissolution of the empire in the fifth century.

In the seventh and eighth centuries, Arabs brought the barberry bush with them as they swept across North Africa and into Spain. Neither Arabs nor Europeans understood that the bush harbors rust fungi because the fungi inhabit the bush without harming it, much as the pathogens that cause malaria and yellow fever live in the gut of the female mosquito without harming her. A barberry bush that harbors rust fungi has no symptoms of disease. Only in the seventeenth century did Europeans begin to suspect the bush to be a Trojan horse. In 1660 France enacted the first law to eradicate the bush. Other European nations passed similar laws, as did the American colonies in the eighteenth century.

These measures were not enough to stop the spread of rust. Plant breeders in the nineteenth century began to search for rust resistant wheat to cross with high-yielding but susceptible varieties, a program that accelerated that century as England, France, the German states, and the United States poured money into agricultural science. Around 1900 agronomists at the U.S. Department of Agriculture identified an Italian durum wheat suitable for pasta and a Russian emmer wheat suitable for bread. These were the first of innumerable resistant wheat varieties that give humans the best, if incomplete, protection against failure of the wheat crop from rust.

Rice Stunt Disease
Chinese records first mention the cultivation of rice 4,000 years ago, though its cultivation may have begun in southeastern Asia. By 1000 BCE, farmers grew rice in China, the Korean peninsula, and the swath of land between modern Vietnam and India. By the first century CE, farmers were growing rice in Japan, Indonesia, and the Philippines. The people of these regions were nearly as dependent on rice as the Irish would be on potato in the nineteenth century. True, farmers also grew soybeans throughout Korea and China, and wheat grown along the Indus River reached the people of central and southern India by trade, but soybeans and wheat were minor supplements to a diet of rice.

Roughly forty diseases afflict rice making difficult the task of sorting among them, as well as among climatic factors, to explain the 1,800 famines that Chinese documents have recorded since 100 BCE and the 70 in India since 33 CE. Because rice needs more water than any other grain to thrive, Chinese and Indian texts often attributed crop failures to inadequate or impure water.

In the sixth century CE, a Japanese text mentions stunted (short or dwarf) rice plants that bore little or no rice. The condition baffled farmers for 1,200 years. In 1733, 12,000 Japanese died of famine when stunt destroyed their rice crop, yet no one was any closer to understanding what stunted rice plants. Unlike Europe, Asia never developed science in its modern form but only gradually assimilated it from Europeans during the eighteenth and nineteenth centuries. The people of Japan and continental Asia did, however, have a tradition of careful observation. This tradition led one Japanese farmer in 1874 to study the feeding habits of leafhoppers on rice plants. He doubted that insect bites alone could arrest plant growth and instead proposed that leafhoppers carried a pathogen that they transmitted to rice plants by bite. The pathogen, not leafhoppers, stunted rice plants.

The idea was as novel as it was correct. Leafhoppers carry within their gut Rice Dwarf Virus just as, one may recall, various species of mosquitoes carry the pathogens for malaria and yellow fever. Rice Dwarf Virus remains virulent throughout a leafhopper’s life, and female leafhoppers pass the virus to their offspring, multiplying it with each generation. When the leafhopper population is large, as it must have been in Japan in 1733, the virus becomes widespread enough to cause failure of the rice crop even though the leafhopper is an inefficient flier.

The discovery of insect transmission of a pathogen opened a new field in the study of plant diseases by uniting entomology, the study of insects, with plant pathology.
Scientists came quickly to understand that control of insect populations is essential if one hopes to minimize crop damage from an insect-borne pathogen. It was no longer enough for the plant pathologist to understand diseases. He now had to understand the feeding and mating habits of insects and their distribution in areas of disease. The need to combat insects accelerated the study and development of insecticides as a branch of applied chemistry in the twentieth century. The study of insect-borne viruses and the development and use of insecticides would later be crucial in fighting corn diseases in the United States.

**Rye Ergotism**
The importance of wheat and rice to the sustenance of Europeans and Asians has deflected attention from rye and its diseases. The Germanic tribes that settled the lands that are today France and Germany began growing rye in the second century CE. Wheat always commanded a higher price than rye, making rye bread the staple of the poor until the even cheaper potato spread through Europe between the sixteenth and nineteenth centuries.

The diseases of rye thus afflicted the poor rather than the rich. Particularly serious was ergotism, a fungal disease that fills rye grains with a toxin that in sufficient quantities causes convulsions and death in humans. Unlike most plant diseases, ergot of rye threatens humans by poisoning them rather than by causing famine. The agony of death from ergot toxicity led medieval Europeans to attribute the disease to God’s wrath, hence the name “Holy Fire.” Medieval chronicles cite the first outbreak of Holy Fire in the eighth century. In 857 CE, thousands died in the Rhine Valley, with smaller outbreaks throughout France and Germany.

One may recall that fungi spread in wet environments. Evidence from dendrology and medieval chronicles suggests that after 1000 CE, Europe’s climate turned wet and cool, hastening the spread and severity of ergotism in northern and western Europe. An outbreak in 1039 was the first in a series of virulent outbreaks between the eleventh and eighteenth centuries. Ergotism along with famine in the early fourteenth century may explain the high mortality of the Black Death. Plague, if the cause of the Black Death, should not have killed between a third and half of Europe’s people between 1347 and 1351, for plague is a disease of rodents and other small mammals. Yet ergotism and famine may have left Europe’s peasants and urban poor too weak to ward off plague. The result was the worst pandemic of the Middle Ages.

**Diseases of the Staple Crops Indigenous to the Americas**

**Late Blight of Potato**
The fungus that causes late blight of potato is at the center of a tragedy, the Irish Potato Famine. The tragedy has its roots not in Europe but in the Andes Mountains, where the natives of Peru domesticated the potato. The Spanish conquered Peru in the sixteenth century. In search of gold, they found a more valuable commodity, the potato. From Peru the potato reached Spain by ship around 1570, then spread west through continental Europe and north across the English Channel, reaching Ireland before 1800. On the continent, the potato vied with rye bread as the staple of the poor. In Ireland policies and economic exploitation made it the only staple.

For many years the Irish sought independence from England, a goal England’s Lord Protector Oliver Cromwell crushed. In the 1650s his army ravaged Ireland and Cromwell divided the land among his supporters. These men charged rents so high that the Irish peasant could set aside only a small plot of land for his family. The rest of the land went to raise the grain and livestock peasants needed to pay rent.

By 1800 the Irish, squeezed by their lack of land and high rent, had no choice but to embrace the potato for sustenance because it yielded more food per unit of land than any grain. Reliance on a single crop is always risky, as Columella had emphasized in the first century. The potato posed risks far greater than the Irish could have imagined. The Spanish had brought little more than a few handfuls of potatoes with them. These potatoes were of the same stock and thus genetically uniform. Because the
potato propagates by shoots, new potatoes, barring mutation, are genetic equivalents of the parent potato. With all potatoes near carbon copies of one another, any disease that threatens one potato threatens all.

With the potato vulnerable, catastrophe struck in 1845. Six weeks of rain hastened the spread of the blight fungus across Ireland. The plants died and potatoes rotted in the ground. Blight struck again in 1846. Their staple gone, the Irish scrounged for nuts and roots while English landlords took their wheat and livestock. One million starved and 1.5 million fled Ireland.

The tragedy galvanized scientists throughout Europe into action. In 1861 Anton de Bary isolated the culprit, a fungus he named *Phytophthora infestans*, and by spreading it on healthy potato plants demonstrated that it caused blight. The Potato Famine had spurred de Bary’s discovery, which marked the beginning of plant pathology as a science.

More than that, potato blight made conspicuous the evils of economic oppression. On the heels of the famine, the German socialist Karl Marx and his English counterpart Friedrich Engels in 1848 denounced the exploitation of the poor in the *Communist Manifesto*. Revolution swept across Europe that year as intellectuals and the poor demanded an end to oppression. The potato blight was more than a disease; it was a call to arms, a call for political and economic reforms. The potato blight thus left its imprint on agriculture, science, politics, and economics.

**Corn Diseases**

As with potato diseases, scientists know little about corn diseases during the pre-Columbian period. What is clear, however, is that corn, unlike potato, is a cross-pollinating plant that produces plants with genetic diversity. Cross-breeding achieves diversity by reshuffling chromosomes in any plant or animal, including humans. This diversity should minimize the occurrence of epidemics, for within a heterogeneous population some individuals, in this case corn plants, should be resistant to disease.
The Corn Viruses
Since the 1920s, corn breeders have reduced the genetic diversity by breeding a small number of high-yielding corn plants of roughly uniform genotypes, making corn vulnerable to epidemics. An outbreak of corn stunt disease along the lower Mississippi valley in 1945, reminiscent of the stunt disease that ravaged rice in Asia, presaged corn’s vulnerability to an epidemic. As is true of rice stunt, a virus causes corn stunt disease and is spread by an insect, in this case a species of aphid.

Worse was to follow. A few stunted corn plants in Portsmouth, Ohio, erupted in an epidemic that engulfed the Ohio and Mississippi valleys in 1963 and 1964, costing farmers who had planted on some lands along these rivers their entire corn crop. The culprit was not the corn-stunt virus as scientists first thought but two viruses: Maize Dwarf Mosaic Virus (MDMV) and Maize Chlorotic Dwarf Virus (MCDV). The initial confusion among scientists slowed their response, opening the entire Midwest and South to the danger of an epidemic.

The method of virus transmission saved corn growers. A species each of aphid and leafhopper transmits MDMV and MCDV respectively by bite. Both feed primarily on Johnsongrass that grows along the Ohio and Mississippi rivers. Both viruses inhabit Johnsongrass, as the ergot fungus inhabits the barberry bush, without signs of disease. But neither insect is a strong flyer, and, unlike the leafhopper that carries Rice Dwarf Virus, neither aphid nor leafhopper retains MDMV and MCDV in virulent form more than forty-five minutes, limiting the range of both viruses.

Once scientists had fingered the aphid, leafhopper, and Johnsongrass as culprits, the U.S. Department of Agriculture in fall 1964 launched a campaign to kill aphids and leafhoppers by insecticide and Johnsongrass by herbicide (chemicals unavailable to save the Japanese from famine in 1733). The expenditure of chemicals and money ended the threat of these viruses and led scientists to believe they held the upper hand against corn diseases. Success prevented all but a few scientists from questioning the wisdom of growing genetically uniform corn throughout the Midwest and South.

Southern Corn Leaf Blight
Catastrophe struck in 1970 as Southern Corn Leaf Blight, a fungal disease, swept the United States, destroying 710 million bushels of corn, 15 percent of the corn crop that year. From Texas to Georgia and Florida, farmers lost half their corn crop. These losses cost farmers $1 billion and the collapse of farm commodity prices cost investors billions more. In a single summer, one corn fungus threatened financial ruin.

Plant pathologists identified a single female parent of corn (a type of corn that produced no pollen and so was male sterile) as susceptible to Southern Corn Leaf Blight. By dropping it from the corn pedigree, agronomists bred new varieties of corn resistant to South Corn Leaf Blight, but corn remains as genetically uniform today as it was in 1970.

Ants and Black Pod Disease in Africa
Black pod disease (Phytophthora pod rot) is a serious disease in Africa where it damages the economically valuable cocoa plant. The role of ants in spreading the disease was first noted in 1927 and described in detail in 1970.

A small black ant also has been implicated as an agent in bringing Phytophthora from the soil to pods on which it attains to scale insects. Two trees with no black pod, at the margins of a cocoa plot had pods above the ground with scales on the pod stalk being cared for by the ants. Two sporulating diseased pods were placed at the base of each tree and covered with litter. Two weeks later all seven pods (three on one tree, four on the other tree) had the black-pod disease starting at the petiole side where the ants had built tents made of soil and debris to protect the scales from the rain. Pods at the same height but without the ant on three adjacent trees remained healthy and free of the disease.

Future Prospects
The imperative to minimize crop losses from diseases will only intensify in the future as the human population grows exponentially. At their origin 130,000 years ago, modern humans cannot have numbered more than a few thousand. Only around 1800 did the human population number 1 billion. The population doubled by 1940 and again by 1975. Today, more than 6 billion humans crowd the earth, and demographers fear our numbers may swell to upwards of 9 billion by 2045.

To avert famine on an unprecedented scale, farmers must triple food production by then. To fall even 2 percent short of the goal, demographers believe, will condemn some 270 million people to starvation. Only with the highest yielding varieties of potatoes, corn, soybeans, wheat, and rice, the sustenance of humanity, can humans hope to avert widespread starvation. But only a small number of varieties of any crop can yield enough food for a hungry world. The future will only exacerbate the problem of genetic homogeneity. Crops may become more rather than less vulnerable to epidemics.

The future may bring new solutions but at the moment only two seem viable. First, scientists might use the emerging technology of genetic engineering to combine disease resistance and maximum yield in a crop, an achievement that has eluded the traditional plant breeder. But there are obstacles to this goal. In the 1990s, frightened Americans branded as “Frankenfood” the first variety of corn genetically engineered to be resistant to an insect. As in the past, public fears may slow the advance of science. Even with public support, the engineering of disease-resistant plants is an arms race. Mutation will force scientists to engineer plants resistant to new pathogens ad infinitum. One cannot foresee the outcome of this struggle between pathogen and plant.

Second, humans might limit their numbers. Contraceptive devices make this approach possible. The United Nations has for decades advocated population control, but with the notable exception of China, most nations are far from committed to holding their population in check. Will the rest of the world comply? At present the United States will not, and as was true during the Cold War, the United States and China are again at loggerheads, with Europe, Africa, and the rest of Asia unsure which to follow. If humans do not limit their numbers, plant diseases, if unchecked by science, will limit population by famine. Ireland in 1845 and 1846 may be the earth writ small.

Christopher M. Cumo

Further Reading

Displaced Populations, Typology of

Population displacement is the process through which populations are forced to leave their habitat and productive activities and compelled to seek alternative locations and modes of securing their living. Such forced population dislocations are due to a variety of causes, which take different forms, encompass in their totality large numbers of people, and exert both immediate and long-lasting negative effects on those affected.

Given their high frequency and magnitudes, and because they are ultimately rooted in societies’ political, economic, and environmental structures, population displacements and resettlements are one of the main categories of contemporary demographic processes. Social sciences such as sociology, anthropology, geography, economics, and political science increasingly research the causes, contents, and consequences of displacement and resettlement.

The Concept

As a concept, the term “displaced person” (“DP”) was first used at the end of World War II to define persons liberated from the extermination camps or labor camps set up by Nazi Germany, but not yet relocated to their homeland and into a stable settlement. The allied powers created (1943) a special organization—the United Nations Relief and Rehabilitation Administration (UNRRA)—to assist displaced persons, especially in Europe and China. UNRRA repatriated some 7 million displaced people and provided temporary shelter for about 1 million refugees unwilling to return to their countries of origin, until they were resettled elsewhere, overcoming huge difficulties in finding a “place” and in their integration. There were about 1 million Europeans still homeless five years after the end of World War II. In March 1949, UNRRA’s functions were transferred to other U.N. agencies, such as the International Refugee Organization, the United Nations Children Fund, the Food and Agriculture Organization, and later to the United Nations High Commissioner for Refugees (UNHCR). Currently, the concept of “displaced populations” is used to designate categories of populations, not just individuals, that are forcibly displaced from their habitat for different causes. Given the vast numbers of people in such situation today, population displacements represent one of the major problems on the international agenda and on the internal agenda of many countries, particularly developing and transition countries.

The concept of “population displacement” differs from the traditional concept of “population migration” in that displacements are involuntary, coerced; they are forced upon those displaced either through physical violence (including life-threatening violence), or through legal enactments (including expropriation by eminent domain or other kinds of government decrees), or by dint of natural calamities (e.g., floods, volcanic eruptions, etc.). People caught in such processes do not have the choice of remaining in their place. Conversely, the concept of “migration” defines population movements that have a different social causality and content, as these involve the deliberate decision-making by the individuals who migrate (as, for instance, in the context of rural-urban migration or international migration). Migration is scholarly defined as a movement by choice resulting from an individual’s “perceived relative deprivation” (Stark & Taylor 1991) and from his aspiration to overcome such deprivation by migrating elsewhere.

Over the last 10–15 years, the attempts to emphasize certain similarities and a “continuum” between migration and forced population displacements have resulted in the promotion of a somehow hybrid concept—“forced migration”—widespread now, but lacking scientific precision. This concept is increasingly criticized for being a contradiction in terms and for overstating continuity and understating the deep differences between displacement and migration. It is therefore important to stress that the essential distinction between forced “displacement” and “migration” reflects objective structural differences among
the causes, content, mechanisms, and consequences of these two types of population movements.

Types of Population Displacements
Population displacements may differ among themselves in many respects. A ramified architecture of concepts has been developed to define various types and subtypes of such displacements. Differences result from the social or natural causes of displacement, the various agents that trigger and enforce displacements, the characteristics of the socioeconomic sector within which displacement occurs, the resettlement locations where those displaced end up, or some other important differentiating factors. The multiplicity and complexity of population displacements have thus given birth to a bewildering series of notions, many of which “step on each other” and sometimes obscure rather than illuminate the issues, such as “involuntary resettlers,” “displacees,” “refugees,” “asylum seekers,” “environmental refugees,” “displacement,” “diaspora,” “eviction,” “oustees,” “forced migrants,” “internal evacuees,” “diapirization,” “conservation refugees,” “project-affected people,” and many others.

It is therefore necessary to employ a taxonomy of displaced population that can introduce conceptual order by using distinct criteria and classifications among these populations. Each of these main criteria or classifications casts its own rays of light, from different perspectives and angles, on the displaced populations. Examined from many various angles, the same populations reveal different aspects of their movements and existence. This way, the cumulated knowledge of the several typologies improves and broadens the understanding of population displacement.

Causal Typology
Explaining causality is essential for understanding the origin, identity, and composition of various displaced populations, their basic needs, and the ways in which they can be assisted. The principal typology constructed by social scientists consists of five clusters of massive population displacements that differ by their causes: (a) populations displaced because of wars, civil wars, and political turmoil; (b) populations displaced by development programs that change land or water use and build major new infrastructure; (c) populations displaced by organized persecution—ethnic, religious, racial; (d) populations displaced by environmental disasters—droughts, famines, floods, desertification, earthquakes, etc.; and (e) population displaced by the disintegration of state or by border changes.

While the main causes of population displacements differ, the consequences of displacement upon the affected populations do have important common characteristics: massive loss and destruction of assets, in many cases loss of life; sudden drop in welfare and standards of living; prolonged uprooting, alienation, and unemployment; cultural and identity loss; severe long-term psychological effects, political disempowerment, etc. Almost all such coerced displacements involve human and civil rights infringements. Social research has also concluded that the negative effects are more severe on women than on men and on particularly vulnerable population segments such as children, the elderly, or indigenous groups.

Refugees and Internally Displaced Peoples
Using “space” as criterion, a basic typological distinction within displaced populations is based on where relocation takes place immediately after displacement. Regardless of the cause of their displacement, the forcibly displaced people who cross a national border and settle in a different state are defined with the concept of “refugees.” Those who remain within the borders of their state are defined as “internally displaced people.” Thus, the most encompassing umbrella concept is “displaced populations” (as indicated before, a term more precise than “forced migrants”). Within this umbrella concept, the principal politico-legal distinction usually made is between “refugees” and “internally displaced people.”

The term “refugee” is sometimes employed loosely in common parlance or in the media to describe all those who have been forced to abandon their place of usual residence. However, international law gives a more precise
meaning to this term, making a critical distinction between those who cross a border and those who, while displaced, remain in their country. Both groups are displaced people, but only those in the first category are defined as “refugees,” while those in the second are defined as “internally” displaced people. The difference in “labeling” reflects significant differences in terms of their entitlements to international assistance and protection. Refugees often establish “diaspora communities” in the arrival countries and either integrate in those countries or return eventually to their country of origin.

Historically, the most broadly accepted definition of “refugees” was given by the U.N. Convention Relating to the Status of Refugees: “the term refugee refers to a person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, or membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country” (United Nations 1951, article 1). In 1969, in response to the increasingly frequent flows and growing scale of refugees in Africa, the Organization of African Unity adopted a refugee convention with a slightly broader definition: “The term refugee shall apply to every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality” (Organization of African Unity 1969). This description of refugees, which employs two key characteristics—violence and border crossing—as definitional, is restrictive on purpose: it is not open to include either voluntary (economic)

The Trail of Tears

Although “Displaced Peoples” is a new concept, it is an old practice. The following extract of text from the U.S. Indian Removal Act of 1830 is an example of one of the most notorious acts of displacement in human history. The act authorized the president to order the transfer of Native American nations in the eastern U.S. to the western territories where land was promised to them “in perpetuity. The relocation in 1838 came to be known as the “Trail of Tears”—a forced exodus in which many people suffered and died to settle in harsh conditions on land that was again taken from them years later.

The Indian Removal Act of 1830

CHAP. CXLVIII. An Act to provide for an exchange of lands with the Indians residing in any of the states or territories, and for their removal west of the river Mississippi.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That it shall and may be lawful for the President of the United States to cause so much of any territory belonging to the United States, west of the river Mississippi, not included in any state or organized territory, and to which the Indian title has been extinguished, as he may judge necessary, to be divided into a suitable number of districts, for the reception of such tribes or nations of Indians as may choose to exchange the lands where they now reside, and remove there; and to cause each of said districts to be so described by natural or artificial marks, as to be easily distinguished from every other.

SEC. 2. And be it further enacted, That it shall and may be lawful for the President to exchange any or all of such districts, so to be laid off and described, with any tribe or nation within the limits of any of the states or territories, and with which the United States have existing treaties, for the whole or any part or portion of the territory claimed and occupied by such tribe or nation, within the bounds of any one or more of the states or territories, where the land claimed and occupied by the Indians, is owned by the United States, or the United States are bound to the state within which it lies to extinguish the Indian claim thereto.

SEC. 3. And be it further enacted, That in the making of any such exchange or exchanges, it shall and...
may be lawful for the President solemnly to assure the tribe or nation with which the exchange is made, that the United States will forever secure and guaranty to them, and their heirs or successors, the country so exchanged with them; and if they prefer it, that the United States will cause a patent or grant to be made and executed to them for the same: Provided always, That such lands shall revert to the United States, if the Indians become extinct, or abandon the same.

SEC. 4. And be it further enacted, That if, upon any of the lands now occupied by the Indians, and to be exchanged for, there should be such improvements as add value to the land claimed by any individual or individuals of such tribes or nations, it shall and may be lawful for the President to cause such value to be ascertained by appraisement or otherwise, and to cause such ascertained value to be paid to the person or persons rightfully claiming such improvements. And upon the payment of such valuation, the improvements so valued and paid for, shall pass to the United States, and possession shall not afterwards be permitted to any of the same tribe.

SEC. 5. And be it further enacted, That upon the making of any such exchange as is contemplated by this act, it shall and may be lawful for the President to cause such aid and assistance to be furnished to the emigrants as may be necessary and proper to enable them to remove to, and settle in, the country for which they may have exchanged; and also, to give them such aid and assistance as may be necessary for their support and subsistence for the first year after their removal.

SEC. 6. And be it further enacted, That it shall and may be lawful for the President to cause such tribe or nation to be protected, at their new residence, against all interruption or disturbance from any other tribe or nation of Indians, or from any other person or persons whatever.

SEC. 7. And be it further enacted, That it shall and may be lawful for the President to cause such tribe or nation to be protected, at their new residence, against all interruption or disturbance from any other tribe or nation of Indians, or from any other person or persons whatever.


migrants to other countries or people displaced by planned development projects. The reason is that countries and international organizations that grant special entitlements to refugees are concerned with avoiding confusion, for instance, between a voluntary (economic) migrant and a genuine refugee.

Size of Refugee Flows
World history is sadly rich in refugee waves that ebb and flow. Refugee populations result directly from the causes listed earlier under “a” and “c” and sometimes “e” (see above section on causal typology), and therefore their total numbers tend to increase dramatically and suddenly with the eruption of conflicts or the onset of violence and persecution. They decrease with cessation of conflicts and through repatriations. UNHCR data show that during the decade 1993–2002, 75 percent of the world’s refugees originated from developing countries, while at the same time other developing countries were providing temporary asylum to 69 percent of the global refugee population. A historic peak in recent refugee waves was reached around the middle of that decade, because of events in the Great Lakes region of Africa (causing huge waves of Burundian and Rwandan refugees) and in Southeast Europe (wars in Serbia and in Bosnia and Herzegovina). Conversely, during the second half of the decade, 1998–2002, the global number of refugees fell by 7 percent compared to 1993–2002. At the end of 2002, the refugee population stood at some 10.6 million, consisting, by continents, of: Africa 3.3 million, Asia 4.2 million, Europe 2.3 million, Latin America and Caribbean 40,900; North America 615,000; Oceania 70,100. In 2002, the refugee population decreased by 13 percent compared to 2001. The main
reason was the return of some 2 million Afghan refugees from Pakistan and Iran. The total refugee returns during 2002 reached about 2.4 million people (UNHCR 2004).

Consistent with the definitions mentioned above, these numbers do not include the large displaced populations resulting from causes listed under “b,” “d,” and “e” in the section on causal types. The UNHCR evaluated the decade 1992–2001 as a period when “the situation of refugees has generally improved. Since 1997 global refugee figures have fallen; more refugees have repatriated than were forced to leave their country and new refugee outflow have diminished” (UNHCR 2002, 25–26). It is noteworthy, however, that the same armed conflicts, persecutions, or violence which have caused the refugee waves reflected in the massive numbers given above, have, in reality, displaced also an additional number of people who, although forced to abandon their homes, have remained within the borders of their own country. They are defined as “internally displaced people” and are not included in the numbers of those labeled “refugees,” but their total number is also big, although statistics are not usually available. For them too, as for those recognized as refugees, providing human security, assistance, relief, and reestablishment remains essential and demands humanitarian action.

The most illuminating typology usable within the amorphous IDP category is, again, the one based on causes, with its five causes enumerated above, but in this case applied only to those who relocate internally. Thus, IDPs include people forced to flee violence, war, persecutions, etc., but unable to cross a frontier, and people compelled to move by environmental disasters; and most importantly, IDPs include the vast numbers of people displaced, so to say, by “plans,” i.e., by public-sector and private-sector development projects. Assistance to these internal displacees categories is not included in the formal U.N. mandate to UNHCR, and no other global U.N. agency has been yet established for this purpose. Analysts, public advocates, social scientists, and some institutions have initiated during the 1990s convergent efforts “to establish the internally-displaced people (IDPs) as a discrete humanitarian category” (UNHCR 1999). These efforts are increasingly gaining recognition: the U.N. appointed in 1992 a special Representative of the U.N. Secretary-General on Internally Displaced Persons and scientific research on this category has much expanded.

Agent-Cased Typology and the Role of the State

Another modality to typologize population displacements is by the agent of displacement. The purpose of this classification is not to list all historically possible agents, but rather to conceptualize and distinguish the broadest categories of agency primarily relevant to contemporary processes. By that criterion, it is helpful to distinguish between (a) displacements triggered and executed by the state and (b) displacements triggered by nonstate agents. This typology is heuristically fertile because, in the case of category a, it focuses the lens directly upon the state’s own policy, responsibilities, and accountability. Conversely, in the case of category b, this criterion helps illuminate what the state can do when certain nonstate agents (or other states) displace some of the state’s population. This criterion also helps highlight what civil society expects from the state, in either case. State-centricity is one of the legitimate research perspec-
Resettlement in China: The Three Gorges Dam

The following is an example of internal displacement for development reasons. It is extracted from a field report on the Three Gorges Dam, to be built across the Chang-jiang (Yangzi) River in China, which is expected to require the resettlement of more than one million people by the time of its projected completion in 2009.

Throughout my trip, interviewees expressed a sense of resignation about the inevitability of the Three Gorges Dam project, and a widespread, though by no means unanimous, belief that people’s living standards and general quality of life would decline after resettlement.

This feeling is particularly strong among farmers and elderly people. “Four years from now my entire family will have to move away whether we want to go or not,” a woman farmer in Fengjie said, “but we still don’t know where we will rebuild our home. Are we going to live next to our old neighbors and relatives? We don’t know. Are we going to have enough land to farm? No, that I know as clearly as I know the five fingers of my hand. There is no land to farm behind our village. When the time comes, I will refuse to move out of my village. They will have to use police to drag me away if they want me to leave.”

In an equally revealing statement, a county-seat physician said that many of his elderly patients confided in him their determination to stay where they are until the flood comes. “These old people have lived on the riverbanks for so long,” he said. “They have built their houses here, cultivated their vegetable gardens on the slopes, opened small shops near the docks, and they have their particular teahouses for talking with their old friends. It will cost them more to move everything than the government will provide in compensation. Above all, they want to be buried in the family graveyard together with generations of ancestors. They are depressed by the economic loss they will suffer and disturbed by the inevitable breakup of the emotional ties they have had with this land.”


Introducing the agent of displacement as a criterion regroups differently the kinds of displacements described earlier. The most frequent kinds of state-initiated displacements are development programs that entail resettlement; politically motivated displacements of ethnic or other minorities, sometimes termed “ethnic cleansing”; dedensification of resource-poor or drought areas that are overpopulated (e.g., the case of Ethiopia); and displacements related to state border changes. In the second category, the nonstate-caused displacements result from either social or natural causes. They are population displacements caused by exploding civil wars; by natural calamities such as floods, volcanic eruptions, or droughts; or by private sector companies. (There are also “mixed” situations, such as displacements caused by ethnic or religious persecutions of one group by another, in which the state as well has a hand.) The practical comparative advantage of a typology based on agency is that it facilitates policy recommendations concerning restricting or promoting state intervention.

Types of Development-Caused Displacements

Worldwide aggregated data, despite inherent gaps, indicate that the single largest cause accounting for the highest number of displaced people is development—i.e., development projects that require changes in the people’s uses of land and water. Displacements by development projects result from countries’ acute need to build modern industrial infrastructure and transportation, expand power generation, develop irrigated agriculture, implement urban renewal, and enhance social services—schools, drinking water supply systems, and hospitals. These developments require “right of way” and entail land expropriation and attendant dislocation of vast numbers
of people from their lands, homes, and shops. Political factors and vested interests interfere in such displacements constantly, often “justifying” or amplifying displacements beyond what is objectively necessary. Although such imposed displacements are supposed to be carried out in a planned, respectful of human rights, and controlled manner, they often are ill-planned and underfinanced. They cause enduring adverse economic, cultural, political, and psychological effects, victimizing the affected populations.

Not all development-caused displacements are unavoidable and justified by public interest. Some specific displacements could simply be avoided or reduced by optimizing planning. Yet the continuous increase in population densities exacerbates land scarcity. Scientists predict that this type of displacement will continue in the future as a companion of development and one of its painful social pathologies. Most governments do not disclose, or understate, the aggregate statistics of development-caused displacements. Research by the World Bank concluded that during the last two decades of the twentieth century at least 180 million people were displaced worldwide over a decade by development projects in just three economic sectors: urban, transportation, and dam construction. This number would be larger if statistics from other sectors would become available. Since 1948, during India’s short postindependence history of five decades, over 50 million people were displaced by development projects. The World Summit in Johannesburg in 2003 defined compulsory displacements for development reasons as a global problem.

Within the large category of development-displaced people, several subcategories can be distinguished by applying additional criteria. Along sectoral criteria, for instance, distinctions can be made mainly between urban sector displacement, agricultural and forest sector displacement, hydropower dam–caused displacement, industrial and mining displacement, and transportation corridor–caused displacement (such as highways, railways, airports, and high-speed train lines). Research has pointed out also the category of conservation-induced population displacement, as when traditional residents are evacuated out of vast expanses of lands, declared as “parks” or “protected areas” to be preserved uninhabited. Such subtypes are conventional groupings, usually proposed by resettlement researchers, but they are based on real, objective features and differences, and are necessary for elaborating different policy solutions and for diagnostics, predictions, and better planning.

In turn, the resettlement patterns that result as outcomes of displacement can in turn be used as a typology criterion. New concepts have been coined during the last decade to distinguish “new settlement” creation from “infill resettlement,” as well as “linear resettlement” (in railway track construction) or “vertical resettlement,” when land scarcity leads to resettling single-floor-dwellers in multifloor buildings (an approach widely used in China).

Impoverishment Risks in Displacement

Development-caused displacements embody a perverse contradiction of development itself, as they reflect the inequitable distribution of benefits and losses from development and raise major ethical questions. The worst and most widespread effect of development-induced displacements is the impoverishment of a vast number of people.

Empirical research has identified the risks of impoverishment, destitution, and social disarticulation imposed on the internally displaced people. These risks are synthesized in the Impoverishment Risks and Reconstruction (IRR) Model for Resettling Development-displaced Populations (Cernea 1997, 2000), which highlights the following eight fundamental risks of impoverishment: landlessness; joblessness; homelessness; marginalization; increased mortality and morbidity; food insecurity; loss of access to common property natural resources; and social disarticulation. Given the political and cultural complexities of displacement, which go beyond the eight risks listed above, policies and projects must address impoverishment risks at three interrelated levels: (a) risks confronting individuals and households; (b) risks confronting communities; and (c) society/systemic risks. Displacement processes are complex processes occurring under essentially unequal power relations, are always
politically underpinned, and cannot be regarded or treated as simply “technical” operations.

In turn, the IRR model also highlights the poverty and environmental risks that the displaced groups create at arrival sites. These are, in essence, risks newly imposed upon the host populations and risks to the surrounding environment. Increased population densities at arrival sites aggravate competition for natural resources and jobs; further, relocation processes often tend to exceed the carrying capacity of the environment and entail unsustainable use of limited natural resources, soil erosion, and deforestation.

Since governments or private-sector corporations initiate the projects that cause such displacement, it is incumbent on these governments or corporations not only to provide full compensation, but also to support the sustainable resettlement and livelihood improvement of the people displaced by development through added investments to finance the development of the affected population.

The Use of Typologies in Practical Work
Given the diverse causes of displacement, assistance and support work must be tailored to the characteristics of each major category and further adjusted operationally to specific local circumstances. For refugees, the main solutions include repatriation, or absorption and integration at the arrival place. Humanitarian assistance during the refugee-status period is indispensable. Relocation of refugees in improvised camps or colonies is regarded only as a temporary-relief response to humanitarian emergencies, not as a solution. In the case of development-caused displacements, such camps are fully unacceptable.

For development-displaced people, the obligations incumbent upon the displacing agent (the state or private sector corporations) are high. For instance, the IRR model outlines the strategies necessary to counteract the risks of impoverishment, including land-based resettlement, employment provision, and house reconstruction. Such measures must be articulated into resettlement action plans. Internationally accepted guidelines require that each project that causes displacement should contain also a resettlement action plan, adequately financed. Socially responsible resettlement involves also the reempowerment of the population uprooted and disempowered by displacement. This can best be achieved by enabling resettlers to self-organize, express their needs, and participate in planning the relocation and postrelocation development. For this, the adoption of explicit international and national policy standards and legal frameworks to regulate development-caused displacement and resettlement is indispensable.

Michael M. Cernea

See also Diasporas

Further Reading
The history of woman is the history of the continued and universal oppression of one sex by the other. The emancipation of woman is her restoration to equal rights and privileges with man. • Tennesse Claflin (1846–1923)

As early humans moved out of Africa and into colder, more hostile climates they were confronted with the problem of keeping warm. Without a thick coat of hair to protect them from the elements they had to create an artificial means of retaining body heat in order to survive. From this basic need developed the rich and varied dress of the world’s peoples. As societies began to develop, many other factors determined the specific dress of a region or a culture, including the technological levels, relative affluence, class and hierarchy, migration, war, religion, and industrialization. Historically dress has provided people with a visual cue that allows for the instant determination of ethnicity, class, gender, profession, economic status, and even place of origin. It forms an important element in social, technological, and economic history and can be an excellent basis for the study of culture. People have used dress throughout history to both accentuate and obscure the body. Most cultures have particular dress for ceremonial occasions and life celebrations, thus dress holds a central role in ritual, social, and political life.

Early clothing was dictated not only by climate and environment, but also by available clothing materials. The earliest forms of dress were probably animal skins, at first used in their original shapes and later modified to fit the human form. The invention of textiles increased the scope and variability of early dress. Despite the wide diversity of dress globally, early humans developed a limited number of basic garment shapes. The first woven garments were probably simple rectangles or squares of fabric draped or wrapped around the body. These multi-purpose garments could be used as a skirt, cloak, or even as a shelter or bundle for carrying possessions. Its descendants include the Roman toga, the Indian dhoti, and the Indonesian sarong.

A hole for the head in the middle of the basic rectangle increased the possibilities for covering the body. This garment could be worn loose, like the Peruvian poncho, or belted around the body. The sides could be sewn up to form a closed garment, like the Greek chiton. The addition of sleeves created the T-shaped tunics of the Roman and early European medieval periods and even the humble T-shirt. By slitting the T-shaped garment down the front, coatlike overgarments such as the Arabian abaya were created. In the steppes (vast, usually level and treeless tracts) of central Asia nomads refined the coat by adding triangles of fabric to the front opening that overlapped the chest area. This garment, the cross-fronted tunic, influenced early Chinese and Asian dress and can be seen today in the Afghan and central Asian khalats and even the Japanese kimono. Any of these basic garments could be worn in combination or in addition to skirts or pants to further cover the body and protect it from the elements.

After the basic necessities were taken care of, dress became more elaborate, formalized, and regulated. It began to differentiate one group, class, culture, or religion from another. Clothing that mirrored social divisions and defined subcultures allowed an instantaneous visual...
determination of the wearer’s place and status. Any deviation from the norm could be read as a change of identity or status and determine who was friend or foe. Dress became even a tool of governmental social policy—to promote national solidarity, to define the limits of accepted society, and even to force modernization. Russian Czar Peter the Great’s insistence on Western dress for nobles and the Turkish soldier and statesman Kemal Atatürk’s dress reform for Turkey were attempts to achieve modernization through clothing reform.

**Gender**

Gender is an important component of dress. Most cultures have specific styles that differentiate or reinforce gender divisions and enforce gender and social stability. For Western societies gender dress has meant skirts for women and pants for men. This differentiation is not a global standard, and women often wear pants, whereas in other regions men wear “skirts,” usually in the form of sarongs, hipwraps, or kilts. The symbolism placed on a garment by a particular society makes a garment “male” or “female.” Gender-specific dress can accentuate physical differences between the genders and/or emphasize erotic areas of the body, often by deformation of the body by padding, corseting, or other means. In many cultures women’s dress directly reflects the wealth of their husbands or fathers, making dress an economic indicator. Some forms of women’s dress, such as foot binding in China, have become symbolic of women’s reduced position in patrilineal societies. The Islamic veil, to many Westerners, symbolizes the subjugation of Islamic women. However, for many Islamic women the veil is a symbol of religious identity. It is also an example of the strength of custom. Veiling predates the Prophet Muhammad by six hundred years or more and is not a requirement of the Quran. As Islam spread, religion and local customary practices became inextricably linked. Deveiling campaigns in the former Soviet Union, Republican Turkey, and modern France have met with resistance by religious women who view the veil as an important part of their religious identity.

Dress also has served to identify and define class and to mark social divisions. Divisional dress predates the rise of consumerism and is tied to a desire for upward mobility. Elaborate garments for the ruling elite highlight personal and national prestige and wealth and set the ruling elite apart from the rest of society. At the same time prescribed dress for those participating in royal courts limits their participation outside the rarefied atmosphere of the court. Expensive fabrics, trimmings, and extravagant cuts elevated the wearer above the working classes. This elevation came at a price. Women’s fashionable dress in Renaissance Italy, with its ultrawide sleeves, restricted movement, as did the heavy woolen folds of the Roman toga. Court ritual in China required the emperor to comply with elaborate rules and highly specific dress requirements for rituals. He was both elevated and restricted by the same dress that reinforced his power.

Dress also can be used to enforce the status quo.
Sumptuary (relating to personal expenditures) laws that govern the clothing of particular classes developed in early times. They are most numerous where class tension exists. During the early Ottoman Empire sumptuary laws were seldom published, implying that the social boundaries between classes were generally accepted. However, in early modern Europe the frequent publication of such laws coincided with the struggle for power between the nobility and the rising middle class.

Just as dress can denote status, it can also denote subjugation. An example is the queue (a braid of hair usually worn hanging at the back of the head) and Manchu clothing that were imposed by the conquering Qing dynasty (1644–1912) on the ethnic Chinese. Clothing of subjugation can take on symbolic meaning and come to represent the political system that institutes it. Its removal also can take on political overtones. One of the symbols of the 1911 Chinese Revolution was severing the queues, although Manchu clothing was mostly retained because of its practicality.

**Occupations**

Within social divisions dress often became a marker for occupations. Specialized garments developed to protect workers or their clothing from the dangerous elements of their profession. Dress such as the blacksmith’s apron or the baker’s hat became integral parts of the craft or professional identity. In some cases, such as academic dress, specific garment details became institutionalized and continued as a marker long after their original purpose was gone. Today the color of one’s collar is used to denote hierarchy in the Western workforce. Occupational custom could be so strong that workers had to fight for the right to wear more practical attire. U.S. nurses and female hospital workers faced both custom and gender boundaries in their battle to wear pants instead of skirts and white hose at work.

Dress can be an external expression of one’s religious
beliefs. For Christians, dressing the body is directly tied to the concept of original sin. For Orthodox Jews, Muslims, and people of many other religions, dress symbolizes their membership in a religious community and sets them apart from the surrounding societies. Religious attire may be differentiated by color, cut, fabric, or even, in some cases, the absence of dress itself. Like academic dress, clerical dress often contains stagnated forms of historical garments. Ritual dress for religious elites shows the power, prestige, and the wealth of the religious establishment. Modernization has altered Western religious dress, making it more secular in appearance.

A difference between urban dress and rural dress has probably existed since the development of cities, but industrialization and its accompanying mass migration of labor to the cities have made this difference even more striking. “Fashion” generated in the cities was part of the reason, but the availability of finer cloth and manufactured clothing also separated urban from rural. Workers adopted “city clothes” to fit in and show their connection with their new environment, and a mix of urban and rural dress illustrates the mixed consciousness of early industrial workers. Strangely, fashion sometimes reverses this pattern, with urban residents adopting the clothing of the countryside in a nostalgic attempt to recapture a simpler past.

Modern manufacturing, communication, and advertising have increased the importance of fashion and the speed at which it changes and spreads, even creating an international fashion of T-shirts, blue jeans, and sport shoes that defies gender, nationality, and class. Although a Western “institutionalized fashion cycle” began in the courts of fourteenth-century Europe, fashion has likely been around nearly as long as clothing. Since prehistoric times humans have shown an interest beautifying their clothing with beads, feathers, and other sorts of trim. They have also shown an interest in changing clothing styles, although at a much slower pace than today. Roman writers described the importance of fashion during their time, and during the Tang dynasty (618–907 CE) in China, feathered skirts were so popular that certain species of birds were threatened with extinction.

Two girls in their First Communion costumes. The use of special clothing is an element in many religious rituals in many religions.

The words native and traditional are often used in dress history to imply something that is static and unchanging. These two words are often used interchangeably with the word authentic, implying freedom from modern contamination and a continued cultural longevity. Dress, however, like material culture in general, does not develop in isolation. It develops with internal and external forces. Modern concepts of “traditional dress” are often based on festival or ceremonial clothing and are divorced from what people actually wear on a day-to-day basis. Even such festival or ceremonial clothing is a hybrid of indigenous styles and outside or modern influences. African traditional clothing, for example, is a result of centuries of contact and borrowing from African, European, and Arabic cultures. Within these “traditions” runs a current of nuanced and ever-changing fashion that may be unnoticed by outside observers. Many wearers of “traditional dress” willingly trade customary fabrics for modern human-made ones and incorporate
“nontraditional” objects into their clothing in order to appear more fashionable.

The Hawaiian muumuu was concocted by missionaries to “civilize” the native population by covering its nakedness. “Native” dress in Central and South America, as well as in central Asia and Africa, shows strong colonial influence, especially the multi-tiered flounced skirts. Western hats and garments of all sorts were adopted by indigenous peoples because of a desire to “fit in” or to mimic the ruling powers or in some cases because of market considerations. Native Americans adopted European garments and, like the workers of the industrial cities, combined them with their regular dress, creating a picture of mixed consciousness. Industrial development made fabric cheaper and often replaced native weaving styles and economy. The introduction of artificial dyes replaced natural dyes and increased the range of colors used in native clothing.

In some cases “traditional” dress has even been fabricated. The Welsh national costume for women was invented during the 1830s when Welsh advocate Lady Llanover (Augusta Waddington) romanticized Welsh country dress and published drawings and paintings of her fantasy costumes. By the twentieth century this fictitious “Welsh dress” became a popular festival dress and tourist attraction. The Scottish and Irish “cultural revival” styles of the twentieth century are other examples of the fabrication or manipulation of existing styles for political purposes.

Dress forms a rich and varied component of global history. It can be used to illustrate economic development, social hierarchy, gender, modernization, and a multitude of other factors in human history.

Rebecca Wendelken

See also Festivals; Textiles

**Further Reading**


**Drugs**

Psychoactive drugs became global commodities with the expansion of oceanic trade from the late fifteenth century. In many ways the diffusion of drugs resembled that of germs. That which had been confined to one region, continent, or hemisphere spread around the world. The principal difference was that drug production and commerce were deliberate and profit motivated, while the introduction of germs was not. Only from the late nineteenth century onward did political elites reevaluate the lucrative international trade in drugs and begin selectively imposing restrictions.

The most important drug commodities produced and traded in both hemispheres were alcoholic and caffeinated beverages, tobacco, opiates, cannabis, and various coca products. Psychoactive exchanges occurred in both directions, from west to east and east to west. Tobacco, coca, and cacao originated in the New World and spread to the Old. Liquor, wine, opium, and cannabis originated in the Old World and spread to the New. Sugar cane, another important transplant from the Old World, was used to make rum. Sugar also sweetened bitter-tasting psychoactive products, among them chewing tobacco, coffee, tea, chocolate, and even opium. A spoonful of sugar made the drugs go down.

Not all local or regional drugs became global products. For reasons that ranged from spoilage problems to cultural prejudice against their effects, use of khat, kava, betel, peyote, mescal beans, and many other substances remained confined to one hemisphere or the other. For a drug to become a global commodity, it first had to catch on in one or more of Europe’s seafaring imperial nations: Portugal, Spain, the Netherlands, Great Britain, and...
France. Only their merchants, planters, and seamen had the means to ensure that the drugs they valued became worldwide trade goods and cash crops.

**Tobacco as a Model**

Tobacco offers the clearest example of European adoption and global dissemination of a novel psychoactive drug. Tobacco use and cultivation had originated in South America and spread northward, reaching the upper Mississippi Valley by 160 CE. It also had taken root in the Caribbean, where in 1492 two of Columbus’s crew observed Taino Indians smoking tobacco. Later explorers and missionaries often described native smoking rituals. But in Europe, early interest in tobacco centered on its possible medical uses. The Seville physician Nicolas Monardes (1493–1588) recommended that tobacco be applied topically to aches and wounds; swallowed to kill worms; or chewed to alleviate hunger and thirst. Others valued it as an antidote to epidemics. Tobacco was much in demand when plague visited Europe’s cities.

Tobacco also caught on among soldiers, sailors, and courtiers, including England’s Sir Walter Raleigh (1552–1618). Begun as a pastime and continued as an addiction, nonmedical tobacco use proved controversial. Critics said it sickened and impoverished its enslaved users. The practice nevertheless continued to spread in taverns and brothels, and in distant lands visited by pipe-smoking sailors. Demand grew, and so did profits for cultivators. The Spanish introduced tobacco to the Philippines, where it became a cash crop after 1575. About 1600 sailors and merchants from Fujian, in southeastern China, took the plant back with them from the Philippines. Between about 1590 and 1610 the Portuguese introduced tobacco to West Africa, India, Java, Japan, and Iran. Subsequent diffusion from these places made tobacco a truly global crop.

Seventeenth-century clerics, physicians, and monarchs in lands as far separated as Great Britain and China condemned the nonmedical use of tobacco. But even public executions of recalcitrant smokers failed to check tobacco’s progress. By the end of the seventeenth century prohibition had given way to regulation and taxation, as tobacco settled into a long career as a lucrative nuisance. It became a major source of tax revenue and, for European overseas empires, a mainstay of colonial agriculture, expanding through the African slave trade. The more the American plantations produced, the more Europeans and their reexport customers consumed. As with sugar, plantation agriculture increased supply and drove down the price. Chesapeake tobacco that had sold for as much as sixteen English pennies a pound in the early 1620s was bringing only one penny by 1670. Practically everyone could afford to smoke, chew, or snuff the drug—the method of consumption varying by region, gender, class, and shifting fashion.

**The Advantages of Drug Commerce**

The story of tobacco repeated itself, with variations, for all the major global drugs. When Europeans discovered a novel psychoactive substance (or learned to manufacture one, as in the case of distilled spirits) they always investigated possible medical uses. This aspect of drug dissemination—doctors debating indications, doses, and side effects—seldom caused public alarm. Several therapeutic breakthroughs, such as the 1884 discovery of cocaine’s local anesthetic properties, won universal approval. Controversy arose only when a pattern of nonmedical use
emerged, as in England’s early eighteenth century gin-drinking epidemic, the “luxurious” use of opium by the idle rich, or, in the age of synthetic and semisynthetic drugs, self-intoxication with barbiturates, heroin, and amphetamines.

For most of eighteenth and nineteenth centuries government officials tolerated drug abuse and poisoning as unfortunate by-products of a lucrative commerce. Drugs were, in many ways, ideal products. Because they were quickly consumed, regular users had to constantly replenish their supplies. Because they caused tolerance—larger and larger doses were necessary to achieve the same effect—sales volume tended to increase over time. And because drugs addicted at least some users, demand was relatively inflexible. In the early days of the 1849 California Gold Rush, tobacco sold for close to its weight in gold. Entrepreneurs rushed supplies from Honolulu and other ports to San Francisco, whose warehouses soon bulged with tobacco.

Alcohol and tobacco were ideal barter goods. Merchants traded them for native labor and for such products as sandalwood, trepang (sea cucumbers), copra, and peltries (furs and skins). The early modern fur trade, a global enterprise that tied Europe’s cities to the remotest backwoods of Siberia and the Americas, was in essence also a drug trade, with profits running as high as 400 percent on the watered spirits supplied to natives. Alcohol and tobacco proved just as useful in acquiring African slaves. Between 1700 and 1830 perhaps one in every four slaves imported from Luanda and Benguela to Brazil was paid for with rum. The slave-plantation-drug complex became a sort of economic perpetual-motion machine. Slaves grew tobacco and sugar; sugar was manufactured into rum; tobacco and rum (as well as coffee and cacao) helped pay for more slaves, who raised more drug crops.

Political elites profited from the growing drug commerce through taxation. Imperial Russia, for example, essentially paid for its military by taxing alcohol. Colonial administrators in Africa and Asia depended on alcohol taxes, often supplemented by opium revenues. They periodically auctioned the exclusive right to sell opium (the “opium farm”) to the highest bidder, usually a syndicate of Chinese merchants. During the nineteenth century Singapore derived half its revenue in this manner. The French profited from a similar commerce in Indochina. In 1945, when Ho Chi Minh (1890–1969) officially declared Vietnamese independence, he specified the opium and

---

**Tobacco Cultivation in the West Indies**

*Spanish historian Gonzalo Fernandez de Oviedo y Valdes (1475–1557) published the extensive *La General y Natural Historia de las Indias over several decades beginning in 1526. In the excerpt below, he describes the “very bad” vice of tobacco use.*

Among the vices practised by the Indians of this island there was one that was very bad; which was the use of certain dried leaves that they call tabaco to make them lose their senses. They do this with the smoke of a certain plant that, as far as I have been able to gather, is of the nature of henbane, but not in appearance or form, to judge by its looks, because this plant is a stalk or shoot four or five spans or a little less in height and with broad and thick and soft and furry leaves, and of a green resembling the colour of the leaves of ox-tongue or bugloss (as it is called by herbalists and doctors). This plant I am speaking of in some sort or fashion resembles henbane, and they take it in this way: the caciques and leading men have certain little hollow sticks about a handbreadth in length or less and the thickness of the little finger of the hand, and these tubes have two round pipes that come together, . . . and all in one piece. And they put the two pipes into the openings of their nostrils and the other into the smoke of the plant that is burning or smouldering; and these tubes are very smooth and well made, and they burn the leaves of that plant wrapped up and enveloped in the same way the pages of the court take their smokes: and they take in the breath and smoke once or twice or more times, as many as they can stand, until they lose their senses for a long time and lay stretched out on the ground or in a deep and very heavy sleep.

Source: Ortiz, F. (1947). *Cuban counterpoint, tobacco and sugar* (pp. 120–122). New York, Knopf.
alcohol traffic as among the many imperialist crimes the French had committed against his people.

**Restriction and Prohibition**

Revulsion against imperial drug profiteering was one important reason for the worldwide movement to restrict or prohibit drug trafficking. The reformers initially concentrated on China, where nationalists and Christian missionaries had long been concerned with opium smoking. The problem originated with opium imports from British India in the eighteenth and nineteenth centuries. Though forbidden by Chinese imperial edict, the import trade flourished, and acquired legal status after the British prevailed in the Opium Wars of 1839–1842 and 1856–1858. Chinese domestic production rose even faster than imports; by the early twentieth century the Chinese were growing most of their own opium in vast poppy fields. The traffic threatened the nation’s health, morale, and productivity. Chinese officials wanted it stopped. So did Britain’s reformist and temperance-minded Liberal government, which came to power in 1906. The following year, 1907, the British began to phase out Indian opium exports, conditional upon the Chinese eliminating domestic production at a similar rate. In 1913 the India-China opium trade officially came to an end. The initial (if imperfect) success of this joint effort set a precedent for supply control, which became the central object of drug diplomacy for the rest of the twentieth century.

By 1912 diplomats from Britain, the United States, and other nations had hammered out the Hague Opium Convention, a treaty aimed at limiting the manufacture and consumption of opium and coca-based drugs to the amount required for medical purposes. At first Germany, whose pharmaceutical industry could produce large amounts of narcotics, put off signing the agreement. But, after defeat in World War I (1914–1918), Germany and its ally Turkey, a leading opium producer, were required to ratify the Hague Convention as part of the peace process. Over the next half century diplomats and drug-control bureaucrats negotiated further amendments and treaties, the upshot of which was tighter narcotic production and export regulations. The 1971 Psychotropic Substances Convention brought several new categories of drugs, including hallucinogens, amphetamines, and barbiturates, into the international control regime.

None of this diplomacy ended international drug trafficking, though it did reduce its volume and alter its character. Criminal syndicates and guerrilla armies played an increasingly important role in the clandestine manufacture and illegal distribution of regulated drugs. Illicit trafficking became concentrated in chaotic or weakly governed regions, such as China between the world wars or Colombia in the late twentieth century. Protracted civil war was good for the illicit drug business. Contending factions knew they could acquire cash for weapons by protecting local growers and smugglers, and appropriating a share of their profits.

The international movement to rein in the narcotic traffic was part of a larger campaign against the abuse of psychoactive substances. By the late nineteenth and early twentieth centuries the world was awash with manufactured drugs, including cheap spirits and mass-produced cigarettes. A growing body of medical evidence testified to the toxic effects of these substances, both for their users and for children exposed in the womb. Urbanization and industrialization had made intoxication more wasteful and dangerous. No one wanted drunken operators around heavy machinery, or behind the wheels of the growing fleet of motor vehicles. The new industrial realities also gave rise to a cosmopolitan progressivism, a conviction that governments should restrain economic activity that generated inordinate social costs. To many progressive reformers, poisoning people for profit fell into the same category as rapacious monopoly, unrestrained industrial pollution, and adulterated food. All merited government suppression.

What made drug suppression tricky was that exceptions had to be made for legitimate medical use. Even in the United States during Prohibition (1920–1933), medicinal alcohol was exempted and widely available through prescription. By the last third of the twentieth century the problem of medical exemption was commonly resolved by a system of “scheduling.”
sorting drugs into legal categories according to their medical benefits, toxicity, and addiction potential. The most restrictive category, which included hallucinogens such as LSD or (in some nations) cannabis, amounted to prohibition. Other categories ranged from tight controls on manufacturing and distribution for drugs like methadone, a synthetic opiate, down to simple prescription requirements for drugs of lesser abuse potential. Unscheduled drugs such as caffeinated beverages, tobacco, and alcohol were regulated, if at all, through tax policy and restrictions on advertising or sales to minors.

The Double Standard
The most anomalous feature of the modern control system was that it privileged tobacco and, at least outside of Islamic lands, alcohol, despite the fact that tobacco and alcohol were as harmful as many of the drugs subject to stricter controls. As lung tumors became the world’s most common form of cancer, critics complained that it made no sense to outlaw marijuana while permitting worldwide sales to pass, in 2000, a record 15 billion cigarettes a day. In fact, given tobacco’s role as a “gateway” drug (those who smoked tobacco were far more likely to experiment with other drugs), there wouldn’t have been as much marijuana use if cigarettes hadn’t been so readily available.

Though irrational in public health terms, tobacco and alcohol’s underregulation made sense in economic and sociological terms. The smaller and more deviant a drug-using population, the easier it was to impose and maintain restrictive legislation. The larger and less deviant, the harder it was. By the early twentieth century nonmedical cocaine use was widely associated with prostitutes and, in North America, with renegade black men. The places that grew most of the world’s coca, Peru and Java, were poor and politically inconsequential. That simplified the task of international control. The same couldn’t be said of alcohol production, then an important industry on every continent except Antarctica. In the early twentieth century, one in every eight Frenchmen derived income from some aspect of the alcohol business. The scale of potential opposition was one important reason why
politicians generally preferred alcohol taxation to stricter forms of control. That most of these politicians enjoyed alcohol themselves was another factor, elites being disinclined to outlaw their own vices.

The popularity of cigarettes conferred similar advantages on tobacco companies, at least until the late twentieth century, when the educated classes in Western societies began shunning their products. The tobacco companies’ wealth nevertheless permitted them to pursue a sophisticated strategy to save their business in the face of damning medical evidence. They hired public relations experts to obfuscate the health issue; deployed lobbyists to block, delay, or water down antismoking measures; advertised cigarettes as cool products to attract new teenage smokers; and aggressively expanded in developing nations, many of which lacked tobacco marketing regulations. In 1999 and 2000 World Health Organization (WHO) investigators found that 11 percent of Latin American and Caribbean school children between the ages of thirteen and fifteen had been offered free cigarettes by tobacco industry representatives. In Russia the figure was 17 percent, in Jordan 25 percent. Outrage at such tactics, coupled with alarm over the health consequences of the cigarette pandemic, prompted an international anti-tobacco movement, not unlike the narcotic control campaign of a century before. To date the principal diplomatic achievement of this movement has been the WHO’s 2003 Framework Convention on Tobacco Control. This agreement commits signatories to such goals as advertising restrictions, smoke-free environments, and state-funded treatment for those trying to quit—an ambitious agenda in a world of 1.3 billion smokers.

David T. Courtwright

See also Alcohol; Coffee

Further Reading


American writer and educator

William Edward Burghardt Du Bois was one of the most important African American leaders in the United States in the first half of the twentieth century. He made significant contributions as a journalist, sociologist, historian, novelist, pamphleteer, civil rights leader, and teacher. Among his many publications are sociological studies as well as studies of the slave trade (1896), John Brown (1909), and Reconstruction (1935).

Du Bois was born on 23 February 1868, in Great Barrington, Massachusetts. In 1884, he graduated from Great Barrington High School as valedictorian of his class. In 1888, Du Bois graduated from Fisk College in
Nashville, Tennessee. It was while in Tennessee that Du Bois first experienced overt racial discrimination. Du Bois earned a second bachelor’s degree (1890) and a master of arts degree (1892) from Harvard University. From 1892 to 1893, he studied at the University of Berlin, where he was greatly influenced by the socialist scholar Edward Bernstein. Du Bois remained sympathetic to Marxism for the rest of his life.

In 1895, W. E. B. Du Bois was awarded the first doctorate to be granted to an African American by Harvard. His doctoral dissertation, *The Suppression of the African Slave Trade to the United States of America, 1638–1870,* was published in 1896. It constitutes a pioneering application of economic analysis to history. Previous studies of slavery had given little attention to slavery’s indissoluble connection to the cotton market.

After receiving his doctorate from Harvard, Du Bois served as a professor at Wilberforce University (1894–1896) and as an assistant instructor of sociology at the University of Pennsylvania (1896–1897). But he is best known for his long association with Atlanta University, where he was a professor of economics and history from 1897 to 1910 and served as the chair of the sociology department from 1934 to 1944.

Between 1897 and 1914, Du Bois completed multiple sociological investigations of African Americans, including *The Philadelphia Negro: A Social Study* (1899), which is the first case study of an urban African American community ever conducted in the United States.

Du Bois’s views on civil rights clashed with those of another prominent African American leader, Booker T. Washington. Washington urged African Americans to accept discrimination for the time being and encouraged them to elevate themselves through hard work. At first, Du Bois agreed with Washington. He applauded the famous 1895 Atlanta speech in which Washington argued for “segregated equality.” But changes within African American communities militated against Washington’s position as African American migration accelerated the growth of black ghettos. Du Bois addressed Washington’s position in a chapter of his most widely known book, *The Souls of Black Folk* (1903), cogently arguing that Washington’s strategy could serve only to perpetuate the further oppression of African Americans.

*The Souls of Black Folk* also gave first expression to Du Bois’s most abiding theoretical contribution to African American studies. He underscored the characteristic dualism of African Americans: “One ever feels his ‘two-ness’ —an American, a Negro; two souls, two thoughts, two irreconcilable strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder” (1996, 58).

In 1905, Du Bois founded the Niagara Movement. This small organization, which met annually until 1909, was seriously weakened by internal squabbles. Nevertheless, it is significant as the forerunner of the National Association for the Advancement of Colored People (NAACP).

Du Bois played a major role in founding the NAACP in 1909 and became the association’s director of research. As founding editor of its magazine *The Crisis,* he wrote editorials that resulted in a number of changes to public policy: the admission of African Americans to officers’ training schools, establishment of legal procedures against those accused of lynching African Americans, and the creation of a federal work plan to benefit African American veterans.

Du Bois’s nationalism took a variety of forms. He was a strong advocate of Pan-Africanism—a political ideology based on the belief that all people of African descent had common interests and should work together in a common struggle for freedom. In 1900, Du Bois served as an organizer of the first Pan-African Conference, which was held in London. He was also the architect of four subsequent congresses held between 1919 and 1927.

In addition, Du Bois was an advocate of economic nationalism. He asserted that African Americans needed to develop a separate “group economy” of producers and consumers. Others within the NAACP did not see it this way. Du Bois’s ideas brought about an intense ideological split within the organization, and in 1934 Du Bois resigned from the NAACP.

After leaving the NAACP, Du Bois returned to Atlanta University, where he devoted the next ten years of his life
to teaching and research. In 1940, he founded the magazine *Phylon: The Atlanta University’s Review of Race and Culture*. He also produced two major books: *Black Reconstruction* (1935) and *Dusk of Dawn* (1940). *Black Reconstruction* provided an innovative and exhaustive treatment of a pivotal period in African American history. *Dusk of Dawn* was autobiographical and recounted Du Bois’s role in the civil rights struggle.

Following a decade of teaching at Atlanta University, Du Bois returned to the NAACP, where he held a research position from 1944 to 1948, but this affiliation ended in yet another bitter debate.

In the 1890s, Du Bois had been an outspoken supporter of capitalism, publicly urging African Americans to support African American businesses. By 1905, however, he became thoroughly convinced of the advantages of socialism. He joined the Socialist Party in 1912 and remained sympathetic to socialist ideals for the rest of his life.

After 1948, Du Bois moved further leftward politically. He began to identify with pro-Russian causes and was indicted in 1951 as an “unregistered agent for a foreign power.” Although acquitted of all charges, Du Bois became increasingly disillusioned with the United States. In 1962, he renounced his American citizenship and moved to Ghana, where he was to serve as editor in chief of the *Encyclopedia Africana*. The encyclopedia was never completed.

W. E. B. Du Bois died on 27 August 1963 in Accra, Ghana. The majority of his personal papers are archived at the University of Massachusetts at Amherst.

Stephen D. Glazier

See also Pan-Africanism; Race and Racism

---

**Further Reading**


---


---

**Dutch East India Company**

Historians have identified the Dutch Republic as the “first modern economy,” while the Dutch East India Company (V.O.C. after its Dutch initials) has, deservedly or not, been styled the “first modern corporation.” In the context of the Eighty Years War (1568–1648), the general expansion of trade and shipping, and, to a lesser extent, the missionary impulse of Calvinism, Dutch overseas expansion was spurred by a powerful combination of politico-economic, commercial, and religious motivations. The “First Shipping” to Asia of 1595 was followed by the creation of “pre-companies” in various cities of the northern Netherlands trading to the East. To curb internal competition and forge a military-diplomatic tool against the Spanish and Portuguese colonial possessions, these “pre-companies” were merged into a United East India Company. On 20 March 1602, the States General issued a charter, which would be continuously renewed until 31 December 1799, when the possessions of the V.O.C. were taken over by the Dutch government.

In the “age of mercantilism,” the V.O.C. was given a monopoly on all shipping “from the Republic east of the Cape of Good Hope and through the Strait of Magellan,” effectively covering the entire Indian Ocean Basin. The board of directors, or Gentlemen Seventeen, consisted of eight representatives from Amsterdam, four from Zeeland (Middelburg), one from each of the four smaller chambers (Rotterdam, Delft, Hoorn, and Enkhuizen), and a final member selected by Zeeland or one of the smaller chambers. The charter also granted the company delegated sovereign powers, including the right to appoint
governors, build forts, maintain armies and fleets, and conclude treaties with or wage war against indigenous rulers.

A central Asian rendezvous and trade emporium was established at Jakarta, renamed Batavia, on the island of Java in 1619. Batavia was the seat of the High Government, the Governor General and the Council of the Indies, coordinating activities of the company settlements in the East. The V.O.C. divided its trading operations in Asia into three categories, with their relative significance indicated by their respective designation. The core consisted of spice-producing areas or trade emporia, such as the “governments” of Ambon, Banda, Cape of Good Hope, Coromandel, Makassar, Northeast Coast of Java, Taiwan, and Ternate, where the company enjoyed trade as an outcome of its “own conquest.” A second category contained those regions, such as the “commandments” of Malabar and the West Coast of Sumatra, where the company conducted trade “by virtue of exclusive contracts.” The third category consisted of economically important establishments under a director, including Bengal, Surat, and Persia, parts of powerful indigenous empires such as Mughal India or Safavid Persia, and peripheral establishments under a resident, head, or chief, such as Banjarmasin, Ligor, or Tonkin, where trade was merely conducted alongside other merchants “by virtue of treaties.”

Before the industrial revolution, trade between Europe and Asia was characterized by a structural trade imbalance, following a “bullion for goods” model. (See table 1.)

Table 1.
Sources of Precious Metals Available to the Dutch East India Company in Asia from 1602 to 1795

<table>
<thead>
<tr>
<th>Years</th>
<th>Shipped from Europe</th>
<th>Assignaties*</th>
<th>From Japan</th>
<th>From Persia</th>
<th>From Gujarat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1602–1609</td>
<td>521</td>
<td>N.A.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>521</td>
</tr>
<tr>
<td>1610–1619</td>
<td>1,019</td>
<td>N.A.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,019</td>
</tr>
<tr>
<td>1620–1629</td>
<td>1,236</td>
<td>N.A.</td>
<td>395</td>
<td>0</td>
<td>0</td>
<td>1,635</td>
</tr>
<tr>
<td>1630–1639</td>
<td>850</td>
<td>N.A.</td>
<td>2,338</td>
<td>0</td>
<td>0</td>
<td>3,188</td>
</tr>
<tr>
<td>1640–1649</td>
<td>920</td>
<td>377</td>
<td>1,519</td>
<td>427</td>
<td>0</td>
<td>3,243</td>
</tr>
<tr>
<td>1650–1659</td>
<td>840</td>
<td>451</td>
<td>1,315</td>
<td>661</td>
<td>120</td>
<td>3,387</td>
</tr>
<tr>
<td>1660–1669</td>
<td>1,210</td>
<td>249</td>
<td>1,455</td>
<td>400–700</td>
<td>211</td>
<td>3,400–3,800</td>
</tr>
<tr>
<td>1670–1679</td>
<td>1,130</td>
<td>430</td>
<td>1,154</td>
<td>400–700</td>
<td>637</td>
<td>3,700–4,000</td>
</tr>
<tr>
<td>1680–1689</td>
<td>1,972</td>
<td>802</td>
<td>298</td>
<td>400–700</td>
<td>358</td>
<td>3,800–4,100</td>
</tr>
<tr>
<td>1690–1699</td>
<td>2,861</td>
<td>756</td>
<td>229</td>
<td>400–700</td>
<td>170</td>
<td>4,400–4,700</td>
</tr>
<tr>
<td>1700–1709</td>
<td>3,928</td>
<td>639</td>
<td>0</td>
<td>c. 600</td>
<td>N.A.</td>
<td>5,100–5,200</td>
</tr>
<tr>
<td>1710–1719</td>
<td>3,883</td>
<td>1,122</td>
<td>0</td>
<td>&gt;300</td>
<td>N.A.</td>
<td>5,300–5,400</td>
</tr>
<tr>
<td>1720–1729</td>
<td>6,603</td>
<td>796</td>
<td>0</td>
<td>&gt;300</td>
<td>N.A.</td>
<td>7,700–7,800</td>
</tr>
<tr>
<td>1730–1739</td>
<td>4,012</td>
<td>1,680</td>
<td>0</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>1740–1749</td>
<td>3,827</td>
<td>1,390</td>
<td>0</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>1750–1759</td>
<td>5,839</td>
<td>2,360</td>
<td>0</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>1760–1769</td>
<td>5,354</td>
<td>3,790</td>
<td>0</td>
<td>0</td>
<td>N.A.</td>
<td>9,200</td>
</tr>
<tr>
<td>1770–1779</td>
<td>4,831</td>
<td>3,590</td>
<td>0</td>
<td>0</td>
<td>N.A.</td>
<td>8,400</td>
</tr>
<tr>
<td>1780–1789</td>
<td>4,789</td>
<td>4,000</td>
<td>0</td>
<td>0</td>
<td>N.A.</td>
<td>8,800</td>
</tr>
<tr>
<td>1790–1795</td>
<td>1,697</td>
<td>1,340</td>
<td>0</td>
<td>0</td>
<td>N.A.</td>
<td>3,100</td>
</tr>
</tbody>
</table>

*Assignaties were bills of exchange issued in Asia upon deposit of gold or silver coin, payable at company offices in the Dutch Republic.

Precious metals served as the lubricant of the early modern world economy with important political, socioeconomic, demographic, and cultural ramifications, interacting with regional and local processes of state formation, social stratification, economic development, population movements, and intellectual-religious changes.

The economic history of the V.O.C. can be divided into three distinct periods: a monopolistic phase (1600–1680), determined by the acquisition of monopolistic or monopsonistic (market situation in which the product or service of several sellers is sought by only one buyer) positions in various commodities (pepper and fine spices) and markets (Japan); a competitive phase (1680–1740), dominated by less profitable, nontraditional products, such as textiles, coffee, and tea, available on the relatively open markets of India, Arabia, and China; and disengagement and decline (1740–1800), marked by the commencement of the era of Franco-British global wars and a distinct decline in terms of the volume of Dutch trade and shipping. (See tables 2 and 3.)

Historians have pointed to a number of factors contributing to the eventual demise of the company. Previous scholarship criticized nontransparent bookkeeping practices, the narrow financial basis of the V.O.C. and the resulting dependency on outside capital, failing entrepreneurship and lesser quality of company servants, lack

### Table 2.
**Homeward Cargoes in the Euro-Asian Trade: Analysis of Imports and Sales of Various Commodities at the Amsterdam Chamber in Selected Triennial Periods**

<table>
<thead>
<tr>
<th></th>
<th>1648–50</th>
<th>1668–70</th>
<th>1698–1700</th>
<th>1738–40</th>
<th>1778–80</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fine spices and pepper</strong></td>
<td>59.3</td>
<td>57.4</td>
<td>38.1</td>
<td>35.0</td>
<td>35.4</td>
</tr>
<tr>
<td><strong>Textiles and raw silk</strong></td>
<td>17.5</td>
<td>23.8</td>
<td>43.4</td>
<td>28.3</td>
<td>32.7</td>
</tr>
<tr>
<td><strong>Tea and coffee</strong></td>
<td>0</td>
<td>0</td>
<td>4.1</td>
<td>24.9</td>
<td>22.9</td>
</tr>
<tr>
<td><strong>Sugar</strong></td>
<td>8.8</td>
<td>2.0</td>
<td>0.2</td>
<td>3.0</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Drugs, perfumery, dye stuffs</strong></td>
<td>7.3</td>
<td>5.9</td>
<td>6.6</td>
<td>2.7</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Salt peter</strong></td>
<td>4.3</td>
<td>7.6</td>
<td>4.0</td>
<td>3.6</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Metals</strong></td>
<td>0.7</td>
<td>3.0</td>
<td>2.9</td>
<td>0.6</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Sundries</strong></td>
<td>2.1</td>
<td>0.3</td>
<td>0.7</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>


### Table 3.
**Financial Results (Expenditures and Sales Revenues) of the Dutch East India Company from 1640 to 1795**

<table>
<thead>
<tr>
<th></th>
<th>(in millions of guilders)</th>
<th>(in millions of guilders)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years</strong></td>
<td>Expenditures</td>
<td>Sale revenues</td>
</tr>
<tr>
<td>1640–1650</td>
<td>42.7</td>
<td>78.4</td>
</tr>
<tr>
<td>1650–1660</td>
<td>71.1</td>
<td>84.2</td>
</tr>
<tr>
<td>1660–1670</td>
<td>80.4</td>
<td>92.3</td>
</tr>
<tr>
<td>1670–1680</td>
<td>77.0</td>
<td>91.3</td>
</tr>
<tr>
<td>1680–1690</td>
<td>87.6</td>
<td>103.4</td>
</tr>
<tr>
<td>1690–1700</td>
<td>106.9</td>
<td>127.2</td>
</tr>
<tr>
<td>1700–1710</td>
<td>122.6</td>
<td>139.5</td>
</tr>
<tr>
<td>1710–1720</td>
<td>135.2</td>
<td>163.7</td>
</tr>
</tbody>
</table>

of coordination between the various levels of administration, and increasing corruption among V.O.C. officials in Asia. More recently, however, scholars have stressed changing consumption patterns for Asian products in Europe, declining profits from inter-Asiatic trade partly related to the decline of the Mughals (after 1707), the fall of the Safavids (1722), the increasingly restrictive policies of Tokugawa Japan after 1685, and the disruptions caused by the Fourth Anglo-Dutch War (1780–1784). Similar to the English East India Company some fifty years later, the V.O.C. fell victim to the ongoing processes of territorialization, especially on Ceylon and Java, and subsequent rising administrative overhead costs, along with the growing competition of British country traders. In the nineteenth century merchant capitalism and chartered companies were superseded by the overseas projection of industrial capitalism and the nation-state.

Markus P.M. Vink

See also Dutch Empire

Further Reading


Dutch Empire

Toward the end of the sixteenth century, Dutch ships started to explore the waters beyond Europe. Because of their rebellion against their Habsburg rulers, the Dutch no longer were able to operate as traders in the Portuguese and Spanish overseas empires or obtain non-European products in the Habsburg-controlled Iberian ports. In order to reduce the risks of conducting trade in Asia, the United East India Company (Vereenigde Oost-Indische Compagnie or VOC) was founded in 1602.

The United East India Company (VOC)

It was the first commercial venture in the world financed by anonymous shareholders with the aim of conducting business over a lengthy period of time, not just financing one trip or conducting business for one year. Within six months about 6 million guilders were collected. The company was made up of six local chambers, and according to its share in the capital outlay, each chamber was allowed to send representatives to the seventeen-member board of directors. The company received a monopoly from the government for trade and the right to declare war and conclude treaties with individuals and states in the whole of Asia.

During the first two decades of its existence, the VOC
# Expansion and Contraction of European Empires

<table>
<thead>
<tr>
<th>Century</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15th Century</strong></td>
<td>Portuguese knights capture Cueta in North Africa from the Muslims.</td>
</tr>
<tr>
<td></td>
<td>Columbus “discovers” the Americas for Spain and colonies are established in the Americas.</td>
</tr>
<tr>
<td></td>
<td>Portugal claims Brazil under the Treaty of Tordesillas.</td>
</tr>
<tr>
<td></td>
<td>Vasco da Gama of Portugal discovers an all-sea route to India.</td>
</tr>
<tr>
<td><strong>16th Century</strong></td>
<td>Portugal dominates the maritime trade in South and Southeast Asia.</td>
</tr>
<tr>
<td></td>
<td>The Pacific Ocean is “discovered” by Vasco Núñez de Balboa of Spain.</td>
</tr>
<tr>
<td></td>
<td>Spain claims the Philippines.</td>
</tr>
<tr>
<td></td>
<td>The Habsburg ruling house of Europe comes to power.</td>
</tr>
<tr>
<td></td>
<td>France establishes a presence in West Africa.</td>
</tr>
<tr>
<td></td>
<td>Portugal’s dominance in East Africa and Asia begins to decline.</td>
</tr>
<tr>
<td><strong>17th Century</strong></td>
<td>The English, Dutch, and French charter trading companies.</td>
</tr>
<tr>
<td></td>
<td>The English settle Jamestown in Virginia.</td>
</tr>
<tr>
<td></td>
<td>France establishes colonies in North America and the Caribbean.</td>
</tr>
<tr>
<td></td>
<td>Russia colonizes Siberia.</td>
</tr>
<tr>
<td><strong>18th Century</strong></td>
<td>France loses American colonies and territory to England and Spain.</td>
</tr>
<tr>
<td></td>
<td>The English lose control of their American colony.</td>
</tr>
<tr>
<td></td>
<td>The Dutch Republic becomes a colonial power with the abolition of its private trading companies.</td>
</tr>
<tr>
<td></td>
<td>The Dutch begin to lose most of their colonies to the British.</td>
</tr>
<tr>
<td></td>
<td>The Spanish empire declines.</td>
</tr>
<tr>
<td></td>
<td>By the time of the Treaty of Paris in 1763, England has become the dominant European colonial power.</td>
</tr>
<tr>
<td><strong>19th Century</strong></td>
<td>France under Napoleon regains territory in the Americas.</td>
</tr>
<tr>
<td></td>
<td>Haiti gains freedom from France through a slave revolt.</td>
</tr>
<tr>
<td></td>
<td>Brazil declares independence from Portugal.</td>
</tr>
<tr>
<td></td>
<td>Slavery is abolished by all imperial powers.</td>
</tr>
<tr>
<td></td>
<td>The Habsburg empire is transformed into the Austro-Hungarian empire.</td>
</tr>
<tr>
<td></td>
<td>The German empire is established after the Prussian defeat of France.</td>
</tr>
<tr>
<td></td>
<td>Russia colonizes Poland and Finland, the Caucasus, and Central Asia.</td>
</tr>
<tr>
<td></td>
<td>England, France, Spain, Portugal, Belgium, Germany, and Italy solidify their colonies in Africa.</td>
</tr>
<tr>
<td><strong>20th Century</strong></td>
<td>European control of its African colonies intensifies.</td>
</tr>
<tr>
<td></td>
<td>World War I starts when the Austro-Hungarian government declares war on Serbia.</td>
</tr>
<tr>
<td></td>
<td>The end of World War I marks the end of the Austro-Hungarian empire and the German empire.</td>
</tr>
<tr>
<td></td>
<td>Britain and France gain trust territories in Asia.</td>
</tr>
<tr>
<td></td>
<td>The British Commonwealth of Nations is created.</td>
</tr>
<tr>
<td></td>
<td>During World War II Japan takes Asian colonies from Britain, France, and the Netherlands.</td>
</tr>
<tr>
<td></td>
<td>Following the end of World War II, the British, French, Dutch, and Portuguese empires shrink as many former colonies become independent nations.</td>
</tr>
<tr>
<td></td>
<td>The Comunidade dos Países de Língua Portuguesa (CPLP) unites eight Portuguese-speaking nations.</td>
</tr>
<tr>
<td></td>
<td>The Russian-Soviet empire disintegrates.</td>
</tr>
</tbody>
</table>
needed government subsidies to stay afloat, but after 1620 its activities were increasingly more profitable. Trading between the various regions in Asia accounted for most of these profits. In 1619 the city of Batavia (now Djakarta) was founded as the pivot in the trade between the Dutch Republic and its trading partners in Asia. The governor general in Batavia concluded treaties with local rulers for the exclusive delivery of spices such as pepper, nutmeg, cinnamon, and cloves. In addition the company traded in opium, Chinese porcelain, tea, silk, and Indian cotton cloths. In order to obtain these goods, the company sent large of amounts of cash to Asia.

Over time the VOC grew to become the largest company in the world, employing more than 40,000 persons at the height of its existence. Yearly, more than sixty East Indiamen left the Netherlands for a year-long journey to Batavia, using the Dutch colony at the Cape of Good Hope as a stopover. However, during the course of the eighteenth century, competition from the British East India Company, the French, and even the Danes took business away from the VOC. In order to keep its shareholders and bondholders happy, the company started to borrow money in order to pay dividends. In spite of regulations, most of the company’s employees in Asia conducted trade on their own behalf, which was also detrimental to the company’s well-being, forcing it into bankruptcy. In 1799 the Dutch state dissolved the VOC and assumed the sovereignty over the company’s possessions in Asia and at the Cape of Good Hope.

The West India Company (WIC)
The early success of the Dutch East India Company was a strong stimulus to create a similar company for the trade and colonization in the Atlantic. In 1621 the West India Company (The West-Indische Compagnie or WIC) was founded. In contrast to the VOC, the WIC took a long time to collect sufficient operating capital. Most merchants did not invest as they felt that the company would be used by the Dutch state as an instrument of maritime warfare against Spain rather than as a profit-seeking venture. Like the VOC, the WIC was organized in chambers, but in the course of the company’s history, its policies became more and more fragmented. The Zeeland chamber began to administer some parts of Guiana exclusively, whereas the Amsterdam chamber concentrated on New Netherlands in North America and the Dutch Antilles. In 1628 all chambers were allotted exclusive trading rights in separate areas along the coast of West Africa. This process of fragmentation was strengthened by the issuing of private freehold estates, called patroonships, in New Netherlands and in the Caribbean. A consortium, in which the WIC participated as only one of the shareholders, owned the Caribbean plantation colony of Suriname, conquered in 1667. Private merchants who received land grants within the company’s territory were usually connected to, or even directors of, one specific WIC chamber.

At the beginning the WIC played an important role in the Dutch maritime trade. Around 1650, when the company still governed part of Brazil and New Netherlands, the total value of the imports into the Dutch Republic amounted to about 60 million guilders, of which nearly 18 million came from Brazil, Africa, the Caribbean, and North America. During the second half of the seventeenth century, the loss of Brazil and New

---

The popular view that free trade is all very well so long as all nations are free-traders, but that when other nations erect tariffs we must erect tariffs too, is countered by the argument that it would be just as sensible to drop rocks into our own harbors because other nations have rocky coasts. • Joan Robinson (1903–1983)
Netherland, the application of the Navigation Acts in the British colonies and similar protectionist legislation in the French colonies, and the declining opportunities for Dutch privateers reduced the volume and value of the Dutch Atlantic trade. Around 1650, estimates put the yearly number of Dutch ships operating in the Atlantic at around 250. During the eighteenth century that average had declined to about 140. In addition to the triangular slave trade from Europe to West Africa, then on to the New World and back again to Europe, the WIC ships traded in American and African produce such as Brazilian wood, hides, ivory, sugar, tobacco, and cacao.

The WIC concentrated on trade, not colonization. The total number of Europeans in the colonies and trading establishments of the company never surpassed 20,000 at any one time. That suggests that it must have been more profitable to send young men on a temporary basis to tropical Asia than to settle them as colonists in New Netherlands and the Cape colony. The Dutch West India Company was not interested in exporting the Dutch language or the official brand of Dutch Protestantism. The governors of the various Dutch colonies and trading forts were well aware of the fact that only religious and cultural tolerance could prevent internal strife among the many non-Dutch nationals.

After 1734 the WIC became a “body without a soul.” Private consortia governed the two most important Dutch plantation colonies, Suriname and Berbice. The company was left with the administration of the Dutch possessions on the African coast, the Dutch Antilles, and two small plantation colonies on the South American mainland, Essequibo and Demerara. Its top-heavy apparatus at home did not change: The national and local directorships had become part of the job circuit within the Dutch oligarchy. Private Dutch traders did increase the volume of the trade in slaves and tropical cash crops, but the Dutch were unable to profit from the explosive growth of the Atlantic economy after the War of American Independence. In 1791 the second WIC was abolished and the Dutch Republic itself became a colonial power.

Dutch West India Company Charter, 1621

As indicated by this excerpt from the charter granted by the “High Mightinesses the Lords the States-General of Holland,” the Dutch West India Company was given powerful rights over trade between Holland and the West Indies and Africa.

That, for a period of twenty-four years no native or inhabitant of this country shall be permitted, except in the name of this United Company, either from the United Netherlands or from any place outside them, to sail upon or to trade with the coasts and lands of Africa, from the Tropic of Cancer to the Cape of Good Hope, nor with the countries of America and the West Indies, beginning from the southern extremity of Newfoundland through the Straits of Magellan, Le Maire, and other straits and channels lying thereabouts, to the Strait of Anjan, neither on the North nor on the South Sea, nor with any of the islands situated either on the one side or the other, or between them both; nor with the Australian and southern lands extending and lying between the two meridians, reaching in the east to the Cape of Good Hope, and in the west to the east end of New Guinea, inclusive. And therefore whoever shall venture, without the consent of this Company, to sail upon or trade with any places within the limits granted to the said Company, shall do so at the risk of losing the ships and merchandize which shall be found upon the aforesaid coasts and districts, which it shall be competent to immediately seize on behalf of the said Company, and to hold as confiscated property at the disposal of the same. And in case such ships or merchandize should be sold or taken to other lands or ports, the underwriters and shareholders may be sued for the value of the said ships and merchandize; with this exception only, that those ships which, before the date of this Charter, have sailed from these or other lands to any of the aforesaid coasts, shall be permitted to continue their trade until they have disposed of their cargoes, and until their return to this country, or until the expiration of their Charter, if they have been granted any before this date, but no longer.

The Netherlands as Colonial Power

During the period 1795–1816, virtually all the Dutch colonial possessions fell into the hands of the British. Eventually, the Dutch East Indies, Suriname, and the Dutch Antilles were handed back, but not the Cape colony, Ceylon, Demerara, Essequibo, and Berbice. In 1870 Britain bought the Dutch forts on the Gold Coast.

In the East the Dutch colonial government could not generate sufficient income to pay for the administration and defense. In order to increase the colonial revenue, a system of forced cropping was introduced in 1830, by which the Indonesian villagers would cultivate a part of their lands with coffee and sugar to be delivered to the colonial government as a tax in kind. This system was a financial success and soon the island of Java produced so much revenue that the major part of this income could be transferred to the treasury in the Netherlands. In 1860 both the cultivation system in the East as well as slavery in the West were abolished as the prevailing liberal ideology in the Netherlands had become opposed to forced or slave labor. After 1870 investment and private land ownership by European entrepreneurs increased and Dutch control was extended to all of the islands of the Indonesian archipelago. In Aceh (North Sumatra) the Dutch met with fierce resistance and it was not until 1913 that the region was brought fully under Dutch control.

In the Dutch Caribbean slavery was not abolished until 1863. The belated emancipation of 40,000 colonial slaves was due to the fact that there was no strong abolitionist lobby in the Netherlands and that until 1860 the liberal ideology in economic matters did not have many adherents, nor was tax money readily available to compensate the slave owners. It was the revenue derived from the cultivation system in the Dutch East Indies that tipped the balance. After the ending of slavery, the Dutch instituted a ten-year period of apprenticeship (1863–1873) and then started to import 30,000 indentured laborers from British India (1873–1916) and a similar number from Java (1890–1939). As the Dutch Antilles housed no large-scale plantations, their freedmen were exempt from apprenticeship and none of the islands imported indentured labor. At the beginning of the twentieth century, the economy of the islands received a strong boost from the construction of oil refineries. Similarly, Suriname experienced economic growth by allowing the American-owned SURALCO Company to mine its aluminum ore. During World War II, the aluminum production in Suriname and the oil refineries on the Dutch Antilles were of such importance to the allied war effort that the United States and the United Kingdom took over the defense of these colonies with the consent of the London-based Dutch government in exile.

The End of “Empire”

In 1942 the Japanese occupied the Dutch East Indies and collaborated with those Indonesian politicians who were in favor of independence. Its 40,000 Dutch colonists were put in camps. After the Japanese had surrendered, the Indonesians promulgated the independent Republic of Indonesia, while the Dutch tried to restore their prewar colonial rule. In spite of severe shortages at home caused by the ravages of the German occupation, the Dutch drafted a considerable army to fight the Indonesian Republic. However, the U.S. government was in favor of Indonesian independence and threatened to cut off Marshall Plan aid to the Netherlands. The Dutch gave up their efforts to restore colonial rule, and on 17 August 1949, the Republic of Indonesia, with the exception of
the eastern part of New Guinea, which was not transferred to Indonesia until 1963, became a sovereign state.

In the wake of the achievement of independence by Indonesia, Suriname and Dutch Antilles were given self-government in 1948. In 1954 a Dutch Commonwealth Statute stipulated that the Netherlands, the six Dutch Antilles (Curaçao, Aruba, Bonaire, Sint Maarten, Saint Eustatius, and Saba), and Suriname would be equal partners, have internal self-government, and share their foreign relations and defense. Over time the disadvantages of this arrangement increased as about 30 percent of the population of the Dutch West Indies moved to the Netherlands, while at the same time the Dutch government spent large amounts in aid subsidizing the budget of these former colonies. In 1975 the Dutch succeeded in granting independence to Suriname by providing the 400,000 inhabitants of the former colony with 4 billion guilders in aid. The six Dutch Antillean islands refused a similar offer. The Dutch Antilles prefer to continue their membership in the Kingdom of the Netherlands, but some of the islands prefer to have a direct link rather than an indirect one through the common inter-island council in Willemstad on Curaçao. The Netherlands cannot change its relationship with the Dutch Antilles, such as instituting a barrier for immigrants, as the Commonwealth Statute demands that all constituent members of the Dutch Kingdom agree to its annulment.

Pieter C. Emmer

See also Dutch East India Company; Spice Trade

Further Reading


Historians sometimes refer to the era between the premodern (or medieval) and late modern eras as the “early modern world.” The world during this era was increasingly united by the projection of European power abroad, especially in the Americas. Although early modern Europeans still had little knowledge of, let alone hegemony (influence) over, the inland regions of Africa and Asia, the links created and dominated by Europeans made all the world a stage for fundamental historical processes.

Historians debate, or pass over in silence, the problem of determining the precise starting and ending dates of the early modern world and have produced only the vaguest consensus. Roughly, the era of the early modern world began during the fifteenth century with the Timurid (relating to the Turkic conqueror Timur) and Italian cultural renaissances. The year 1405 serves as a convenient starting date because it marks not only the death of Timur, the last great central Asian conqueror to join farmers and nomads into a single empire, but also the first of the Chinese admiral Zheng He’s (c. 1371–1435) naval expeditions to the “Western Oceans.” The era might be taken to end in the late eighteenth century with the French and Industrial revolutions, both European events of global consequence in the late modern world. The uncertainty of this periodization derives in part from the concept of an early modern Europe, with its own uncer-
tain chronological boundaries, and in part from the unconsidered way in which both phrases entered historical scholarship.

**Origins of the Concept**

Although conceptually the phrase *early modern world* is an extension of the phrase *early modern Europe*, the initial histories of both phrases have some surprises. The earliest known appearance of the phrase *early modern world* occurs in Willard Fisher’s “Money and Credit Paper in the Modern Market” from *The Journal of Political Economy* (1895). Although Fisher writes, “We all know that the system of bank credits and bank money, which was introduced into the great commercial centers of the early modern world, has now attained a quite marvelous development” (1895, 391), the geographical sense of his statement is strictly, if implicitly, European. On the other hand, the phrase *early modern Europe* first shows up twenty years later, in Dixon Ryan Fox’s “Foundations of West India Policy” in *Political Science Quarterly* (1915). Fox remarks, “It was now realized by students of colonial history that in the Caribbean [the “West India” of the article’s title] might best be traced the application of those principles which formed the working basis for the old empires of early modern Europe” (1915, 663). Ironically, the phrase *early modern Europe* first appeared in the Caribbean, in the global context of colonialism, in an article advocating trans-Atlantic history. In their debuts each phrase bore something of the other’s sense.

Fox’s usage was an anomaly, and when the phrase *early modern Europe* arrived in Europe, it had come to stay. The phrase *early modern world*, however, for decades would imply *world* to mean, in an indefinite way, immediate rather than global surroundings; because this historical scholarship dealt with European subjects, the “early modern world” was in fact “early modern Europe.” The early modern world became global only with C. F. Strong’s grammar school textbook *The Early Modern World* (1955) and S. Harrison Thomson’s 1964 review of J. H. Parry’s *The Age of Reconnaissance*, in which Thomson uses the phrase to describe the “story of the successive expansion of European venture, from Africa to the reaches of the Indian Ocean by Arabs and Portuguese by sea, the movement westward to the Americas and the early transition from discovery to fishing, trading, and exploitation” (1964, 188).

The first considered analysis of the early modern world came after the posthumous publication of Joseph Fletcher’s article “Integrative History” in 1985. Such analysis has tended to adopt either a deductive or an inductive approach.

**Deductive Approach**

A deductive approach to the early modern world compares premodernity and late modernity, devises the characteristics necessary to bridge the two stages, and only then seeks confirmation in the historical record. This approach assumes the existence of a modernizing trajectory, which the early modern world shared with (and perhaps inherited from) early modern Europe.

Informed by a Marxist perspective, the essentials of the early modern world would highlight transitions from feudal to bourgeois, from serfdom to wage-earning proletariat, and from local subsistence to regional market
economies. A functionalist understanding of modernity, of the sort theorized by the German sociologist Max Weber, the U.S. sociologist Talcott Parsons, or the French sociologist Emile Durkheim, explains social phenomena in terms of their ability to fulfill social needs and broadens this base beyond the mode of production. Here the critical shifts would be from belief in miracles to belief in science, from household-based craft production powered by muscle, dung, water, and wood to factory-based mass production powered by electricity and fossil fuels, and from government justified by tradition to government consciously invented.

Even in the context of early modern Europe critics challenge the effectiveness of a deductive approach by condemning its implication of an inevitable progress from premodernity to modernity. A deductive approach takes little cognizance of the possibilities of various starting points, different destinations, and particular paths. In some twentieth-century cases the transition to modernity was less a progression than a violently dramatic change. When expanded to a global context this approach becomes not only teleological (assuming a design or purpose in history), but also artificially Eurocentric.

**Inductive Approach**

Rather than specify theoretical factors to be sought in the time period, an inductive approach examines what happened in different places and extracts from what happened a set of common features. Although such an approach removes the theoretical obstacle of a modernizing trajectory, the historian is left with the Herculean task of specifying processes that united all, most, or many of the world’s peoples. Such an approach need not focus on Europe, nor need it measure the success of various regions in terms of their progress along Europe’s path.

How closely do the rough chronological parameters suggested here match the conventional historiographies (the writings of history) of the various regions outside Europe? Traditional periodizations in African and American history are directly linked to European expansion. Marked by a European presence that could not yet dominate the continent, an early modern Africa might last from the Portuguese capture of Ceuta, a port on the Moroccan side of the Strait of Gibraltar (1415), until the development of quinine and steamships in the nineteenth century. The first Niger steamship expedition returned without casualties in 1854. An early modern America might stretch from the encounters of 1492 until the period of independence movements, from 1776 to the independence of Brazil in 1822.

An early modern India might begin with the fifth-generation descendant of Timur, Zahir-ud-Din Muhammad Babur, whose ancestry inspired him to conquer northern India. The Mughal dynasty he founded (1526) would rule effectively for two centuries; the British would take charge of its Delhi nucleus in 1803. An early modern Japan stretches from the unification efforts of Oda Nobunaga (1534–1582) to the end of the Tokugawa shogunate (the dictatorship of a Japanese military governor) in 1867. Other regional historiographies fit less naturally. Although the Ottomans’ 1453 conquest of Constantinople (modern Istanbul, Turkey) was timely, the Chinese Ming dynasty began too early (1368) and ended inconveniently in the middle of our early modern period (1644). Worse, key modernizing revolutions came late relative to the western European timetable—the Chinese Revolution in 1911, the Russian Bolshevik revolution in 1917, and the Kemalist (relating to the Turkish soldier and statesman Kemal Atatürk) revolution in Turkey in 1923.

The actual use of the phrase *early modern* in the periodization of regional histories varies. Outside of Europe, it is most commonly used in Asia, especially in works on China, Japan, and, to a lesser extent, India. Historians of China sometimes extend the period into the twentieth century. Far fewer historians write of an “early modern Africa” or an “early modern Brazil.” This fact is due in part to the power of the word *colonial* to identify these time periods. Latin American periodization is so consistently divided into pre-Columbian, colonial, and national periods that there is no need for the phrase *early modern*, which should correspond to the middle, colonial period. In fact, the phrase *early modern Mexico* sometimes refers to the period immediately after independence.

The divergence of these traditional periodizations of
regional histories, so often linked to high-level political history, should not surprise. The global historian in search of an early modern world can look beyond these periodizations to seek processes that enveloped wide swaths of the planet.

**Development of Global Sea Passages**

Nothing is more characteristic of the early modern world than the creation of truly global sea passages. Before 1492 the Americas remained essentially isolated from Eurasia. In 1788 the last key sea passage was completed by the first permanent settlement of Europeans in Australia. This passage also concluded the integration of the Pacific Ocean as a geographical concept, a process that began when the Spanish explorer Vasco Nuñez de Balboa became the first European to see the Pacific from America in 1513.

During the early fifteenth century the Europeans were unlikely candidates to fill the key role in this process of exploration. Portuguese exploration of the African coast was declining, and mariners were reluctant to sail out of sight of land. Even the overland excursions undertaken by Europeans had become more modest. Muslims still controlled southern Iberia, and in 1453 the Ottomans conquered Constantinople. Smart money would have rather at the Chinese admiral Zheng He, whose seven expeditions between 1405 and 1433 reached even the shores of eastern Africa. A change in Chinese imperial policy halted these expeditions, and the voyages that finally connected the world were directed by Europeans. In 1522 the survivors of the expedition of the Portuguese navigator Ferdinand Magellan completed the first circumnavigation of the globe. During the following centuries a skilled captain and crew could navigate a ship from any port to any port and reasonably expect to arrive. In 1570 the Flemish cartographer Ortelius published what has been described as the first modern atlas, the *Theatrum orbis terrarum* (Theater of the World); this comprehensive yet handy and inexpensive work enjoyed immediate success. By the end of the period the best-mapped region of the world would be China.

**Global Demographic Interconnections**

The world’s population doubled during the early modern period, from approximately 374 million (1400) to 968 million people (1800). Although demographic data are limited, some patterns emerge. Rapid growth was punctuated by a seventeenth-century decline in Europe, Russia, Iran, Central Asia, China, and Korea—and recovery from this decline occurred globally, even in the Americas. The more populous regions tended to grow more rapidly.

The new global sea passages set the stage for a transatlantic “Columbian exchange” (the biological and cultural exchange between the New World and the Old World that began with the 1492 voyage of Christopher Columbus) and for a transpacific “Magellan exchange” of crops and disease pathogens that put the peoples of the world in a more direct demographic relationship than ever before. The arrival of American maize and potatoes in Eurasia, and later in Africa, facilitated an intensive agricultural, and thus demographic, growth, and the appearance of tomatoes in Italy and chili peppers in India had important dietary and culinary consequences.

Disease also became a global phenomenon. First appearing in Europe in 1494, venereal syphilis reached India four years later, and by 1505 it had outraced the Portuguese to China. The New World’s isolation and limited biodiversity (biological diversity as indicated by
numbers of species of plants and animals) did not afford its indigenous peoples the same immunities enjoyed by Europeans, who as children were exposed to a multiplicity of infections. Measles, smallpox, and other diseases brought by Europeans triggered a long-term demographic catastrophe. The indigenous population of central Mexico declined from 30 million in 1518 to 1.6 million in 1620—a genocide unintended, misunderstood, and undesired by the Spanish who sought souls for salvation and laborers for their mines. Contact with the wider world wrought similar demographic calamities on other isolated peoples, including Pacific Islanders, Siberian tribes, and the Khoikhoi of southern Africa. Increased contacts distributed pathogens more evenly throughout the world and generally reduced susceptibility to epidemic disease.

**Development of a Global Economy**

The development of global sea passages integrated America into a truly global economy. Rapidly growing long-distance commerce linked expanding economies on every continent. Dutch merchants in Amsterdam could purchase commodities anywhere in the world, bring them to Amsterdam, store them safely, add value through processing and packaging, and sell them for profit. Intensive production fueled by the commercialism of an increasingly global market gave new importance to cash crops and sparked an unprecedented expansion in the slave trade.

The movement of manufactured goods from eastern Asia toward Europe and America created a chain of balance-of-trade deficits, which funneled silver from American mines to China. Regular transpacific trade developed during the decades after the founding of Manila in the Philippines in 1571 and followed the same pattern:

Exports of porcelain and silks from China created a trade imbalance that sucked silver from the Americas and from Japan. Through military-commercial giants such as the Dutch East India Company (founded in 1602), European merchants disrupted traditional trading conditions in Africa and Asia to muscle into regional “country trade.”

The expansion of settled populations, as well as the new ocean trade route alternatives to the Silk Road that linked China to the West, contributed to the decline of nomadism. The agriculture of settled peoples supported large populations and tax bases that an efficient state could translate into permanent military strength.

**Development of Large and Efficient States**

The global trade in firearms and similar weapons contributed to the growth of large and efficient states, known as “gunpowder empires.” Expensive and complex, the most advanced weapons became a monopoly of centralized states, which employed them to weaken local opposition. During the mid-fifteenth century the king of France used artillery to reduce some sixty castles annually. Administrative procedures also became increasingly routinized and efficient. Ever more abstract notions of state authority accompanied the evolution of new sources of legitimacy. From the Irrawaddy River in Asia to the Seine River in Europe, religious uniformity served to reinforce and confirm centralized rule. The ideal of universal empire was native to America, Africa, and Eurasia.

The early modern unification of England with Scotland and Ireland was paralleled throughout Europe. If in 1450 Europe contained six hundred independent political units (or more, depending on the criteria), in the nineteenth century it contained around twenty-five. About thirty independent city-states, khanates (state governed by a ruler with the Mongol title “khan”), and princedoms were absorbed into the Russian empire. By 1600 the Tokugawa shogunate had unified Japan. Fourteenth-century southeastern Asia had two dozen independent states that evolved into Vietnam, Siam (Thailand), and Burma (Myanmar) by 1825. The Mughals unified India north of the Deccan Plateau for the first time since the Mauryan empire (c. 321–185 BCE). Unification was also...
an overture to expansion. In addition to an increasing European presence worldwide, Qing China (1644–1912) invaded Xinjiang, Mongolia, Nepal, Burma, and Formosa, and during the seventeenth century Romanov Russia stretched out to the Pacific.

The new unities led relentlessly to new fragmentations and hierarchies, and resistance to such centralizing political forces was equally universal. During the century between 1575 and 1675, for example, uprisings occurred in China, Japan, India, Armenia, Georgia, Kurdistan, Ukraine, the Balkans, the German lands, Switzerland, France, Catalonia, Portugal, England, Ireland, and Mexico. At the end of the period, the French Revolution (1789) would enjoy global influence as the first revolution modern in its progressive, absolute, and sudden nature.

**Intensification of Land Use**

The concurrence of population growth, global markets, and aggressive states led to wider and more intensive use of land. Displacing or subordinating indigenous peoples, pioneers backed by aggressive states drained wetlands and cleared forests to create new lands for intensive commercial, agricultural, and pastoral regimes. (Similarly, commercial hunters pursued various species of flora and fauna to extinction for sale on a global market.) Oblivious to any land claims held by indigenous peoples, states would offer pioneers low taxes in exchange for settlement and land rights. For example, the Mughal empire provided land grants, Hindu merchants provided capital, and Sufi (Muslim mystic) brotherhoods provided leadership for the communities of Muslim pioneers who transformed the Bengal wetlands into a key rice-producing region. These efforts compensated for the extended disobliging weather patterns that plagued temperate zones throughout the Northern Hemisphere—a “little ice age” affecting climate throughout the early modern world.

**Religious Revival**

The most distinctive religious characteristic of this era was the global expansion of Christianity. Indeed, the impetus driving the creation of global sea passages was religious as well as commercial. The efforts of Catholic religious orders predominated—the great Protestant missionary societies would be founded only in the 1790s. Sufi brotherhoods such as the Naqshbandiyah expanded Islam in Africa, India, China, and southeastern Asia. Tibetan Buddhism pushed into northwestern China, Manchuria, Mongolia, Buryatia, and to Kalmikya, on the shore of the Caspian Sea, which remains today the only Buddhist republic in Europe.

The increased emphasis on orthodox and textual conventions of Latin Christendom’s Reformation had a parallel in the Raskol schism of the Russian Orthodox Church during the 1650s. Elsewhere, Muhammad ibn Abd al Wahhab (1703–1792) founded the Wahabbi movement to reform Sunni Islam under strict Quranic interpretation.

Many people believed that the era that historians call “early modern” would be the last. Franciscan apocalyptic thought inspired Columbus, and the belief that the god Quetzalcoatl would return from the East in a One Reed year led the Aztec sovereign Montezuma II to regard the Spanish conqueror Hernán Cortés and his comrades as divine envoys. A Jesuit at the court of Akbar in 1581 found the Mughal ruler open to the idea of the imminent end because that year was eleven years from the thousandth anniversary of the Hijra, which was the journey the Prophet Muhammad took from Mecca to Medina in 622 CE. The Jewish Sabbatian movement expected the end of the world in 1666. In late eighteenth-century central China the White Lotus Society awaited the return of the Buddha to put an end to suffering. All these developments might best be understood in the context of notions of history in which significant change was either absent—or sudden and awesome.

**Outlook**

Neither a deductive nor an inductive approach to the early modern world is entirely satisfactory. A deductive approach expects to see the entire world following a Eurocentric roadmap to modernization (one that Europe itself might not have followed). An inductive approach respects the diversity of historical experience, but this diversity itself can frustrate attempts to delineate a discrete list of unifying features.
If historians can tolerate the inconveniences of regional exceptions to every “global” process, the idea of an early modern world has its attractions. Although a perspective that twists the world around a European center is unproductive, the regions of the early modern world were increasingly named (in America) and mapped (as in China) by Europeans. Nevertheless, in its application beyond Europe the idea of an early modern world redresses the distortions of the Orientalist assumption of parochial, timeless, and conservative inertias unaltered by European expansion. It recognizes that peoples of the early modern era in some ways had more in common with each other than with their own ancestors and descendents—that time unites just as powerfully as place. It facilitates comparative study not only for comparative study, but also for the broadest possible analysis for a historian’s scrutiny.

Luke Clossey

See also Foraging (Paleolithic) Era; Modern Era; Renaissance

Further Reading


Earthquakes

Earthquakes are vibrations of the earth caused by waves radiating from some source of elastic energy. Earthquakes can have disastrous effects on densely populated areas as well as on nuclear power plants, dumping grounds for hazardous wastes, nuclear waste depositories, and large-scale technical constructions. They can destroy our built environment and life-support systems and endanger lives. Eventually, the economic consequences of earthquakes can be of vast dimensions.

Causes

Earthquakes are vibrations of the earth caused by waves radiating from some source of elastic energy. Earthquakes can have disastrous effects on densely populated areas as well as on nuclear power plants, dumping grounds for hazardous wastes, nuclear waste depositories, and large-scale technical constructions. They can destroy our built environment and life-support systems and endanger lives. Eventually, the economic consequences of earthquakes can be of vast dimensions.

Causes

Earthquakes are vibrations of the earth caused by waves radiating from some source of elastic energy. Earthquakes can have disastrous effects on densely populated areas as well as on nuclear power plants, dumping grounds for hazardous wastes, nuclear waste depositories, and large-scale technical constructions. They can destroy our built environment and life-support systems and endanger lives. Eventually, the economic consequences of earthquakes can be of vast dimensions.

Causes

Earthquakes are vibrations of the earth caused by waves radiating from some source of elastic energy. Earthquakes can have disastrous effects on densely populated areas as well as on nuclear power plants, dumping grounds for hazardous wastes, nuclear waste depositories, and large-scale technical constructions. They can destroy our built environment and life-support systems and endanger lives. Eventually, the economic consequences of earthquakes can be of vast dimensions.
by human activities, such as construction of dams, mining, and nuclear explosions. For example, a reservoir filling in Koyna, India, induced a catastrophic earthquake in December 1967 that caused 177 deaths.

As mentioned earlier, the majority of earthquakes are caused by the movement of tectonic plates, as explained by the continental drift theory of Wegener. Tectonic plates are large segments of the earth’s lithosphere (the outer, rigid shell of the earth that contains the crust, continents, and plates). The earth’s surface consists of nine major plates: six continental plates (the North American, South American, Eurasian, African, Indo-Australian, and Antarctic plates) and three oceanic plates (the Pacific, Nazca, and Cocos plates). Tectonic plates move in relation to each other and along faults over the deeper interior. Faults are fractures or zones of fractures in rock along which the two sides have been displaced relative to each other parallel to the fractures, for example, the well-known San Andreas fault in California, which separates the Pacific plate (on which lie San Francisco and Los Angeles) from the North American plate.

When lava is upwelling at the midoceanic (mid-Pacific, mid-Atlantic) ridges, rock moves slowly on either side of the ridges across the surface of the earth. New plates are constantly being created, and other plates must also be absorbed at the so-called subduction zones (where the edge of one plate descends below the edge of another). Earthquakes are divided into shallow earthquakes (depth of focus <65 km), intermediate depth earthquakes (65–300 km), and deep earthquakes (>300 km). The subduction zones are where most deep-focus earthquakes occur.

Earthquakes, volcanoes, mountain building, and subduction zones are therefore generally explained as consequences of steady, large, horizontal surface motions. Most tectonic plates contain both dry land and ocean floor. At present, those plates containing Africa, Antarctica, and North and South America are growing, whereas the Pacific plate is getting smaller. When plates collide (for example, the African and the Eurasian or the Indo-Australian and the Eurasian) big mountain chains, such as the Alps and the Himalayas, arise. This phenomenon is accompanied by persistent earthquake activity.

**Strategy against Earthquakes**

The increasing density of population boosts the potential effects of earthquakes, especially in urban areas with high seismic activity—for example, San Francisco, which was struck by a huge earthquake on 18 April 1906. For this reason, anti-seismic building codes are important. Today, proper planning and regulation of new buildings and seismic upgrading of existing buildings can safeguard most types of buildings against earthquake shocks. One obstacle to adhering to anti-seismic building codes is the high cost; this is true particularly in cities of the Third World and of countries at the stage of economic takeoff. The 19 September 1985 Mexico City earthquake, for example, occurred 200 kilometers from Mexico City, but the shaking of loose sediments in the city was much stronger than at the epicenter. Nearly 10,000 people died, and the city was heavily damaged as poorly constructed buildings collapsed. The earthquake destroyed as many as 100,000 housing units and countless public buildings.

**Earthquake Catastrophes—Examples**

The following earthquake catastrophes from different regions in different time periods provide opportunities to examine human-environment interaction and the influence of each on the other over time and across places:

1. The 18 April 1906 San Francisco, California, earthquake
2. The 17 January 1995 Hanshin-Awaji, Kobe, Japan, earthquake
3. The 17 August Izmit, and 12 November 1999 Duzce, Turkey, earthquakes
4. The 26 December 2003 Bam, Iran, earthquake

**1906 San Francisco, California, Earthquake**

The 18 April 1906 San Francisco earthquake with a magnitude of 7.8 remains one of the most damaging in the history of California. The magnitude of an earthquake is...
a measure of the amount of energy released. One common type of magnitude measurement is the Richter scale, named after the U.S. seismologist Charles Francis Richter (1900–1985). The Richter scale (0–9) is logarithmic. This means that the seismic energy of a magnitude 7 earthquake is a thousand times greater than that of a magnitude 5 earthquake.

On 19 April 1906, the day after the earthquake, the New York press wrote: “Heart of San Francisco in ruins; earthquake and fire kill hundreds; property loss $100,000,000 and growing. . . . Enormous property loss in many cities and towns, and Santa Rosa and Berkeley burst into flames at night—authorities fear that when full truth is known an appalling disaster will be found to have swept that entire section of State—loss of live everywhere.

“Terrific early morning shock demolishes most of the business section of Golden Gate City, and flames close behind. Sweep practically unchecked through day and night, lack of water making fire-fighters powerless.”

The damaged region extended over a distance of 600 square kilometers. The earthquake was felt in most of California and parts of western Nevada and southern Oregon. The earthquake caused the longest rupture of a fault that has been observed in the contiguous United States. The displacement of the San Andreas Fault was observed over a distance of 300 kilometers. The maximum intensity of XI was based on geologic effects. (Commonly used intensity scales are the European Macroseismic Scale 1998 [EMS-98] in Europe and the Modified Mercalli Intensity Scale in the United States, both with intensity ratings between 1 and 7. Japan uses the Omori Scale, with intensity ratings between 0 and 7. The damage distribution of an earthquake is visualized on maps on which lines of equal intensity [isoseismals] on the earth’s surface are drawn.)

The earthquake and resulting fires took toll of an estimated 3,000 lives and caused about $524 million in property loss. The earthquake damaged buildings and structures in all parts of the city and county of San Francisco. Brick and frame houses of ordinary construction were damaged considerably or completely destroyed, and sewers and water mains were broken. Unfortunately, one pipeline that carried water from San Andreas Lake to San Francisco was also broken, closing the water supply to the city. For this reason it was impossible to control the fires that ignited soon after the earthquake occurred and subsequently they destroyed a large part of San Francisco.

For the surviving refugees, the first few weeks were hard: although aid poured in from around the country, thousands slept in tents in city parks. However, numerous businesses relocated temporarily in Oakland and many refugees found lodgings outside the city. Reconstruction of the city proceeded but it was not until 1908 that San Francisco was well on the way to recovery.

17 January 1995 Hanshin-Awaji, Kobe, Japan, Earthquake

On 17 January 1995, the Great Hanshin-Awaji earthquake with magnitude 6.9 occurred directly under the modern industrialized urban area of Kobe. The shock occurred at a shallow depth on a fault running from Awaji Island through the city of Kobe, which in itself had a population of about 1.5 million. Strong ground shaking lasted for about twenty seconds and caused severe damage over a large area. At best the urban facilities were severely impaired, while others were completely destroyed. More than 5,000 people were killed by the earthquake. Total damage and destruction is estimated at more than $100 billion, or about 2 percent of the gross national product of Japan.

More than 150,000 buildings were ruined; highways, bridges, railroads, and subways failed; water, sewage, gas, electric power, and telephone systems were considerably damaged and out of service for a period of time. The Hanshin Expressway, built in the 1960s primarily of reinforced concrete, was nearly destroyed over more than 20 kilometers. Many spans of the almost completed Wangan Expressway, which is largely composed of steel superstructures, lost their bearing connections, damaging the superstructures and closing the route indefinitely. A number of major bridges of very modern design were also severely damaged.
The city of Kobe—one of the six largest container cargo ports in the world and the major one in Japan—was nearly destroyed. Its relative importance as a major hub and transshipment point in Asia declined over the following years, which resulted in enormous economic consequences for the country.

Japan had invested heavily in earthquake research. People believed they would be ready for the next earthquake, but their faith was shattered deeply after the Kobe catastrophe.

17 August Izmit, and 12 November 1999 Ducze, Turkey, Earthquakes
A large area of 60,000 square kilometers was hit on 17 August 1999, including the provinces of Kocaeli, Sakarya, Yalova, Istanbul, Bolu, Bursa, Eskisehir, Tekirdag, and Zonguldak. More than 15 million people inhabited the disaster area, which contributed more than 8 percent of Turkey’s gross national product. The magnitude of the Marmara region earthquake was 7.4.

At least 17,100 people were killed, nearly 50,000 were injured, and thousands were missing; about 500,000 people were left homeless. The estimated damage in Istanbul, Kocaeli, and Sakarya provinces was estimated as between $3 billion and $6.5 billion. The earthquake was felt (intensity III) at Anapa, Russia; Chisinau, Moldova; Simferopol, and on the south coast of Crimea, Ukraine.

Another major earthquake, with a magnitude of 7.2, occurred on 12 November 1999. At least 894 people were killed and about 4,900 injured, mostly in the Bolu-Duzce area. Extensive damage occurred in the Bolu-Duzce area, and landslides in the Bolu Pass blocked the Ankara-Istanbul highway. The city of Istanbul, Turkey’s capital, was hit too: nine hundred people died there. The earthquake also was felt as far away as Ankara and Izmir. It was also felt (intensity III) at Chisinau, Moldova, and at Sevastopol and Simferopol, Ukraine.

The earthquake zone was previously a well-developed area and the richest district of Turkey. The damage to buildings was enormous: 66,441 residential buildings and 10,901 stores were destroyed. The water supply and sewage systems were also heavily damaged. Several telecommunication centers were destroyed, others were only partially damaged, but by the end of November, they were all operational again.

The earthquakes also caused an economic and social disaster: Many small and medium-sized businesses no longer existed, and people abandoned this area. Prior to the earthquakes the region had been a holiday area, benefiting from the tourist industry. Naturally, after this major catastrophe, these sources of economic stimuli (business and tourism) were no longer in existence.

It is obvious that the enormous task Turkey has had to face after the earthquakes includes rebuilding the infrastructure, the accommodations, and the economic activities of the area and reorganizing administrative services. Managing the social aspects of the consequences of the earthquakes involves dealing not only with families themselves but also with the communities they represent, and this aspect should not be underestimated. The solution to social problems in the present cultural milieu has always

---

**Earthquakes have always been a sudden terrifying event beyond human prediction or control. Numerous explanations have been set for earthquakes. The following is the explanation of the Andaman Islanders, the indigenous people of the islands of the same name in the Bay of Bengal.**

The Andaman Islands are occasionally visited by earthquakes. An Aka-Kede account of how earthquakes are caused is that when a man dies he goes to the spirit world which is beneath the earth. The spirits hold a ceremony. My informant spoke of the ceremony as Kimil, which is the name of the initiation ceremonies. At this ceremony they have a dance similar to the peace-making dance... but instead of erecting a screen such as is used in that ceremony, they make use of the rainbow. As they shake the rainbow in dancing this causes earthquakes. The ceremony which newly-arrived spirits have to undergo in the world after death is a poroto kimil, i.e., the initiate eats poroto (Caryota sobolifera).

been the family, in the broad sense of the term, but this working system has been destabilized by the consequences of the earthquakes, and there is nothing to make up for this deficiency.

26 December 2003 Bam, Iran, Earthquake

On 26 December 2003, an earthquake occurred below the city of Bam in the southeast of Iran, that illustrates once again the tragic connection between poor building quality and large numbers of victims. The strong earthquake had a magnitude of 6.5 and the hypocenter was only 8 kilometers below the city of Bam, approximately 180 kilometers south of Kerman, the provincial capital.

The maximum intensity recorded in Bam, which lay in the epicentral area, was IX on the EMS scale, VIII at Baravat, and V at Kerman, where it was also felt. (The place at which rupture commences is called the “focus” or “hypocenter,” whereas the point on the earth’s surface directly above the focus of an earthquake is called the “epicenter.” The distance between the focus and the epicenter is called the “focal depth” of an earthquake.) The people of Bam were still sleeping when the earthquake struck. The death toll was estimated at 43,200, with more than 30,000 injured, and 100,000 made homeless. The main reason for the large number of fatalities was once more the generally poor construction quality of buildings, 85 percent of which were damaged. Many of these were traditional houses of mud-brick construction, with heavy roofs. The unreinforced masonry holds almost no resistance against the ground motion generated by strong earthquakes. Experts classified the region as a highly exposed zone even before the earthquake—given this fact, the buildings should have been of safer construction. But the catastrophe demonstrated once again the connection that exists around the world between a low standard of development and a high number of earthquake fatalities. Even if the hazard is known, the people in such regions simply do not have the money to build earthquake-resistant houses as a means of cushioning or avoiding catastrophes.

Situated on the legendary Silk Road, Bam is famous for its two-thousand-year-old citadel Arg-e-Bam. This fortified settlement is one of the country’s most important cultural monuments and was badly damaged by the earthquake. The destruction of Bam and its citadel will bring tourism in the region to a standstill for years. The area has thus been robbed of an important economic support. The impoverished population itself will suffer from the economic effects caused by the earthquake. Besides having to deal with the immense human tragedy, the region thus also faces complete economic collapse (Munich Re Group 2004, 33).

Outlook

As cited earlier, the Munich Re Group stated in its annual review about natural catastrophes of 2003 that several hundred millions of people throughout the world live in buildings that would collapse in a strong earthquake, as did those in Iran. It is anticipated that in the future more catastrophes with high death tolls will occur. In fact, it is only a matter of time before a strong quake occurs again directly beneath a city with over a million inhabitants and claims the lives of several hundred thousand people, as in Tang Shan, China, in 1976. Owing to the rapid growth of many Third World metropolises in highly exposed regions, such a scenario has become distinctly more
probable in recent decades, in spite of the possibilities provided by modern earthquake engineering. Experts fear that if a strong quake were to be triggered beneath Tehran, Iran, which has a population of 12 million and has already been destroyed on several occasions in the course of its history, as many as a million people could die (Munich Re Group 2004, 35).

As was illustrated by the previous examples, infrastructure systems, like water, sewage, gas, electric power, telephone systems, are extremely vulnerable and their failure can result in failures of other life-support systems. Losses from disruption of such activities are much greater than the cost to repair damage; for example, it was impossible to control the fires that ignited soon after the 1906 San Francisco earthquake occurred, which destroyed a large part of the city, because the water pipelines were broken.

Infrastructure that is often not considered is that of port facilities. Ports are particularly vulnerable because they are naturally located on soft soils, which are of high risk during earthquakes. The damage to the port facilities in Kobe in 1995, for instance, was a major event of its kind. The influence of such a loss can be serious because major ports are centers of commerce, dealing with not only regional but also international trade, and are associated directly with other commercial activities.

At present, the time, location, and magnitude of earthquakes cannot be predicted precisely. However, damage and casualties can be lessened if builders adhere to building codes based on the seismic hazards particular to their areas.

Christa Hammerl

See also Climate Change

Further Reading


Eastern Europe

Eastern Europe has been termed the heart of Europe and Europe’s suburb—both the crossroads of the continent and the borderland of Western civilization. The debate over Eastern Europe’s proper definition (an integral part of Europe or the western frontier of Asia?) illustrates the region’s historical place as a marchland: an area where religions, empires, economic spheres, and cultural zones have overlapped and conflicted. Some view the term “Eastern Europe” as a relic of the Cold War division of Europe and propose other designations. “Central Europe,” which suggests the region’s vital contributions to Europe, is proposed for the region as a whole or in part (usually Poland, the Czech Republic, Slovakia, and Hungary). And because the term “Balkans” connotes backwardness and ethnic strife, “Southeastern Europe” is offered as a designation for the lands south of the Danube. In these terms, we see the disputed notions of...
the region: is it an integral part of democratic, capitalist Europe, or an area that is “less European”—culturally, economically, politically—than its western neighbors?

Defined as the eighteen post-Communist states among Russia, Germany and Austria, and Italy, Eastern Europe is a region of 191 million people and over thirty ethno-linguistic groups. Diversity of languages, cultures, and religions is a primary characteristic of this region: the product of centuries of migrations, interregional trade, expansion of religions, and imperial conquest. These interactions have had a remarkable influence on the region’s history and culture, evident in the painted churches of Romania and the architecture of Dubrovnik, the discoveries of Nicolaus Copernicus (a Pole) and Nikola Tesla (a Serb), the music of Bartók and writings of Kafka, and the moral philosophies of Václav Havel and John Paul II. Yet, the meeting of these various cultural currents in Eastern Europe has had devastating consequences as well. The Thirty Years’ War (1618–1648) began in Eastern Europe (in the Czech lands), as did the World Wars I and II. The decades of Communist rule (1947–1991) damaged the region’s economies, societies, and the environment, and still today Eastern Europe is plagued by economic instability, authoritarian politics, and nationalist tensions.

**Geography and Population**

Eastern Europe has no definite geographic boundaries. The North European Plain stretches from northern France across Poland, the Baltics, and Belarus, and into the Eurasian steppe. A spine of mountains—running from the Alps, through southern Germany and the Czech lands, to the Carpathians—separates the North European and Hungarian plains. South of the Danube, criss-crossing chains of mountains divide the region into remote valleys. Coastal areas are limited. The principal navigable rivers—the Oder, Vistula, Dnieper, Dniester, and Danube—flow to enclosed seas (the Baltic and the Black). South of the Danube, there are no major waterways, and the Adriatic coast is separated from the arid interior by the Dinaric Alps.

Riverine and maritime transportation have not been decisive factors in Eastern Europe’s history, compared to the western part of the continent; the overland movement of peoples, goods, and ideas has been the essential factor in the region’s development. As the trunk connecting
the European promontories to Eurasia, Eastern Europe was the path of migration for Germanic and Hunnic tribes in the fourth and fifth centuries CE; Bulgars and Slavs in the seventh and eighth; Magyars in the ninth; and Germans and Jews, migrating eastward, in the twelfth and thirteenth centuries. In the Middle Ages, major overland trade routes crossed Eastern Europe, connecting the German and Italian states with Constantinople and the Baltic Sea. And the region has been devastated by the epic conflicts of western Eurasia, from the ravaging of Attila in the fifth century to the Nazi–Soviet campaign in the twentieth.

The lands of Eastern Europe have offered a variety of natural resources. The plains of Poland, Hungary, and Ukraine are areas of abundant agricultural production, supplying grain for centuries to Western Europe, Constantinople/Istanbul, and Moscow. During the medieval centuries, mining was an important activity throughout the region, with gold, silver, copper, tin, iron, and salt extracted from the mountains of the Czech lands, Slovakia, Transylvania, Bosnia, and Serbia. In the nineteenth and twentieth centuries, coalfields were mined in the Czech lands, Poland, and Ukraine, and oil and gas deposits were tapped in Romania and Ukraine.

Although some of these mineral and agricultural resources were processed and consumed within the region, for the most part Eastern Europe has produced raw materials for neighboring states. A principal reason for this disparity in consumption was the low population density in Eastern Europe. In the eleventh century, the estimated population density of Italy was 24 people per square kilometer, and in France, 16 people per square kilometer. In the Czech lands, in contrast, population density was only 7.8 people per square kilometer; in Poland, 5 people per square kilometer. By the late Middle Ages, when cities were emerging as economic and cultural centers in Western Europe, only a handful of cities in Eastern Europe had populations over ten thousand: Prague, Wrocław/Breslau, Gdańsk/Danzig, Krakow, Kiev, and Smolensk. Contemporary capitals such as Ljubljana (Slovenia), Zagreb (Croatia), and Sofia (Bulgaria) had populations under twenty-five thousand until the early twentieth century. At that time, population density across much of Eastern Europe was still less than 100 people per square kilometer. In most areas south of the Danube, it was less than 50 people per square kilometer. Marked increases in population and urbanization did not occur until after 1950.

Other demographic indices further illustrate Eastern Europe’s standing as a marchland. The British demographer John Hajnal has drawn a line demarking the “European Marriage Pattern” through Eastern Europe, from St. Petersburg to Trieste. To the west of that line, Hajnal and others have observed, medieval Europeans married later than people in most other world regions (the average age of first marriage was in the mid-twenties, while some 10 to 20 percent of people remained single) and established single-family households. To the east of that line, and in most areas of the world, marriage was nearly universal, couples married at a young age (late teens to early twenties), and multifamily households were organized along patrilinear lines. In the lands that Hajnal’s line crosses (the Baltics, Poland, the Czech lands and Slovakia, Hungary, Slovenia, and Croatia), patterns of medieval marriage and household composition followed both western and eastern models.

This same line also serves as a boundary in mapping indices of economic and social modernization: in the mid- to late 1800s, levels of gross domestic product (GDP), industrial output, and density of rail lines were far higher to the west of the line; by the 1930s, there was also a large disparity in literacy rates and infant mortality. As with Hajnal’s mapping of the European Marriage Pattern, areas of Poland, Slovakia, Hungary, Slovenia, and Croatia were a transitional zone. In terms of demographic and economic measures, the Czech lands in the 1930s were most like Western Europe: the literacy rate was 96 percent, over half the population lived in urban areas and was engaged in industrial or commercial activity. Furthest removed from West European indices were Bulgaria, Albania, and the southern regions of Yugoslavia. In Albania, in the 1930s, only 12 percent of the
The worker becomes all the poorer the more wealth he produces, the more his production increases in power and range. The worker becomes an ever cheaper commodity the more commodities he creates. • Karl Marx (1818–1883)

population lived in urban areas and the literacy rate was only 30 percent. In her studies of Albania and Montenegro from the early 1900s, the anthropologist M. E. Durham observed patriarchal tribal societies, a justice system based on blood vengeance, and cultural practices that blended Islam and Catholicism with belief in vampires and the evil eye.

**Economic Development**

Eastern Europe offers a classic example of a peripheral economic zone, a region that is dependent upon more populous and developed areas—in this case, for the export of raw materials and the import of capital and technology. Eastern Europe has been in a peripheral relationship not only to the West European core, but also to Constantinople/Istanbul and Moscow. At various times, these imperial powers competed with each other or with Western European states for control of the region’s resources. In the fifteenth and sixteenth centuries, the Ottoman Turks vied with Venice for silver and other resources in Bosnia and Serbia, leading to a series of wars. The Ottomans were forced to surrender the agricultural areas of Ukraine and the Danube delta in wars with Russia in the 1700s. And imperial and Soviet Russia sought to offset Austrian and German influence in Southeastern Europe and Poland in the nineteenth and twentieth centuries.

A consequence of these overlapping economic interests is that, from the later medieval period through the twentieth century, Eastern Europe’s natural resources have been extracted largely for the benefit of its neighbors to the west, east, and south. After the Ottoman conquest of Constantinople in 1453, foodstuffs from Ukraine and metals from Bosnia and Serbia fueled the capital’s rebuilding. North of the Danube, the Austrian Habsburgs and their German bankers gained control of the mineral resources of the Czech lands and Slovakia in the sixteenth and seventeenth centuries. The word *dollar* is derived from *Joachimsthaler,* a silver coin minted in present-day Jachymov, Czech Republic, that the Habsburgs circulated in the seventeenth century. This export of natural resources did generate some prosperity in the region. But, for the most part, because of its dependence upon or exploitation by neighboring states, the economic development of Eastern Europe was stunted. In the late medieval period, landowning nobles in Poland and Hungary seized upon high profits to be gained in the export of grain and cattle to German and Italian markets. This export of foodstuffs resulted in the gradual transformation of the agrarian system from a tenant economy, in which peasants paid rent to the lords, to a feudal structure that restricted peasant mobility and obliged them to work the lords’ estates. Thus, at the same time parts of Western Europe transitioned from a feudal to a market-based economy, Eastern Europe experienced a “second serfdom.” Economic power remained in the hands of the landed nobility, who invested their profits in manors and luxury goods.

Banking, industry, and commerce were limited in the late medieval and early modern periods. Jews, Armenians, and Germans scattered in the region controlled most commercial and industrial activities. During the fourteenth and fifteenth centuries, caravans along the trade route between Akkerman on the Black Sea and Lviv/Lwów (Ukraine) were always under the direction of Armenian merchants. Merchants in L’viv—whether Armenian, Jewish, German, Tatar, Polish, or Italian—traded wheat, fish, caviar, and cattle for pepper, cotton, and silk. Slaves were also an important commodity: between 1500 and 1650, some ten thousand slaves—seized in Poland, Ukraine, and southern Russia—were exported each year to Istanbul.

Lacking a prominent middle class and domestic markets, Eastern Europe’s economy was slow to industrialize. By the late 1800s, isolated areas of industrialization had emerged: the Czech lands were an important manufacturing area in the Habsburg empire; the region around Lodz, Poland, produced 40 percent of the Russian empire’s coal and nearly a quarter of its steel; and Budapest was one of the world’s largest centers for milling flour. For the most part, however, industrialization was limited. In the 1930s, over 75 percent of GDP in Albania, Bulgaria, Lithuania, Romania, and Yugoslavia was agriculture; after Czechoslovakia, the largest indus-
trial sector was in Hungary, where industry was only 24 percent of GDP. Development of industry, transportation, and communications in the late nineteenth and early twentieth centuries was generated largely through foreign investment. Austrian, German, and French firms owned factories, railroads, and shipping lines in the region. Foreign companies owned 95 percent of Romanian oil deposits. The other driving force behind the region’s economies was state interference in or direction of development. Thus, the economic central planning of the post-World War II Communist regimes was not a great departure from the pattern of preceding decades. Under the Communist regimes, the Eastern European economies were tied to each other and to the Soviet Union in the COMECON trading bloc. Industrialization advanced rapidly in the region, although at a steep cost: resources and finished goods were exported, below market value, to the Soviet Union, while factories scarred the landscape of the region, particularly the northern Czech lands, southern Poland, and Romania.

**Frontiers Between Religions**

The indistinct boundaries of the Catholic patriarchates of Rome and Constantinople also met in Eastern Europe, and missionaries from both cities brought Christianity into the region. Both the Roman pope and the patriarch in Constantinople recognized the early mission of the brothers Cyril (c. 827–869) and Methodius (d. 885). Sent from Constantinople, Cyril and Methodius carried the Christian faith north of the Danube, together with a Slavic literary script to be used for liturgy. Even in areas that were loyal to Rome after the Great Schism of 1054, this liturgy and script, known as Glagolitic, continued to be used: in Poland and the Czech lands, the Slavic rite persisted until the twelfth century; in Croatia and Dalmatia, Glagolitic was the script for liturgical texts into the twentieth century. This script became the basis for the Cyrillic alphabet used today in Russia, Ukraine, Serbia, Bulgaria, and other nations.

Following the mission of Cyril and Methodius, competition arose between the Latin church, with its German allies, and the Greek church, which was backed by Byzantine power. Local princes looked both to Rome and Constantinople. Duke Borivoj (d. 889), founder of Prague, was baptized into the Slavic rite, while the Bulgarian czar, Boris I (d. 889), exchanged letters on theological questions with the Roman pope. Their choices, and the success of one rite or the other in a particular principality, resulted more from political exigencies than religious conviction. The expansion of the Roman church in the Czech lands and Poland during the ninth and tenth centuries was due largely to German bishops and the emperors Otto I and Otto III. In 917, the patriarch in Constantinople established an independent patriarchate for the Bulgarian church. Although independent, this new church followed the Slavic rite and maintained loyalty to Constantinople —thus remaining free from Rome. This competition between the ecclesiastical authorities, and local princes’ strategies of playing Rome off against Constantinople, continued after the Great Schism of 1054 separated the patriarchates into the Roman Catholic and Orthodox churches. In the fourteenth and fifteenth centuries, the two churches vied for converts in the last pagan areas of Europe: an arc from Lithuania through Belarus and Ukraine to the Black Sea. At the same time, in mountainous Bosnia, a church emerged that was independent of the two authorities and combined elements of both Latin and Slavic-Greek traditions. By the mid-1400s, though, this Bosnian church was broken, largely through the efforts of Franciscan missionaries, and both Catholic and Orthodox churches competed for its former adherents.

The religious map of Eastern Europe was further colored by migrations, invasions, and reform movements of the late medieval and early modern periods. Ashkenazic Jews, speakers of Yiddish, migrated from the Holy Roman Empire into Poland in the twelfth through the fourteenth centuries and into Lithuania, Ukraine, and Romania in the fifteenth through seventeenth centuries. Of the 7.5 million Jews living in Eastern Europe in 1900, 70 percent lived in these areas. The Sephardic Jews of Southeastern Europe, distinct from the Ashkenazim in custom and language, were descendents of the Jews expelled from Spain in 1492 and welcomed into the Ottoman empire. The
Sephardim numbered 193,000 in 1900, most in cities such as Sarajevo and Salonika. The Ottoman expansion into Southeastern Europe in the fourteenth and fifteenth centuries also brought Islam into the region. According to the Ottoman census of 1520–1530, Muslims were 18.8 percent of the population in the empire’s European lands. Muslims also congregated in towns: the population of Sofia, for instance, was over 66 percent Muslim, while the surrounding district was only 6 percent Muslim. These Muslims included Turkish officials, soldiers, and artisans, as well as converted Greeks, Albanians, and Slavs. Conversions were due largely to Islam’s adaptability to local folk religion, rather than firm conviction, and many Muslims of Southeastern Europe maintained ties to Christianity. In some rural areas, peasants went to the mosque on Friday and church on Sunday.

The Reformation and the Counter-Reformation further stirred the region’s religious waters. Martin Luther acknowledged the influence of early reformer Jan Hus (c. 1372–1415), a Czech priest and critic of Catholic doctrine. Although the church executed Hus as a heretic, Catholic armies failed to suppress his followers in the Czech lands. With the ground prepared by the Hussite challenge, branches of the Protestant Reformation found adherents in the Czech lands, as well as in other areas of Eastern Europe, in the early 1500s. Lutheranism advanced into the Czech lands, Slovenia, and Poland in the 1520s. The Reformed (Calvinist) movement spread rapidly in Hungary and the Ottoman vassal state of Transylvania. Calvinism also gained adherents in Poland and Lithuania, where Reformed universities were founded in the 1620s. Anabaptist and Anti-Trinitarian (Unitarian) sects also took root in Poland, Lithuania, and Transylvania. In Transylvania, Prince István Báthory (reigned 1571–1586) recognized the Unitarian, Catholic, Lutheran, and Reformed faiths as accepted religions of the state. This toleration was unusual in Eastern Europe—and in Europe as a whole. By the late 1500s and 1600s, in the Czech lands, Poland, Hungary, and Slovenia, Jesuits and Catholic nobles succeeded in reestablishing Catholic dominance and outlawing Protestantism throughout much of Eastern Europe.

Political History

During the medieval period, independent kingdoms in Eastern Europe rivaled states to the west and east. Under Czar Simeon (reigned 893–927), Bulgaria dominated the lands south of the Danube, from the Black Sea to the Adriatic. During the reign of Charles IV as Holy Roman Emperor (reigned 1346–1378), Prague became the leading city of the region, and the site of the first university north of the Alps. And the Hungarian court at Buda, under Matthias Corvinus (reigned 1441–1490), was a center of art and learning in the early Renaissance. In the early modern period, however, the independent states of Eastern Europe ceased to exist, as the region came under the political control of rival empires. The threat of Protestantism in the Czech lands and the Ottoman Turks in Hungary led to the consolidation in the early seventeenth century of an empire ruled by the Catholic Habsburgs. In 1683 the Ottoman Turks’ final advance into Europe was halted at the Habsburgs’ seat, Vienna, and, less than two decades later, the Habsburgs had seized Hungary and Transylvania from the Ottomans. At the same time, new expansionist powers were emerging in the east (Russia) and the northwest (Prussia). In the early 1700s, under Peter the Great (Peter I, reigned 1682–1725), Russia pressed south into Ukraine; and at the end of the century, under Catherine the Great (Catherine II, reigned 1762–1796), the empire partitioned the territory of the weakened Polish kingdom among Habsburg Austria, Prussia, and itself. Following the Napoleonic wars, these imperial powers—Austria, Prussia, Russia, and the Ottoman empire—claimed all the lands of Eastern Europe.

Yet, at the same time as the neighboring powers culminated their advance into Eastern Europe, local movements began to challenge imperial power. Over the course of the nineteenth century, these initiatives developed into mass nationalist movements. Motivated by ideas imported from Western Europe—the French idea of the nation as a source of sovereignty and the German conception of the nation as a community united by language and culture—regional elites assembled the components of national communities: codified languages, books and periodicals in those languages, national histories,
and institutions for education and culture. From the mid-nineteenth century, national movements demanded linguistic and educational rights and administrative autonomy. Violent confrontations with imperial authorities erupted in several areas: Poland (1830, 1846, 1863), Hungary (1848), Bosnia (1875), Bulgaria (1876), and Macedonia (1903). While the Russians suppressed Poland and the Austrian Habsburgs granted autonomy to Hungary, the emerging national movements of Southeastern Europe embroiled the region into the early twentieth century. Ottoman weakness and the scheming of the independent states of Greece (independent in 1830), Serbia (1878), Romania (1878), and Bulgaria (1878) stoked the incendiary situation in the region. Bloody wars in 1877–1878 and 1912–1913 and other economic and diplomatic crises drew the major European powers—Austria-Hungary, Britain, and Germany—into a complicated tangle in the region. A Serbian student’s assassination of the Habsburg heir, Archduke Franz Ferdinand, on 28 June 1914 precipitated the unraveling of that tangle, and led to the start of World War I.

World War I brought the creation of new independent states in Eastern Europe (Estonia, Latvia, Lithuania, Poland, Czechoslovakia, and Yugoslavia), but the process of building ethnically homogenous polities out of the former empires continued throughout the twentieth century. “Ethnic cleansing,” a term that entered the universal lexicon during the wars of the former Yugoslavia (1991–1999), has been a stain on the region’s history since the wars of 1877–1878 and 1912–1913, when Slav, Romanian, and Greek armies expelled thousands of Muslims. The expansion of Nazi German military power into the region, followed by the Soviet Union’s devastating victory, accelerated the segregation of national groups. In addition to the 4.5 to 5.4 million Jews of the region who perished at the hands of the Nazis and their local accomplices, another 9 to 10 million people—mostly Poles, Belarusians, and Ukrainians—were killed during the German advance of 1939–1941. The Soviet regime deported some 1.5 million Poles and Ukrainians to Asia, while 5.5 million people from throughout the region were forced into labor in Germany. Following the war, over 18 million people were resettled, including over 8 million Germans expelled from Poland, Czechoslovakia, and Hungary. With the collapse of the Communist regimes in 1989 and 1991, the efforts at creating nation-states have continued, with the establishment of independent post-Soviet republics (the Baltic states, Belarus, Ukraine, Moldova) and the peaceful split of Czechoslovakia in 1993. The conflicts in Croatia, Bosnia, and Kosovo, however, have shown that nationalist identities, when mixed with economic decline and political provocation, remain a deadly force in the region.

Eastern Europe in the Twenty-First Century

Over a decade after the collapse of the Soviet bloc in Eastern Europe, the region is again a marchland of economic, political, and cultural spheres. In spring 2004, eight former communist states join the European Union. Yet the former Yugoslav republics remain unstable after the wars of the 1990s, and the former Soviet republics of...
Moldova, Ukraine, and Belarus are beset by economic and political problems. Eastern Europe remains an exporter of natural resources. The principal resource now is labor: industrial workers find jobs throughout Western Europe, while educated young people leave for universities—and jobs—in Western Europe and North America. Some observers take these as positive signs of post-Communist Eastern Europe’s integration with the world. But the road will be long. According to estimates, even the region’s most advanced countries (Poland, Hungary, Czech Republic) will not reach Western European economic levels for another fifty years.

Bruce Berglund

See also Europe; Inner Eurasia; Russian-Soviet Empire

Further Reading


Economic Growth, Extensive and Intensive

Economic growth is an increase in the total value of goods and services produced by a given society. There is little common agreement, however, on how best to measure this value precisely. Many distortions are possible even in societies where most goods and services are provided by specialists and exchanged for money—so that prices provide some standard of measure of the relative value people assign, for instance, to a sack of rice, an hour of childcare, an automobile, or a concert ticket. Measuring economic growth is still more difficult where economic activity is carried on outside the market, and thus not given a price that makes it comparable to other products. (For example, if hired cooks are paid enough each hour to buy five square meters of cloth, then we know something about how to add cooking and cloth-making together in an index of total value produced;
but if all families cook for themselves, it becomes much harder to know how to do that addition.)

**Definitions**

Despite these difficulties, it is widely agreed in principle that one can arrive at a total value for a society’s economic production, and that an increase in this number—*economic growth*—indicates an increase in material abundance in that society. Therefore, economic growth has a great influence on human welfare, though it does not automatically indicate material betterment; growth that is mostly directed toward building weapons, for instance, or growth that is so unevenly distributed that the number of very poor people is increasing, would not do much to improve overall material welfare. Still, there is enough correspondence between economic growth and the capacity to meet material goals, whatever they may be, that in the twentieth century, measures of economic growth probably became the most widely used indicator for trends in aggregate human material welfare, both in the present and the past. Even those who are very skeptical of equating output with welfare usually agree that *something* important about a society is being measured when we measure the level and rate of change of its economic output.

Economic growth is usually further divided into extensive and intensive economic growth. This distinction is clear in theory but messy in practice. *Extensive growth* refers to an increase in economic production that results from mobilizing more of the three basic factors of production: land, labor, and capital. If a farmer who used to work 50 days a year sowing 20 pounds of seed on 10 acres of land begins to work 100 days a year and sow 40 pounds of seed on 20 acres, thereby doubling his crop, this is pure extensive growth.

*Intensive growth*, on the other hand, refers to growth that does not require more factor inputs, but results from using these inputs more efficiently; this could result from new technology, a more efficient social organization of production, or increases in knowledge that make workers more efficient. If two people who used to each need a week to build a shelter start working together so they can build three shelters in that time—increasing their output without using any more materials or labor time—that is intensive growth.

Extensive growth comes with obvious costs and is presumably finite; on the other hand, it is extremely common in world history, since it is an option open to any society with unused land, free hours, etc. By contrast, intensive growth can be nearly free (though not entirely so, since considerable resources might be invested in figuring out how to do things better); in principle, it is also infinite, since it requires no additional material resources. On the other hand, it is not obvious that every society at every time can experience very much intensive growth. Consequently, economic historians have devoted considerable attention to trying to identify which times and places have seen important bursts or sustained periods of intensive growth, and social and economic theorists have devoted just as much attention to trying to extract from these cases a general set of conditions conducive to intensive growth.

In practice, however, intensive and extensive growth often occur together. If a new kind of plow makes it possible to grow grain on land that would not previously support it, the innovation represents intensive growth; but the extra labor, seed, etc. needed to maximize the benefit of the innovation represents an extensive component. Many technical or social changes also result in a switch from using one kind of input to another (from horses and hay to cars and oil, or from 50 hours of labor and a very cheap spinning wheel to a few minutes of labor and a huge machine) and may cause large changes in the relative value of these inputs. (An hour of a handloom weaver’s labor bought three or four days worth of food in parts of eighteenth-century China; today that labor is worth very little.) Therefore, it can be very hard to decide how much of a given episode of growth to assign to the intensive or extensive category. Still, any understanding of the changing material life of humans requires trying to sort this out.

**Three Eras of Growth**

Though it is hard to prove, most growth prior to the nineteenth century is regarded as having been extensive,
resulting from more people expending labor on more of the earth and its products. On the other hand, most growth in the nineteenth and twentieth centuries has been intensive. Systematic science has increased the speed with which new ways of doing things are discovered and disseminated, and supposedly more-efficient forms of economic organization have diffused around the world under the increased competitive pressure wrought by improved transportation and increased trade.

As a very rough approximation, this is probably correct, but any full story would be much more complicated. A fuller analysis shows that three critical eras account for most of the economic growth in human history, and that the combination of intensive and extensive growth is different in each case.

**The Neolithic Revolution**

Through the millennia during which people were hunter-gatherers, there were many examples of unrecorded intensive growth: gradual improvements in hunting techniques, expanding knowledge of what plants were edible and how to find them, and so on. Studies indicate, however, that these did not lead to substantial increases in per-capita income, because people who were often on the move had no incentive to accumulate possessions, unless these possessions could walk, and the only animal that seems to have been widely domesticated well in advance of the emergence of settled farming was dogs (used in hunting). Thus, whatever economic growth there was in the long period from the first emergence of humans until about 10,000 years ago was mostly reflected in population growth, as people spread out of Africa and gradually covered all the habitable portions of the earth, probably by roughly 30,000 years ago.

The efficiency gains from learning to do things better also enabled particular bands of humans to feed themselves with fewer hours of labor—an important improvement in human welfare, but one that does not show up as economic growth. Studies of modern hunter-gatherers suggest that they eat reasonably well with a work week of fewer than thirty hours per adult. Thousands of years ago, before agricultural and industrial societies pushed them onto marginal lands, these people could probably feed themselves with less work.

This photo, taken at Acoma Pueblo in New Mexico shows the mix of the modern economy with the indigenous way of life in a Native American community in the 1990s.
The first concentrated burst of intensive and extensive growth, then, was probably the Neolithic Revolution: our name for a cluster of innovations that includes settled farming, the domestication of animals, and the construction of permanent settlements. Controversy continues about how and why this process occurred—and it seems to have occurred independently in at least six places in the world. In the short run, these developments did not make life easier for individuals. Early farmers lived no longer than their nomadic ancestors, and they almost certainly worked much harder. Skeletal remains suggest they were shorter (which usually means less well-nourished) and suffered more injuries of various sorts. They certainly suffered more from contagious diseases, as people occupied large enough settlements for various diseases to become endemic, and as they stayed for long periods in proximity to their own waste, to animals that hosted diseases, and so on.

On the other hand, settled societies could achieve far higher population densities, because each acre of land in settled areas was now devoted only to plants useful to humans, and human activity—weeding, watering, etc.—increased the yields of these favored species. Staying in one place also made it easier for women to have more children, since children did not need to be carried as much as they did in migratory bands. For the same reason, settling down also facilitated the accumulation of material possessions. The overall result was substantial economic growth: more people and more output per person resulted from both an increase in inputs (more laborers, each working more hours on average) and eventually, from greater efficiency. Permanent settlement also facilitated the storage of food and thus the feeding of people who themselves might not produce food. This made greater occupational specialization possible, which in turn facilitated the discovery and diffusion of knowledge, manifested in the rise of advanced construction, metal-working, cloth-making, and many other skills.

Thus, intensive growth encouraged extensive growth, and vice versa. Within a few thousand years of the first agricultural settlements there grew up cities, governments, and writing—as well as far greater human inequality, which both reflected the accumulation of goods and served as a spur to further accumulation. While no good numbers for economic growth exist for this period, estimates of human energy consumption are a useful (though very inexact) proxy. A very rough estimate is that in the era of hunter-gatherers, perhaps 6 million humans each directly or indirectly used about 5,000 calories per day, for a total of 30 billion calories per day worldwide; by 5,000 years ago, perhaps 50 million people burned an average of 12,000 calories per day, for a total of 600 billion calories. Including improvements in the efficiency with which energy inputs were turned into output of human goods, economic growth in this period exceeds 2,000 percent; but since this was achieved over perhaps 5,000 years, the annual growth rate was still minuscule.

From perhaps 5,000 years ago to roughly 500 years ago, economic growth was primarily a matter of slow extensive growth—mostly clearing forest or jungle to create more farmland and accompanying population growth. The global population reached perhaps 500 million by 1500 CE, for a growth rate of less than 0.1 percent per year. Technical and institutional innovations also continued, but slowly. Not only was the rate of invention slow compared to the last century or two, but the rate at which new techniques spread across the world was very slow, due to limited communications. Iron plows, paper, and other very useful innovations took centuries to spread from China, where they were invented, to the other end of Eurasia, not to mention the Americas or Australia; the manufacture of paper, for instance, is noted in China in 100 CE, but not in Europe until after 1200. Productivity-enhancing institutional innovations, such as the growth of markets in land and labor, were often even slower to spread, since they threatened the vested interests of those who controlled these resources by force. It was also probably common for useful innovations to be lost periodically, since small societies were easily disrupted and much of their knowledge was never written down.

Innovations occasionally came in clusters, as in Song China (960–1279 CE), when breakthroughs in water control, rice growing, silk reeling and weaving, navigation, and time keeping were all invented in a relatively
short time. Whether coincidentally or otherwise, Song China also saw a marked institutional shift away from self-reliant estates that made heavy use of compulsory labor; instead, people at all levels of society began to rely more on markets and to specialize in a few goods or services they could sell in exchange for others. The growth of markets was certainly not new or unique to Song China, but that appears to be where it first reached the critical level at which the process became self-sustaining. This pattern of commercialization spread outward from China and a few other centers, though the degree to which it prevailed in any particular society remains controversial among historians.

Migrations and conquests could also suddenly spread a great many innovations all at once. Muslim conquerors spread rice, sugar, oranges, cotton, and other crops westward, having earlier obtained these plants via trade with India; they also played a very important role in spreading originally Persian irrigation techniques, and medical techniques derived from the ancient Mediterranean, India, and the Arab world. But more often, centuries separated major inventions, and they spread rather slowly. By Roman times, agricultural yields in parts of Italy had reached levels that would not be exceeded until 1800 (though the number of places in Europe achieving those yields increased as efficient practices slowly spread). The same was true of the most productive farms in East China, which by 1200 at the latest had reached yields not reliably exceeded until well into the twentieth century. Even within the small space of England, the top wheat yields on medieval manors set a standard that did not become common until roughly 1800. Every piece of land is subtly different from others in soil chemistry, drainage, sun and shade, and so on, and before the advent of modern chemistry, adopting what worked on somebody else’s farm was a laborious trial-and-error exercise for even the best-informed and most diligent farmers.

By the fifteenth century, however, a new phase of growth was beginning to appear in various parts of the world, composed of three loosely related elements: more rapid population growth and land clearance (extensive growth); an “industrious revolution,” in which people began to work longer and harder (extensive growth) but also more efficiently (intensive growth); and technological change, which increased slowly before accelerating sharply in the industrial revolution of the nineteenth century.

**The Industrious Revolution**

Populations across Eurasia recovered from the fourteenth-century plague during the following century eventually reaching previous peak levels; but this time, they didn’t stop: For reasons that are unclear, world population had reach almost 1 billion by 1800, roughly twice its previous peak. Land under cultivation also increased, though not as fast as population: Frontiers were pushed back in Eastern Europe, Southwest China, the interior of India, the Americas, and many other places. In many cases, the advance of cultivation went along with small but significant technical improvements: new seeds better suited to harsh conditions, better water pumps for irrigation, improved knowledge of crop rotation, etc. At the same time, yields per acre rose, though often painfully slowly. For instance, the practice of double-cropping—squeezing in a second crop on the same piece of land in one year—became much more common, especially in East and South Asia. This helped support more people, but the second crop often yielded less output for each day of work than the primary crop. In nonagricultural occupations as well, output rose, but hours worked seem to have risen even faster.

In Europe, where the best data exists, the number of hours of work required to earn a day’s food soared during the fifteenth and early sixteenth centuries, and then took a very long time (in some cases into the 1930s) to return to early fifteenth-century levels. Consequently, families worked more hours per year to make ends meet: Men worked longer, more women worked for pay, and more children worked as well. One study suggests that the average work year for adult males rose over 20 percent in England just between 1760 and 1800. Though evidence elsewhere is spottier, a similar “industrious rev-
olution” appears to have occurred in other parts of Europe, China, Japan, colonial North America, and perhaps parts of India. Meanwhile, slaves in the New World, particularly on sugar plantations, were being worked as hard as any labor force in history.

The slaves had no choice, but why did so many free or semi-free people begin to work much harder? Some of them had no choice, either: As birth rates rose there were more mouths to feed, and the availability of more laborers also tended to drive down workers’ earnings per day; but a cultural shift was at work, too.

With more days of work required just to earn the family’s food, people might have been expected to buy fewer nonessentials, or at least not more of them. But instead, ordinary people in various parts of the world appear to have purchased considerably more clothing, specialty and processed foods, household goods and services, etc. in 1800 than in 1500. (Again, the evidence is most detailed for Western Europe, but it points the same way for various parts of East Asia, North America, and perhaps elsewhere.) In other words, people worked more hours for the market, not just to get essentials, but to acquire various little luxuries: sugar, tobacco, silver jewelry, tableware, etc. This was mostly a matter of extensive growth, but it also relied in part on improvements in technology (more efficient shipping that facilitated trade, for instance) and changes in social organization, especially greater labor specialization. For instance, many people gave up making their own candles and began buying them instead, while putting the hours saved into making more of whatever they in turn specialized in (say, cloth) and selling it.

The resulting gains in efficiency from increased interdependence, though hard to measure, were considerable. And once again, extensive growth (more land and labor inputs) and intensive growth (social and cultural changes that created more efficient marketplaces with more attractive goods available, perhaps acting as incentives for people to work harder to get them) were so sufficiently intertwined that they are hard to separate. In fact, more efficient labor markets may even have helped create the population growth that increased the labor supply. The gradual freeing of people in various places from forced labor obligations and restrictions on migration, improvements in the availability in labor markets of information about opportunities elsewhere, and greater opportunities for commoners to acquire land all meant it was easier for young people to start their own lives and families without waiting for their parents to give them land, or a shop, or some other productive asset. The result, frequently, was earlier marriage and higher birth rates. At the same time, denser population increased the possibilities for specialization—only a community of a certain size will support a full-time carpenter or weaver—and set the stage for intensive growth.

The increased long-distance trade that resulted from advances in navigation and shipping also fueled growth during the industrious revolution. Exotic new goods, mostly from the tropics, proliferated, and they were often at least mildly addictive: sugar, cocoa, tea, coffee, and tobacco. These fueled the emerging consumerism of people in Europe, China, and elsewhere, and generally had to be obtained through the market: Of the crops listed above, only tobacco could be grown in the temperate zones where the largest and wealthiest collections of consumers were found. Meanwhile, potatoes, corn, and other new crops made food production possible in places where no known crop had grown before, especially at high elevations. Enormous new fisheries off the North American coast provided cheap protein. And the knowledge of strange new worlds—which was collected above all in Europe—did more than just provide practical new ideas; it also shattered old systems of knowledge, intensifying the search for new ways to understand the natural world. The new thinking that emerged did not produce the modern sciences and science-based technologies until the nineteenth century; but when they did, they transformed almost every branch of economic activity.

This “industrious revolution,” however, could not go on forever, and it also did not yield vast increases in output per person. While global population doubled from 1500 to 1800, output perhaps tripled, so that output per
person rose about 50 percent in 300 years. The critical constraints were in the area of agroforestry and energy. Broadly speaking, all the basics of human life—food, construction materials, clothing fiber, and energy—came either from vegetative growth (grain, lumber, cotton or flax, firewood) or from plant-eating animals (meat, leather, animal locomotion), which meant from the combination of land, fresh water, and sun. Supplies of these could not be increased on demand, creating difficult trade-offs: More farmland, for instance, meant less forest, and thus less lumber and firewood. The result, in several of the most productive places in the world, was a serious energy shortage, which placed limits on economic growth.

The Industrial Revolution

The solution to this energy shortage was the development of fossil fuels: first coal (and to a lesser extent peat) and later oil and natural gas. While coal, in particular, had been used to some extent in many places over the centuries, Great Britain was the first society to use it on a truly massive scale for its everyday needs. A number of factors contributed to this. First of all, Britain had lots of coal, much of it very conveniently located. Second, it was badly deforested relatively early, making the switch to coal (and to stone for building) imperative. Third, technological developments, especially in metallurgy and precision boring, facilitated the development in England of the world’s first economically viable steam engines, which were essential to pumping water out of the coal mines. Without steam power, it has been estimated, British coal mining could not have expanded beyond its level in 1700; instead it multiplied sevenfold by 1815, and almost 100-fold by 1900. Coal mining elsewhere grew even faster in the late nineteenth century, albeit from a smaller base. And in the twentieth century, the increased use of oil and natural gas—fuels barely used at all before modern times—has made possible even more staggering increases. The average human today uses ten to twenty times as much energy as he or she did before the Industrial Revolution, and in rich countries, the figure is higher still.

The staggering quantities of energy thus made available, combined with a wave of other technological innovations, ushered in by far the greatest surge of intensive growth in human history—one that has continued for roughly 200 years thus far, gradually spreading from a few pockets in Britain and elsewhere in Northwestern Europe to much (though not all) of the world. While global population has risen a bit over 500 percent since 1800, economic output has risen over 4,000 percent; industrial production may have risen 10,000 percent since 1750. About half of all economic growth in human history, as best as it can be measured, has occurred since 1950. Since that growth far exceeds the growth in land and labor inputs, most of it is a combination of additional capital inputs and intensive growth: technological and institutional changes that make labor, capital, and land use more efficient. It is very hard to measure the effects of capital apart from technology, since so much capital enters the economy in the form of new machines, but there is no doubt that much of this prodigious growth is intensive. The development of far more systematic natural sciences has led to a steady stream of new productivity-enhancing technologies. In earlier eras, by contrast, technological change usually came in the form of single innovations or small clusters, and exhausted itself when a boom in the innovative industry created a shortage of some particular material. (Improvements in metallurgy, for instance, often led to such massive deforestation that the metalworks ran out of fuel.) And the advantages in military and political power that were conferred by industrialization were so great that governments everywhere tried to change their institutions to facilitate economic growth. Indeed, gross national product per person is probably the single most widely used index of the success or failure of societies in today’s world—even though this measurement was invented only in the twentieth century, and most economists would agree it is only a very rough measure of human welfare.

For all the diversity of technological changes involved, much of the story of post-1800 growth is that of the fossil fuel revolution in its many applications. It surfaces as
transportation that has transformed the global division of labor (making it possible to a greater extent than ever before for people to depend on very distant places even for essentials), as chemical fertilizer and pesticides that have raised yields per acre to unheard-of levels (greatly reducing the extent to which the finite supply of land constrains production), as plastics and other new materials that substitute for other resources, and as machinery that substitutes for the muscles of billions of people and animals. Thus labor supply does not currently limit production very much, either; the problem, on the contrary, is a surplus of workers, or workers who are not in the places where they are needed.

**Economic Growth in the Contemporary World**

While global wealth is very unequally distributed, and poverty remains a huge problem in much of the world, the modern economic era is unparalleled in at least two ways. First, the world economy has grown to the point where everybody could theoretically have more material goods than even the privileged had in most societies until quite recently. Second, the major constraints on even further growth are probably not so much the old ones of limited land, labor, and capital, as they are the environmental damage that may result from continued extension of our energy-intensive production methods. At the moment, the threat of global climate change from continued production of greenhouse gases (a byproduct of all fossil-fuel burning) is probably the most widely discussed, but the long-term effects of making, burning, using, and dumping many other chemicals invented in the last two centuries—most of them, in one way or another, derivatives of coal or oil—pose a number of other poorly understood threats. In the last few decades, major economies have become less fossil-fuel intensive, meaning they burn fewer fossil fuels per dollar of economic activity. Decreasing the energy intensity of the economy is also a high priority for China, the world’s largest developing economy. But because the total amount of economic activity continues to grow, so do worldwide fossil fuel consumption, global warming, and various other kinds of environmental damage. It remains to be seen whether less-damaging energy sources can become a significant part of the world’s power. None of this means we are likely to see an end to economic growth any time soon, but it does mean that how we think about growth and its costs may change. Even intensive growth may no longer be the “free lunch” it has sometimes seemed to be.

*Kenneth L. Pomeranz*

See also Agrarian Era; Foraging (Paleolithic) Era; Industrialization; Industrial Technologies; Modern Era; Trade Cycles

**Further Reading**


Ecumenicism

Ecumenicism is the striving for reconciliation and unity across the diversity of Christian denominations. To a lesser extent, it can also mean a looser goal of harmony among religions, both Christian and non-Christian. The term ecumenicism comes from the Greek word *oikoumene*, designating the entirety of the inhabited earth (in the scope of Greek knowledge, roughly the lands from the western Mediterranean to India). It is one among many modes of universalistic thinking in world history.

**Premodern Ecumenicism**

The first wave of Christian ecumenicism occurred in the centuries after the split between Rome and Byzantium. The fairly short-lived unity of early Christendom had rested on the success of the Council of Nicaea (325 CE) and Constantinople (381 CE) in stamping out heretical sects, and of the far-reaching rule of the Roman empire, which had adopted Christianity as its official religion in the fourth century. The division between the Latin West, centered on Rome, and the Orthodox East, centered on Byzantium, came to involve differences deeper than mere politics: a divergence of ideas about state–church relations, the relative strength of Roman and Greek cultural legacies, and so on. When the Crusades brought more intense contact between western and eastern Christendom, the greater visibility of contrasts only worsened the state of ill will. Ecumenical thinking in these centuries revolved around the perceived need to restore the unity of Christendom as one expanding community of believers defined by correct doctrine and loyalty to one organized church (in practice, given the greater Western interest in ecumenicism, the Catholic Church with its pontiff at Rome).

To a lesser extent, the same kind of thinking appeared in sixteenth- and seventeenth-century western Europe. The Protestant Reformation had put an end even to the unity of western Christendom, which had rested on the cultural-religious-intellectual syntheses of Aquinas, Dante, and the like. Despite these multiplying political and doctrinal divisions, the ideal of a single universe of believers lingered throughout Christianity’s second millennium. Much as in the other major Eurasian civilizations, a fragmented reality was being measured against the standard of a unified golden age. It was believed that cleavages of nation, race, and class should properly yield to the ultimate solidarity of the faithful.

Of course, broader ecumenical patterns of thinking had long allowed intellectuals to imagine unity, or at least convergence, across the boundaries of sect and rite. Mystics within the world religions have often believed that ultimate spiritual truth, being higher than any doctrine or practice, cuts across the world religions. The most ecumenically minded groups have included world renouncers like the gnostics, the Sufis, and the Upanishadic forest dwellers. But even more mainstream theologians in each of the world religions have found ways to justify interreligious openness. For medieval Catholics, there was the idea that other religions, even if they lacked the crucial centrality of Jesus as savior, at least reflected natural law and an innate human tendency to seek the divine. Islam had a framework of respecting other religions, such as Judaism, Christianity, and Zoroastrianism, as legacies of earlier divine revelations that had become distorted over time. And the various branches of Hinduism tended to imagine all religions as alternative paths to the same goal. This kind of ecumenical openness has been a recurring theme in those world-historical encounters that go beyond trade and migration into the more challenging realm of intellectual dialogue. Religious cosmopolitans have always tried to step back from superfluous differences of practice and symbolism, to find common ground in divine or human nature. Examples include the interreligious councils of Akbar and Abu’l Fazl in Mughal India, and the entry of Jesuit missionaries to Confucian China in the 1500s.

**Ecumenicism in Modernity**

The twentieth century saw a second major wave of Christian ecumenicism. At first the need for a common front in European colonial missionary activity drove the search
for unity, especially across the Protestant denominations. The 1910 World Missionary Conference at Edinburgh is often seen as the start of this ecumenism. Later, the broadening of ecumenism to encompass Protestant, Catholic, and Orthodox branches of Christianity responded to other pressures, like the crisis of secularization in the West. Many Christians saw fragmentation as due to petty squabbles, and as an obstacle in countering the broader decline of religious belief among the peoples of the developed world. Social and geographic mobility also increased many believers’ desire to cross-denominational boundaries and do such things as take communion together.

In the later twentieth century, ecumenicism often took on a more leftist cast. The rise of national Christian churches in newly independent African and Asian countries broadened the base of transnational ecumenical bodies like the World Council of Churches. Issues of human rights, nuclear disarmament, and social equality figured more prominently in ecumenical circles from the 1960s onward. Efforts have aimed mainly at enhancing practical cooperation, moving toward mutual recognition of baptisms and marriages, and overcoming thorny debates over the historical roots of priestly authority. Ecumenicism has tended to draw support mainly from high-culture establishment versions of Christianity like Anglicanism and Catholicism, and from the more liberal currents like Unitarianism. Opposition has remained

This American lithograph titled Christian Union (c. 1845) shows men from nine Christian denominations, with lion and lamb in foreground and Native American and African-American men in the background.
strong among Evangelicals and others who consider it misguided to downplay core doctrinal commitments, or who for various reasons dislike the political agendas that ecumenicism has embraced. Often the strongest voices of present-day religious resurgence, such as born-again Christians, have affirmed their identities in a way that leaves little room for ecumenical bridge-building.

**World Religions and the Broadening of Horizons**

In the last few decades, the scope of ecumenicism has also expanded to include openness to non-Christian religions. Theological dialogues with Jews and Muslims, who share many of the same historical and metaphysical reference points, are one example. The broadening of ecumenicism also reflects a growing Western interest, especially since mid-century, in Asian religious traditions such as Buddhism. Ecumenically minded clergy and laypersons alike often look beyond Christianity for sources of meaning in a disenchanted modern world, and for potential allies in an era of growing secularization. This interest in the non-Christian traditions is loosely analogous to the way the study of world history itself has been broadened, and the effort to overcome earlier Eurocentrism in how Westerners made sense of their place in the world.

Adam K. Webb

See also Red Cross and Red Crescent Movement

**Further Reading**


**Education**

Education is a process or the result of a process by which people acquire knowledge, skills, habits, values, or attitudes. It may also be defined as growth—the cumulative effect of changes in behavior resulting from experience, both planned and unplanned, and may be defined as learning acquired through formal and informal processes. This would include directed learning from a teacher, mentor, priest, or other adult specifically charged with instructional duties, but much education also takes place outside the classroom through interaction with family, peer groups, and community.

Ideally, education should help people to become more productive members of society, both as citizens sharing...
in democratic processes and as workers in the economy. In early civilizations education was the responsibility of family members or tribal elders and eventually priests. Survival skills, customs, and beliefs about the unknown were passed to each succeeding generation.

The history of schooling focused on themes of governments, bureaucracies, churches, and elites. It is crucial to examine to whom schooling is available—the rich and poor, male and female, urban and rural, racial and ethnic groups, and people of different levels of ability. The history of education is therefore a study of social organization and change, as well as economics, politics, and religion.

The Ancient World
In preliterate societies education consisted of the transmission of essential skills and the orally preserved traditions of the tribe or community. The continuance and cohesion of the society depended on the ability of adults to pass on to the next generation the folklore, the social practices, and an understanding of the world of the unknown. Children learned adult roles and the means of personal and collective survival by imitation; it was only with the advent of the early civilizations, and their more complex and regulated social organizations, that teaching became a specialized activity. The beginnings of educational systems lay in settled societies, regulation and law, government administration, and religion.

China
Although civilization began with the settlement of people in Mesopotamia, it was in China, despite invasions and divisions, that emphasis on nation and culture began. School and its famous examination system, a selection device for scholar-officials, existed in China by the end of the second millennium BCE. Schools and examinations were grounded in traditions, strong social codes, and a respect for writing, which also played a part in the continual attempts by China’s ruling dynasties to solidify political power. Also important was the philosophy of Confucianism—a theory of ethics and practical politics first formulated and advanced in the sixth century BCE that promoted education, ceremony, and ritual based on the philosopher’s classic texts. Through efforts to educate and strengthen political structures, Confucianism established its lasting influence. Though the implementation of Confucius’s ideas was not consistent even during his lifetime, versions of Confucianism dominated or influenced Chinese educational thought and practice and are still influential today.

India
While writing was a dominant part of the culture in China, India depended more on oral forms of communication including prayers, hymns, and songs, which between the fifteenth and tenth centuries BCE were embodied in what later became known as the Vedic literature. The Vedas, the product of spiritual leaders of the Indo-Aryans who had migrated from Central Asia, were sacred texts that represented complex religious and social traditions. In the middle of the first millennium BCE, priests and teachers became custodians of literature and tradition and public rituals. As a separate component within the growing caste system, Brahman priests controlled higher learning through their monopoly of the Sanskrit language of the Vedas for the next two millennia. Education and instruction in religion were completely inseparable in the Brahman tradition. In the sixth century CE a rival Indian religion, Buddhism, with a focus on self-discipline and meditation, arose. It attracted popular support for its opposition to the caste system and its acceptance of secular teaching.

The Middle East
In the fourth millennium BCE, scattered settlements along the fertile rivers began to assume the shape of cities. Temples and king-priests emerged with the growth of organized religion, and with the invention of writing, which often used representational pictograms, came scribes and schools for training scribes. Throughout the complex history of Sumeria, Babylon, Akkad, and Assyria runs the thread of the development of writing and forms of schooling or training associated with writing and with the rituals connected with the worship of gods. Scribal schools spread to the Mediterranean as civilization spread.
westward and the influence of the Mesopotamian region declined during the middle of the first millennium BCE. Egyptian civilization evolved in the Nile Valley paralleled this history from the fourth millennium BCE, developing hieroglyphic writing and arithmetic. Here also, education was carried on largely by scribes, who were the driving force behind Egyptian civilization, which introduced astronomy, invented a calendar, created a variety of writing materials, and emphasized instruction in practical subjects.

**Greece and Rome**

The first literate society of the world was Athens in the fifth century BCE. In the following century Plato and Aristotle produced the first and most influential theories of the relationship between education and the state. The history of Greek civilization begins in the fourth millennium BCE and involves both native cultures and those of invading peoples. The Homeric period of 1100–800 BCE had produced oral traditions and ideals transmitted as poetry and myths that were embodied in written texts by the seventh century BCE. Greek city-states, primarily Sparta and Athens, were taking shape. Sparta became known for its educational system, which was based on the athletic and military training of boys who were separated from their families as early as age seven to prepare them for a role in the city’s defense. At the same time Athens developed a democratic framework that involved its free citizens in all aspects of the city’s life and government; in education a balance was sought between physical education and the cultivation of music and poetry.

Education was not required by the state, but elementary education was accessible to almost all the children of free citizens and male literacy was probably extensive. Though interpreted differently than in Sparta, education in Athens was closely linked to citizenship—the Athenian aim was for citizens to be able to take part in debate, to elect and to be elected in order to help foster the ideal society. Greece already had an alphabet and had developed aspects of astronomy, mathematics, and cosmology. By the fifth century BCE, Athens also had the capacity to sustain critical theoretical debate, including discussions about the aims and processes of education, as embodied in the work of the Sophists and their sternest critic, Socrates, whose thinking featured centrally in Plato’s and Aristotle’s writings.

The Roman Empire and its culture and education spread across Europe, but the empire had declined by the 6th century CE, leaving behind the legacy of Latin.

**Judaism**

Interwoven with much of the history of education in the ancient world and with the changing landscape of Europe was the religion of the Hebrew people. Their history was concurrent with the western Asian civilizations, but it differs from other civilizations in their adoption of monotheism and their repeated migrations, persecution, and exiles. The Covenant of the second millennium BCE conveyed an injunction to study and to teach the traditions passed on by Moses, the lawgiver. In Cannon, Babylonia, Egypt, and Persia, and during the Diaspora, rabbis studied the laws handed down to Moses by God. Their centuries of scholarship resulted in the compilation of the Talmud in the fourth century CE. The Jews were an educated people, and wherever they went the school became as important as the synagogue.

**Medieval Europe**

As Rome declined and was destroyed by incursions of Germanic tribes in the fifth and sixth centuries, the Christian church became its major legacy to the conquerors. While most of the classical Roman culture held little attraction during this time, the church drew popular appeal. It was in conjunction with the church and its institutions that the learning and schooling survived the Dark Ages in Europe, spanning the sixth to eleventh centuries.

**Charlemagne’s Reign**

The important framework for education for eight centuries following the decline of the Holy Roman Empire grew out of the relationship between church and state and the dominant role of the church as overseer or provider of educational institutions. The emergence of a
strong Frankish monarchy was crucial to this period and was solidified by the accession of Charlemagne to the throne in 768 and his crowning as emperor by the pope in 800. Charlemagne encouraged scholarship and used the palace school to promote learning, while directing that monasteries and abbeys conduct schools and that, where possible, parish churches should do so as well. The importance of Charlemagne’s efforts lies in the revival of learning and the marrying of Latin and Christian traditions.

Diversity of Schooling
In feudal Europe social divisions were reflected in different educational forms. For example, the majority of serfs or peasants had little access to formal education since most schooling focused on priestly or other service to the church. Chivalry and its ideals developed as a form of training for the nobility and knighthood, and became the subject of the songs of troubadours and minstrels. At the same time there began a consolidation of various kinds of advanced professional and liberal schools and institutions, the beginning of European universities, mostly in the south and west, in the late twelfth century such as Bologna, Paris, Oxford, Salamanca, and Padua.

Islam
Arabic education was influenced by Islam ever since the time of the Prophet in the sixth century, establishing two important traditions—the provision of schools in connection with mosques and the preservation and development of the intellectual achievements of the Greek and the Hellenistic world, including mathematics, medicine, and the works of Plato and Aristotle. The Islamic empire of the seventh century, especially, became a repository of scientific knowledge and a publishing center for books, a collector of manuscripts, and a builder of libraries and
observatories. As the empire expanded, it conquered Spain in the early eighth century, and from the ninth to the eleventh centuries made Spain the most powerful center of culture and learning in the West, with its schools, higher leaning institutes, and libraries. It was through Saracen Spain that Europe acquired some of the elements for the revival of learning. By the eleventh century, Islam had firmly established itself throughout Central Asia and India, where it established mosques, schools, and centers of higher learning. But Islam was in decline as an intellectual force by the time Europe began its revival.

The Italian Renaissance

The fifteenth century brought a reassertion of worldliness, optimism, and a renewed faith in human potential in Europe, and the process of rescuing the classics of Greece and Rome accelerated and stimulated a surge in painting, sculpture, and architecture. With this rejuvenation of the fine arts, education and various kinds of training flourished as well. Humanism, a new orientation that emphasized a different literary, philosophical, and historical approach to studies, was at the heart of the movement. By the early sixteenth century, courtly education for the sons and daughters of the elite became prominent throughout Europe.

Continuity and Change

In the late fifteenth and early sixteenth centuries, Portugal and Spain were the chief colonizing powers and began penetrating parts of South America, Africa, and Asia in their pursuit of territorial and economic ambitions. The colonizers brought new educational activity, with priests and friars quickly following the path of the conquerors and setting out to educate and convert native peoples. Although colonization did not peak until the nineteenth century, European education had been introduced in many regions of the world by the seventeenth century, following the routes established by the explorers of the previous two centuries.

Enlightenment and Reform American reformers such as Thomas Jefferson in the increasingly powerful American colonies drew on and transformed the ideas of seventeenth-century English philosophers concerning education. In Europe, Locke was a key figure in the European Enlightenment and represented the French rationalist philosophers for whom education was central to their vision of a new, more rational social order. At the end of the eighteenth and beginning of the nineteenth centuries these ideas were translated into political action, producing significant and sustained plans for basic educational reform. From this time forward, perceptions of the world and possible futures changed rapidly.

The Nineteenth Century

Many social, political, and economic movements profoundly affected education in the nineteenth century. Among them were empire building, the growth of the nation-state, modernization, and the progressive movement, all of which clearly show how the international scope of education and universal literacy was explicitly
identified as a desirable goal. For example, in the mid-
nineteenth century, schooling in America underwent
major changes. Mass education had previously been the
results of charity and the efforts of religious schools, but
as social change accelerated under industrialization and
commerce, a reform movement for free public education
emerged in the 1830s. Another example would be mod-
ernization as seen through the Meiji Restoration in Japan
of 1868 that sought to build a more sophisticated edu-
cational system.

The Twentieth Century
By the twentieth century, education and its social, eco-
nomic, and cultural contexts have grown in complexity.
Education has clearly become a component of change in
national policies and the allocation of public resources.
Controversies surrounding education, such as the differ-
ence between public and private schooling, remain and
are further complicated by related political and ideolog-
ical controversies.

Jaclyn A. LaPlaca

See also Adolescence; Childhood; Dictionaries and Ency-
clopedias; Initiation and Rites of Passage; Libraries;
Missionaries

Further Reading
Cambridge, UK: Cambridge University Press.
Ireland: Four Courts Press.
Kaestle, C. F. (1983). Pillars of the republic: Common schools and Am-
York: Cambridge University Press.
Rothblatt, S., & Wittrock, B. (1993). The European and American uni-
versity since 1800. New York: Cambridge University Press.
New York: Praeger.

Egypt—State Formation

The formation of the ancient Egyptian state is one of
the most taxing and complex subjects in Egyptology
and world history; its investigation is significant as it
allows scholars to understand the origins of the social,
economic, and political institutions that make up other
ancient and modern state systems.

Recent research has demonstrated that the formation
of the state in Egypt, resulting in the world’s first territo-
rial state system, is the result of gradual, multilinear and
multicausal processes that took place between roughly
3400 and 2700 BCE.

The evidence for these processes largely derives from
archaeological data collected over more than a hundred
years through archaeological activity in Egypt. In the past,
our understanding has been hampered by a prevalence of
mortuary data from southern (Upper) Egypt, which re-
sulted in a much lamented bias and strong focus on this
area. Only in the last two decades of the twentieth century
and subsequently have modern archaeological investiga-
tions in different parts of the country, including settlement
sites, demonstrated that both Upper and Lower Egypt
made significant contributions to the cultural, economic,
and social evolution toward the state. That research has
generated a strong interest in and numerous projects
investigating the cultures of prehistoric and early histori-
ical Egypt, which make this subject not only one of the
most contested but also most productive in Egyptology.

Modern research on the subject has also benefited
from the application of anthropological and sociological
theory, and as a result theories and models about the for-
mation of the Egyptian state abound. It is now generally

Helm.
recognized that any study of this subject must acknowledge and take into consideration the complexity of the evidence as well as the validity of different approaches.

The Three-Stage Approach to State Formation in Egypt

Scholars considering the phenomenon of state formation in ancient Egypt have in the past often simplified their object under the Egyptological term “Unification of Egypt,” which in essence represents the more advanced, secondary stage of a development toward political unity on a large territorial scale. This view, however, ignores the significant primary stage in this development, namely the formation of early kingdoms at the end of the prehistoric period (c. 3300 BCE), that not only chronologically precedes the latter, but that needs to be considered and understood as a precondition. Further, the achievement of the second stage at the beginning of the dynastic era, that is, with the first dynasty (c. 3100 BCE), is followed by a long process of administrative organization and economic integration of the country’s provinces and is finalized around the third dynasty (c. 2700 BCE).

This three-stage process sees at the beginning incipient developments towards social, economic, and cultural complexity that gained speed as time progressed, largely due to the ecological constriction of the Nile Valley as well as the easy means of transport and communication along the river.

The First Stage

Although significant developments took place in the Neolithic period (c. 5000–3900 BCE), it was primarily during the Chalcolithic period (c. 3900–3300 BCE) that major economic and social advances were made which led to the appearance of local market centers in different parts of the lower Nile Valley. Here, craft specialization and interregional trade were encouraged and local elites started to emerge. Craft specialization is one of the best tangible areas of study in this context, as there are a variety of industries that produced substantial archaeological evidence. These include ceramics, stone vessels, flint knapping (the shaping of flint by chipping off pieces), jewelry making, and metallurgy. The latter, especially, depended on the increasingly established interregional trade, which supplied raw materials from within and outside Egypt. Known areas of indirect or direct contact were Nubia (in present-day southern Egypt and northern Sudan), Ethiopia, the Levant (the area of present-day Israel, Syria, Lebanon, and Palestine), and Mesopotamia. The burgeoning local elites may have sponsored or controlled these industries and trade activities in order to satisfy their needs in peer competition or conspicuous consumption, which manifested itself in richly endowed burials, equipped with exotic goods.

These wealthy burials led to much archaeological attention being given in the early stages of research to the cemeteries of Upper Egypt, at sites such as Naqada, Hierakonpolis, and Abydos, and as a result, scholarship was much reduced to the analysis of mortuary data of the south. For a long time, the highly tenuous belief was held that agile Upper Egyptian tribes of hunter-gather origin had been the driving forces in the process of state formation and had taken over the territory of the more peaceful agriculturalists of the north, paving the way for the cultural and political unification of the country. Lately, however, Lower Egypt and especially sites around the apex of the Nile Delta have also been taken into consideration, and their investigation has caused a major paradigm change, as they, too, bear evidence for similar and endogenous economic and social processes. Significant is the site of Maadi, near modern Cairo, where a large early Chalcolithic community was based that engaged in the specialized manufacture of metal and flint tools and which not only exchanged commodities such as copper and pottery with the southern Levant, but also housed foreign traders within their settlement—a clear indication of direct interregional trade.

At the end of the Chalcolithic period, Egypt consisted of a chain of regional chiefdoms along the Nile river and in the Delta that engaged in agriculture and produced a variety of crafts that were exchanged on the local, regional, and interregional markets, and whose leaders and kin enjoyed the economical and social benefits. This situation encouraged increasing social and wealth dis-
The Second Stage

There is evidence from around 3300 BCE that relatively large kingdoms with substantial urban centers had emerged in different parts of the country, most notably at Hierakopolis, Abydos (Thinis), and in the north, whose leaders were monarchs from powerful families with near unlimited access to exotic long-distance trade goods, artisans, craft industries of local products, human and natural resources, as well as a body of personnel whose skills were employed to develop an administrative system by way of writing. This increasing segmentation of society laid the foundation for the development of complex society in Egypt.

It has been suggested that neighboring city-states maintained regular contact with each other and that they thus not only engaged in trade and exchange of goods but also came to share cultural values, religious beliefs, and artistic conventions and ideologies. This premise possibly allows us to explain the practically simultaneous appearance of names of contemporary, but possibly competing, rulers of different parts of the country, inscribed on objects such as cylinder seals and pottery vessels. The same design principles were used each time in writing the various royal names, which indicates that these rulers shared artistic and literary conventions. At a slightly later stage the name of the ruler was augmented by the addition of a deity, the god Horus, which implies the sharing also of religious beliefs for the expression of royalty in different parts of the country. Interestingly, commodities inscribed with royal names have been found at great distance from their places of origin. For example, pottery vessels inscribed with the names of southern rulers have been found in the north of Egypt. In the past, that would have been taken as evidence for control or conquest of...
The Sphinx in Jizah, Egypt, photographed between 1867 and 1899. It is a powerful symbol of the Egyptian state, both past and present.

the north by the southern rulers. However, in absence of archaeological evidence for warfare, today it is often explained in terms of active interpoly exchange during this period.

In the south, the late Chalcolithic chiefdoms saw a growth in population in the increasingly urban market centers; the north not only replicates this process but does so at a much greater scale, although at a slightly later point in time. The region at the apex of the Nile Delta and around what later became the capital Memphis experienced a period of growth around 3300 BCE that is measured by an increase in cemetery sites and number of graves. It is possible that this area may have been a kingdom or city-state in its own right, but there is currently no evidence, other than much later historical sources that refer to a Memphite kingdom, to support this. Contemporary archaeological evidence from the area’s main necropolis at Helwan also suggests that this region gained in importance on a countrywide scale as rulers from different parts of Egypt maintained contacts with its inhabitants and employed administrative personnel from here.

Already at this stage, basically all the criteria for state formation in Egypt were fulfilled. Each of the kingdoms had a powerful monarch who was seen as having abilities beyond the natural realm, including the ability to mediate between the human and the divine; they each had a hierarchical and highly segmented society, a centrally directed economy and administration that employed the advantages of writing, and trade links to neighbors and distant regions. Some of these kingdoms may have had better access to certain resources, or simply better leadership, which allowed them to increase their territorial gains, wealth, and power.

At around 3100 BCE, so it seems, the rulers of the powerful kingdom of Abydos (Thinis) in the south managed to subsume the territory of Hierakonpolis and largely expanded its territory in the south. To what extent this process was an act of warfare, economic coercion, or voluntary alliance is unknown. One of the persons who may have been largely responsible for this act was king Narmer, the first king of what has come to be known as the first dynasty, who dedicated a ceremonial cosmetic palette to the Horus temple at Hierakonpolis on which he represented himself as the protector of his territory from outside enemies and the forces of chaos. Such representations are well known from before and after the time of Narmer and most likely do not refer to actual events but rather have to be seen in the light of ideological validation and political legitimation.

Simultaneously, the region around Memphis received another boost in activity, and from the time of Narmer’s successor, Hor-Aha, there is the first evidence of monumental architecture in the form of richly endowed private tombs for members of the royal family and the bureaucratic elites at Memphis, while the kings themselves chose to be buried with their ancestors in the royal necropolis at Abydos. It appears as if the family, or dynasty, of Abydene rulers of this time was so powerful that they not only succeeded in integrating Hierakonpolis into their territory, but soon after also moved north and thus created the national territory of Egypt, with Memphis as its capital. This, finally, represents the completion of the second stage of state formation in Egypt.

**The Third Stage**

The final stage was a far more drawn-out process, in which the state administration consolidated the government, devised a method to determine, collect, and redis-
tribute taxes, and integrated the provinces into an overall economic system. It is also possible that the kings were on occasion faced with political challenge from remnants of some of the old ruling families during this time. While the evidence is inconclusive, there is reason to suggest that there existed a number of kings that did not belong to the ruling family of the first and second dynasties, and that hence might have represented political contenders. Also, the divisions between the first and second dynasties as well as between the second and third dynasties, which have been later introduced by ancient historiographers, do suggest a degree of dynastic discontinuity. Nevertheless, it is important to note that during each dynastic transition, the king of the new dynasty buried his predecessor and thus, by performing the funerary rituals necessary to transform the deceased king into a cosmic divinity, demonstrated his respect for and acceptance of his predecessor’s rule.

Past and current research on the topic have demonstrated that many of the contributing factors in the formation of the Egyptian state are still poorly understood and that progress can only be made through more intensive archaeological research and better application of modern anthropological theories. In contrast to the other regions in old world archaeology, where early states started to form at around the same time, for example the city states in southern Mesopotamia, Egypt formed the world’s first nation state on a territorial scale that encompassed the lower Nile Valley from the first Nile cataract to the Mediterranean coast. This new state was thus confronted with, and successfully resolved, such significant logistical challenges as political and economic administration and communication over relatively long distances that other regions and early states were unable to surpass until much later. In this regard, Egypt’s achievements and contribution to world history are unique, as it had no model to follow and instead laid the essential foundations for territorial statehood for others to pursue.

E. Christiana Köhler

See also State Societies, Emergence of; State, The

Further Reading


Egypt, Ancient

It has long been common practice to speak of Egypt as a grace bestowed by the Nile’s beneficence. Given the essential part that this river’s life-giving waters played in shaping the culture, ethos, and institutions of the country, this is a very appropriate metaphor indeed.

Contemporary historians have tended to follow the lead of the third-century BCE Egyptian priest Manetho in their subdivision of Egyptian history by dynasty, adding the practice of assigning subsets of the thirty pharaonic dynasties to specific periods. With some minor variations the following scheme, taken from one of the standard treatments of Egyptian history, is representative of most: predynastic (5500–3050 BCE), archaic/early dynastic (3050–2663 BCE), Old Kingdom (2663–2195 BCE), First Intermediate (2195–2066 BCE), Middle Kingdom (2066–1650 BCE), Second Intermediate (1650–1550 BCE), New Kingdom (1550–1064 BCE), Third Intermediate (1064–656 BCE),
Saite (664–525 BCE), Late (525–332 BCE), Hellenistic (332–30 BCE), Roman (30 BCE–395 CE), Byzantine (395–640), Arab (640–1517), Ottoman (1517–1805), Khedival (1805–1914), British (1914–1922), Egyptian monarchy (1914–1922), and Egyptian republic (1953–present). While it must be remembered that schemes such as this are artificial, they do enable scholars to assemble factual data and produce a coherent narrative of past events.

**Predynastic Period to the Old Kingdom, 5500–2195 BCE**

The early history of Egypt witnessed significant advancements in virtually every aspect of culture. Of these, two areas were of particular importance—politics and religion. The fate of Egypt was determined to a great extent by the adroitness of its kings and the intellectual creativity of its priests. Much of Egypt’s predynastic history remains shrouded in mystery. Archeological evidence suggests that hunter-gatherers from various locales migrated to the banks of the Nile and established an agricultural economy centered in villages of modest size and based on the domestication of grains and small animals. Burial practices, which included placing the body of the deceased in a fetal position and surrounding it with implements used in daily life, may indicate that these early Egyptians held a rudimentary belief in an afterlife. The archaic period witnessed the unification of Egypt’s two distinct geographical regions (Upper and Lower Egypt) by the pharaoh Menes (flourished c. 2925 BCE) and the construction of Memphis as the first capital. A new cult dedicated to the god Ptah (the capital’s tutelary deity) was established, and the reigning pharaoh was said to be the incarnation of this god. Centralization of government authority, the creation of new gods, the construction of shrines, and the enfranchisement of clergy to provide spiritual oversight for a rapidly evolving and diverse Egyptian theology followed on the heels of this development. The advent of the Old Kingdom saw the construction of the first pyramids at Saqqara, Dahshur, and Giza as well as the rise of Heliopolis as a center for solar worship. It was also a time during which a confident Egyptian worldview supported by values such as discretion, modesty, patience, and prudence developed. This was, no doubt, an outgrowth of economic prosperity and political stability.

**The Decline of Ancient Egypt**

The First Intermediate period was marred by political turmoil brought on by climactic changes that affected the regularity of Nile flooding. During this era, the pharaohs’ ability to hold sway over the entirety of Upper and Lower Egypt was severely compromised. The severity of these conditions abated slightly during the years of the Middle Kingdom, when efforts were made to restructure the government, limit the burgeoning power of local leaders, tighten border control, and extend mercantile activities in Syria-Palestine to the northeast. Egypt faced yet another challenge in the Second Intermediate Period, caused by the incursion of nomads from both Palestine and the Nubian highlands. The former, commonly known as the Hyksos, established control over Lower Egypt and made the city of Avaris in the Nile Delta their stronghold. The latter succeeded in establishing an independent principality in the area of the second cataract of the Nile. Yet another center of administrative activity was established at Thebes, thereby yielding a threefold partition of the kingdom.
Hyksos control was brought to an end during the New Kingdom, a period that also witnessed the reconceptualization of the pharaoh’s political role (he was now seen as a warrior and national savior), the religious reforms of the pharaoh Akhenaton (reigned 1379–1362 BCE), and the highly successful reigns of Ramses II (reigned 1304–1237), Merneptah (reigned 1236–1223 BCE), and Ramses III (reigned 1198–1166 BCE). Ramses III’s victory over the Sea Peoples (c. 1177 BCE) spared Egypt the ignominious fate suffered by its neighbors in Syria and Anatolia to the north. Some are of the opinion that Egyptian civilization reached its zenith during the brief reign of Akhenaton and began a slow but inexorable decline thereafter. While the wisdom of so designating the reign of a pharaoh considered eccentric at best by his successors might be questioned, the fact remains that from the Third Intermediate period onward, the extent of Egyptian political hegemony in the Nile valley and beyond was severely constricted. The land of the pharaohs was eventually subsumed (c. 342–332 BCE) into the Persian empire and then made part of the imperial holdings first of the Macedonians and then of the Ptolemies before being brought under the control of Rome.

**Selection from *Adoration of the Nile*, an Ancient Egyptian Prayer**

Praise to you, O Nile, that issues from the Earth, and comes to nourish Egypt...

That waters the meadows, he whom Re has created to nourish all cattle. That gives drink to the desert places...

Beloved of Geb (the Earth-god), director of the grain-god...

That makes barley and creates wheat, so that he may cause the temples to keep festivals.

If his flood is low, breath fails, and all people are impoverished; the offerings to the gods are diminished, and millions of people perish.

The whole land is in terror and great and small lament...

When he rises, the land is in exultation and everybody is in joy.

All mouths begin to laugh and every tooth is revealed.

It is he that brings victuals and is rich in food, that creates all that is good...

He gives herbage for the cattle that are sacrificed to every god...

He fills the storehouses, and makes wide the granaries; he gives things to the poor.

He makes trees to grow... and people have no lack of them...

Your young people and your children shout for joy over you, and the people hail you as king.

Your laws are unchanging...

People drink your water.

You come in flood, giving water to the fields to drink and making the people strong.

Musicians play to you on the harp, and singers sing to you, keeping time with their hands...

When you flood, O Nile, offerings are made to you, cattle are slaughtered for you, a great oblation is made for you.

Birds are fattened for you, antelopes are hunted for you in the desert...

Offering is made to every god, even as is done for the Nile, with incense, oxen, cattle, and birds upon the flame...

He makes green the two riverbanks.

You are verdant, O Nile, you are verdant.

He makes folk live on their cattle, and their cattle on the meadow.

You are verdant, you are verdant, O Nile, you are verdant.

Legacy
Ancient Egypt has been a source of endless fascination for political leaders, intellectuals, tourists, and others with antiquarian interests. Its system of government, architectural monuments, artistic norms, burial practices, religious customs, and language present both corollaries and stark contrasts to current global conventions. On the one hand, today we generally do not suggest that our heads of state are the embodiment of divine powers. On the other, many continue to assert that such officials must maintain physical vitality and a sterling public image to govern effectively. As in ancient Egypt, in the modern world architecture continues to be used to reinforce conceptions of national power and grandeur. Belief in the continuation of life beyond physical death and the development of specific mortuary rituals are other areas in which one sees resonances between Egyptian lifeways and those embraced by members of various contemporary communities of faith. Finally, today’s use of pictograms to convey information and provide direction in public facilities—particularly those frequented by a multilingual population—might be seen as a reappropriation and adaptation of Egyptian pictographic writing. Thus, it could well be argued that while the golden age of ancient Egypt has passed, many of its cultural contributions continue to shape twenty-first-century life.

Hugh R. Page, Jr.

See also Hatshepsut; Ramses II

Further Reading

Einstein, Albert
(1879–1955)
German–American physicist

Albert Einstein contributed more than any other scientist to the twentieth-century vision of physical reality with his special and general theories of relativity, and he won the Nobel Prize for Physics in 1921 for his explanation of the photoelectric effect. Recognized in his own lifetime as one of the most brilliant minds in human history, he advanced a series of theories that proposed entirely new ways of thinking about space, time, and gravitation. His theories profoundly advanced the field of physics and revolutionized scientific and philosophical inquiry.

Born in 1879 in Ulm, Germany, Einstein and his family moved a year later to Munich to establish a small electrical engineering firm as the family business. Einstein showed little interest or ability in school. Two of his uncles who were involved with the family business, however, stimulated his interest in mathematics and science. When the business failed in 1894, the family moved to Milan, Italy, and Einstein soon followed, then resumed his education in Switzerland. He graduated from the Zurich Polytechnic school in 1900 as a secondary school teacher of mathematics and physics, also becoming a Swiss citizen.

After a short period, he obtained a job as an examiner at the Swiss patent office in Bern and married his university sweetheart, Mileva Maric, in 1903. They had two sons, but the marriage ended several years later. He later remarried, in 1919.

From 1902 to 1909, while working at the patent office, he completed an astonishing range of publications
in theoretical physics. For the most part these texts were written in his spare time and without the benefit of close contact with either scientific literature or theoretician colleagues. The publication of one paper, “A New Determination of Molecular Dimensions,” and its submission to the University of Zurich won him a doctoral degree in 1905. Einstein’s paper provided convincing evidence for the physical existence of atom-sized molecules, a much-theorized topic. In 1908 he sent a second paper to the University of Bern, which got him a job there as a lecturer. The next year he received an appointment as associate professor of physics at the University of Zurich.

One paper, on the production and transformation of light, revolutionized the theory of light. Still another, containing his special theory of relativity, had its beginnings in an essay he had written at age sixteen. The theory postulated that if, for all frames of reference, the speed of light is constant, and if all natural laws are the same, then both time and motion are relative to the observer. The follow-up paper, “Does the Inertia of a Body Depend upon Its Energy Content?” established the equivalence of mass and energy, commonly expressed in the formula $E=mc^2$. The theory remained controversial for many years before its mainstream acceptance.

This outpouring of brilliance in such a short time made Einstein the leading scientific thinker among Europe’s physics community, though public understanding of his theories was years away. After moving quickly from one university post to another, in 1914 he became professor at the prestigious Prussian Academy of Science in Berlin. He occasionally lectured at the University of Berlin, but from this time on he never again taught regular university courses. He remained there until 1933, when the rise of fascism in Germany impelled him to leave for an analogous research position in the United States, at the Institute for Advanced Study in Princeton, New Jersey, a position he held until his death.

In his work after 1905, Einstein had made important contributions to the quantum theory, but increasingly thereafter he focused on perfecting his theory of relativity. By 1916, he had completed his general theory of

Albert Einstein:
Out of My Later Years

The excerpt below was taken from Dr. Albert Einstein’s collection of essays that appeared early in 1950: Out of My Later Years. The distinguished physicist thought they needed no personal introduction.

To be sure, the World War had already shaken this feeling of security. The sanctity of life vanished and the individual was no longer able to do as he pleased and to go where he liked. The lie was raised to the dignity of a political instrument. The War was, however, widely regarded as an external event, hardly or not at all as the result of man’s conscious planful action. It was thought of as an interruption of man’s normal life from the outside, universally considered unfortunate and evil. The feeling of security in regard to human aims and values remained, for the main part, unshaken.

The subsequent development is sharply marked by political events that are not as far-reaching as the less easily grasped sociopsychological background. First a brief, promising step forward characterized by the creation of the League of Nations through the grandiose initiative of Wilson, and the establishment of a system of collective security among the nations. Then the formation of Fascist states, attended by a series of broken pacts and undisguised acts of violence against humanity and against weaker nations. The system of collective security collapsed like a house of cards—a collapse the consequences of which cannot be measured even today. It was a manifestation of weakness of character and lack of responsibility on the part of the leaders in the affected countries, and of shortsighted selfishness in the democracies—those that still remain outwardly intact—which prevented any vigorous counterattack.


I never think of the future—it comes soon enough. • Albert Einstein (1879–1955)
relativity. It claimed that gravitation is not a force, as Isaac Newton had said, but a curved field in the space-time continuum created by the presence of a mass, such as the sun. When the theory was later proved during a solar eclipse, when his light-deflection prediction could be tested, the popular press praised Einstein.

Einstein’s stand as a pacifist who did not support Germany’s war aims brought him much respect outside Germany, but derision as a traitor and defeatist from his former countrymen. After the war, when the victorious powers sought to exclude German scientists from international meetings, Einstein worked to include German physicists. His popularity and his political stances, which also included Zionism, led to attacks in the 1920s by anti-Semitic physicists. This in part explains why his Nobel Prize in 1921 was awarded not for relativity, but for his less controversial 1905 work on the photoelectric effect.

Einstein abandoned his pacifism when he realized that Hitler and the Nazis had to be stopped by military means, but he never stopped working on behalf of peace. Einstein sent a letter to President Franklin D. Roosevelt in 1939 urging that the United States develop an atomic bomb before Germany could do so. The letter contributed to Roosevelt’s decision to fund what became the Manhattan Project. It is one of the great ironies of the pacifist Einstein’s life that his energy-mass equation, which asserted that a particle of matter can be converted into an enormous quantity of energy, found its proof in the atomic and hydrogen bombs, the most destructive weapons ever created. After the war, he joined with other scientists in seeking to contain nuclear proliferation.

Though he failed in his political efforts, Einstein was not disappointed. His central interest always remained physics and the search to find the mathematical relationship between electromagnetism and gravitation, better known as the unified field theory. A version of the unified field theory he published in 1950 was politely criticized as flawed and went somewhat neglected for decades. In more recent years, physicists have begun trying to combine Einstein’s relativity theory with quantum theory to arrive at a “theory of everything,” by means of highly advanced mathematical models. That some of Einstein’s theories are only now being fully understood, decades after his death, stands as a testament to his place in science and human history.

James G. Lewis

See also Energy; Science—Overview

Further Reading


Electricity

Electricity is so common today that it would be difficult for anyone to imagine how life would be without the well-known applications we use every day in our homes and jobs. But things were not always that way. It is just four hundred years since scientists began to study electrical phenomena and the nature of electricity, and no more than 150 years since electrical applications started to be a part of our way of living.

Around 600 bce, one of the natural philosophers of ancient Greece, Thales of Miletus (625?–547? bce), observed that rubbing ἕλεκτρον (amber) against a piece of cloth attracted light bodies. This remained the only reference to an electrical phenomenon for almost two thousand years, and though it was considered quite impressive the cause of this strange effect remained unexplained.

At the end of the sixteenth century, the Englishman William Gilbert (1540–1603) became the godfather of electricity, as he was the first natural philosopher who introduced the word electric, in his book De Magnete.
The Eighteenth Century

A more systematic investigation of electrical phenomena took place during the course of the eighteenth century, following the scientific revolution.

Stephen Gray (1667–1736) in England and Charles Francois de Cisternay Du Fay (1698–1739) in France worked seriously on electricity. Gray in 1732 demonstrated electrical conductivity. A decade later, in 1745, the Dutch physicist Peter van Musschenbroek (1692–1761), the most important popularizer of Newtonian physics, invented the first kind of electrical condenser, the Leyden jar. (Some argue, however, that the real inventor of the Leyden jar was Ewald Jurgen von Kleist, in Kammin, Pomerania.)

The years to come were very productive with regard to electricity. Electrical experiments, especially those using electrostatic machines, became very popular. Scientists performed experimental demonstrations using static electrical charges in the salons of the French and Italian nobility and the courts of the European kings. The audience sometimes participated actively in these experiments, and their fascination with the impressive results can be seen in engravings of the period. One example is the experiment performed by the French physicist Le Monnier in the court of the king in order to prove the strength of an electric shock caused by a Leyden jar—a test in which 140 people participated.

Around 1750 there were two leading figures investigating electricity: Abbe Nollet (1700–1750) in France and Benjamin Franklin (1706–1790) on the other side of the Atlantic Ocean. They proposed two different theories of electricity, and a strong debate started in the scientific community. Nollet devoted himself to the study of electricity, and his theory, presented in his book Essai sur l’electricité des corps (Essay on the electricity of the bodies) (1746), can be summarized by the proposition that electrical matter is a combination of elementary fire and denser matter.

According to Benjamin Franklin’s biographers he first became engaged with electricity following his astonishment at some spectacular electrical demonstrations performed by Dr. Archibald Spencer in Boston in 1743. Today Franklin is mostly known for his experiment with kites, intended to demonstrate that lightning is a form of static electricity. But his work on the nature of electric matter is much more fundamental from a scientific point of view. He was the first to propose, in contrast to previous theories, that electricity was a single common element, or fluid, passing through all matter (the “single-fluid” theory), and that it had no weight. Differences in electrical charge were caused by an excess (+) or deficiency (−) of this fluid.

As Franklin’s theory gradually came to prevail during the last quarter of the eighteenth century two new thinkers contributed to the development of the theoretical and experimental concept of electricity. In 1785, Charles August Coulomb (1736–1806) used the torsion balance to find the inverse square law governing the electrical force between two charges. In 1791 the Italian Luigi Galvani (1737–1798) conducted a well-known experiment with a frog’s leg to prove that there was a relationship between living beings and electricity. Galvani’s conclusions were proved wrong some years later by his rival in the scientific field, Alessandro Volta (1745–1827).

The Nineteenth Century

During the nineteenth century there was dramatic progress in the study of electrical phenomena. In 1800 Volta, a professor at the University of Pavia in Italy, created the so-called voltaic pile, the first battery, opening new horizons to electrical applications. For the first time

A close up of a turbine generator in the Ruacana Power Station in Namibia.

The Eighteenth Century

A more systematic investigation of electrical phenomena took place during the course of the eighteenth century, following the scientific revolution.

Stephen Gray (1667–1736) in England and Charles Francois de Cisternay Du Fay (1698–1739) in France worked seriously on electricity. Gray in 1732 demonstrated electrical conductivity. A decade later, in 1745, the Dutch physicist Peter van Musschenbroek (1692–1761), the most important popularizer of Newtonian physics, invented the first kind of electrical condenser, the Leyden jar. (Some argue, however, that the real inventor of the Leyden jar was Ewald Jurgen von Kleist, in Kammin, Pomerania.)

The years to come were very productive with regard to electricity. Electrical experiments, especially those using electrostatic machines, became very popular. Scientists performed experimental demonstrations using static electrical charges in the salons of the French and Italian nobility and the courts of the European kings. The audience sometimes participated actively in these experiments, and their fascination with the impressive results can be seen in engravings of the period. One example is the experiment performed by the French physicist Le Monnier in the court of the king in order to prove the strength of an electric shock caused by a Leyden jar—a test in which 140 people participated.

Around 1750 there were two leading figures investigating electricity: Abbe Nollet (1700–1750) in France and Benjamin Franklin (1706–1790) on the other side of the Atlantic Ocean. They proposed two different theories of electricity, and a strong debate started in the scientific community. Nollet devoted himself to the study of electricity, and his theory, presented in his book Essai sur l’electricité des corps (Essay on the electricity of the bodies) (1746), can be summarized by the proposition that electrical matter is a combination of elementary fire and denser matter.

According to Benjamin Franklin’s biographers he first became engaged with electricity following his astonishment at some spectacular electrical demonstrations performed by Dr. Archibald Spencer in Boston in 1743. Today Franklin is mostly known for his experiment with kites, intended to demonstrate that lightning is a form of static electricity. But his work on the nature of electric matter is much more fundamental from a scientific point of view. He was the first to propose, in contrast to previous theories, that electricity was a single common element, or fluid, passing through all matter (the “single-fluid” theory), and that it had no weight. Differences in electrical charge were caused by an excess (+) or deficiency (−) of this fluid.

As Franklin’s theory gradually came to prevail during the last quarter of the eighteenth century two new thinkers contributed to the development of the theoretical and experimental concept of electricity. In 1785, Charles August Coulomb (1736–1806) used the torsion balance to find the inverse square law governing the electrical force between two charges. In 1791 the Italian Luigi Galvani (1737–1798) conducted a well-known experiment with a frog’s leg to prove that there was a relationship between living beings and electricity. Galvani’s conclusions were proved wrong some years later by his rival in the scientific field, Alessandro Volta (1745–1827).

The Nineteenth Century

During the nineteenth century there was dramatic progress in the study of electrical phenomena. In 1800 Volta, a professor at the University of Pavia in Italy, created the so-called voltaic pile, the first battery, opening new horizons to electrical applications. For the first time

A close up of a turbine generator in the Ruacana Power Station in Namibia.
the general public, and scientists in particular, had steady and reliable access to an electrical current over an extended period of time.

The Danish physicist Hans Christian Oersted (1777–1851) found that electrical current would deflect a magnetic needle, thus establishing the discipline of electromagnetism. The basic mathematical equations of electromagnetism were developed by André-Marie Ampère (1775–1836) in 1820s.

In 1826 Georg Simon Ohm (1787–1854) proposed the law defining the resistance of metallic conductors. During the same decade Michael Faraday (1791–1867) impelled electromagnetism even further by building the first electric motor, transforming electric energy to kinetic energy. In addition, Faraday's theoretical proposal about dynamic lines provided a foundation for the Scotsman James Clerk Maxwell (1831–1879), who in 1856 wrote the essay “On Faraday's Lines of Force,” establishing in pure mathematical language the new subject of field physics, unifying magnetism, electricity, and light. Maxwell's laws of electrodynamics were important for the development of many useful applications during the twentieth century like electric power stations, radio, television, and even the computer.

But before these applications came the electric telegraph, invented by Samuel Morse (1791–1872) around 1840, which caused a real revolution in communications. After Morse, Thomas Edison (1847–1931) became famous for his electric lamp, not to mention his many other inventions, like the phonograph. Carbon arc lamps were used around the world extensively until the late 1970s, but the invention of the incandescent filament lamp by the Englishman Joseph Swan (1828–1914) in 1878 and by Thomas Edison in 1879 in the United States reduced their use dramatically in the years to follow.

As the usefulness of electricity was recognized by society, the need for electric power started to become immense. Carbon, oil, and waterfalls became the main sources for the energy needed. In 1896 George Westinghouse (1846–1914) used Niagara Falls to produce electric power and transmit it to cities like New York. Westinghouse collaborated closely with the Serbian physicist Nicola Tesla (1856–1943) in the development of an electrification system based on alternating current (AC). This advance led to long discussions with the supporters of direct current (DC) like Edison, but finally alternating current prevailed.

**The Twentieth Century**

During the twentieth century the use of electricity became fundamental in the lives of western societies, but it is no less important for the developing world. The continuous increase in the need for electricity led to the establishment of nuclear-powered electric stations and the establishment of huge dams to collect the necessary quantity of water for use in hydroelectric plants. One of them, for example, the Aswan High Dam in Egypt, changed the whole economic and social profile of the country. During the last decades of the twentieth century alternative sources for the production of electricity became more popular. Among them solar energy and wind energy are the most widely used. In countries with high tides like England and France, these are also used for the production of electricity.

There is no doubt that civilization as we know it could not exist without electricity, yet we must not forget that electricity is a product of that civilization. Therefore, it is necessary for people to secure the use of electric energy in the future by constructing the necessary factories and networks, having always in mind that oil and carbon will not last forever and that sun, water, and air can provide cheaper and more environmentally friendly sources for the power supply we need.

*George N. Vlahakis*

See also Computer; Energy; Industrial Technologies; Telegraph and Telephone
Further Reading

Elizabeth I
(1533–1603)
Queen of England

Elizabeth I reigned as queen of England from 1558 to 1603. During that time England began its rise to become the empire “on which the sun never sets.” Under Elizabeth popular culture flourished; her court became a focal point for writers, musicians, and scholars such as William Shakespeare (1564–1616) and Francis Bacon (1561–1626) and explorers such as Francis Drake (c. 1540–1596) and Walter Raleigh (c. 1554–1618). The English economy expanded greatly. She also encouraged a spirit of free inquiry that in turn facilitated the Scientific Revolution and the Age of Enlightenment.

Elizabeth inherited an England that was troubled by inflation, bankruptcy, disastrous wars, and religious conflict. Poverty and disease were common. From childhood Elizabeth’s own life was fraught with danger. When she was only two years old, her father (King Henry VIII, 1491–1547; reigned 1509–1547) executed her mother, Anne Boleyn (his second wife), and Elizabeth was declared illegitimate. After her father died, her brother Edward (1537–1553; reigned 1547–1553), the son of Henry’s third wife, inherited the throne but lived for only a short time. In 1553 Elizabeth’s Catholic half-sister Mary Tudor (1516–1558; reigned 1553–1558), who was Henry’s daughter by his first wife, became queen. In March 1554 Elizabeth was imprisoned in the Tower of London, accused of plotting against Mary and of refusing to embrace the Catholic religion. Elizabeth was released in May but remained under suspicion and was carefully watched until Mary died childless in 1558.

In this context the fact that Elizabeth ever became queen, much less that she reigned for forty-five years, is remarkable. However, she had been forced to learn the skills of survival at an early age, and these skills served her throughout her life.

Still relatively young at twenty-five when she took the throne, Elizabeth knew that, unlike her father, she could not use an autocratic approach based on absolute power. She would have to rule in a more sophisticated way. She also knew the value of wise counsel. She created a small cabinet of trusted advisers, the most influential of whom was William Cecil (1520–1598). When she appointed Cecil as her secretary of state, she told him, “This judgement I have of you, that you will not be corrupted by any manner of gift, and that you will be faithful to the state, and that without respect of my private will, you will give me that counsel you think best, and if you shall know anything necessary to be declared to me of secrecy, you shall show it to myself only” (Luke 1973, 28). During the next forty years Elizabeth rarely made an important decision without consulting Cecil, although she did not always defer to his advice.

Elizabeth was an intelligent ruler and made herself familiar with all aspects of policy within and outside her realm. Accordingly, people could deceive her only with difficulty. Being multilingual, she was able to talk directly with ambassadors from many countries, and this fact ensured that no information could be lost in translation.
Cecil’s admiration for her grasp of policy and politics is evident in his remark that “there never was so wise a woman born, for all respects, as Queen Elizabeth, for she spake and understood all languages; knew all estates and dispositions of Princes. And particularly was so expert in the knowledge of her own realm and estate as no counsellor she had could tell her what she knew not before” (Somerset 1997, 64).

Although Elizabeth never traveled beyond England, she was not an insular queen. Indeed, she was an expert on foreign policy, and one of her legacies was the establishment of England as a maritime nation. Although she never formally condoned piracy on the high seas, Elizabeth informally encouraged (partly through financing) Francis Drake and other sailors to plunder on her behalf. During her reign English merchant ships challenged Spain’s seafaring preeminence, and the first English settlers were sent to North America.

Elizabeth was pragmatic about international affairs. Careful with money, she was reluctant to fight wars because their cost inevitably drained her treasury. She also appreciated the necessity of managing her reputation. Her courtiers frequently used propaganda and “political spin” on her behalf. In matters of international politics monarchs were always aware of their image. Their status within the international arena also reflected directly on their courtiers, especially ambassadors in foreign courts—prestige by association. As a woman, Elizabeth was at a disadvantage within the international hierarchy; however, her intellect, judgment, and grasp of foreign policy became legendary. Consequently, as her reign proceeded, the reputation of both Elizabeth and of England grew. Visual images of Elizabeth were also tightly controlled. Paintings presented her as a powerful ruler and cultivated her image as a forever youthful virgin queen who was married to England and her subjects. Elizabeth used her travels around the country to make herself visible to her subjects. Her courtiers were often amazed at how she allowed the common people to approach her.

Religious divisions were a major issue throughout Elizabeth’s reign. Her father, Henry VIII, had rebelled against the pope and rejected the Catholic church, which dominated Europe. Subsequently, Queen Mary, Elizabeth’s half-sister, had returned England to Catholicism and married Philip II, the Catholic king of Spain. Mary had persecuted people who had resisted the Catholic religion. Elizabeth was aware of the religious polarities within England and was more tolerant. Although she returned her country to Protestantism, Elizabeth recognized the dangers of encouraging the extremist elements of Protestantism. She insisted on changes in church services but retained many of the trappings of Catholic worship, such as crucifixes, clerical robes, and candlesticks.

Taking a religious middle ground, Elizabeth brought a degree of peace to England—peace that was not found in continental Europe, where religious fanaticism and turbulence were rife. The Inquisition terrorized Spain, and in France heretics were burned at the stake. By contrast, Elizabeth attempted to defuse religious tensions by increasing outward compliance with Protestant services. Any person who did not attend church was subject to a fine. However, during the first part of Elizabeth’s reign Catholics who either attended the parish church or paid their fines for nonattendance could usually still practice their religion privately without fear of persecution. In contrast to Elizabeth’s more lenient attitude in religious
matters, her counselors feared that Catholic religious extremists would assassinate the queen. Francis Walsingham (c. 1532–1590), acting under the direction of Cecil, was in charge of gathering information about any threats to the queen through a network of spies. Walsingham, who held extreme Puritan views, operated a counterespionage organization that used double agents and torture to obtain information. Although Elizabeth considered Walsingham to be an extremist in terms of religion, she admired his shrewdness and never doubted his devotion to her welfare.

Elizabeth’s religious moderation was tested when her cousin Mary Queen of Scots (1542–1587) took sanctuary in England in 1568 after an uprising in Scotland. Mary was Catholic, and some Catholic factions at the national and international level believed that she was the rightful queen of England. Cecil and Walsingham were concerned that Mary’s presence in England posed a threat to Elizabeth’s safety. After almost twenty years in captivity in England, Mary was executed for treason in 1587.

Like many leaders, Queen Elizabeth had a strong sense of destiny: She had no doubt that her rise to the throne was the will of God. When informed that her half-sister Mary Tudor had died and that Elizabeth was now queen, Elizabeth stated, “This is the Lord’s doing; and it is marvelous in our eyes” (Marshall 1991, 47). Elizabeth viewed the advantages that accrued from her sovereign status as far outweighing the disadvantages that accrued from her gender. For Elizabeth being a woman was more an irrelevance than a handicap, stating that “my sex cannot diminish my prestige” (Somerset 1997, 60).

During the sixteenth century the first duty of a monarch was to marry and have children, thereby ensuring the succession of the throne. Cecil in particular was eager to secure the succession and create a Protestant heir to the throne. As queen Elizabeth was expected to marry someone of royal blood. She understood that marriage to a foreign prince offered some security from hostile nations in Europe. However, she also understood that the English people were antagonistic toward foreigners. Mary Tudor’s marriage to King Philip II of Spain had caused great disruption within England. Elizabeth’s other option was marriage to an English nobleman. However, she thought that such a marriage would create jealousies within the nobility and could lead even to civil war. To her, having to share power with a husband conflicted with her sense of personal destiny. Elizabeth’s childhood experiences and her knowledge of international politics had led her to believe that marriage would be disadvantageous both to her and to her realm. Although an unmarried queen was considered unnatural at that time, Elizabeth turned her single status into a strength.

However, Elizabeth’s policy of remaining single did leave the problem of succession. The loss of such a charismatic leader as Queen Elizabeth left a vacuum in England that resulted in great internal conflict. On her death she was succeeded by the son of Mary Queen of Scots, James I of England (1566–1625; reigned as James VI of Scotland 1567–1625 and as king of England 1603–1625), who had been raised a Protestant. This subsequent period in English history was one of social turmoil, religious strife, and civil war.

Elizabeth was an extraordinary woman, respected abroad and celebrated at home. Four hundred years after her death we still recognize her legacy as one of the greatest monarchs in English history. Her reign brought increasing prosperity and peace and strengthened England’s international interests. After the turbulent years of Henry VIII’s reign, the relative stability that England enjoyed during Elizabeth’s reign advanced the development of English culture. Her reign led to the emergence of the mighty British empire. In North America, Virginia (named after Elizabeth the virgin queen) was explored and colonized. England defeated the Spanish Armada and became a dominant sea power. Drake circumnavigated the globe. Sailors such as Raleigh and Drake took the English language abroad; today it has become the language of world communication. Her policies encouraged development of parliamentary democracy, a moderate Church of England, and, for her time, a relatively prosperous, peaceful, and stable society. Many scholars consider the Elizabethan era to have been a golden age.
Indeed, Elizabeth came to be known as “Gloriana,” a name that reflected the triumphs of her reign.

Margaret Collinson and David Collinson

See also British Empire; Enlightenment, The; Scientific Revolution

Further Reading


Empire

Empire is one of the most commonly used terms in world history. It appears in reference to a long list of powerful states and societies, ranging from the ancient Akkadians to contemporary America. Many of the leading themes in world history—war, migration, and trade, for example—arose in conjunction with empires, which touched the lives of immense numbers of peoples. “To write the history of empire,” Dominic Lieven has observed, “would be close to writing the history of mankind” (2002, xiii).

The very pervasiveness of empire as a historical category makes its meaning difficult to pin down. Definitions abound. Typologies proliferate. The term is often used interchangeably with “dynasty” and “civilization.” While most historians are likely to agree that empire refers to the political power exerted by a state or its agents over a culturally diverse group of peoples, this understanding of the term is so vague as to accommodate any number of different historical phenomena, ranging from the continental-wide conquests of the Mongols to the transoceanic extortions of the Portuguese. Moreover, even this definition may not be broad enough to account for the meaning of empire associated, for example, with the Holy Roman Empire, a loose affiliation of central European states that shared a common allegiance to the Catholic faith. In the end, empire can be seen a kind of palimpsest on which historians have written about various subjects associated with the consolidation of communities into large political units.

Etymology and Uses

The term empire derives from the Latin imperium, which originally meant the sovereignty held by a magistrate, but later evolved to refer to the authority that the ancient
Romans established over much of Europe and the Near East. Its etymology indicates the main source and standard for its usage. The Roman empire became the archetype of what an empire should look like and how it should behave, a positive model for the Europeans who sought to emulate its achievements. In the east, the Byzantine empire kept its heritage alive for nearly a millennium. In the west, the Carolingian empire, the Napoleonic empire, the British empire, Hitler’s Third Reich, and various other expansionist European states consciously evoked the Roman empire in their iconography and ideological claims to legitimacy. The Roman model made its mark on European historiography as well, acquiring a prominent place in literature that sought to discern the patterns of history and distill its lessons. Edward Gibbon’s *Decline and Fall of the Roman Empire* (1776–1788) is arguably the most influential work of history ever written.

*Empire* also carries negative connotations, evoking charges of political and cultural oppression. This use of the term has its origins in the classical Mediterranean world as well, though its principle source is probably the Achaemenid empire of Persia, which threatened the independence of the Greeks. The same connotations are attached in Western historiography to its successors, the Sasanid and Safavid empires, as well as to neighboring states that came in collision with Europe, notably the Ottoman and Mugal empires. The term is used less consistently in other geographical and historical contexts. While the closest counterpart to the Roman empire was in many respects the contemporaneous Han polity of China, it is more often called a dynasty than an empire. The same is true for its successor states—the Tang, the Song, the Ming, the Qing, and others.

Some historians have shown similar reservations about using the term *empire* in reference to the Abbasids and Umayyads, who consolidated political authority across much of the Near East and North Africa under the banner of Islam. In sub-Saharan Africa, indigenous polities rarely receive the appellation empire, the main exceptions being the West African states of Ghana, Mali, and Songhai, whose indirect association with medieval Europe gave them mythic reputations. Similarly, the only polities in the Americas commonly characterized as empires are those that fell to Spanish conquerors, the Aztecs and the Incas, even though archeologists have determined the earlier existence of other large states in the same locations and in other parts in the western hemisphere. The ambivalence and inconsistency that have characterized the use of *empire* serve as a reminder that words and their meanings are no less embedded in the particularities of history than other aspects of human experience.

### Empire Building as State Building

For all the semantic uncertainty surrounding the term *empire*, there can be little doubt that the phenomenon it signifies was a consequence of the rise of states. Empires appeared on the scene soon after the first states came into existence in the densely populated river valleys of Mesopotamia, Egypt, China, and elsewhere. Indeed, the association between the two is so close that it is not entirely clear when state building becomes empire building. Every successful state soon expanded its reach well beyond the real or fictive lineage ties and ethnic bonds that supplied its original claims of sovereignty, relying on conquest and other coercive methods to bring additional peoples under its control. The demands for labor and tribute, the reliance on armies and bureaucracies, and the

---

The terra cotta warriors of the Qin Dynasty in China created in about 210 BCE to guard the emperor’s tomb.
insistence on hierarchy and hereditary privilege were common to both types of polities. As David Armitage has stated, “Empires gave birth to states, and states stood at the heart of empires” (2000, 15).

The distinction most often drawn between empires and other states can be characterized as functions of intent and degree: Empires are those states that seemed especially aggressive in their expansionist ambitions and especially accomplished at extending their sway over other peoples. Yet the same state could fluctuate quite dramatically in terms of the policies it pursued and the territories it controlled, thus exhibiting more or fewer of the characteristics of an empire as its aims and fortunes varied. It is impossible, for example, to know how to classify Pharaonic Egypt, which expanded and contracted repeatedly over the course of its long history, conquering others and being conquered in turn. Part of the problem derives from the fact that we tend to look at the intentions and actions of individual states to determine whether or when they were empires, whereas it was their “spheres of interaction” with neighboring peoples that often determined this outcome (Barfield in Alcock et al. 2001, 40).

In modern times, the rise of the nation-state presents what seems at first sight a much clearer typological contrast to empire, since its reliance on linguistic and/or ethnic homogeneity and the claim of popular sovereignty stand at odds with the foundational premises of empire. Yet archetypal nation-states like Britain and France established huge empires that stretched around the globe. They resolved the apparent contradiction between their dual roles as nation-states and empires by maintaining strict institutional and ideological boundaries between the metropolitan sphere, where the principles of the nation-state applied, and the overseas possessions, where they did not.

**Land-Based Empires**

The vast majority of empires until the last four or five hundred years consisted of states that extended their power into contiguous territory, either through conquest or composite monarchy. A key dynamic in the rise and fall of these land-based empires was the sometimes complementary, sometimes adversarial relationship between the sedentary agricultural societies that gave rise to states and the pastoralists and other mobile peoples who operated outside the boundaries of those states. The two groups usually kept their distance from one another, coming together mainly to trade goods, but environmental changes, demographic pressures, and other forces provoked periodic clashes between them. States and their agrarian populations enjoyed the advantages of concentration, central direction, and sheer numbers over their widely dispersed, frequently fissiparous adversaries, and their demand for land, labor, and tribute gave them motive to encroach on the domains of the latter.

Even when states merely sought to secure their frontiers against raids by nomads, their efforts often sucked them further and further into the hinterland in an unending quest for security. Given the right circumstances, these dynamics could lead them to absorb an immense amount of territory: Two classic examples are the Roman and Han empires. The significance that these empires attached to their troubled relations with pastoralists and other unpacified peoples is evident in the way they represented themselves and their actions as advancing the cause of “civilization” against the “barbarians” on their borders. One of the standard tropes of empire would become this dichotomy between civilization and barbarism.

Pastoralists were by no means the mere victims of empires, however. A perennial theme of world history is the sudden breakout by nomadic invaders whose mobility, weaponry, and warrior ethos overwhelmed sedentary agricultural societies. These events had several quite different outcomes. One was the destruction of the conquered state and the fragmentation of political authority. Examples include Western Europe after the fall of Rome in the fifth century CE and West Africa after the invasion of Songhai in 1591 CE. In other instances, the “barbarian” invaders preserved the lineaments of the state, but placed themselves at its head. Although they ran the risk of cultural absorption by the host society, they also gained access to its immense resources, which they were able to
mobilize to carry out still more conquests. Two of the largest empires in Eurasian history were the work of pastoralist peoples, the Mongols and the Arabs. Both burst out of their natal lands (the central Asian steppes and the Arabian desert), crushed the states that stood against them, created new state structures on the foundations of the old, and used them in the task of empire building with astonishing success.

After about 1450 CE, however, the pastoralist threat to agrarian societies began to disappear. As William McNeill and others have argued, the gunpowder weapons that came on the scene around this time proved to be more than a match for nomadic warriors on horseback. They gave an irreversible strategic advantage to large sedentary states, which had the fiscal, technical, and logistical means to produce these weapons on a large scale and put them into use with devastating effect. The result was the rise of new gunpowder empires in Europe, Russia, China, India, and the Near East which hemmed in their nomadic neighbors and put an end forever to their depredations on agricultural communities.

Transoceanic Empires

The mid-fifteenth century marked a related shift in the history of empires—the rise of Western European transoceanic empires. The projection of power by sea was not in itself a new phenomenon. The Greeks and the Phoenicians had used their seafaring skills to plant their peoples and spread their influence across the ancient Mediterranean world, though neither found a way to knit their scattered communities together into a single powerful state. The Vikings faced the same problem despite their remarkable success in raiding and settling coastal zones from the North Sea to the Mediterranean. The Persian Gulf, Indian Ocean, and the South China Sea all sustained their own series of seaborne traders and raiders, some of whom established polities of considerable size and sophistication.

By sitting astride the Malaccan Strait, a chokepoint in the Asian seaborne trade, Srivijaya became the dominant power in Southeast Asia in the seventh century. Oman, a small city-state on the southern Arabian coast, controlled trade along the east coast of Africa through much of the eighteenth and nineteenth centuries. In the estimation of some historians, both states became empires.

The transoceanic empires established by Western European states shared some features with the cases mentioned above, but they differed in crucial respects as well.
Like most of their sea-borne predecessors, they set out in search of trade, not of the tribute that sustained land-based empires. Trade would remain an integral feature of these empires, so much so that many theorists and historians have concluded that modern European imperialism was driven first and foremost by the demands of commerce and capitalism. But Western European states also established the sort of centralized political control over their overseas possessions that was more characteristic of land-based empires than of previous seaborne polities. This can be explained in part by the fact that they were at the forefront of the military revolution precipitated by gunpowder weaponry, allowing them to exercise power over greater distances than ever before. Above all, however, it was due to the contemporaneous consolidation of strong centralized states at home, which provided the incentives—and the blueprints—for the extension of these policies and institutions abroad.

Portugal, the earliest and least developed of the European states that sought an overseas empire, had the least success in establishing a political foothold in foreign lands. Its larger and more powerful neighbor, Spain, effected a far greater transformation on the territories it claimed. And although France, England, Holland, and other European states each had its own distinct imperial style, all of them sought to subordinate the colonies they established to the political will of the metropolis.

Most historians agree that these European overseas empires had an unprecedented effect on world history. By bringing together parts of the world that had been effectively isolated from one another since the dawn of civilization, they set in motion a series of changes that rippled around the globe. They brought about a transfer of diseases, plants, and animals which transformed environments and societies almost everywhere. One of the most immediate consequences was the sharp reduction of indigenous populations in the Americas, Australia, and other regions where the arrival of deadly new microbes generated “virgin soil” epidemics, while over the long term the spread of new food crops supported an unparalleled growth in the world’s population. European overseas empires also facilitated the transfer of peoples from one continent to another.

Streams of emigrants from Europe settled in North America, Australia, New Zealand, and other mainly temperate lands, laying the foundations for what Alfred Crosby has aptly termed “neo-Europes.” At the same time, millions of Africans were sent as slaves to New World plantations, while large numbers of indentured servants from India, China, and other lands sailed across
the seas to meet the labor demands of European-owned economic enterprises. These enterprises were integral to the global transfer of goods that also distinguished the transoceanic empires of Western European states. By orchestrating the operations of this system, Europeans became its main beneficiaries. This was especially true after industrialization at home skewed the terms of trade in favor of European manufactured goods, creating a growing disparity of wealth between Europe and much of the rest of the world. Although the United States, Japan, and other countries worked their way into the column of industrialized countries, the fissure between rich and poor peoples remains a lasting legacy of European overseas empires.

Ideologies of Empire

While the drive for power and wealth may have been the basic motive behind imperial expansion, no empire lasted very long if it didn’t develop an ideological claim on behalf of its own legitimacy. Quite apart from inspiring the empire’s agents or easing their consciences, this claim sought to make conquered peoples more acquiescent to their own subjugation. The key to accomplishing this goal was the dissemination of an idea or doctrine that overcame ethnic or cultural particularisms, offering in their stead integration into a larger imperial identity. The Romans were famous for their promise of citizenship under Roman law. The Han and their successors embraced Confucian principles and perpetuated them through the efforts of a relatively open bureaucratic elite. Although rulers also relied on religion to bolster their authority, they ran the risk that their official faith would alienate subject peoples who worshipped different gods. Most empires took care to respect religious diversity.

The relationship between empire and religion did, however, undergo a significant shift with the emergence of Christianity and then Islam. Both were universalist creeds that welcomed all converts, irrespective of their origins. This made them attractive to empires seeking ways to incorporate newly conquered subjects; by the same token, empires were attractive to them as instruments for the propagation of the faith. Though forced conversions were uncommon and counterproductive, both Christianity and Islam often worked hand-in-glove with empires, supplying them with important ideological rationales for their rule.

Christianity was integral to the early modern European empires, which found especially fertile grounds for their missionary endeavors among the demoralized and much diminished peoples of the Americas and the deracinated slaves shipped from Africa. Once they came into possession of large tracts of South and Southeast Asian territory in the late eighteenth century, however, they had to develop alternative justifications for their presence, since Christianity simply antagonized the region’s Hindu, Muslim, and Buddhist populations. The introduction of stable government and the rule of law, the promotion of prosperity through international trade, the advancement of scientific knowledge and its application in modern medicine and technology, and various other claims were made in justification of European imperial rule. Underlying all of these claims was the assertion that empire brought the benefits of civilization to colonial subjects. Whether expressed in secular or religious terms, a belief in the superiority of its own way of life—what it characterized as civilization—lay at the ideological heart of every empire.

Costs, Benefits, Consequences

Whether for good or ill, empires were crucial engines of change in world history. They were the paramount institutional expressions of the human will to power, exerting greater authority over greater numbers of people than any other system of rule. Their armies and ambitions caused untold human suffering and destruction. At the same time, they brought culturally diverse and geographically scattered peoples together, providing the political framework for the rise of those large, vigorous societies that often go by the name of civilizations. They also served as the nurseries for the acquisition of skills, the invention of products, and the origination of ideas that spread far beyond the physical boundaries and the temporal existence of the
Empires themselves. Lastly, their relentless drive for expansion supplied much of the impetus for those ever-enlarging systems of interaction and exchange that eventuated in what we now know as globalization, with all its attractions and drawbacks.

Dane K. Kennedy

See also Imperialism

Further Reading


In the eyes of empire builders men are not men but instruments. • Napoleon Bonaparte (1769–1821)

Energy

When seen from the most fundamental physical point of view, all processes—natural or social, geological or historical, gradual or sudden—are just conversions of energy that must conform to the laws of thermodynamics as such conversions increase the overall entropy (the degree of disorder or uncertainty) of the universe. This perspective would make the possession and mastery of energy resources and their ingenious use the critical factor shaping human affairs. Also, given the progressively higher use of energy in major civilizations, this perspective would lead logically to a notion of linear advances with history reduced to a quest for increased complexity that is made possible by higher energy flows. People who could command—and societies and civilizations who could use large or high-quality energy resources with superior intensities or efficiencies—would be obvious thermodynamic winners; those converting less with lower efficiencies would be fundamentally disadvantaged.

Such a deterministic interpretation of energy’s role in world history may be a flawless proposition in terms of fundamental physics, but it amounts to a historically untenable reductionism (explanation of complex life-science processes and phenomena in terms of the laws of physics and chemistry) of vastly more complex realities. Energy sources and their conversions do not determine a society’s aspirations, its ethos (distinguishing character, sentiment, moral nature, or guiding beliefs) and cohesion, its fundamental cultural accomplishments, its long-term resilience or fragility.

Nicholas Georgescu-Roegen, a pioneer of thermodynamic studies of economy and the environment, made a similar point in 1980 by emphasizing that such physical fundamentals are akin to geometric constraints on the size of the diagonals in a square—but they do not determine its color and tell us nothing whatsoever about how that color came about. Analogically, all societies have their overall scope of action, their technical and economic capacities, and their social achievements constrained by the kinds of
energy sources and by varieties and efficiencies of prime movers that they rely on—but these constraints cannot explain such critical cultural factors as creative brilliance or religious fervor, and they offer little predictive guidance regarding a society’s form and efficiency of governance or its dedication to the welfare of its citizens. The best explanation of energy’s role in history thus calls for a difficult task of balancing these two realities, of striving for explanations that take account of these opposites.

Periodization based on the dominant uses of primary energy cleaves world history into just two highly asymmetrical spans: the renewable fuel era and the nonrenewable fuel era. All premodern societies relied exclusively, or overwhelmingly, on solar, that is, perpetually (when measured on civilizational time scales) renewable energies. They derived their heat and light from biomass (the amount of living matter) that is produced by photosynthetic conversion of sunlight and harvested mostly as wood and crop residues, above all straws and stalks; plant and animal fats were also used in lighting. Their kinetic energy came from human and animal metabolism (energized, obviously, by eating the biomass) and, to a much lesser extent, from wind and flowing water, the two forms of converted solar radiation (after it is absorbed by the earth’s biosphere) that power the global water cycle and atmospheric circulation.

Fossil fuels, too, had their origin in photosynthesis, but the constituent biomass was subsequently transformed over a period of between 1 million and 100 million years by high temperatures and pressures in the uppermost layers of the earth’s crust into qualitatively new materials. Consequently, fossil fuels—ranging, in the ascending order of quality, from peats through various coals (lignites to anthracites) to hydrocarbons (crude oils and natural gases)—are not renewable on historic time scales. This means that premodern, solar societies had an energy basis whose potential longevity coincided with the remaining duration of the biosphere (the part of the world in which life can exist) itself (i.e., still hundreds of millions of years to go). On the other hand, modern societies will have to change their energy base if they are to survive for more than a few hundred years.

**Biomass Fuels**

Biomass fuels had two inherent disadvantages: low power density (expressed in watts per square meter—W/m²) and low energy density (expressed in joules per kilogram—J/kg). Even in rich forests biomass was harvested with densities not surpassing 1 W/m², but most people did not have tools to cut mature tree trunks and had to rely on smaller trees, branches, and leaves gathered with much lower density. Similarly, the collection of crop residues, needed also as feed and as a raw material, rarely yielded more than 0.1 W/m². Consequently, extensive forested areas were needed in order to supply the energy needs of larger settlements. A large preindustrial city in a temperate climate would have required at least 20 to 30 W per square meter of its built-up area for heating, cooking, and manufacturing, and, depending on the kind fuel it used, it would have needed a nearby area of up to three hundred times its size to supply its fuel. The constraint is clear: No temperate-climate megacities of 10 million people or more could have existed during the era when wood was the main source of energy.

These power density limitations became even more acute after charcoal became used on a relatively large scale. Conversion from wood to charcoal was done to increase wood’s low energy density: In its air-dried form (about 20 percent moisture) the fuel had about 18 MJ/kg, whereas charcoal rates about 60 percent higher at 29 MJ/kg. The obvious advantages of the better fuel include smaller mass to be transported and stored, smaller furnaces (or braziers), less frequent stoking, and less air pollution. However, traditional charcoaling was inefficient,
wasting about 80 percent of the initially used wood in the process. This waste would put a great strain on wood resources even if charcoal’s use was limited to space heating and cooking, but its expanded use in various manufactures and in metallurgy made it an acutely limiting factor. For example, in 1810 the metallurgical charcoal needs of the United States prorated annually to a forested area of roughly 50 by 50 kilometers, and a century later they would have amounted to an area of 170,000 square kilometers, equal to a square whose side is the distance between Philadelphia and Boston. The constraint is clear: No global steel-dominated civilization based on charcoal could exist, and coal-derived coke took over.

Human and Animal Muscles

Similarly, the limited power of human and animal muscles constrained productive capacities as well as aggressive forays of all traditional societies. Healthy adults can sustain work at 40–50 percent of their maximum aerobic capacity, and for men (assuming muscle efficiencies of 20 percent) this translates to 70–100 W of useful work. Small bovines (cattle and water buffalo) can sustain about 300 W, lighter horses around 500 W, and heavier animals 800–900 W (one horsepower is equal to 745 W). These rates give common equivalences of at least four men for an ox and eight to ten men for a horse. No less importantly, heavier draft animals can develop briefly maximum power well in excess of 3 kW and can thus perform tasks unattainable by men (plowing heavy soils, pulling out tree stumps). Larger numbers of stronger draft animals thus greatly improved the productivity of traditional farming: Even slow plowing was three to five times faster than hoeing.

However, these gains had to be paid for by devoting more time to caring for these animals and devoting increasing amounts of land to their feeding. For example, feeding the peak number of U.S. farm horses and mules in 1919 (21 million) required about 20 percent of the country’s farmland. Obviously, only countries endowed with extensive farmland could afford this burden: The option was foreclosed for Japan, China, or India. Heavier draft animals and better implements eventually cut the time that was spent in producing staple crops. For example, all field work on a hectare of wheat required 180 hours in medieval England, 120 hours in early nineteenth-century Holland, and 60 hours on the U.S. Great Plains in 1900. However, in any society where food production was energized solely by human and animal muscles most of the labor force had to be employed in agriculture. The rates ranged from more than 90 percent in imperial China to more than 66 percent in the post-Civil War United States, and in all traditional agricultures adults were also commonly helped by children.

Limits were also obvious in warfare because even trained muscles could impart relatively restrained destructive force to the tools of war, a reality made clear by comparing kinetic energies of common preindustrial weapons. The kinetic energy of a single stone ball shot from a medieval cannon equaled that of five hundred arrows discharged from heavy crossbows or one thousand thrusts delivered with heavy swords. Pregunpowder battles thus consisted of limited expenditures of muscular energy, a reality that explains frequent preference for either sieges or stealthy maneuvers. Wars became much more destructive only with the introduction of gunpowder—in China during the tenth century and in Europe at the beginning of the fourteenth century.

Speed of travel was another obvious constraint imposed by animate metabolism and by inefficient conversion of wind. Speedy running and horse riding were used only for urgent messaging, and impressive distances could be covered in a single day: The maximum on

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Density (MJ/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried dung</td>
<td>10–12</td>
</tr>
<tr>
<td>Air-dried straw</td>
<td>14–16</td>
</tr>
<tr>
<td>Air-dried wood</td>
<td>15–17</td>
</tr>
<tr>
<td>Charcoal</td>
<td>28–29</td>
</tr>
<tr>
<td>Lignites</td>
<td>10–20</td>
</tr>
<tr>
<td>Bituminous coals</td>
<td>20–26</td>
</tr>
<tr>
<td>Anthracites</td>
<td>27–30</td>
</tr>
<tr>
<td>Crude oil</td>
<td>41–42</td>
</tr>
<tr>
<td>Gasoline</td>
<td>44–45</td>
</tr>
<tr>
<td>Natural gas</td>
<td>33–37 (cubic meters)</td>
</tr>
</tbody>
</table>
Roman roads was up to 380 kilometers. However, speeds of normal travel were restricted to 10–15 kilometers a day for men with wheelbarrows (a common means of transport in imperial China), not much more for wagons drawn by oxen, 30–40 kilometers for wagons pulled by heavy horses, and 50–70 kilometers for passenger horse carts on relatively good roads. The prohibitive costs of animate land transport are perfectly illustrated by prices noted in the Roman emperor Diocletian’s famous edictum de pretiis (price edict): In 301 CE moving grain just 120 kilometers by road cost more than shipping it from Egypt to Ostia, Rome’s harbor.

**Preindustrial Inanimate Prime Movers**

Most preindustrial Old World societies eventually introduced simple mechanical devices to convert two indirect solar energy flows—flowing water and wind—to rotary power, and they also used sails to propel their ships. The evolution of sails shows slow progress from inefficient square sails of ancient Egypt and classical Mediterranean cultures to triangular sails of the Muslim world, batten sails of medieval China, and finally complex rigging (flying jibs, fore, main, mizzen, topgallant, and spanker sails) of large ships that early modern Europe sent on its global conquests during the eighteenth and nineteenth centuries. Although seaborne transport was by far the cheapest alternative, it was both unpredictable and unreliable.

The best sailing ships—British and U.S. China clippers of the second half of the nineteenth century—could average more than 30 kilometers per hour for hours and came close to 20 kilometers per hour for entire intercontinental journeys, whereas the best Roman cargo vessels could not surpass 10 kilometers per hour. However, all sailing ships could be becalmed by lack of winds or had to resort to extensive tacking when sailing into the wind. Consequently, grain ships sailing between Ostia and Egypt could take as little as a week or as long as three months or more, and two thousand years later homeward-bound English ships had to wait sometimes up to three months for the right wind to take them into Plymouth Sound.

The origins of waterwheels remain uncertain, but, notwithstanding such impressive examples as a cascade of Roman watermills in Barbegal in southern France, they were of limited importance in all classical societies where slave labor provided cheap energy for grain milling and manufacturing tasks. Waterwheels did become particularly important in some medieval societies where their power was used above all for food processing, wood sawing, and metallurgical processing. However, eight hundred years passed before the capacities of the largest wheels increased tenfold, and by the beginning of the eighteenth century, when they were the largest available prime movers, their European ratings averaged less than 4 kW, an equivalent of just five heavy horses. Windmills appeared only toward the end of the first millennium CE and, much as waterwheels, became eventually important in some Middle Eastern and Mediterranean countries and in parts of the coastal Atlantic Europe. However, again, even the relatively advanced Dutch machines averaged less than 5 kW during the eighteenth century.

As a result, societies that derived their kinetic energy almost exclusively or overwhelmingly from animate energy almost exclusively or overwhelmingly from animate...
power that was supplemented locally and regionally by small waterwheels and windmills could not guarantee either an adequate food supply or a modicum of material comforts for most of their inhabitants. Nutrition remained barely sufficient even after good harvests (yields remained static for centuries), famines were recurrent, small-scale artisanal manufactures (except for a limited luxury trade) were inefficient and limited to a narrow range of crude products, typical personal possessions were meager, illiteracy was the norm, and leisure and travel were uncommon.

**Fossil Fuels, Mechanical Prime Movers, & Electricity**

All of those circumstances changed with the introduction of fossil fuels. Although people had used coal in parts of Europe and Asia in limited ways for centuries, the Western transition from biomass to coal took place (obviously with the exception of England) only during the nineteenth century (for example, in the United States wood supplied more than half of all primary energy until the early 1880s), and in the most populous Asian countries the transition was accomplished only during the second half of the twentieth century. The oldest fossil fuels (anthracites) go back 100 million years, the youngest ones (peats) go back just 1,000 years. Both solid fuels (different kinds of coal) and hydrocarbons (crude oils and natural gases) are found in often highly concentrated deposits from which they can be extracted with extraordinarily high-power densities: Coal mines with multiple seams and rich oil and gas fields can produce between 1,000 and 10,000 W/m² (watts per square meter), densities 10,000–100,000 higher than those for biomass fuels.

Moreover, fossil fuels, with the exception of marginal kinds such as low-quality lignites and peat, also have much higher energy densities: Steam coal, now used largely for electricity generation, rates 22–26 MJ/kg, and crude oil and refined products rate 42–44 MJ/kg. Extraction and distribution of fossil fuels thus create energy systems that are the opposite of biomass-based societies: High-energy-density fuels are produced from a limited number of highly concentrated deposits and then distributed not just regionally or nationally but increasingly also globally. The distribution task is particularly easy with liquid hydrocarbons that are shipped by large tankers or sent through large-diameter pipelines. Not surprisingly, liquid fuels became the world’s leading energy sources during the latter half of the twentieth century.

Desirable qualities of fossil fuels were greatly augmented by two fundamental technical revolutions: the invention and rapid commercial adoption of new mechanical prime movers and by the creation of an entirely new energy system that produced and distributed electricity. Chronologically, the new inanimate prime movers were steam engines, internal combustion engines, steam turbines, and gas turbines, and their evolution has brought increased overall capacities and higher conversion efficiencies. The English inventor Thomas Newcomen’s steam engines (after 1700) were extraordinarily wasteful, converting no more than 0.5 percent of energy in coal into reciprocating motion; the Scottish inventor James Watt’s radical redesign (separate condenser) raised the performance to 5 percent by 1800, and his machines averaged about 20 kW, equivalent to two dozen good horses. Before the end of the nineteenth century gradual improvements increased the power of the largest steam engines to the equivalent of four thousand horses and their efficiency to more than 10 percent.

These machines powered the main phase of nineteenth-century industrialization by mechanizing many industrial processes, expanding productive capac-
cles, and putting the cost of an increasing range of basic consumer products within the reach of average families. Their impact was particularly critical in coal mining, the iron and steel industry, and machine construction. They also offered unprecedented power for both landborne and waterborne transportation. By 1900 railways offered scheduled services at speeds an order of magnitude faster than those of horse-drawn carriages, and large steamships cut the trans-Atlantic crossing to less than six days, compared to the pre-1830s mean of nearly four weeks.

However, their peak was short-lived: During the last two decades of the nineteenth century small steam engines began to be replaced by internal combustion machines and the large ones by steam turbines. Internal combustion engines of the German engineer Nicolaus Otto’s motorcycle (commercialized as stationary machines after 1866 and as wheeled transport by the German engineers Gottlieb Daimler and Karl Benz and Wilhelm Maybach starting in the 1880s) eventually reached efficiencies in excess of 20 percent. Inherently more efficient engines of the German engineer Rudolf Diesel (introduced after 1900) reached more than 30 percent. Inventions of the 1880s, the most innovation-packed decade in history, also laid lasting foundations for the development of the electric industry with the U.S.

This series of drawings shows the variety of means used to make fire over time and across cultures: (4) Fire saw from Borneo; (5) Fire thong from Borneo; (6) Fire plow from Polynesia; (7) Fire drill from Native America; (8) Fire drill from Inuit of Alaska; (9) Fire drill from Inuit of Alaska; (10) Fire drill from Iroquois of Canada; (11) Strike-a light from Inuit of Alaska; (12) Strike-a light from England; (13) Strike-a light from Malaysia; (14) Tinder pistol from England; (15) Strike-a light from Spain; (16) Fire syringe from Thailand and Malaysia; (17) Lens from ancient Greece; (18) Hydrogen lamp from Germany; (19) Match light box from Austria; (20) Matches; (21) Electric gas lighter from the United States.
inventor Thomas Edison's development of an entirely new energy system (a contribution more important than his tenacious work on incandescent light), the U.S. inventor Nikola Tesla's electric motor, and the Irish engineer Charles Parsons's steam turbine.

Electricity provided the superlative form of energy: clean at the point of use, convenient, flexible to use (as light, heat, motion), and amenable to precise control. The latter fact revolutionized industrial production as electric motors (eventually more than 90 percent efficient) replaced unwieldy and wasteful steam-driven shafts and belts. The last of the modern prime movers, the gas turbine, was introduced for aircraft jet propulsion during the 1930s, and later it also became a common choice for generation of electricity. All of these machines were much lighter per unit of installed power than were steam engines—and hence more compact and (with the exception of large steam turbogenerators) suitable for mobile applications.

On the destructive side the Swedish manufacturer Alfred Nobel’s invention of dynamite introduced an explosive whose detonation velocity was nearly four times that of gunpowder, and even more powerful compounds followed soon. By 1945 destructiveness was raised to an entirely new level by the development of nuclear-fission weapons, with fusion bombs following just a few years later. By the time the Cold War ended in 1990 with the demise of the USSR, the two superpowers had diverted significant shares of their total energy consumption to the assembly of an incredibly destructive arsenal that amounted to nearly twenty-five thousand strategic nuclear warheads whose aggregate capacity was equivalent to nearly half a million Hiroshima bombs.

**Modern Energy Systems**

Every component of fossil-fueled energy systems experienced impressive gains in capacity and efficiency, the combination that resulted in large increases in per capita consumption of energy. Although the world’s population nearly quadrupled between 1900 and 2000 (from 1.6 billion to 6.1 billion), the average annual per capita supply of commercial energy more than quadrupled, and higher efficiencies meant that in the year 2000 the world had at its disposal about twenty-five times more useful commercial energy than it did in 1900. As a result, today’s affluent economies have experienced eightfold to tenfold increases in the per capita supply of useful energy services (heat, light, motion), and the corresponding multiples have exceeded twenty-, or even thirty-fold, in such industrializing countries as China or Brazil: Never before in history had an even remotely comparable gain translated into enormous improvements in the quality of life.

Gains in energy flows that are controlled directly, and casually, by individuals were equally stunning. In 1900 even a well-off U.S. farmer holding the reins of six large horses controlled sustained delivery of no more than 5 kW of animate power; a century later his great-grandson driving a large tractor controlled more than 250 kW from the air-conditioned comfort of his cabin. In 1900 a stoker on a transcontinental train traveling at 100 kilometers per hour worked hard to sustain about 1 megawatt (MW) of steam power; in 2000 a pilot of a Boeing 747 retraclng the same route 11 kilometers above the Earth’s surface merely supervised computerized discharge of up to 60 MW at a cruising speed of 900 kilometers per hour.

However, the benefits of these spectacular energy flows remained unevenly divided. When measured in metric tons of oil equivalent (toe), annual per capita energy consumption in the year 2000 ranged from about 8 in the United States and Canada to 4 in Germany and Japan, less than 3 in South Africa, 1 in Brazil, about 0.75 in China, and less than 0.25 in many countries of sub-Saharan Africa. Yet, a closer look at the rewards of high energy consumption shows that all of the quality-of-life variables (life expectancy, food supply, personal income, literacy, political freedom) relate to average per capita energy use in a distinctly nonlinear manner: Clear diminishing returns set in for all of these variables as the energy use increases beyond 1–2 toe/capita, and there are hardly any additional gains attached to levels above roughly 2.5 toe. This reality becomes obvious when one asks a simple question: Have the lives of U.S. citizens of the last two generations been twice as good (twice as long, healthy,
productive, literate, informed, or free) as those of people in Western Europe or Japan?

What does a rich energy endowment do for a country? In the United States it has obviously contributed to the country’s emergence as an economic, military, and technical superpower—but it could not prevent the collapse of the USSR, which was in 1989 the world’s largest producer of fossil fuels. Other prominent examples of the failure to use rich energy resources to build modern, prosperous societies include such different societies as Iran, Nigeria, Sudan, and Indonesia: None of them secured vibrant economies and prosperous lives for its citizens. In contrast, three energy-poor countries of eastern Asia (Japan, South Korea, Taiwan) became the paragons of rapid economic growth and impressive improvements in average quality of life.

Finally, energy use cannot explain the rise and fall of major civilizations and powerful societies. Such notable consolidations and expansions as the rise of Egypt’s Old Kingdom, maturation of the Roman republic, unification of Han China (206 BCE—220 CE), the spread of Islam, the Mongolian conquests in Eurasia, and the enormous eastward extension of the Russian empire cannot be linked to any new prime movers or to new, or more efficient, fuel uses. As for the declines, no drastic change of fuel base and delivery (wood, charcoal) or prime movers (slaves, oxen, horses, sailing ships, waterwheels) took place during the long decline of the western Roman empire (the eastern part managed to survive with the identical infrastructure for another millennium), and none of the great breaks of the early modern and modern world—the French Revolution, the collapse of the czarist Russian empire, the fall of Nationalist China, the collapse of the USSR—could be given convincing (or indeed any) energy explanations.

Energy resources and uses are, undeniably, among the critical variables whose specific and unpredictable combinations determine the fortunes of societies. They promote, restrict, or complicate many economic and individual options, and once in place they are critical for setting the tempo of life and the levels of general welfare. Immutable dictates of thermodynamics also mean that higher socio-economic complexity requires higher energy flows. However, this undeniable relationship is not a matter of continuous linear progress but rather one of a relatively early saturation. Moreover, possession of abundant energy sources or their high consumption cannot guarantee well-functioning economies, decent quality of

<table>
<thead>
<tr>
<th>Projectile</th>
<th>Kinetic Energy of Projectile (J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrow from a bow</td>
<td>20</td>
</tr>
<tr>
<td>Arrow from a heavy crossbow</td>
<td>100</td>
</tr>
<tr>
<td>Bullet from a Civil War musket</td>
<td>$1 \times 10^3$</td>
</tr>
<tr>
<td>Bullet from an assault rifle (M16)</td>
<td>$2 \times 10^9$</td>
</tr>
<tr>
<td>Stone ball from a medieval cannon</td>
<td>$50 \times 10^3$</td>
</tr>
<tr>
<td>Iron ball from an eighteenth-century cannon</td>
<td>$300 \times 10^3$</td>
</tr>
<tr>
<td>Shrapnel shell from World War I artillery gun</td>
<td>$1 \times 10^4$</td>
</tr>
<tr>
<td>High-explosive shell from a heavy World War II antiaircraft gun</td>
<td>$6 \times 10^5$</td>
</tr>
<tr>
<td>Depleted uranium shell from M1A1 Abrams tank</td>
<td>$6 \times 10^6$</td>
</tr>
<tr>
<td>Hijacked Boeing 767 (11 September 2001)</td>
<td>$4 \times 10^9$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Explosives</th>
<th>Energy Discharged (J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand grenade</td>
<td>$2 \times 10^6$</td>
</tr>
<tr>
<td>Suicide bomber</td>
<td>$100 \times 10^6$</td>
</tr>
<tr>
<td>World War II gun shrapnel</td>
<td>$600 \times 10^6$</td>
</tr>
<tr>
<td>Ammonium nitrate-fuel oil (ANO) truck bomb (500 kilograms)</td>
<td>$2 \times 10^6$</td>
</tr>
<tr>
<td>Hiroshima bomb (1945)</td>
<td>$52 \times 10^{12}$</td>
</tr>
<tr>
<td>U.S. ICBM warhead</td>
<td>$1 \times 10^{15}$</td>
</tr>
<tr>
<td>Tested Novaya Zemlya fusion bomb (1961)</td>
<td>$240 \times 10^{15}$</td>
</tr>
</tbody>
</table>
life, personal happiness, or a nation’s security. Energy sources and uses constrain our actions but do not dictate our choices, do not assure economic success, and do not condemn civilizations to failure. In the modern world the only inescapable consequences of higher energy use are greater impacts on the earth’s biosphere: The fate of modern civilization may be ultimately decided by our capacity to deal with this challenge.

Vaclav Smil

See also Coal; Natural Gas; Oil; Water Management

Further Reading


Engines of History

Human beings like to understand what goes on around them; and historians, being human, like to understand what they write about. They do so by finding causes even for the most surprising events. This was true from the start. Herodotus (484–425 BCE), for example, set out to explain how a few small Greek cities had been able to defeat an immense Persian army and navy; while the first historian of China, Sima Qian (d. c. 87 BCE), sought to explain how China’s ruling dynasties rose and fell. Herodotus found a twofold explanation: Free men, he said, fought willingly and more bravely than Persian subjects, forced to obey a mighty king; moreover, the king’s overweening pride also offended the gods who sent storms to damage his invading fleet. Similarly, Sima Qian invoked both human and supernatural causes. According to him a ruler’s virtue allowed him to rule well and therefore attracted the Mandate of Heaven, but when rulers ceased to be virtuous, Heaven withdrew its Mandate and good government broke down until a virtuous new ruler emerged to found another ruling dynasty.

These ideas about what made history happen the way it did proved to be very influential. Until about a hundred years ago China’s historians continued to organize their histories around successive dynasties empowered by the Mandate of Heaven. And the idea that freedom made men successful in war (and also in peace) appealed to Romans as well as to Greeks, and reentered European consciousness with the Renaissance.

But in the world as a whole, the Hebrew prophets’ idea that Almighty God governed history, punishing peoples and persons for their sins, and rewarding scrupulous obedience to His will, played a more influential role, dominating Jewish, Christian and Muslim societies from the inception of those religions. For believers, Divine Providence remained inscrutable to everyone except specially chosen prophets. Yet ordinary chroniclers and historians took God’s will for granted as the decisive force behind everything that happened. Other causes, when they bothered with them, were only subordinate instruments of God’s will. Hinduism and Buddhism, on the other hand, treated the visible world as an illusion and paid scant attention to human history. Instead religious speculation about endless cycles of reincarnation reduced everyday events to transient triviality.

The Importance of Animism

Behind and beneath these civilized literary traditions lay a much older interpretation of the world that modern anthropologists call animism. Its basic tenet is that nat-
ural objects are inhabited by invisible spirits and share the spectrum of cooperation and conflict humans exhibit in everyday interactions with one another. Spirits can also move about invisibly, entering and leaving a person or object at will. Hence the world of spirits exactly parallels human societies. Individual spirits work their will when they can, submit when they must, and influence everything that happens to human beings.

The earliest bands of human foragers carried these ideas with them around the earth; and they still permeate common speech as, for example, when historians refer to the “spirit of an age.” Later religions made room for spirits too in various forms: angels, devils, saints and ancestors to whom ordinary persons could appeal for help in time of need, or, as the case might be, drive away by appropriate rituals. As such, animism is the longest lasting, most pervasive worldview that human beings have ever conceived. Throughout most of the past, the coming and going of spirits and the clash of their individual wills convincingly explained dreams, sleep and death, as well as illness and trance and why human hopes and expectations were so often disappointed by experience. Experts in the supernatural sought to navigate among the spirits, driving some away, appeasing some, and keeping others close by for help in time of need. All religions of the world descend from and incorporate the notion that we are surrounded by a society of powerful spirits, affecting everything that happens.

Yet curious persons could never refrain from trying to fill in the gap between invisible supernatural powers, variously defined by local religion and folk practice, and whatever it was that actually occurred. As long as historical changes remained so gradual as to be imperceptible, it was possible to believe that everyday surprises and disappointments remained fundamentally the same across time. In such societies, belief in the overriding power of gods and spirits remained thoroughly persuasive. But when new forms of government, new economic activities, and new information about distant peoples and places upset old customs and expectations, new-sprung prophets, philosophers and historians came into their own by investigating more closely the world of people and things and its relationship with supernatural powers. This was the context within which Gautama Buddha, the Hebrew prophets, Chinese and Greek philosophers as well as Herodotus and Sima Qian did their work.

Greek and Roman Influences

Among the Chinese, the idea of a dynastic cycle, supervised by a vaguely personified Heaven, remained central and seldom challenged. Greek historical ideas were more volatile. Some, like the poet Hesiod (c. 700 BCE), held that all changes were for the worse, declining from an age of gold, to silver, bronze and then of iron, amidst which
the poet found himself. Yet the story of how Prometheus stole fire from the gods, and empowered humankind by that gift, implied the opposite idea that humans had in fact accumulated skills, knowledge, and power across time.

Nor did Herodotus’ ideas seem adequate to historians after him. Thucydides (c. 460–404 BCE), for example, refrained from even mentioning the gods, and explained the course of the Peloponnesian war by emphasizing deliberate public decisions, influenced by the personal character of individual leaders. Yet he also recognized more general processes at work: how Athens’ tyranny over other cities provoked eventual defeat; how the hardships of war disrupted commonality among fellow citizens, provoking civil strife, and how pursuit of honor gave way to greed. Later Greek historians, most notably Polybius (c. 200–118 BCE), elaborated the idea that a natural cycle existed whereby political power passed from monarchy to aristocracy and then degenerated into democracy. Polybius argued that the rise of Roman power—his principal subject—was due to Rome’s mixed constitution, balancing monarchical, aristocratic, and democratic elements.

Almost two centuries before Polybius wrote about Rome, Alexander’s conquests brought Greeks into far closer touch with Egypt and western Asia than before. Accordingly, Hellenistic scholars set out to link the Greek past with that of Egypt and western Asia by constructing parallel chronologies. About 200 BCE, an Egyptian priest, Manetho, organized Egyptian history into thirty dynasties that are still used; and at almost the same time, a Babylonian priest, Berosus, summarized Mesopotamian history—before and after the Flood—down through Persian times. Both wrote in Greek, perhaps at the command of the new Macedonian rulers; and simultaneously Eratosthenes of Cyrenaica, (c. 276–194 BCE), most famous for his accurate geometrical measurement of the circumference of the earth, arranged Greek history around quadrennial Olympiads dating back to 776 BCE.

All too obviously, history was expanding geographically and chronologically, and persuasive ideas to explain all the surprising things that kept on happening were in short supply. In Roman times, the idea that unvarying natural law, as conceived by Stoic philosophers, ruled the universe had to compete with the notion that Fortune, conceived as a whimsical goddess, favored some and destroyed others for no reason at all. The leading Roman historians emphasized individual moral character, and both Livy (59 BCE–19 CE) and Tacitus (56–120 CE) regretted the end of republican liberty, arguing that moral decay was what had led to civil war and imperial government in their lifetimes.

**The Advent of Judaism, Christianity, and Islam**

Judaism, Christianity, and Islam superceded discrepant pagan ideas about history by recognizing God’s almighty will, operating always and everywhere. Jews, Christians, and Muslims agreed that the main lines of the world’s history were revealed in sacred scripture. History began with creation, and centered not on war and politics, as pagan historians had assumed, but on how God had revealed his will to humankind, and on the always-imperfect efforts people made to obey and observe His instructions. Holy Scriptures also predicted that the world was destined to end suddenly with a Day of Judgment, when God would reward and punish the living and the dead, sending everyone eternally to heaven or to hell.

However convincing this overall pattern of history might be, short-term surprises remained as puzzling as before. But for many centuries the authority of sacred scriptures, and of codified interpretations placed upon them by religious experts, remained authoritative. Correspondingly, historical writing became intellectually impoverished since miracles abounded, and easy invocation of God’s will explained everything. To be sure, pagan classical writers were never entirely forgotten, and writers like Eusebius (flourished 313–337 CE) and Orosius (flourished c. 414 CE) made rather hasty efforts to fit a few highlights from the pagan political past into the Biblical narrative. New habits of citing and quoting sources make even the most credulous Muslim and Christian chronicles of interest to modern scholars; and the universal framework of sacred history—from Creation to
the Day of Judgment—made it easy to introduce new peoples, states, and regions into the historical domain as they became known to Christians and Muslims. More important, the universal character of God’s power invited believers to construct all-embracing chronologies, beginning with Creation for Jews, with the birth of Christ for Christians, and with Muhammad’s flight to Medina for Muslims. Despite the awkwardness of running numbers backward before the Christian and Muslim eras, these chronologies remain in use today, though most historians now substitute the religiously neutral label “Common Era” when using the Christian scheme for dating events.

After 1000 ce, trade intensified and information about distant places and peoples expanded across the Old World, and inherited religious explanations began to demand more detailed analysis. How did Heaven or God—or any other sort of ultimate power—use intermediate causes to direct human history? How indeed? Both Byzantine and Italian scholars looked afresh at ancient texts for helpful hints, but most were satisfied with rather superficial rhetorical borrowings from pagan writers. To explain the rise and fall of Cesare Borgia, for example, Niccolo Machiavelli (1469–1527) fell back on the goddess of Fortune without really believing in her existence. In North Africa, however, the Muslim ibn Khaldun (1342–1406) generalized from the political tumult of his times, arguing that superior social cohesion among nomad tribesmen allowed them to conquer urban dwellers only to see their initial cohesion weaken under urban conditions, thus making way for a new conqueror. His concept of ever-fluctuating “social cohesion,” and his recognition of systematic social change throughout Muslim society in the wake of the Black Death, which had killed both his parents, departed from anything historians had thought of before. Perhaps because they were so novel, his ideas survived very slenderly in Muslim lands, and came to European attention only after 1860.

Giambattista Vico (1688–1744) resembled ibn Khaldun in the originality of his ideas about what made history happen. His principal book, Scienza Nuovo (1725) offered a speculative and evolutionary view of world history, according to which each successive age was characterized by dominant ideas and ideals, expressed in religion and poetry, and developed its own distinctive patterns of behavior. He remained devoutly Christian, but elaborated more systematically than anyone before him how Divine Providence allowed selfish and often brutal humans to change their thoughts and actions from age to age.

North of the Alps, the religious upheaval of the reformation and counterreformation dominated historical thinking from 1517 until about 1750. Protestants argued that the Roman Catholic Church had departed from authentic Christian practice as recorded in the Bible; Catholics attributed such practices to apostolic tradition, faithfully transmitted from Peter to the popes of Rome. This was an historical question, and generations of scholars argued back and forth, developing new information, new linguistic skills, and rules for correcting copyists’ errors in ancient and medieval texts—but never achieving anything like agreement. After 1499, the Muslim world, too, split more sharply than before between Sunni and Shia versions of Islam; and, as in Europe, bitter controversy fortified disagreement, without enlarging historical knowledge as much as in Europe, thanks largely to pious restrictions on resort to printing.

Eighteenth and Nineteenth Century

Beginning about 1750 more and more Europeans tired of religious controversy and the warfare it provoked. Secular, anticlerical, and sometimes consciously irreverent ideas proliferated, especially in France and England. Distinguished historical expressions of this change in the climate of opinion include Voltaire, Essai sur les moeurs (1756); William Robertson, History of the Reign of Emperor Charles V (1679), and Edward Gibbon, The History of the Decline and Fall of the Roman Empire (6 vols. 1776–1788). These historians discarded prevailing notions about the active intervention of Divine Providence in human affairs, believing that God, if he existed, had created the world as a self-regulating machine, leaving full responsibility for what happened in history to
human beings. Voltaire expanded the scope of history to embrace everyday customs around the world including distant China—whose civil polity he admired because it did without priests and revealed religion. Robertson dealt with the storms of the reformation era without clearly taking sides. And. Gibbon’s history traced the triumph of “barbarism and religion,” i.e., of Christianity and Islam, that, he argued, eventually brought the Roman empire to an end in 1453.

European historical ideas took new forms with the rise of nationalism, accelerated by the French revolution and the Napoleonic wars that followed. Many Germans, reacting against French political and cultural primacy, accepted the idea that a distinct national spirit inhered in their own and every other language. Johann Gottfried von Herder (1744–1803) was an influential advocate of this idea, and when after 1815 medieval and modern history became a regular subject for lecturing and research in German universities, academic history took off as never before. As the study of history spread to universities in other countries, written histories quickly assumed distinct and diverse national forms. Ideas about what guided history multiplied correspondingly.

Three more or less distinct schools can perhaps be distinguished. One was conservative, idealist and Christian, believing that each nation had its own proper place in God’s plans for humankind, and therefore inherited institutions and practices that appropriately expressed the spirit and destiny of each people and state. A second was liberal, progressive and somewhat less sure of being able to discern God’s hand in history. For the English-speaking world, Lord Acton (1834–1902) more than anyone else defined this view through a history of liberty he projected but never actually wrote, and more concretely by planning a collaborative multivolume Cambridge Modern History, embodying the liberal view, that was published soon after his death. Both conservatives and liberals were challenged after 1848 by socialist, materialist and godless Marxism. Yet Karl Marx (1818–1883) in rejecting the Christian version of history reproduced its principal features, claiming that private property had supplanted primitive communism (equivalent to leaving the Garden of Eden), but changes in the pattern of class warfare that had followed were destined to come to a speedy end when the proletariat, created by modern industry, would take power and restore justice, equality and communism by accepting the principle, “From each according to his ability, to each according to his need.”

The conservative tradition emphasized national, political history and the rise of an international balance of power, adjusted from time to time by war and diplomacy. Liberals emphasized the progress of constitutional freedom across the centuries and congratulated themselves on its approach to perfection in their own time. Socialists emphasized economic history, class conflict and the international solidarity of the working class. All agreed that human beings made their own history but since individual and collective wills clashed perpetually, results were never exactly what anyone hoped or intended.

The Twentieth Century and Beyond

World Wars I and II tended to discredit all three historical traditions. Balance-of-power politics enhancing national rivalries and provoking such destructive violence were not truly conservative, resulting in revolution instead. Freedom to fight and die in the trenches was not an acceptable climax to the advance of constitutional liberty either. And the international solidarity of the proletariat was everywhere betrayed in 1914, even though communist revolution in Russia created a rival social and political order challenging other states after 1917; after World War II China and several other countries also became Communist as well.

Historians were rather slow to adjust their ideas to these upheavals. It was easier to persist in conservative, liberal and socialist modes of thought and not ask large questions about overall patterns and universal causes. In Communist countries, official policy enforced ideological conformity and history soon became mere apologetics for the government of the day. Elsewhere new themes
multiplied, study of new peoples penetrated academic history departments, especially in the United States, and increasingly minute specialization prevailed.

Resulting multiplicity makes it hard to pick out important new ideas about the course of history and the factors that affect it. Rapid globalization since 1950 pushed towards taking world history more seriously than before. New awareness of ecology and the radical impact of recent human activity on other forms of life raised new questions about the human past. The extraordinary multiplication of human numbers drew attention to demography as a fundamental variable as well. More generally, recognition that we are inescapably part of much larger evolutionary processes—cosmological, terrestrial, biological and human—invited a recasting of history to take account of processes of which humans were previously unaware, yet which influenced or even controlled what they were able to do. Histories limited to criticizing and correcting surviving written records about what people said and did had kept historians busy in the nineteenth century. That no longer seemed in the least adequate to describe what really happened. But how to disentangle the enormous complexity of disparate processes within which we exist remains an open question. Very likely, human intelligence and our use of language will never be able to find answers that satisfy everyone.

Still within the past half century, historians have come to understand far more than before about human origins and what used to be called prehistory, thanks to archeological discoveries, anthropological studies of surviving bands of foragers, and observation of bands of chimpanzees and our other close relatives. Similarly, advances in epidemiology allowed historians to understand far more about how disease organisms and human populations have interacted across time. Energy flows sustaining human activity offer a promising way to construct quantitative estimates of our quite extraordinary success in enlarging our ecological niche at the expense of other species. Moreover, human webs of communication, permitting more extensive and efficacious cooperation across time, seem responsible for the collective learning and the accumulation of skills that produced this amazing result.

In general, by assimilating history to sister sciences, or more exactly by making all the sciences historical, we can hope for an improved understanding of ourselves and everything around us. For it is now apparent that all the sciences evolve across time, and the physical, chemical, geological and biological processes they study are likewise time sensitive. Change pervades the universe. Human changeability is unusually rapid and, at least on a terrestrial scale, is unusually significant as well, since we are and have long been capable of upsetting all the life-forms around us, thanks to actions coordinated by language and more recently by mathematical symbols and digitalized signals as well.

A few historians have begun to attempt this bold synthesis. Among them David Christian, *Maps of Time* (2004), is the most notable. But the task is just begun and who knows what may follow? Human history is always surprising and sure to remain so. Authoritative religions may again simplify the task of making sense of what happens. Sudden collapse of existing high-tech urban societies cannot be ruled out. Human survival itself is problematic. Or we may learn enough to navigate the future for a long time to come just as successfully, and as precariously, as our predecessors did. Time, as always, will tell. And all the while, historians’ ideas will continue to reflect changing conditions within the societies they live in.

William H. McNeill

*See also* Cultural Ecology; Population Growth as Engine of History; Writing World History

**Further Reading**


Enlightenment, The

The Enlightenment designates a period of European intellectual history from the late seventeenth to the late eighteenth century that brought together ideas in moral and natural philosophy and shifted inquiry away from metaphysics and the supernatural toward a focus upon physical and human nature. More significantly, the Enlightenment represented the adoption of a critical attitude toward inherited cultural and intellectual traditions. The forty-volume Encyclopédie (1751–1772), compiled by the important Enlightenment thinkers Denis Diderot (1713–1784) and Jean Le Rond d’Alembert (1717–1783), idealized the Enlightenment thinker, or philosophe, as one who “tramples on prejudice, tradition, universal consent, authority, in a word, all that enslaves most minds,” and “dares to think for himself” (Diderot 1759, 5:270). A generation later, the German thinker Immanuel Kant (1724–1804) defined the Enlightenment as a process of freeing oneself from what he called “self-incurred tutelage,” and he wrote that the motto of the Enlightenment ought to be “Sapere aude! ‘Have courage to use your own reason!’” (1988, 462).

Expanding the Intellectual Sphere

The Enlightenment took advantage of new forms of intellectual exchange. Enlightenment thinkers like David Hume (1711–1776) railed against the exclusivity of earlier generations and insisted that they were bringing knowledge out of the pedantic world of the closeted learned to the sociable world of polite conversation in academies, debating societies, salons, and coffeehouses. Along with the expansion of the sphere of oral communication went a similar expansion of readership and print culture. In this period books became smaller, cheaper, and therefore more accessible. This time witnessed the birth of the periodical press, of newspapers and magazines. Changes in print production went along with changes in how readers related to print. Gone were the days of laborious reading; instead expanding literacy, particularly among middle-class men, meant that expanding audiences read pamphlets, essays, novels, and newspapers in their leisure time.

Physical and Human Nature

The sixteenth and seventeenth centuries saw European thinkers challenge inherited ideas about the physical universe. Medieval thinkers had built elaborate cosmological systems upon classical, and particularly Aristotelian, foundations. But in many fields, such as physics, applied mathematics, and especially astronomy, new discoveries and explanations put forward by Nicolaus Copernicus (1473–1543), Galileo Galilei (1564–1642), and Sir Isaac Newton (1642–1727), among others, challenged the picture of a finite, earth-centered universe and replaced it with a potentially infinite universe and a sun-centered system. Explanations of the physical universe thus increasingly presented it as analogous to a mechanism, governed by rational, mathematically expressible rules, which a divine power may have created but with which it did not need to interfere.

This shift to mechanistic explanations was also apparent in moral philosophy. Seventeenth-century thinkers like William Harvey (1578–1657), Thomas Hobbes (1588–1679), René Descartes (1596–1650), and John Locke (1632–1704) developed new medical and psychological theories to account for human movement, behavior, feeling, and thinking as governed by mechanical principles. The philosophes then developed economic, social, and political theories that challenged the belief in a divinely instituted and intuitively recognizable order. Enlighten-
ment thinkers viewed human nature in terms of a morally neutral tabula rasa, or blank slate, that could be molded in various ways. They applied the idea of a social tabula rasa, or state of nature, to explain how civil society might have emerged and ought to be governed. Many Enlightenment thinkers, such as Hobbes, the Marquis d’Argenson (1694-1757), Montesquieu (1689-1755), and Jean-Jacques Rousseau (1712-1778), argued that political stability could be guaranteed by organizing society as a machine in which each component worked in harmony with the rest. Still others, like Locke in his The Second Treatise of Government (1689), used the idea of a state of nature to define the boundaries of state power in guaranteeing political stability.

Progress and Utility
During the seventeenth century, European intellectuals quarreled over whether contemporary “modern” European thinkers had surpassed their “ancient” Greek and Roman counterparts and this debate gave rise to the Enlightenment belief that better ways of thinking and behaving had emerged in recent decades. The sense of modern improvements led to a faith among the philosophes that the new ideas and methods would guarantee indefinite progress in politics, society, and the arts and sciences. The philosophes took up the cause of improving their social and natural surroundings through experiment and reform. Societies and academies, such as the English Royal Society, emerged in which innovative ideas and techniques were presented, debated, and recommended. From agricultural techniques to zoological taxonomies, progressive reform was an important Enlightenment ideal associated with another Enlightenment principle: utility. Hume (1902, 183) wrote that “public utility is the sole origin of justice.” In their emphasis upon principles of progress and utility, most Enlightenment thinkers were the heirs to the “moderns” in the quarrel of the ancients and moderns.

Religion and Politics
But the Enlightenment cannot be equated easily with the rise of modernity if we understand modernity to mean atheism and democracy. As often happens with any movement critical of established institutions or ideas, definitions of the Enlightenment have been constructed as much by its enemies as by the philosophes themselves. An appreciation of the Enlightenment must therefore go
beyond commonplace definitions that tend to see it as simply challenging the authority of church and state, of Christianity and absolute monarchy. Indeed, with few exceptions, Enlightenment thinkers were defenders of both.

The Enlightenment’s religious outlook was built partly upon the ideas of certain dissenting Protestant sects, such as Socinians (who denied the divinity of Christ, and consequently the Trinity) and Arians (who believed that the Son was not of the same substance as the father), and also partly upon the skeptical and humanistic traditions within Roman Catholicism. In fact, the very term enlightenment had already been used by Christians to designate divine inspiration. But many Enlightenment thinkers reacted to what they criticized as the “enthusiasm” of religious dogmatists and the “fanaticism” of religious wars, such as the French Wars of Religion (1559-1598), the English Civil Wars (1638-1660) or the Thirty Years War (1618-1648). They emphasized the need rationally to reexamine the foundations of beliefs. These individuals insisted that religion ought to agree with reason and that any belief not derived from observation of the world or from human reason ought to be rejected. These thoughts encouraged the tolerance and rationalism that gave rise to the ideas of deists like Voltaire (1694–1778), who argued for a pared-down, “reasonable” Christianity emptied of its dogma and ritual, as well as those of atheists like Hume and the Baron d’Holbach (1723–1789).

The Enlightenment’s political outlook similarly mixed continuity with the past and a critical perspective on traditions. Although their enemies often accused the philosophes of corroding political order and the established monarchy, most philosophers actually favored monarchy. George III in Great Britain, Louis XV and Louis XVI in France, Frederick the Great in Prussia, Joseph II in Austria, and Catherine the Great in Russia all gave support to and were supported by Enlightenment thinkers. Influenced by the Enlightenment principle of maximizing utility, these monarchs tried to institute reforms in their kingdoms. Thus Enlightenment thinkers like Voltaire actually advocated a form of “enlightened despotism,” or the rule of a single sovereign with absolute power to reform society. Two things that Enlightenment political philosophers tended to oppose were what they called “Oriental despotism,” the kind of arbitrary rule they associated with Islamic states, and the customary privileges enjoyed by certain groups, like aristocrats and guilds, which they saw as inefficient and inequitable.

The Enlightenment and the Wider World

Although the Enlightenment was almost exclusively a European phenomenon, the wider world played a key role in the development of Enlightenment thought. Descriptions of previously unknown species of animals discovered in distant lands led natural historians, such as Carolus Linnaeus (1707–1778), to develop new taxonomical systems that could effectively organize the growing mass of information regarding plants and animals. Discoveries of fossilized plants and animals also led many to abandon the practice of interpreting scriptural accounts of the world’s creation literally. Instead philosophes like Georges-Louis Leclerc de Buffon (1707–1788) argued that the earth was formed and transformed at extremely slow evolutionary rates and as the result of natural occurrences such as volcanic activity and tides.

European encounters with non-Europeans and their languages, religions, and political practices also stimulated Enlightenment thinkers in many ways. Philologists such as Sir William Jones (1746–1794), who recognized the affinities between Persian and European languages, set the stage for nineteenth-century comparative grammarians. Jesuit missionaries in China, impressed with the virtue of the people they encountered, emphasized parallels between Christian and Confucian beliefs, and many Enlightenment thinkers, such as Matthew Tindal (1653–1733) and Gottfried Wilhelm Leibniz (1646–1716), pointed to China in arguing against the need for revelation, and for the idea that the tenets of natural religion were apparent to all reasonable and observant people. The Scottish thinker Henry Home (1696–1782), noting the radical physical differences between peoples around the world, argued for the polygenetic origins of human races, an argument that contradicted scriptural accounts.

Education is a progressive discovery of our own ignorance. • John Dryden (1631–1700)
Thomas Hobbes on the State of Nature: 
"solitary, poor, nasty, brutish, and short"

The Enlightenment, a period of European intellectual history from the late seventeenth to the late eighteenth century, focused a great deal on the state of human nature.

Thomas Hobbes (1588–1679), one of the preeminent thinkers of his day, traveled widely throughout Europe in order to study different forms of government. Like his contemporary John Locke (1632–1704), Hobbes was interested in why people allowed themselves to be ruled and what would be the best form of government, especially for his native England.

In 1651, Hobbes wrote his most famous work, entitled *Leviathan*. In it, he argued that people were naturally wicked and could not be trusted to govern. Therefore, Hobbes believed that an absolute monarchy—a government that gave all power to a king or queen—was best. Hobbes believed that humans were basically selfish creatures who would do anything to better their position. Left to themselves, he thought, people would act on their evil impulses. According to Hobbes, people therefore should not be trusted to make decisions on their own.

Governments were created, according to Hobbes, to protect people from their own selfishness and evil. The best government was one that had the great power of a leviathan, or sea monster—an authority figure to provide direction and leadership to the masses. Because the people were only interested in promoting their own self-interests, Hobbes believed democracy—allowing citizens to vote for government leaders—would never work. Giving power to the individual would create a dangerous situation that would start a war of every man against the other and make life “solitary, poor, nasty, brutish, and short.”


The tendency of Enlightenment thinkers increasingly to compare their own society to those of recently discovered and distant peoples challenged traditional notions in many other ways. Locke, for example, in his *Second Treatise on Government* (1690), noted that “in the beginning, all the world was America” (Locke 1993, 285). Though very few had traveled outside Europe, Enlightenment thinkers frequently used descriptions of distant cultures to comment on their own countries. One of the commonplaces of the Enlightenment was the image of the American Indian, and later of the Pacific Islander, as existing in a state of nature without literature, religion, laws, or political and social distinctions. The French aristocrat Louis Armand de Lahontan (1666–1716), for example, popularized the figure of the American Indian as living in this enviable state through the publication of fictional dialogues between a Huron and himself. In these dialogues, the Huron gets the better of his European interlocutor on such subjects as marriage, religion, and jurisprudence. Lahontan’s work was discussed by important European thinkers such as Leibniz and influenced ideas of natural law and natural religion. Lahontan’s *A Conference or Dialogue between the Author and Adario, a Noted Man among the Savages* (1703), and other works like Montesquieu’s *Persian Letters* (1721), Voltaire’s *Ingenuous* (1767), and Oliver Goldsmith’s (1730–1774) *Citizen of the World* (1762), popularized the Enlightenment genre of the imaginary traveler from a distant land who comments critically upon European customs. Indeed, this was one of the most important vehicles through which European audiences imagined non-Europeans and criticized customs within their own society.

The Enlightenment’s encounter with non-Western societies also promoted the rise of what we now call the social sciences. Sociology, ethnography, anthropology, psychology, economics, political economy, and even literary criticism all grew out of the Enlightenment. Enlightenment historians studied how each human society followed a definite and, for most philosophes, progressive development from a hypothetical state of nature to civilization. This “conjectural history” implied definite hierarchies of cultures, and the Enlightenment was an important period in the development of cultural particularism, which fed into the nationalist and racialist ideologies of the nineteenth century.

But since the Enlightenment thinkers saw differences
between peoples as cultural, historical, or environmental rather than racial, they tended to see human nature and dignity as shared in common among all peoples. This view played a large role in the development of Enlightenment cosmopolitanism, the idea that the philosophes is a citizen of the world more than of any nation-state with its accidental traditions. Another important implication of this emphasis on a shared human nature was that many Enlightenment thinkers, such as Diderot and the Abbé Raynal (1713–1796), condemned slavery as an immoral and inhumane practice and played a role in the development of the abolitionist sentiment.

**Enlightenment and Modern Political Revolutions**

One of the perennial questions surrounding the Enlightenment is the extent of its influence, particularly on the political and social revolutions in Europe and in European colonies in the Americas. As noted above, most Enlightenment thinkers did not advocate either political revolution or republicanism. In fact, in some ways, the very concept of the Enlightenment as a coherent movement, critical of established political institutions and ideas, was created as much by revolutionaries seeking retrospectively to justify their actions intellectually as by the ideas of the philosophes themselves or the assertions of their enemies. There can be no question, however, that certain American revolutionaries, like Thomas Jefferson (1743–1826) and Thomas Paine (1737–1809), were influenced by Enlightenment ideas and that Rousseau in particular had a tremendous impact on the course of the French Revolution. Simón Bolívar (1783–1830), the “liberator” of South America, learned from his tutor about Rousseau and Voltaire and while traveling in Europe he absorbed Enlightenment ideas from such thinkers as Alexander von Humboldt (1769–1859). The idea of a written constitution, of freedom from arbitrary and unjust customs, of equality before the law, and, to some extent, of checks and balances within government were all concepts advanced by Enlightenment thinkers. In these ways, as well as others, many of which are noted above, the Enlightenment contributed much to the emergence of the modern world.

Matthew Lauzon

See also Darwin, Charles; Descartes, Rene; Mathematics; Science—Overview; Scientific Revolution; Secularism; Social Sciences

**Further Reading**


**Equatorial and Southern Africa, 4000 BCE–1100 CE**

During the more than five thousand years from 4000 BCE to the beginning of the second century in the second millennium CE, sweeping transformations of economy, technology, culture, and society took shape stage by stage across the equatorial and southern regions of
The Map of Beatus (776 CE) shows the world south of North Africa as uninhabitable. Of course, the region had been home to humans for some 200,000 years.

Africa. Historians of Africa used to treat this immensely complex history as if it were a single development, which they called the Bantu expansion, and that expression lingers on in some books. There is an element of truth in this designation: A major accompanying feature of this long history was the widening establishment of Bantu languages across the greater part of nearly half of Africa.

But the driving forces of change in that long sweep of time were a succession of transformations in lifeways—the shift from hunting and gathering pursuits to agriculture, the adoption of new technologies, the rise of specialized production for the market, and the eventual emergence, although not everywhere, of states and towns. The initial impetus for these transformations came from West Africa. In that region, from around 8000 to 5000 BCE, a great variety of peoples, speaking languages of the Niger-Congo family, had participated in the independent development of a productive system—West African planting agriculture—adapted to wet environments. The early crops of this agriculture included several African species of yams, along with oil palms, black-eyed peas, *voandzeia* (a kind of groundnut), and bottle gourds. By the fifth and fourth millennia BCE Niger-Congo peoples supplemented cultivation with the tending of guinea fowl and goats.

**Early Agricultural Spread—Equatorial Rain Forests**
The first spread of West African planting agriculture into equatorial Africa came about in the fourth millennium BCE. Two Niger-Congo communities from west central Cameroon initiated this era of change. Coastal Bantu people settled along the Atlantic littoral near the mouth of the Ogowe River, where their descendants still live today. The second group, the ancestral Nyong-Lomami Bantu, filtered at first into the areas around the Nyong and lower Sanaga Rivers in modern-day Cameroon. With the one exception of the Coastal Bantu of the lower Ogowe River areas, all the far-flung Bantu languages of later times descend from the ancestral Nyong-Lomami tongue. Both groups brought with them an economy that combined fishing and hunting with the cultivation of yams, oil palms, black-eyed peas, *voandzeia*, and gourds and the raising of goats and guinea fowl. They introduced the first pottery to the region, along with the technologies of boat building and polished-stone tool making.

Their settlements brought them into contact with the diverse Batwa hunter-gatherer societies, whose ancestors had inhabited the rain forest zones for thousands of years. (The Batwa are often called by the pejorative term *Pygmies.*) The Batwa entered into trade relations with the newcomers, bartering surplus products from their forest hunting and gathering, such as honey and ivory, for the pottery and polished stone axes of the Bantu-speaking communities.

The Bantu-speaking farmers and fishers introduced a new kind of settlement and a new type of social structure to the rain forest regions. In contrast to the mobile bands of the Batwa, the Bantu communities resided in sedentary villages. Each village was the establishment of a particular clan or a particular lineage within a clan, although people of other lineages or clans might also reside in the village. Throughout the period down to early first millennium CE, hereditary lineage chiefs acted as the ritual leaders of these small independent communities. The Batwa, in contradistinction, recognized neither chiefs nor clans and lineages.

**Spread along Rivers**
A second stage of agricultural expansion in the equatorial rain forest began in the early and middle centuries of the third millennium. Between 2800 and 2400 BCE, the Nyong-Lomami communities spread southeastward, following the major rivers deep into the rain forest zone. By
the twenty-fifth century BCE their descendants had formed a long string of communities extending for hundreds of kilometers along the Sangha and Middle Congo Rivers. Around 2500 BCE, even before this second period ended, a new direction of agricultural spread commenced among Nyong-Lomami people living around the confluence of the Sangha and Congo Rivers. From these areas Nyong-Lomami communities spread south down the Lower Congo River as far as the southern edges of the rain forest zone.

Finally, between 2100 and 1200 BCE, there ensued a fourth period of new settlements in the forest. The historian Kairn Klieman has described it as an era of filling in, because in this period Nyong-Lomami peoples moved with their economy and technology into many of the areas that lay between the major rivers. One offshoot of the Nyong-Lomami, the Savanna Bantu, spread out along the southern fringes of the rain forest. Other communities settled in the far western equatorial region between the Congo River and the Atlantic coast, and still others spread into the farther northern and eastern parts of the equatorial rain forest.

**Batwa Relations with Their Bantu Neighbors**

The third and fourth periods of settlement brought more and more of the Batwa into direct contact with the Bantu farming-fishing communities. Nevertheless, major areas of rain forest remained occupied solely by Batwa, and most if not all Batwa still pursued a fully hunting and gathering way of life. Their material relations with Bantu communities continued to revolve around the trading of the occasional surplus products of their subsistence pursuits.

Most interestingly of all, this coexistence of two differing life ways had a potent religious dimension. The Niger-Congo religion of the early Bantu-speaking communities recognized three levels of spiritual power: a single Creator God of all things; territorial spirits, with powers limited to particular locales; and on the communal level, the ancestor spirits of each particular community. Most important to the Bantu were the ancestor spirits. The burial of the ancestors on one’s land and the veneration and giving of offerings to them secured one’s right to that land. As the farmers and fishers spread into new areas, where their ancestors had not lived, their own beliefs required them to seek accommodation with the Batwa. The Batwa, according to the Bantu view of things, were the first owners of the land. It was the Batwa whose ancestors had lived there, and it was they who knew how to deal with the spirits of the land. As a result the Batwa often came to play key roles in the rituals of the Bantu-speaking villagers. The villagers interpreted the Batwa spirits of the forest as territorial spirits, and in their origin myths they credited the Batwa with being the bringers of crucial environmental and technological knowledge.

**Changes in the Equatorial Rain Forests**

Late in the second millennium BCE a new kind of development, large villages, began to appear in several areas of the equatorial rain forest. Apparently, as Bantu farming populations grew, they began to rely to a growing extent on agriculture and less on hunting and fishing to feed themselves. As that happened, the small villages and hamlets of the first four periods of Bantu settlement in the rain forest grew, here and there, into villages with hundreds of people, often divided up into several different lineages and wards.

Between 1000 and 500 BCE even more fundamental changes in economy began to take shape across equatorial Africa. A central element in these changes appears to have been the spread of ironworking technology. Because iron ore deposits were unevenly spread, the adoption of ironworking led directly to a new kind of trade over long distances in the rain forest regions. Communities without iron resources turned to the specialized production of other kinds of goods in order to join in the new commercial relations. Many communities located right along the great rivers became fishing specialists, catching and drying fish for the market. In areas where the raffia palm
The second front of advance lay at the eastern edge of the Congo Basin, along Africa’s great Western Rift. The Western Rift is a 1500-kilometer-long string of deep valleys, large lakes, and old volcanic mountain ranges separating the vast Congo Basin from the savannas of eastern Africa. The great variations of terrain and altitude create a mosaic of diverse environments in the Western Rift: grasslands in the bottomlands of the valleys, high-rainfall forests on the lower and middle mountain slopes, and savanna and dry woodlands, especially extending eastward from the Rift. The Mashariki Bantu, the easternmost of the Savanna Bantu groups, arrived in this region around the end of the second millennium BCE. They spread at first into the highland forests, where high rainfall supported their accustomed ways of farming and fishing. Over the centuries from around 1000 to 400 BCE the Mashariki expanded north and south along the Western Rift, diverging into two large clusters of communities—the Kaskazi in and around modern Rwanda, and the Kusi farther south in areas not yet satisfactorily identified, but probably centered along the western side of Lake Tanganyika.

The Western and Central Savanna Bantu of these centuries continued the older pattern of their Nyong-Lomami ancestors—they spread the agricultural frontier into regions previously entirely inhabited by hunter-gatherers. The Kusi and the Kaskazi, in contrast, faced a very different challenge between 1000 and 400 BCE. In the mountain forests where they first settled, the previous inhabitants were Batwa food collectors similar in culture and economy to the Batwa of the Congo Basin. But in the grasslands and savannas of the northern parts of the Western Rift, other, very different agricultural societies, whose crops and animals prospered in drier environments, preceded the Bantu. These peoples were heirs of the Sudanic agricultural tradition, the historical roots of which extend back to the southern and eastern Sahara of the ninth millennium BCE. Speaking languages of the Nilo-Saharan and Afrasan language families, they raised the African grains sorghum, pearl millet, and finger millet as their staples, and they herded goats and sheep and, in favorable areas, cattle.
In this encounter of diverse cultural and economic worlds, the Kaskazi and the Kuzi were the ones who made the crucial adaptations. As they gradually cleared more forest for their fields, they created more areas in which grain crops could be grown. The benefits of this opening for new agricultural practices tended to flow in one direction: Finger millet and sorghum could be readapted to wetter conditions, once forest land was cleared. But yams, the crucial crops of the early Kaskazi and Kusi, required more rainfall than the drier savannas provided. So while the Kaskazi and Kusi were able over time to fit sorghum, finger millet, and other Sudanic crops into their agriculture, most of their Nilo-Saharan and Afrasan neighbors maintained their earlier practices with little change.

By the second half of the first millennium BCE, the Kaskazi and Kusi had evolved a new agricultural synthesis. It is clear that they still favored yams as their staple food, but their overall repertory encompassed a wide range of crops, some suited to wet environments and others to relatively dry climates; a varied kit of cultivating tools; and new techniques of field management. They had adopted the fire-hardened digging stick used by the Nilo-Saharan farmers in grain cultivation. The middle of the first millennium BCE was also the period of the invention of iron hoes, which made tilling the fields before planting much more efficient and made it much easier to harvest root crops such as the yam. Some of the Nilo-Saharan tribes also became hoe cultivators, but not to the same extent as the Bantu communities.

Ironworking technology in the Western Rift dates as early as 1000 BCE, and it was from there that this new technology diffused westward to many Bantu of the equatorial rain forest. Nilo-Saharan peoples living along the Nile-Congo watershed were the earliest iron users in this part of Africa. Kaskazi people learned ironworking from them by around the ninth and eighth centuries BCE, and the Kusi peoples farther south began to take up the technology after 500 BCE. The earliest iron items were most likely ornaments and small points and blades. Smiths began to forge larger blades for hoes, axes, adzes, and spears probably only from around 500 BCE onward.

**Agricultural and Technological Change**

The new developments in agricultural technology and production set off a new era of the expansion of Kaskazi and Kusi communities into an entirely new range of environments. From the fourth to the first century BCE, one group of Kaskazi peoples, whom historians call the Great Lakes Bantu, scattered out eastward from the Western Rift into several areas around Lake Victoria. Several different Kaskazi communities relocated to the well-watered woodland savannas and tablelands of far southern Tanzania. Other Kaskazi groups, who switched over entirely to cattle raising and grain cultivation, moved even farther south, to the dry open savannas of east central Zambia. Late in the period still other Kaskazi communities leapfrogged the dry central regions of East Africa and took up lands far to the east, in the better watered areas along the East African coast and around the mountains of northeastern Tanzania. During the same era the Kusi peoples moved into the areas surrounding Lake Malawi. In northern Tanzania and in the Great Lakes region, the incoming Bantu initially settled in environmental islands of wetter climate, with Nilo-Saharan and Afrasan neighbors in the nearby grasslands and drier savannas. In southern Tanzania, Malawi, and Zambia, however, both Kaskazi and Kusi peoples expanded the agricultural frontier into areas previously occupied only by hunter-gatherers.

Between 100 BCE and 300 CE the second stage of this expansion took place. Kusi peoples scattered out southward from Malawi to Zimbabwe, Mozambique, and the eastern side of South Africa. The Kaskazi at the same period grew in numbers, founding new settlements in the highlands of Kenya and in the coastal hinterlands and spreading more and more widely in western and southern Tanzania.

The effects of these developments were not restricted to Bantu-speaking communities. The keeping of sheep and cattle, in particular, appears to have spread southward ahead of the advance of the Kaskazi and Kusi. Sometime between 400 and 100 BCE several groups of Khoisan hunter-gatherers living in what is today northeastern Botswana took up the raising first of sheep and
then of cattle. Combining their older hunting and gathering practices with a highly productive herding economy, one such people, the Khoikhoi, rapidly spread south after 100 BCE to the South African coast and then eastward to the Cape of Good Hope. In the same centuries, a related pastoral society, the Kwadi, spread livestock raising eastward to northern Namibia.

Equally significant, as the Kaskazi and Kusi peoples moved into new areas, knowledge of the African grain crops diffused westward from them to the Bantu communities of the woodland savannas. Adopting these crops, along with ironworking, between approximately 400 and 100 BCE, the Central and Western Savanna Bantu lessened their dependence on high-rainfall environments and entered into a new era of population growth and expansion. Between 100 BCE and 300 CE, several different Western Savanna peoples followed river routes southward into the dry savannas of present-day western Zambia and interior Angola. The ancestral Southwest Bantu moved farthest south, settling along the Kunene and Okavango Rivers in the dry steppes of the far northern Kalahari region. There they took up cattle raising under the influence of their Kwadi neighbors. In the early centuries of the first millennium CE, several Central Savanna peoples also spread out with their now more varied crop repertoire, establishing themselves as far south as central and southern Zambia.

**Chiefdoms and States, 300–1100 CE**

As far as we can presently tell, nearly all Bantu-speaking societies retained the old Bantu pattern of belonging to localized clan and lineage polities down to the end of the first millennium BCE. We know of one probable exception, though. Among certain Great Lakes Bantu along the southeast side of Lake Victoria, there is indirect evidence that local intensive iron production may have enabled small wealthy kingdoms to develop for a time during the last couple of centuries BCE and first three centuries CE. Environmental collapse caused by the overcutting of forests to supply the smelting furnaces brought this period of political growth to an end by the fifth century CE. Wider-reaching political authority conceivably may also have accompanied the rise of large villages and long-distance trade in the first millennium BCE in the equatorial rain forest, but so far no evidence of such political structures has yet been found.

Between 400 and 1100, however, there is clear evidence in three different regions of the emergence of territorial chiefdoms or very small kingdoms. Among the Great Lakes Bantu, chiefdoms and tiny kingdoms emerged anew in several areas, both in the Western Rift and along the western shores of Lake Victoria. The first notable states took shape thereafter, in about 1000.

In the Congo Basin chiefdoms became prominent along the major river arteries of commerce several centuries before 1100. The most striking material testimony of this development was the spread of a particular kind of chiefly or royal regalia, the flange-welded double bell, all around the Congo Basin before 1000 and as far south as Zambia and Zimbabwe by 1100. The new political economy of this age surely rested on new elaborations of commercial relations, although the specific features of these relations remain unclear.

A third region of emerging chiefdoms and petty kingdoms, dating between 400 and 900, lay just south of the Limpopo River in northern South Africa. In the tenth century several royal families migrated northward with their followers across the Limpopo. Bringing with them the new concept of rule by kings and chiefs, they founded the first significant kingdoms at Shroda just north of the river and subsequently, in the eleventh century, at Mapungubwe just south of the Limpopo. In the first period, up to the ninth century, royal wealth in cattle was the material basis of the chiefdoms. From the tenth century onward, international demand (arriving via the Indian Ocean) for African gold and ivory ratcheted upward the scale and complexity of the political order and stimulated the emergence of urban centers, of which Shroda and Mapungubwe were the earliest. The Zimbabwe empire of the thirteen to fifteenth centuries arose on these foundations.

Away from the core regions of political and commercial growth, however, many older patterns of life persisted. In the equatorial rain forest, the last great spread
of the agricultural frontier was that of the Bantu-speaking Mongo, who displaced the Batwa across the central Congo Basin only between 400 and 1100 CE. In eastern and southern Africa, Bantu speakers have continued to expand into new niches down to the present century.

What scholars used to call the Bantu expansion was in fact a complex of varied and distinctive histories extending over five thousand years and across many different lands. That story is told here in barest outline, covering only the main linking themes of those multifaceted pasts.

Christopher Ehret

Further Reading

Klieman, K. (2003). The pygmies were our compass. Portsmouth, NH: Heinemann.

Erosion

One of the less-appreciated constants of world history has been soil erosion because its effects can be unnoticed before crop productivity wanes. Soil erosion causes damage in two main places: where the removal occurs and where the sediment deposits. Where the erosion occurs, it removes particles, organic matter, and important nutrients since many dissolve into water. Thus the problems of on-site soil erosion are the physical loss of the medium of plant growth, nutrient depletion, and either land abandonment or the cost of conservation and reclamation. Severe erosion has removed as much or more than 50 meters of soil and sediment from surfaces, creating canyons where cornfields existed a few decades before. The off-site problems of erosion are at least as severe and include water pollution, sedimentation, and property burial. Indeed, soil erosion creates the largest water pollution problem on earth by carrying nutrients and fertilizers, sediments, and pesticides into stream channels. Sedimentation fills up channels that must be dredged or the channel capacity decreases, which cuts down on its holding capacity and increases flooding. Sedimentation has also buried whole towns and covered many valleys with several meters of often much less fertile sediment.

History

We can view the history of soil erosion as spanning several periods. It started long before human history as geological or “natural” erosion, which is generally a slow process, but given enough time it carved mile-deep and spectacular canyons. This soil erosion occurred in several temporal modes, but it was generally slow and steady over millions of years, though it could be episodically rapid and discontinuous. A second wave started with human-induced or human-accelerated erosion, when humans became technologically advanced enough to disrupt the surface vegetation through fire and the girdling of trees. Evidence suggests that cooking fires arguably go back over 1 million years, but evidence indicates that the use of fire to control vegetation, and thus causing erosion, clearly started as a hunter-gatherer phenomenon in the Pleistocene era (about 60,000 BCE) in what is now Tanzania.

Significant soil erosion started when humans domesticated animals and plants, removed vegetation from larger areas, and thus intensified land use. This erosion presumably began with domestication and concentrated settlement around ten thousand years ago in the Near East and later elsewhere. A third period of erosion probably started with more active trail formation, continued active removal of vegetation for settlements, and soil manipulation for seedbeds. The first actual evidence for erosion seems to lag behind the earliest evidence for agriculture. This lag is about one thousand years in Greece, where the first erosion occurred in some regions about 5000 BCE. The lag also occurred in Mesoamerica, where evidence for agricultural induced land use change occurred around 3600 BCE, but the first wave of sedimen-
Mining has been a major cause of erosion for hundreds of years. This photo (c. 1890–1923) shows African, Chinese, and white miners in a gold mine in South Africa.

tation from erosion occurred by 1400 BCE. Generally, this early erosion accelerated with the Bronze Age civilizations of Eurasia and the Early preclassic (before the first millennium CE) Americas as pioneer farmers ascended from the river valleys and lowlands and deforested steeper slopes in Mesopotamia, Mesoamerica, the Mediterranean, China, and the Indus Valley. Soil erosion waxed and waned in ancient cultures after this period, depending on soil conservation, climate change, and land-use intensity. In some parts of the Classic Americas (about the first millennium CE) in Mesoamerica and the Andes, soil conservation features sustained heavy soil use with high populations, though some studies argue that high soil demands and insufficient conservation figured in declines and collapses. The evidence for the Mediterranean is variable; there is some evidence for soil stability and some for erosion and sedimentation during the highly populated and intensely managed Hellenistic and Roman periods.

A fourth period of world soil erosion occurred with the vast breaking up of new lands around the world that resulted from colonial settlement during the sixteenth to the twentieth centuries. For the first time in history, large areas of previously uncultivated land fell under the plow in the Americas, Oceania, Siberia, Asia, and Africa. Moreover, farmers used to the relatively mild climates and low slopes of Western Europe began to farm areas on steeper slopes with much more intensive precipitation or drier and more wind-erosion-prone conditions. These farmers were pioneers who came with little knowledge about their environments and ignored what conservation indigenous people had practiced. This ignorance led to devastating rates of soil erosion and lost land productivity.

The final period of world soil erosion came after World War II, with the expansion of mechanization and population growth fueled by better food and medicine. What once had been remote or marginal lands, such as steppes and tropical forests, became farmable due to the imperatives of high populations and the growing markets for tropical crops like coffee and bananas. Expanding populations and a variety of displacement processes drove farmers into lands extremely susceptible to erosion, such as that in the mountains of Central and South America, Africa, and South and East Asia. The mechanics of soil erosion alone explain why recent agricultural and wood-cutting expansion upslope into hills of Haiti, Rwanda, Madagascar, and Nepal have made human-induced soil erosion the largest agent of geomorphic change on the earth today.

Unfortunately, even recently in the United States, with its large conservation efforts and scientific capability, almost one-third of its agricultural lands are eroding significantly faster than soil is forming. Despite this, American land continues to maintain its productivity, but at the cost of several immediate and long-term problems: sedimentation (the largest water pollutant) and its ecological impact; cost of fertilizer; and more fuel use.

**Soil Erosion Processes**

We cannot understand the history of soil erosion without recognizing the processes of soil erosion. Soil erosion is
the movement of soil particles by wind and water moving in flows, streams, and waves. Geomorphology is the science that studies the processes and forms of the earth’s surface. Other geomorphic agents also sculpt the earth’s surface over time, including glaciers, chemical dissolution, mass movements or landslides, and of course tectonic and volcanic activities. For the most part, humans speed up earth surface dissection in some places and sedimentation in others, playing their part in such processes as landslides, sinkhole formation, and soil, stream, and beach erosion. Soil erosion can start with raindrops that fall up to about 32 kilometers per hour and impact a soil surface, dislodging and splashing particles of mineral and organic matter upward. These particles will land slightly downwind, but this will only lead to slow creep if the vegetation cover is substantial or water does not run over the surface.

This runoff or overland flow is the second, important step in erosion, and it only happens when rainfall or water delivery to a point occurs faster than soil pores can take in water (infiltration). Runoff may also occur with snowmelt or icemelt and cause accelerated erosion on surfaces from which humans have cleared vegetation or which has been plowed. Initially with runoff, water flows over the surface and removes thin layers of soil, by raindrops dislodging and particles and by the force applied by water flow. This occurs first as sheet erosion as planar flows remove particles evenly from the surface, except for the more resistant soil pedestals that are often left behind as testament to former soil surfaces. This interrill erosion occurs in the belt of no channels on the upper slopes, and can be insidious because it leaves only subtle clues but may cause high soil particle and nutrient losses.

Rills (small streams) start to form downhill from interrills where flow converges and start to dissect soil channels in three directions: headcut, downcut, and laterally cut. Rills can remove large quantities of soil, including whole sections of topsoil, but farmers can plow these out, though the plowing itself may loosen and make soils prone to erosion again. With more flow and greater turbulence, channels enlarge and tend to form in the same slopes where flows concentrate. Since plowing can expunge these larger rills, but they return in the same slope position, they are called ephemeral rills. These areas can be tilled out or left vegetated.

Gullies on the other hand are mature channels that have back, down, and laterally eroded over so large a space that normal tractors cannot plow them out. They can also be formed by waterfall erosion (runoff falls from one surface to another and undercuts the headwall surface), or by piping (water flowing underground intersects the surface, forming a surface outlet channel that erodes a larger area and undercuts surface soils that collapse along the subsurface channel). Gullies often start out being narrow and widen by channel flows undercutting their sides. Water flowing in these channels carries water in suspension and as bed load, rolling, creeping, and saltating (bouncing) downstream.

Human landscape alteration also increases the size and frequency of mass movements on slopes, stream bank erosion, coastal erosion, and wind erosion. Wind soil erosion occurs at natural and accelerated rates as well and over a large part of the earth, especially on flat, drier, sandier, and less-vegetated areas. The key factors in wind erosion are surface cover, soil coherence, and wind intensity and duration. In many areas where all of these conditions prevail, such as in Loess Plateau of China, which has had among the highest rates of erosion for millennia, water erosion is also very high. The processes of wind erosion starts with sediment load in a channel being carried in suspension by winds fast enough to hold up particles or those particles being rolled or saltated along the ground. Over 90 percent of the sediment is carried less than 1 one meter above the surface, and all soil textures (clay, silt, and sand and even gravel) can be carried by wind, depending on aggregation, shape, and density. Winds tend to carry the larger particles like sands over shorter distances as creep or saltation. They can and do carry clays over thousands of kilometers, but clays also cohere into large enough clods that they resist deflation. Thus under normal winds, silt and fine sand is often the texture size that deflates, suspends, travels, and drops out into deposits at predictable distances from the point of erosion. These deposition areas build up and become the...

Progress was all right. Only it went on too long. • James Thurber (1894–1961)
world’s extensive loess (wind-deposited, loamy soil) deposits, like those in China, Central Europe, the Mississippi Valley, and the Palouse Washington State, often fertile but highly erosive landscapes.

**Measuring and Predicting Erosion**

Humans have recognized the on-site and off-site problems due to soil erosion for millennia. Terracing started at least five thousand years ago, and structures to divert runoff were common in many ancient societies. Yet, it was not until the early twentieth century that policymakers and scientists recognized the need to predict soil erosion. In 1908, President Theodore Roosevelt recognized that soil erosion was among the most dangerous environmental challenges. Yet, in the United States, the affective response to soil erosion only came during President Franklin D. Roosevelt’s New Deal in the mid 1930s. This response came in the form of the Soil Conservation Service (SCS)—formerly the Soil Erosion Service of 1933, and now the Natural Resources Conservation Service. The SCS was the largest factor in the spread of soil conservation in the United States, made possible by the New Deal and enthusiastically championed by H. H. Bennett, the first and most prominent director of the service. The New Deal spread the word about erosion and

Rocinha favela, like many other favelas throughout Rio and other Brazilian cities, is located on a hillside. During the rainy season heavy rains often lead to flooding and in some instances homes are washed away. For Rocinha residents a gutter running along the base of the mountain diverts runoff away from the neighborhood.
conservation through funding rural development, art, and science. For example, it organized conservation demonstrations and the Civilian Conservation Corps projects that built check dams and terracing around the United States. The New Deal also used science and scientific management, building predictive models by collecting more than eleven thousand so-called plot years of erosion data from around the United States under different land uses and constant slope lengths and distances. (Scientists can measure erosion using many techniques that have helped them understand both natural and accelerated rates of soil erosion. Measurement has focused on pin studies on natural slopes that have recorded truncation of soils under a variety of land uses and rain intensities and under physically and mathematically simulated conditions.)

Scientists led by Walter Wischmeier at Purdue University forged the plot data into the Universal Soil Loss Equation (USLE), a predictive equation that could be used by farmers and scientists to estimate and compare soil erosion under different crop types and conservation practices. The equation applies well to the regions in the United States from which it was empirically derived, and many studies have adapted it to many other parts of the world with variable success. The equation predicts sheet and rill erosion based on six variables, which are rainfall intensity, soil erodibility, slope length and gradient, crop types, and conservation practices (RKLSCP). Scientists further adapted the USLE into the Revised USLE (RUSLE), based on the same set of factors. These equations have become codified as tools for policy and as important foundations of conservation planning for many land uses and are now freeware available for use around the world from the U.S. Department of Agriculture’s Agricultural Research Service (www.sedlab.olemiss.edu/rusle/). Many scientists have also worked on a variety of physically based or process-oriented models that attempt to simulate the natural, physical processes of soil erosion, such as detachment. This next generation of models, such as the Water Erosion Prediction Process (WEPP) model, should more accurately predict more types of erosion and deposition across a landscape from sheet, rill, and channel erosion (http://topsoil.nserl.purdue.edu/nserlweb/weppmain/wepp.html).

**Soil Erosion in Perspective**

Thus, soil erosion has ramped up and waxed and waned through five major periods in world history. Despite twentieth-century advances in understanding soil erosion and conservation in the United States and other developed nations, the rates of soil erosion have not really waned much of the developing world in the last half-century. Indeed, today humans through soil erosion are the leading geomorphic agents on the earth. The periods when soil erosion ramped up came as the result of technological breakthroughs and population expansions that allowed humans to alter the landscape: applying fire, domesticking animals, centralizing habitation and intensifying farming, expanding onto steeper slopes, and creating a greater demand for tropical crops. In many cases of severe soil erosion, pioneer farmers broke new lands with little understanding of these lands. History also shows that soil conservation arose at different times, curtailing soil losses and developing stable soil use during periods of increased population growth. The problem has always been how to sustain and preserve soil while speeding up the conservation learning curve of pioneer settlers.

*Tim Beach*

**Further Reading**


Description

Known for its simplicity, beauty, and malleability as a medium for translation, Esperanto is considered by many to be one of the easiest languages to master. Its fundamental grammar is based on sixteen rules. In simplified form, these are as follows: (1) there exists no indefinite article and the definite article (i.e., “the” in English) for masculine and feminine nouns is la; (2) all singular nouns end in -o (nominative) or -on (accusative); (3) the adjectival ending is -a; (4) the Esperanto lexicon contains words for the following numbers—“one” through “ten,” “one hundred,” and “one thousand”; (5) there are ten personal pronouns; (6) person and number are not indicated in verb forms, only tense and mood; the endings for the past, present, future, conditional, imperative, and infinitive are -as, -is, -os, -us, -u, and -i, respectively; (7) the adverbial ending is -e; (8) prepositions govern the nominative case; (9) words are read and pronounced exactly as they are written; (10) word accent falls always on the penultimate (next-to-last) syllable; (11) lexical juxtaposition is the means employed to form compound words; (12) two negative particles/words are unnecessary in any clause; (13) the accusative case is used to indicate directionality; (14) all prepositions have a definitive and unchanging meaning—in instances where the correct choice of preposition is uncertain, the word je (which has no exact meaning) is used; (15) foreign words are brought into Esperanto unchanged, except insofar as adjustments are needed to conform them to its orthographic conventions; and (16) an apostrophe can take the place of the final vowel that appears on either the definite article or a noun.

Esperanto's creator, Ludwik Lejzer Zamenhof, was born on 15 December 1859 in Bialystok, Poland. He was raised in a Jewish household, and his parents reinforced in him idealistic virtues that accentuated the kinship of all peoples. At home and in school, he was exposed to several languages including Russian, Polish, German, French, Latin, Greek, Hebrew, and Lithuanian. The interethnic strife that dominated his city left a lasting impression on him and at the age of nineteen he began working on the rudiments of what would become Esperanto. His hope was to provide an international language and unifying ideology that would bring all of the peoples of the earth together in harmony. He published his initial tractate entitled Lingvo Internacia (International Language) in 1887 (in Russian). He did so using

the pseudonymous attribution “Dr. Esperanto,” the meaning of which is roughly “a doctor who is hopeful.” Eventually, this fictive appellation was adopted as the name of Zamenhof’s new language. This was to be a fortuitous development because it describes well the character of many who consider themselves true “Esperantists.”

The corpus of Esperanto literature has grown over the years into one as rich and diverse as that of many national and ethnic languages. It includes novels, plays, periodicals, poetry, and exemplars from virtually all of the major literary genres. In addition, many major literary masterpieces—such as the works of William Shakespeare and even the Christian Bible—have been translated into Esperanto. National and international Esperanto associations serve as resources for those who use the language for social exchange, scientific writing, and a host of other purposes. These include the Esperanto League of North America (www.esperanto-usa.org) and the World Esperanto Association (also known as the UEA—Universala Esperanto-Asocio; for more information see www.uea.org). Both are membership organizations that provide opportunities to become part of the global community of Esperantists through conferences, receipt of newsletters and other periodicals, written correspondence with speakers around the world, and online opportunities for language learning.

In 1954 the United Nations Educational, Scientific, and Cultural Organization (UNESCO) passed a resolution affirming the value of Esperanto in establishing rapprochement between the peoples of the world, noting its positive benefit in furthering intellectual engagement, and pledging cooperation between UNESCO and the UEA. The spirit of this initial resolution was reaffirmed in 1985 by a second resolution that celebrated the centenary of Esperanto in 1987 and empowered UNESCO’s director-general to follow closely the development of Esperanto as a mechanism for facilitating cross-cultural understanding. In 1996 the World Esperanto Congress, held in Prague, issued a manifesto calling world governments, institutions, and others to realize that use of a limited number of national languages would never result in a “fair and effective language order” that promotes democracy, global education, effective language teaching and learning, multilingualism, language rights, language diversity, and human liberation. Concomitantly, it identified the movement to promote Esperanto as a universal second language as a means to achieve the aforementioned ends.

### Outlook

The growth and popularity of this planned language are evidence of its utility and the continuing vitality of Zamenhof’s vision of Esperanto as a linguistic bridge capable of connecting the world’s disparate peoples. The future of the Esperanto movement certainly merits close scrutiny, particularly as the need for effective means of communication, coalition building, and peacemaking increase in the wake of changing geopolitical realities in our postcolonial era.

Hugh R. Page, Jr.

### Further Reading


### Ethnic Nationalism

If nationalism is defined as an ideology that claims statehood and territorial sovereignty in the name of popular identity, ethnic nationalism is the subset thereof that defines popular identity through a myth of common
ancestry. Whether this myth has a basis in fact is largely immaterial, as long as a sense of kinship among the population is manifested and maintained through common culture and tradition. A shared, distinctive language is the most common marker of ethno-nationalist identity, but other cultural attributes such as religion can serve equally well, as illustrated by the rival ethnic nationalisms of Eastern Orthodox Serbs, Bosnian Muslims, and Catholic Croats (all of whom speak what was once known as Serbo-Croatian) and by the division between Unionist Protestants and Irish Nationalist Catholics (who all speak an Irish-inflected English) in Northern Ireland.

Some of the deep sociobiological antecedents of ethnic nationalism can be traced back to behavior patterns that humans have in common with a variety of other vertebrates. A shared commitment to guarding a particular territory (as a food source, breeding site, and/or shelter from predators) is one of the characteristic manifestations of such group solidarity. Among all known human societies, analogous behavior patterns have been refined, reinforced, and expanded by the deployment of a vast array of symbolic markers and cultural expressions of group identity. Among even the smallest hunter-gatherer communities, shared rituals, customs, and modes of communication have been used both to reinforce the social significance of kinship ties and to extend feelings of kinship beyond the relatively narrow group of people who unquestionably share a common ancestral lineage. These cultural mechanisms provide for the adoption of outsiders into the sacred circle of kinship and the casting out of those seen as violating social norms.

**Ancient Origins**

Starting some ten thousand years ago, as the agricultural revolution transformed societies in the Middle East and elsewhere, the size and number of organized communities began to grow exponentially, as did the importance of maintaining long-term control over bounded territories. The difficulty of maintaining social cohesion increased commensurately, for it was in the course of this socio-economic, demographic, and cultural transformation that the phenomenon Benedict Anderson has described as “imagined communities” (1991) first emerged. That is to say, communities grew beyond the critical threshold of roughly 150 individuals—the maximum size of a social group all of whose members are likely to develop mutual personal bonds of affection and solidarity. Communal identity now had to be cultivated and maintained by means other than face-to-face contact. Moreover, it had to be kept alive in the face of ever-widening socioeconomic inequalities.

The linked institutions of religion and law, reinforced by a generous measure of brutality, were central to the establishment of social and political authority over imagined communities. To the extent that divine sanction of monarchy emerged as a dominant legitimizing framework for the state, the ethnic identity of the king’s subjects might not have been a major preoccupation for ruling elites. But contact and conflict between states and societies brought ethnic commonalities and differences to the forefront of people’s consciousness. Close encounters on caravan routes and battlefields made members of different communities much more conscious of the cultural characteristics that set them apart from one another. By the same token, the conquest and consolidation of territorially and demographically extensive empires forced regimes to confront the significance of sociocultural solidarity and conflict among their subjects for the cohesion of their polities.

In large states like Egypt and the successive Mesopotamian empires, political authority, social hierarchy, and collective solidarity were maintained by religious and legal systems that enshrined the monarch as either a god or a descendant of the gods. The philosophically more subtle Confucian tradition in China extolled the virtuous monarch as enjoying the “mandate of heaven.” Yet while these theological frameworks of legitimization were suggestive of claims to universal dominion, the ethnocultural particularisms in which they were rooted became crucial to the political elites in these states the moment their rule was challenged by alien others. The conquest of Egypt by the Semitic Hyksos invaders and the establishment of
world emerged. It may have been during the Babylonian
exile (sixth century BCE) that the distinctive Jewish ethno-
theological synthesis crystallized, with its concept of a cho-
sen people bound by a covenant with God to observe his
commandments and accept the rule of his law in exchange
for living as free people within a clearly bounded territory
(“from Dan to Beersheba”). This conception of nation-
hood, which blended the idea of kinship with the notion
of covenant (a synthesis of ethnic and civic elements, as it
were), motivated the reestablishment of a self-governing
Jewish community in the ancestral homeland and the
eventual reemergence of a short-lived independent king-
dom of Judah in the second and first centuries BCE. As con-
veyed through the Hebrew Bible, the ancient Jewish
paradigm was to play a major role in the shaping of mod-
ern European—and hence global—nationalism.

Modern Ethnic
Nationalism

The ancient world presents us with a variety of scenarios,
ranging from societies in which ethnic self-awareness was
weakly developed and played little active political role to
those in which it was central to the legitimization of polit-
cal authority and territorial sovereignty. Wherever eco-
nomic decline and geopolitical instability undermined the
very possibility of creating or maintaining centralized
state power (e.g. early medieval Europe), ethnic nation-

Ethnic Nationalism: The Reenactment of
Historical Traumas to Galvanize Group Identity

The latter half of the twentieth century saw the great
powers of the world abdicate their responsibility to
stem tragedies that were the result of tensions related
to ethnic nationalism. During the 1990s alone, mil-
ions were killed in the war in Bosnia and the mass
tribal genocide in Rwanda.

Dr. Vamik Volkan, a professor of medicine at the
University of Virginia, has written extensively on the
manner in which societies under tremendous stress
may engage in historical images and fantasies—“cho-
sen traumas”—that bear little relation to reality.

By helping to enforce and galvanize group identi-
ties, chosen (historical) traumas can be reactivated to
provide the fuel for war. For example, President Slo-
bodan Milosevic of Yugoslavia, accomplished pre-
cisely that goal when he disinterred the body of
Prince Lazar, killed in the Battle of Kosovo in 1389,
and ceremoniously buried the body in one Serbian
village after another, revitalizing the mourning
process as though Prince Lazar’s death had occurred
yesterday. The renewed sense of threat and entitle-
ment to seek revenge resulted in hundreds of thou-
sands of deaths.

alism could by definition have little or no occasion to manifest itself. Conversely, the rise of the highly centralized modern state, the growth of geographically integrated economies, and the literary standardization of vernacular languages all begged the following questions: What is the basis of legitimate political power? How should the state define itself in relation to the ethnic and cultural identity of the masses? These issues took center stage in parts of Europe and then spread elsewhere in the context of Western imperial expansion. The steady push toward political democratization in the eighteenth, nineteenth, and twentieth centuries reinforced the growing belief that the collective identity of the populace was critical to legitimizing the very existence and authority of the state as well as the delineation of its boundaries.

In countries where strong preexisting states allowed for the further consolidation of centralized political authority, national identity tended to assume a civic form—that is, it was defined largely in terms of a common set of political values and loyalties, alongside shared territorial attachments and historical memories. Britain and France are the classic models of this variant of nationalism. But even in these cases, national consciousness was closely associated with particular forms of ethnocultural and linguistic identity that were actively promoted by state authorities in a concerted attempt to assimilate, suppress, or marginalize lingering regionalist traditions (e.g., Scottish highlander society and Irish Gaelic speakers in the United Kingdom, Breton identity and the langue d’oc tradition in France) that were seen as potential obstacles to the unity of the nation-state. In territorially contiguous, multiethnic empires that were late to centralize their administrations (e.g., the Ottoman empire and the Habsburg monarchy), efforts to strengthen state authority in the eighteenth through twentieth centuries only served to provoke strong autonomist or secessionist backlashes from alienated ethnic groups (e.g., Armenians in the Ottoman empire, Czechs and Hungarians in the Habsburg lands). In the course of the nineteenth century, Central and Eastern Europe emerged as the locus classicus (to paraphrase Rogers Brubaker) of modern ethnic nationalism.

If imperial regimes served as the incubators of modern ethnic nationalism, it was the sudden collapse of these empires that led to the growing twentieth-century dominance of the ethnic nation-state as a globally standard framework for the exercise of political authority. The end of World War I was the most violent and dramatic of these watersheds, with the Habsburg, Romanov, and Ottoman empires all falling victim to internal disintegration and/or foreign conquest. The slogan of national self-determination, espoused by Woodrow Wilson and Vladimir Lenin alike, became the watchword of the new international order. Even British and French overseas imperial expansion now had to be cloaked in the rhetoric of self-determination doctrine, as in the League of Nations mandates that awarded control over much of the formerly Ottoman Middle East to those two powers on the premise that they would be responsible for leading the colonized peoples of these regions toward eventual independence. In the newly sovereign or newly expanded and reconfigured states of Central and Eastern Europe, policies and institutions were shaped by the struggle to fit divergent forms and conceptions of ethnic identity into unidimensional packages called nation-states. Processes that had taken centuries to unfold in the paradigmatic cases of Britain and France were expected to take place virtually overnight in countries like Poland, the Baltic states, Czechoslovakia, and Romania, as they would be later in the postcolonial polities of Africa and Asia. In many cases, the large and diverse ethnic minorities that dwelled within the borders of the new states were pressured to assimilate, leave, or quietly accept second-class status on the margins of the new, ethnonational political orders. Such internal turmoil and repression came at a heavy price to democratic institutions and political stability.

In the aftermath of the Cold War, the Eastern European nation-states that emerged from post-1945 Soviet domination owed their capacity for democratization and political stability not only to freedom from Communism but also to the brutal legacy of coercive border changes, ethnic cleansing, and genocide—policies (whether internally initiated or externally imposed by German or Soviet
occupiers) that had virtually eliminated the nettlesome problem of ethno-cultural diversity from within their midst. Tellingly, it was precisely the most ethnically diverse Eastern European state—Yugoslavia—that failed to manage the transition from Communism to democracy in a peaceful fashion. In the Union of Soviet Socialist Republics, the façade of ethnofederalism had served the Leninist regime as a propagandist tool employed in the maintenance of centralized, one-party rule. The demise of Communism led to the victory by default of ethnic nationalism as the operative legitimizing ideology in the newly independent republics. Ethnic warfare duly broke out between or within former Soviet republics such as Armenia and Azerbaijan, Moldova, and Georgia.

At the beginning of the twenty-first century, ethnic nationalism remains a powerful and often destructive force not only along the borderlands of the former Soviet Union, but throughout much of the world. In some of the Asian and African states whose post-1945 independence was claimed in the name of nationalism (e.g., Sri Lanka, Rwanda), the unifying emotions of the anti-colonial struggle and its memory are proving an inadequate foundation for the construction of cohesive national identities capable of transcending deep internal ethno-cultural divisions. It has been observed that the greater the pressure toward global economic and cultural homogenization, the stronger the backlash from groups seeking political sovereignty as a bulwark for the protection of their ethnocultural heritage or as protection against the repressive policies of dominant ethnicities. While some manifestations of this tendency can be dismissed as “the narcissism of minor difference” (Ignatieff 1993, 21–22), no society basing its political institutions on the principle of popular sovereignty can ignore the fundamental dilemma of how to define and lend cohesive form to its people’s identity without sowing discord among the ethno-cultural groups constituting its population.

Aviel Roshwald

See also Ethnicity; Ethnocentrism; Nationalism; Nation-State

Further Reading


Ethnicity

Ethnicity is a term both controversial and hard to define, but of vital importance for world history. From the earliest civilizations to the present day, cultures have differentiated themselves from others on the basis of ethnicity. In many civilizations kings and nobles belonged to a different ethnicity than townspeople and peasants. And in the nineteenth and twentieth centuries researchers attempted to define ethnicity on a biological basis, creating pseudoscientific fields such as eugenics and “race sci-
ence.” Even in today’s transnational and globalized world, ethnicity continues to play an important role in national identity and cooperation between different nations.

**Definition**

Ethnicity is exceedingly difficult to define in any precise way. In different contexts, it can come close in meaning to terms such as race, national origin, tribe, or nation. At the root of the work is the Greek term *ethnos*, meaning “nation” but in the specific sense of a group of people descended from a common ancestor, a kind of large extended family. When Sumerians referred to themselves as the “black-headed people,” they were identifying themselves by ethnicity. To be sure, even by 2500 BCE considerable mixing of peoples had already occurred, but the crucial fact is that the Sumerians distinguished themselves from other cultures not only by their language and religion, but by their physical appearance and descent: that is, by ethnicity.

Ethnicity thus refers in its most restricted form to a group’s shared biological origins. But in any complex society intermarriage between diverse groups occurs. Thus ethnicity is often more correctly thought of as the way people perceive their own origins, rather than a biological fact. While ethnicity in its narrow sense comes close to clan or race in meaning, in its broader definition ethnicity more closely resembles the concept of nationality. So when nineteenth-century nationalists praised the long historical existence and glorious past of, say, the German or Lithuanian nations, they did so in ethnic terms. Nation, a more political term, in this way became defined and propagandized as a function of ethnicity.

Strictly speaking, religion and culture have nothing to do with ethnicity. After all, a person can convert or learn a new language, even as an adult. In practice, however, ethnicity often becomes closely linked with a specific language or religion. Thus Poles and Croats came to see their ethnic identity closely linked with the Catholic religion. Similarly, tradition and history forged a tight link between the perception of Russian ethnicity and the Russian Orthodox Church. Again it is necessary to keep in mind that ethnic mythologies are frequently more important than actual bloodlines.

**Ethnicity in the Premodern World**

In the premodern world, before industrialization and the political-social changes of the past roughly 250 years, ethnicity very frequently overlapped with social class. Quite unlike in modern political systems, premodern princes often ruled over regions of extremely mixed ethnic populations with little concern about the origins or languages spoken by their subjects. Indeed, many rulers glorified their own ethnic origins as distinct from those of the people they ruled. The Mughal rulers of what is now India and Pakistan, starting with Zahir-ud-Din Muhammad (Babur; 1483–1530 CE), remembered Central Asia as their true homeland, even centuries afterwards. Similarly, the Manchu rulers of Qing China (1644–1912 CE) consciously emphasized their ethnic and cultural differences from the Han Chinese they ruled over. The fact that the ruling classes were of a different ethnicity than the rest of the population was perceived as quite normal.

In the premodern world, ethnic and cultural diversity was seldom regarded as a political or social problem. On the whole, ethnic groups lived separately (even in the same territory), following their own rules and religious laws, but tolerated by the rulers as long as they paid taxes and avoided rebellion. This is the situation in much of the Hebrew Bible, which recounts the story of one ethnicity (defined originally by religion) that lived under a variety of foreign rulers, from Persians to Egyptians. We should recall that in the premodern world social and physical mobility was quite restricted. Because different ethnic groups mixed less, they also were less likely to take on each other’s cultural and linguistic characteristics. That is, there was relatively little assimilation in the premodern world. Each group followed its own affairs, often guaranteed in its autonomy by the king or sultan, as in the Ottoman empire’s *millet* system, which allowed Jews, Orthodox Christians, and other ethnic groups (though defined by religion) very broad autonomy in their internal affairs.
This is not to say that assimilation did not exist in the premodern world. Any powerful and successful culture attracts imitation among people with enough time, affluence, and ambition to attempt to take on a new culture. For example, in the Roman empire non-Romans were actively encouraged to learn Latin, dress like the Romans, and accept Roman culture in all its forms. Thus “barbarians” (to use the Roman term) like Franks, Visigoths, and Lombards gradually shed their original languages even while retaining important ethnic and cultural differences. With the collapse of the Roman empire in the fifth century CE, the mixture of indigenous, Roman, and “barbarian” cultures allowed new ethnic groups like Frenchmen, Italians, and Spaniards to develop.

Even in the premodern world some cultural and ethnic mixing took place. But there were limits to these processes. For example, stark physical differences in skin color and outward appearance between Europeans, Asians, Africans, and (Native) Americans made it difficult if not impossible for, say, a Mexican or Peruvian to claim to belong to the Spanish ethnicity. In this way race precluded or at the least stymied a broader process of ethnic-racial assimilation. Ethnicity played a crucial role in “ordering” the social order of the post-Columbian New World. At the highest ranks of society were the European-born, closely followed by Creoles (of European ethnicity but born in the New World). Descending down the social hierarchy, people of mixed American and European parentage (“mestizos”) came next, with indigenous people and African slaves occupying the lowest social ranks.

**Ethnicity and Nationalism**

As we have seen, in the premodern world princes and their subjects frequently belonged to different ethnicities. Because premodern rulers did not derive their legitimacy from “the nation” (that is, the people they ruled over), this would have applied in similar cases in earlier centuries also.

Ethnic difference had no effect on their power. All this was to change in the nineteenth century CE with the growth of nationalism. Nationalism can be simply defined as the political doctrine that demands that all “nations” (groups of people bound together by language, culture, religion, shared history, or some combination of these factors) should have their own “states” (sovereign political units). As a political movement, nationalism traces its origins back to the French Revolution, which demanded that the nation—not the king—should decide France’s politics and future. One great sticking point of early nationalism, however, was the definition of a nation. This is where ethnicity often came in. To be sure, few nationalists sincerely believed that, say, all Germans were really descended from the same ancestors, but in their rhetoric they acted as if this was the case. Some extreme cases, like the historian and racist philosopher Joseph-Arthur de Gobineau (1816–1882), specifically defined nations on the basis of ethnicity and even race. The evil consequences of such racist theories became entirely apparent with the rise of Adolf Hitler (1889–1945) to power in Germany. As part of his perverse program to “purify” the German nation, Hitler helped perpetrate one of the most appalling mass murders in history, causing millions of deaths.

In the United States, too, ethnicity played a major part in politics. Before 1864 the vast majority of African-Americans were enslaved and long afterward did not enjoy de facto equal rights with other Americans. Asians immigrated to the United States in large numbers in the mid-1800s and helped build the transcontinental railroad (completed 1869), but they also suffered prejudice and legal disabilities. By the end of the century legal immigration from Asia (especially China) was almost impossible, while the descendants of earlier Asian immigrants were often denied citizens’ rights.

In the last quarter of the nineteenth century and into the twentieth, European nations (joined to some extent by the United States) extended their dominion over much of the rest of the world, especially in Africa. During this boom of “new imperialism,” ethnicity—usually in a racist sense—was employed as a tool to justify European control over Asians and Africans. Rudyard Kipling’s poem “The White Man’s Burden,” which urged the United States to take on the responsibilities of this imperialism, nicely sums up these beliefs.

**Ethnicity in an Age of Globalism**

After World War II, racism, extreme forms of nationalism, and imperialism were explicitly rejected by the United Nations (formed 1945). Though many forms of these vicious ideologies and practices continued, few world leaders were prepared to defend theories of ethnic or racial superiority. Optimists looked forward to a world free of nationalism and racism in the near future. Unfortunately their expectations were not realized.

In the two decades after the end of World War II, dozens of new independent states were created out of former colonies, for the most part in Africa and Asia. Almost all of these new countries contained a variety of ethnic groups among its citizens, often speaking very different languages and following different cultures. For example, the new state known as Pakistan was created from mainly Muslim regions of British India without consideration of its citizens’ ethnic diversity. The very name “Pakistan” was created to reflect this ethnic variety, its first letters referring to different regions dominated by diverse ethnic groups, e.g., Punjab, Afghanistan, Kashmir.

While British India split along religious lines (Hindu-Muslim) when achieving independence from Britain in 1947, most colonies were transformed into sovereign states without any border changes. Since colonial lines were drawn in the nineteenth century without considering ethnic difference, African countries are some of the most ethnically diverse in the world. In many cases this has caused serious problems, including difficulties in communication among populations speaking extremely different languages. An even greater tragedy occurred in the late 1960s when the oil-rich region of Biafra attempted to secede from Nigeria. Biafra’s declaration of independence was based in part on the ethnic demands of the Ibo (or Igbo) nation against Yoruba dominance. In
the end Nigerian troops crushed Biafran independence and an uneasy truce was declared between the three main ethnic groups (Ibo, Yoruba, Hausa) that together make up some two-thirds of the country’s population.

While progress on interethnic relations has been made in Nigeria, the central African country of Rwanda witnessed a horrendous ethnic-based genocide in 1994. Two main ethnic groups, Tutsis and Hutus, dominated the small country created by Belgian colonists. The assassination of the Hutu president of the country set off a massacre of the Tutsi minority in which the majority of the country’s Tutsis were brutally murdered. In part, the Hutu hatred for Tutsis stemmed from historical factors. Tutsis had dominated the region’s politics before independence and the Belgian colonial authorities had generally favored the Tutsi minority over their Hutu neighbors, causing widespread resentment.

Socialist states aimed to overcome ethnic hatred and create new national identities not based on ethnicity. The two best examples of such attempts are the Union of Soviet Socialist Republics (U.S.S.R.) and Yugoslavia. In the U.S.S.R., officially all languages and ethnicities enjoyed equal rights. The country was divided up into fifteen “union republics” (Russian Soviet Federated Socialist Republic, Armenian Soviet Socialist Republic, Azerbaijan S.S.R., Belorussian S.S.R., Estonian S.S.R., Georgian S.S.R., Kazakh S.S.R., Kirgiz S.S.R., Latvian S.S.R., Lithuanian S.S.R., Moldavian S.S.R., Tadzhik S.S.R., Turkmen S.S.R., Ukrainian S.S.R., Uzbek S.S.R.) in which generally two official languages were used: Russian and the local language. Thus in Vilnius, the capital of Soviet Lithuania, street signs were always bilingual, in Russian and Lithuanian. But with the economic problems and political fumbling of the late 1980s in the U.S.S.R., ethnic strife grew. Bloody clashes occurred in the Caucasus region, between Muslim Azeris and Christian Armenians. In the Baltic republics (Estonian S.S.R., Latvian S.S.R., Lithuanian S.S.R.) ethnic pride was one tool used by local activists against the U.S.S.R., culminating in independence in the early 1990s. Considering the huge size and ethnic diversity of the U.S.S.R., it is remarkable that its collapse engendered so little ethnic violence.

An opposite example is Yugoslavia. The south Slav state had been created out of an expanded Serbia after World War I. After World War II, Marshal Josip Broz Tito (1892–1980) led the country to liberation from the Nazis, then created a socialist state in which no one ethnic group was dominant. As long as Tito lived, the compromise between Yugoslavia’s diverse ethnicities lasted. In the 1980s, however, a combination of political and economic breakdowns led to ethnic massacres in the early 1990s. Once again historical memories played some role here: many Serbs remembered the murderous activities of the Croatian Ustasha, which had collaborated with the Nazis during World War II and massacred thousands of Serbs and Jews. Since the Dayton Peace Accords of 1995, an uneasy peace has existed in the region though clashes between ethnic Serbs and Albanians in the Kosovo region have flared up periodically.

In the early twenty-first century, one catchword constantly repeated is “globalization.” But even while the Internet, popular culture, and international trade bring the world closer, ethnicity remains a key and defining issue in domestic and international politics throughout the world. Only the future will reveal whether humanity will learn to appreciate and celebrate ethnic diversity in a spirit of toleration and mutual respect or will take instead the negative path of prejudice, aggression, and genocide.

Theodore R. Weeks

See also Ethnic Nationalism; Ethnocentrism; Indigenous Peoples

Further Reading
Ethnocentrism

Ethnocentrism is the tendency to place one’s own tribe, race, or country at the center of human affairs as superior to other such peoples. Ethnocentrism has existed in virtually all societies in human history. To feel superior to other peoples requires that one is aware of others beyond one’s national or cultural boundaries. To feel superior to other peoples also requires that one knows enough about others to judge their civilization or way of life as inferior to one’s own. Therefore, for ethnocentrism to take root and flourish, engagement with the world outside is necessary. A society that lacks the economic, military, or human resources to step outside its borders and do business with other peoples, whether through trade, conquest, or otherwise, cannot easily be labeled “ethnocentric,” even if it is concerned primarily or solely with itself.

During the last two centuries Western colonialism placed much of the globe under the control of European countries or their transplants. Along with the political and military dimensions of colonialism, the colonizers often took it upon themselves to “improve” the subject peoples on the assumption that Western cultural values and social structures are superior to those of the subject peoples. The nineteenth-century English politician Thomas Macaulay justified, for example, the “Anglicizing” of India on the grounds that “one shelf of a Western library” had more to offer than centuries of Eastern knowledge and literature. French colonizers regarded la mission civilisatrice (civilizing mission, the weaning of the natives from their primitive ways) as an integral part of their work in their colonies. Ethnocentrism certainly provided Europeans with a handy justification for their policies. Darwinist ideas during the late nineteenth century provided an argument to those people who believed that only the best, which generally meant their own nation, would survive and prosper over all others.

Ethnocentric worldviews have not, however, been limited to European colonists in the modern era. The Chinese name for their country, the “Middle Kingdom,” encapsulates the historical perspective that all those people outside its borders were barbarians who lacked the skills and civilization of the Chinese. This perspective applied to the numerous tribes of central Asia, most

In this drawing missionary David Livingstone is shown letting Africans listen to the ticking of his watch. It conveys the ethnocentric notion of Western superiority.
A Christian–Buddhist Dialogue

The following conversation between a Thai nobleman in Thailand and a Christian missionary in about 1850 makes clear the basic beliefs of each faith and suggests the differing perspectives in these contact situations.

Nobleman. After all, my religion is a better religion than yours.

Missionary. Convince me of that and Your Excellency shall be my teacher.

M. This is my religion: To be so little tied to the world that I can leave it without regret; to keep my heart sound; to live doing no injustice to any, but deeds of compassion to all.

N. Why should they commit sin?

M. Who has not sinned: We should own we have sinned; we Christians have One who has removed our sins from us, and taken them upon himself; but you—

N. Where have I sinned? I do not acknowledge sin.

M. But it is not enough that men should be honest and kind to one another. They owe allegiance to God, their great Sovereign. To disobey Him, to forget Him, to avoid His presence, to be indifferent to His favor—this is sin.

N. And so you think God is censorious and jealous of His creatures, and wants their services and their praises? No! Let us treat all men justly. God is absorbed, gone into annihilation. We need not be troubled or think about Him.

M. No! He lives above! He is our Master. It is not enough that servants should be honest towards their fellows, kind to their wives and children; they owe to their Master service and gratitude, and will be punished if they do not render them.

N. Who is to punish? You call sin what is no sin.

M. But does not Your Excellency flog your servants when they disobey? Do you pardon them solely because they have not wronged their fellow servants?

N. (Much excited). What service does God want of us? He is not envious and covetous, as you fancy Him to be.

M. Suppose I told Your Excellency’s servants that nothing was required of them but to live honestly and pleasantly together; to care nothing about you—neither to seek to please, nor obey, nor serve you, nor be thankful for Your Excellency’s kindness: will you allow this?...

N. Now I will tell you of your heavy sins.

M. Show it to me and I will confess.

N. Why don’t you take a wife?—Why don’t you provide successors to teach your religion when you are gone? Christ had thirty disciples, had he not? and his disciples had wives and children; and they multiplied, and have overrun the world; but your

famously the Mongols, whom the Chinese regarded as a constant threat to their way of life. When the British came to China during the eighteenth century to trade, and their emissary George Macartney refused to kowtow to the emperor, clearly strong feelings of ethnic superiority existed on both sides. Chinese attitudes changed, however, during the nineteenth century as the country was subjected to military defeats and humiliating treaties, and Chinese intellectuals sought to introduce Western-style reforms and openly acknowledged the inadequacy of traditional Chinese ideas in dealing with the challenges at hand. Ethnocentrism is dependent on the power that a certain group exercises in regard to others. Ethnocentric views need to be asserted and displayed to those who are being looked down upon.

East and West

The discussion of ethnocentrism has taken a new turn during the last two decades with the appearance of the Palestinian scholar Edward Said’s ideas on orientalism (an ethnocentric Western regard of Asian peoples) and the subsequent application of these ideas to areas beyond
the scope of Said’s study. Western knowledge of and attitudes toward non-Western peoples, according to Said, have been linked to Western dominance and power, both during the colonial era and after. Western representations of the East have been, his argument goes, both the cause and the result of the unequal power relationship between the two during the last two hundred years. The East has been depicted as irrational, despotic, and backward in contrast to the rational, democratic, and progress-oriented West. Ethnocentric and racist attitudes have certainly played a role in this depiction. Although the point of Said’s accusations has been widely acknowledged in scholarship and efforts have been made to rectify it, orientalism arguably continues unabated in the news and popular media.

Although most people would regard ethnocentrism as undesirable, its close derivatives, such as nationalism, are often viewed positively. The explanation for this difference lies in part in the conflation (fusion) of ethnocentrism and racism, with racism clearly being a negative trait. Nationalism, on the other hand, does not always imply a race-based affiliation, although it, too, limits itself to a certain group to the exclusion of all others.

Ethnocentrism does not, however, always require an international context. Within the borders of a state, one racial or cultural or religious group can exercise power over others. Although European or white domination over others comes immediately to mind, this is by no means the only example. The disenfranchisement or even persecution of religious, linguistic, and ethnic minorities is widespread in both Western and non-Western countries in the modern world. Although this phenomenon is often not called “ethnocentrism,” mainly because it is occurring within the same “people,” its characteristics and impact are not very different from those of ethnocentrism in an international context.

**Multiculturalism**

Today people see multiculturalism, whether voluntary or encouraged or required by a government, as a desirable attitude in dealings with members of other groups. It denotes an openness to and appreciation of other cultures. Multiculturalism, so defined, is the opposite of ethnocentrism. Multiculturalism is not a purely twentieth-century phenomenon. It was a component, perhaps by a different name, of the worldview of Romantics (proponents of a literary, artistic, and philosophical movement originating during the eighteenth century) such as the German philosopher and theologian Johann Herder, who respected and valued all cultures around the world, including “native” cultures that were evidently not at the same stage of historical development as those of the West. Multiculturalism in this case co-existed with a
clear sense of being “above” certain other groups. Although modern multiculturalism is directed against biases, prejudices, and negativity toward other cultures, ethnocentrism, as an instinctual tendency to band together with people like oneself, may be hard to eliminate by social policy or decree. Perhaps the best hope lies in the interconnections and cross-cultural contacts that increasingly define our world and force us to recognize how critical members of other groups are to our own physical and even cultural well-being.

Kaushik Bagchi

See also Race and Racism

Further Reading


Eurocentrism

The writer Neal Ascherson suggested that “on the shores of the Black Sea were born a pair of Siamese twins called ‘civilization’ and ‘barbarism’” (1995, 49). The observation about these twins is surely incisive and universal, even if the Black Sea venue may be questioned. The civilized and barbarian twins have had many births and rebirths in all times and places occupied by people. Moreover, they have ever been co-terminus with centrisms—Greco-, Islamic-, Sino-, Euro-, U.S.-, Western—and many others—each of which labeled all others barbarians. What distinguishes Eurocentrism (actually Western-centrism, since Eurocentrism incorporates such geographically disparate regions as North America and Australia as well as Europe) is that during the past century or more it has been accompanied by power, which it has used to legitimate, extend, and maintain itself and its rule in the world.

In 1978 the literary critic Edward Said condemned “Orientalism”—Western conceptions of the Islamic world—as a grab-bag of ill-defined characteristics that are distinctive only in allegedly being non-Western. Indeed, the very invention of Orientalism was not so much an attempt to say something about “the Orient” as an attempt to delineate and distinguish “the West” from “the rest,” as the scholar Samuel Huntington put it in his 1993 article “Clash of Civilizations” in the journal Foreign Relations. The media immediately welcomed this formulation of an alleged clash between The West and (in particular) China and Islam; and they have even more widely accepted it as an explanation of world events since the terrorist attacks of September 11, 2001. However, Gernot Köhler, a scholar of international relations and the world economy, has suggested that the sort of thinking that leads to Orientalism or to theories of civilization clashes goes hand in hand with the notion of global apartheid: The first is an ideological facet of the second, just as the notion of the “white man’s burden” was an ideological facet of European colonialism and imperialism.

Nor does it appear that decolonization of the second half of the twentieth century has put those notions to rest in the sands of history. On the contrary, the rhetoric of leaders such as Britain’s Prime Minister Tony Blair and the United States’ President George W. Bush is replete with claims that they are defending civilization (with the unspoken assumption being that they mean Western civilization) against outside threats—this in spite of the fact that many argue that some of their methods, such as Bush’s doctrine of preemptive war, threaten to destroy one of civilization’s most precious gifts: international law and institutions to prevent man from killing man in a general war of all against all.

Historical Development of Eurocentrism

Eurocentrism currently exerts widespread influence in the humanities, social sciences, and even the natural and
physical sciences, but it was not always so. The 1911 edition of the *Oxford Dictionary of Current English* defined *orient* as “The East; lustrous, sparkling, precious; radiant, rising, nascent; place or exactly determine position, settle or find bearings; bring into clearly understood relations; direct towards; determine how one stands in relation to one’s surroundings. Turn eastward.” By 1980, however, the *American Oxford Dictionary* defined it simply as “The East; countries east of the Mediterranean, especially East Asia.” The Orient as a model to be acclaimed and copied had become the antimodel to be defamed and shunned. Such European luminaries as the philosopher René Descartes (1596–1650), the writer Voltaire (1694–1778), and the economist Adam Smith (1723–1790), however, were still persuaded by the former definition.

Although the French intellectual Montesquieu (1689–1755) was an early forerunner of the change to a more negative image of the East, the major transformation in opinion came with the European industrial revolution and colonialism, especially from the mid-nineteenth century, with those proponents of dialectical change, G. W. F. Hegel (1770–1831) and Karl Marx (1818–1883). Their total Eurocentrism really did turn views of the world on its head. They began a tradition in the humanities and social sciences of differentiating the progressive “us” from the traditional “them” that continues to this day. Historiography—even “world” history—in the West has been entirely Eurocentric, running only on a westward track from “the Orient” to Western Europe and America. Works in this vein include the uncompleted *Weltgeschichte* (Universal History) of Leopold von Ranke (1795–1886), the twelve-volume *Study of History* (1934–1961) of Arnold Toynbee (1889–1975), who described the rise and fall of twenty-one “civilizations” and the “arrested development” of five others, and William McNeill’s *Rise of the West*, originally published in 1963. Nor is the history of science immune from a focus on the West: The very notion of a seventeenth-century scientific revolution in Europe that is taken to be the basis of Europe’s technological and industrial revolution tends to downplay scientific innovation or contributions from other parts of the world.

### Eurocentrism in Sociology and Anthropology

From the 1850s this dichotomy of the West and the rest and attendant praise of things Western has been the hallmark of all Western social theory. The nineteenth-century French “father of sociology” Auguste Compte (1798–1857) and the British legal scholar Henry Maine (1822–1888) distinguished between European “science” and “contracts,” which allegedly replaced age-old “tradition.” The French sociologist Émile Durkheim (1858–1917) distinguished “organic” and “mechanical” forms of social organization, and the German sociologist Ferdinand Tönnis (1855–1936) alleged a transition from traditional gemeinschaft (“community”) to modern gesellschaft (“society”). In the twentieth century the sociologist and economist Max Weber (1864–1920) considered European rationality to be the essential ingredient in Western success, as described in *The Protestant Ethic and the spirit of Capitalism* (1904–1905). During the Cold War, the sociologist Talcott Parsons, who popularized Weber in the United States, distinguished Western “universalist” social forms from the “particularist” social forms of other cultures, and the anthropologist Robert Redfield found a contrast and transition between traditional “folk” and modern “urban” society and a certain symbiosis between “low” and “high” civilizations. In each case, the modern, progressive, “good” side of the dichotomy is the Western one, and the other is the “Orientalist” one, which the Palestinian American Edward Said condemned as an invented grab-bag of whatever is not “Western.” The modernization theory that dominated postwar social sciences and economics distinguished Western modernization from other cultures’ and regions’ traditionalism. The economist W. W. Rostow’s *Stages of Economic Growth* (1959) was a major vehicle for articulating modernization theory and followed the same Eurocentric theoretical path from traditional to postindustrialist society. As late as 1998, David Landes’ best-selling *The Wealth and
Poverty of Nations assured readers of the exceptionality of European culture.

Eurocentrism in the Twenty-First Century

In its present incarnation, Eurocentrism entails the successful, free-trading West teaching the rest of the world the merits of a pull-yourself-up-by-your-bootstraps ethic, which will, proponents believe, bring the wealth of the West to the poor rest. This formulation is an oxymoron. If it is pull yourself up by your own bootstraps, as the Eurocentrists falsely claim, then it can not be duplicated elsewhere, especially inasmuch as the rest of the world is supposedly dependent on being saved from its stick in the mud existence by Western beneficence. The worst forms of Eurocentrism have received a new lease on life after September 11, 2001 by the George W. Bush and Tony Blair propaganda machine who never tire of claiming to be...
dropping their bombs to “Save [Western] Civilization” and their lap-dog media who are trumping up Samuel Huntington’s alleged clash of civilizations between “the West” and “the Rest”—and particularly against Islam and China.

Andre Gunder Frank

See also Europe; Western Civilization

**Further Reading**


---

**Europe**

Europe was an idea long before it acquired anything like its present geographical contours or relationship to the rest of the world. We are concerned here with the many permutations that this idea went through over the centuries. The idea of a European continent may seem to belong to the natural order of things, but in fact the idea of a continent is relatively modern, dating only from the sixteenth century. It is a slippery concept, as is the notion of Europe itself. Europe belonged to the realm of myth before it acquired a concrete physical location. The name comes from Greek myth, the story of Europa. In that story, Europa, the daughter of a Phoenician king, is abducted and raped by the Greek god Zeus. He takes her from her home on the Asian coast of the Mediterranean to Crete, where she bears three sons, giving birth to Minoan civilization. As a mother figure, Europa provided the Greeks, and later Europe itself, with a powerful myth of origins. But Europe did not originally refer to the geography that now bears that name. It was attached to the Aegean coast and only gradually came to be attached to its northern and western hinterlands, to the areas we now associate with the Balkans.

The Greeks used other allegorical female figures, Asia and Africa, to name the lands to their east and south, thereby creating a tripartite division of the world, which they thought of as an island (Orbis Terrarum) encircled by an impassable river they called Oceanus. Europe, Asia, and Africa were not originally conceived of as separate continents, but as parts of a single landmass. The Judeo-Christian myth of Noah’s three sons also presents the idea of an earth island divided into three parts, each inherited by one of the sons, with Shem coming into the possession of Asia, Ham of Africa, and Japheth Europe. It was not until the existence of another landmass was established in the wake of the voyages of Columbus and identified with another female figure, America, that the concepts of continents, defined in 1559 as “a portion of th’Earth which is not parted by the Seas asounder . . .” (Oxford English Dictionary, 3, p. 823), came into being. When the ancient notion of Orbis Terrarum became obsolete, so too did the idea of Oceanus. The idea of the encircling river gave way to the notion of several seas connecting the newfound continents.

Today Europe is one of seven recognized continents, though its claim to that status is not founded in physical geography. Europe is not surrounded by water and it lacks any clear natural boundaries that would differentiate it from Asia. From the beginning, Europe was a floating signifier, attached to a variety of territories, expanding and contracting in scale, changing meaning according to the purposes of those who defined it. As the historian Hugh Seton-Watson observed: “The word ‘Europe’ had been used and misused, interpreted and misinterpreted in as many different meanings as any word in any language. There are many Europes. . .” (Wilson and van der Dussen 1993, 8).

---

See also Europe; Western Civilization
Europe is by no means alone in this respect. All continents are mythical in the sense that they are names given to geographies whose external boundaries are by no means self-evident and whose internal divisions may be greater than those between them and other landmasses. Names like Europe, Africa, and America are very good at conveying meaning, but not very useful in revealing the actual boundaries of populations, economies, or cultures. It is with good reason that geographers such as Martin Wigan and historians such as Kären Lewis have recently begun to talk about the “myth of continents” as standing in the way of a better understanding of the world at large. Yet we are not likely see the concept of continents disappear in the near future. The term Europe remains a very powerful signifier despite the fact that it has changed content so many times over the centuries.

Ancient and Medieval Notions of Europe

Europe was only a vague geographical expression to the Greeks, who identified it with the neighboring lands to their north and west, which were thought to share a similar climate and therefore whose people were thought to possess civilized temperament conducive to self-government. The Greeks were fond of contrasting their own freedoms with the supposed despotism of their great enemies, the Persians, which by extension they attributed to all the peoples of Asia. Lands far to the north were thought to be cold and barbaric, while lands further south were considered too hot for human habitation.

The flexibility of the concept of Europe is due to the fact that it was not generated by any one state, nation, or culture. Just as was the case with the Americas and Australia, Europe was named by strangers, one of the reasons the term has been so fraught with uncertainty and ambiguity ever since. Those peoples residing in what the ancient Greeks called Europe did not know themselves as Europeans any more than the peoples living in Asia knew themselves as Asians or peoples of Africa called themselves Africans. They identified primarily with their local-ity. Even the Greeks did not think of themselves primarily as Europeans, for they identified with their particular city-states. They were Athenians and Spartans before they were Greeks, much less Europeans. The term European was never used by them or by the Romans, another city people who had no particular attachment to the territories that lay between cities. At the peak of Roman imperial expansion, the European, Asian, and African parts of the empire appeared to Romans to constitute the whole world. Identified with a language, a body of law, and a culture rather than a specific territory, Rome saw itself as universal, a claim that was reinforced when its emperor declared Christianity to be the state religion in 313 CE. A world empire wedded to a world religion left no room for a separate European identity.

It was only in the wake of the collapse of the Roman empire that what we now think of as Europe emerged as something more than a hinterland of the Mediterranean littoral. But the consolidation of this new Europe was slow in happening because, while the imperial state disappeared, the universal church did not. Europe remained a part of the larger entity known as Christendom, which included portions of Asia and Africa as well as Europe for the next several hundred years. Throughout the Middle Ages the ancient view of the world as an earth island surrounded by an impassable river held firm. Asia continued to be Christianity’s place of origin, and medieval Europeans continued to be spiritually and materially oriented toward the east, accounting for their designation of it as the Orient. Jerusalem was located on medieval world maps at the center of Orbis Terrarum. Asia, now open by way of the Silk Road, was seen as a land of superior riches, while Africa too was the locus of European desires for gold and other luxury items. Europe itself was seen as peripheral.

During the Middle Ages Europe remained a geographical expression, without political unity, an economic center, or a strong sense of itself as a distinct civilization. Medieval Europe was anything but Eurocentric. Shown on its own maps as the smallest part of Orbis Terrarum, Europe saw itself as the western peninsula of Asia. Arabic maps of the Middle Ages showed it as without distinct
features, a reflection of how little it counted in the view of the great Islamic civilizations of the period. The Chinese, who viewed themselves as the center of the world, had no concept of Europe until European Jesuits introduced them to the idea in the late sixteenth century. Even then, they placed Europe on the margins of the earth, a view shared by many Europeans of the time.

Apart from the Vikings, the peoples occupying that part of earth island known as Europe were not seafaring. They turned their backs to Oceanus and faced eastward spiritually and economically. When the Turks cut off overland access to the Orient in the fifteenth century, Europeans intensified their efforts to venture around Africa. Eventually they turned west to cross the Atlantic. It was only then, and very tentatively, that they began to think of themselves as Europeans. Not until they encountered one another overseas did Englishmen, Flemings, and Genoese begin to use the term “we Europeans” as Francis Bacon did in 1620 CE. Only after establishing seabased empires in the sixteenth century did Europeans reorient themselves from east to west. It was only then that they came to see history moving in a new direction. Christianity, born in Asia and nurtured during its first centuries in Africa, was for the first time seen as essentially a European faith. Henceforth, Europe would no longer subordinate itself to Christendom, but would define it. In the course of the sixteenth and seventeenth centuries Europe ceased to be a geographical expression and became a core region with its own peripheries. Having cut itself off from the Asian and African parts of the old Christendom, Europe emerged from the Age of Discovery smaller and more compact, but with an integral geography and a sense of itself both as a place and as an independent historical agent.

**Europe Becomes a Continent**

The notion of a European continent was born in the sixteenth century, but it took much longer before the peoples indigenous to it came to see themselves as Europeans. The idea of a secular Europe, as distinct from Christendom, first took hold among the elite classes. It arose in part out of balance-of-power diplomacy, which was itself a response to the religious wars of the seventeenth century. While premised on the notion of internal division, thinking of Europe as a coherent system of competing territorial states was the first step toward separating it from the rest of the world. It took a much longer time for the idea of European-ness to trickle down to the lower classes, who were slow to exchange their local iden-
tities for national ones, and even slower to consider themselves Europeans.

But before Europe identified itself entirely with its continental geography, it saw itself as a civilization with boundaries that extended westward. European overseas expansion in the early modern period established in the Americas a series of what can be called “neo-Europes.” European settlers’ identification with the homeland was so strong that it seemed in the eighteenth century that Europe might ultimately span the Atlantic. The conquest of Ireland was the first step in the construction of what the British saw as a greater Britain bridging the Atlantic. Spain established colonies in the Americas from the early sixteenth century onward; France and England established colonies there in the early seventeenth century. The colonial revolts of the later eighteenth century put an end to a pan-Atlantic Europe politically, but the imprint of European culture remained strong, encouraging the idea that it was, like Roman culture, universal, transcending geographical limits.

By the eighteenth century Europe identified itself with “civilization,” a term coined by the French politician Count Mirabeau in 1750. For the first time Europe shed its ancient sense of inferiority to Asia, especially to China. In the minds of Europeans, their culture had become the universal standard, available to all the world’s peoples willing to subscribe to its tenets. Defined initially as a loose package of values, techniques, and ways of life, the European concept of civilization became, by the nineteenth century, a kind of natural law of human progress, seen as spreading inevitably from Europe to the Americas and then to all the world.

In the nineteenth century Europe itself took on a clearer territorial definition, focused on its western regions. In the wake of the failure of the Napoleonic effort to impose continental political and economic unity, the thrust of the industrial and democratic revolutions in western Europe produced powerful economies within the boundaries of new nation-states. The evident differences between western European nations and the regions to the east and south became accentuated. Autocratic Russia now became Europe’s “window on the East.” During the New Imperialism of the later nineteenth century, Europeans’ consciousness of their European-ness was again reinforced by encounters with non-European peoples, affirming the observation that “Europe did not simply expand overseas, it made itself through expansion” (Asad 2002, 220). European anthropology gave scientific credence to Europeans’ heightened sense of difference and superiority. Evolutionary conceptions of history, which
organized the world’s societies in terms of stages of development from savagery to civilization, reinforced Europeans’ sense of being at the forefront of the march of progress.

In the eighteenth century Europe gained a geography; in the nineteenth century it acquired a history. The French Revolution had marked a decisive break with the past and triggered a quest for an historical account that would provide Europeans with a sense of common origins. Political conservatives imagined the Middle Ages as laying the foundations of a unique European civilization, while radicals took Greek democracy as their starting point. The fact that neither the ancient Greeks nor medieval Christians would have recognized themselves as the first Europeans was no deterrent to this project. Despite the fact that both versions of the past were wholly anachronistic, they still remain the favorite starting points for European history in schools and universities, distorting the past but providing a powerful myth of origins. Histories of Europe (and of the world) have tended to characterize it as being set apart from and superior to other world religions.

The notion of European superiority lost some credibility after the two world wars of the twentieth century, but the notion of one universal path of human development persisted. “Modernization,” a term more frequently used in the United States than in Europe, replaced “civilization” as the key word in the vocabulary of comparison. Although clearly biased toward Western interests and values, modernization was supposedly universal in character, knowing no geographical boundaries. Today, “globalization” is the term most frequently used to describe the supposedly inevitable processes that will transform the whole world, erasing geographical boundaries and cultural differences. This is but the latest example of the universalizing tendency of European culture, now fortified by the wealth and power of the neo-European United States.

**Contemporary Europe**

There have been many Europes, and today we see yet another emerging. The entity that is unfolding before our eyes began as a core of Western European nations defining themselves against the Soviet Union and its Communist allies. The Cold War division between West and East provided a powerful unifying factor, but since the collapse of eastern European Communism beginning in 1989, Europe has had no obvious “other” to define its boundaries. Now that former Communist nations are joining the European Union, the boundaries of Europe are again in flux. Should Turkey become a member of the Union, the ancient boundary between Europe and Asia would also be breeched, and the notion of absolute difference between the western freedom and eastern despotism would finally be renegotiated.

This is also a time when geographers and historians are reexamining the idea of the continent itself. After all, Europe has no natural boundaries and has always been defined by its relations with other world regions rather than by something internal to itself. What Europe means to Europeans has been inseparable from world history from the very moment that the Greeks adopted the origin myth of Europa to define themselves against the Persians.
It is therefore wholly appropriate that in this age of intense global interaction, when the identities of all the world’s regions are being formed and reformed at their various points of contact, we recognize just how relative and contingent the notion of Europe has been from the very beginning. The accelerated speed of communications and travel has rendered old geographical boundaries obsolete, but it has by no means led to the abolition of a sense of difference. In fact, the processes associated with globalization have accelerated the rate at which both internal and external differences are produced and institutionalized. These differences are less likely to be national than regional and subregional. Even as they construct a larger political/economic unit in the form of the European Union, Europeans seem to be moving toward a new localism, emphasizing indigenous languages, cultures, and traditions. Today’s typical European has multiple identities, those of locality, region, nation, continent, and the world at large. These are often in tension and can sometimes flare into conflict as has happened in recent years in the Balkans.

Is it time to abandon the notion of Europe? We may wish to move away from a Eurocentric history, which assumes a homogeneous Europe with fixed boundaries and a single point of origin, but we cannot ignore the idea of Europe, which has been so vital not just in European history but in the histories of all the peoples who have come into contact with Europeans. The idea of Europe is still associated with universal values in the minds of many people, including Europe’s enemies. Europe no longer endeavors by force to impose its version of civilization on the world, but European influences can be detected everywhere one looks. Together with the equally powerful symbolic concepts of Asia, Africa, and America, Europe as a signifier remains fundamental to any understanding of the world at large. World history cannot afford to be Eurocentric, but it runs an enormous risk if it neglects the ways in which the idea of Europe has, for better and for worse, shaped and been shaped over centuries of contacts with other world regions.

See also Afro-Eurasia; Art—Europe; Art—Russia; Berlin Conference; British East India Company; British Empire; Caesar, Augustus; Caesar, Julius; Catherine the Great; Catholicism, Roman; Celts; Charlemagne; Charles V; Churchill, Winston; Columbian Exchange; Columbus, Christopher; Congress of Vienna; Crusades, The; Darwin, Charles; Descartes, Rene; Détente; Dutch East India Company; Dutch Empire; Early Modern World; Eastern Europe; Elizabeth I; Enlightenment, The; Eurocentrism; European Union; Expansion, European; Fascism; Feudalism; French Empire; Galileo Galilei; Gama, Vasco da; German Empire; Grand Tour; Greece, Ancient; Gregory VII; Guilds; Hanseatic League; Henry the Navigator; Herodotus; Hitler, Adolf; Holocaust; Homer; Iberian Trading Companies; Indo-European Migration; Interwar Years (1918—1939); Isabella I; Joan of Arc; Lenin, Vladimir; Locke, John; Luther, Martin; Macedonian Empire; Machiavelli, Niccolo; Magellan, Ferdinand; Manorialism; Marx, Karl; Mercantilism; Napoleon; Napoleonic Empire; Newton, Isaac; North Atlantic Treaty Organization; Orthodoxy, Christian; Ottoman Empire; Parliamentarianism; Peter the Great; Plato; Polo, Marco; Portuguese Empire; Protestantism; Raynal, Abbe Guillaume; Renaissance; Revolution—France; Revolution—Russia; Roman Empire; Russian-Soviet Empire; Smith, Adam; Socrates; Spanish Empire; Stalin, Joseph; Thomas Aquinas, St.; Thucydides; Trading Patterns, Ancient European; Trading Patterns, Mediterranean; Treaty of Versailles; Urban II; Victoria; Viking Society; Warfare—Europe; Warsaw Pact; World War I; World War II

Further Reading
After World War II destroyed the economies and financial markets of Europe, nations were determined to rebuild their shattered economies, recover their influence and, above all, ensure that such a catastrophe would never happen again. The restoration process was stimulated by the U.S.-led Marshall Plan, which provided European countries with financial allowances. Primarily, the new continent had to prevent antagonism between Germany and France. Many people supported the idea of a politically unified Europe and proposed a European federation or some form of European government. On 19 September 1946, the English statesman Winston Churchill gave a speech at the University of Zurich outlining his vision of a “United States of Europe” similar to the United States of America. The idea prevailed, and the Council of Europe was created in 1949, even though it remains a restricted organization today. The Council of Europe did not hold any legislative power or a right to vote. It was and still is a forum of political exchange to defend human rights, parliamentary democracy, and the rule of law.

Three Communities

The European Union of today grew out of three separate communities: the European Coal and Steel Community (ECSC), the European Economic Community (EEC), and the European Atomic Energy Community (EAEC). Each of these communities had its own commission as well as its own council. All three communities had the same members continuously.

Early in 1951 France, Germany, Belgium, Luxembourg, the Netherlands, and Italy founded the ECSC, an administrative agency overseeing the production of coal and steel. On 9 May 1950, the French foreign minister, Robert Schuman, publicly presented his plan of pooling the coal and steel resources of the member states to create a unified market for their coal and steel products. This plan became famous as the “Schuman Declaration,” which was drafted by the French civil servant Jean Monnet. Initially the United Kingdom was invited to join the community as well but refused for sovereignty reasons.

By 1954 the ECSC managed to lift restrictions on imports and exports, creating a unified labor market as well as a common set of rules; between 1952 and 1960 steel production rose by about 75 percent. At that time coal and steel were the primary resources for industrialization. The Treaty of Paris of 1952 formally established the ECSC. A few years later the ECSC member states attempted to further integrate politically and militarily. They intended to create the European Political Community and the European Defence Community (EDC), having in mind a European military service under joint control as well as a federation of European states. Regardless of the treaty that was reached between the member states, the French National Assembly failed to ratify the treaty, and thus the EDC was buried. In 1955 the Western European Union settled in its place.

Soon after ratification failed the member states of the ECSC reiterated their desire for further integration and founded the European Economic Community as well as
the European Atomic Energy Community. The EEC was established by the Treaty of Rome in 1957 and formed a customs union among the six founding countries in 1958. Experts thought that deeper economic integration would lead to a political union. The EEC worked for the liberalization of the flow of goods, services, capital, and people; the abolition of trusts and cartels; and the development of joint and reciprocal policies on labor, social welfare, agriculture, transport, and foreign trade. The EEC was the most important of the three communities.

The EAEC (also known as “Euratom”) arose as the third treaty organization and was also established by the Treaty of Rome in 1958. Euratom’s aim was the collaboration of member states in peaceful nuclear research to ensure the free movement of nuclear raw materials, equipment, investment capital, and specialists within the community and to promote European nuclear research rather than national competition. Euratom’s authority was limited to civilian use of atomic energy.

Because the United Kingdom did not participate in any of the three communities it proposed that the Common Market to be expanded to North America. London initiated European Free Trade Association (EFTA) negotiations, which were finalized in 1960 and joined by the European countries that were not members of any of the other three communities. During the 1970s EFTA and EEC negotiated various free trade agreements to reduce trade barriers and in 1979 introduced the European Monetary System (EMS), which helped to stabilize the currencies after two major oil crises in 1973 and 1979.

From Three Communities to the European Community
With the Treaty of Brussels in 1965 Euratom, EEC, and ECSC merged as the European Community. The treaty also joined the three commissions and councils as the single Commission of the European Communities and the single Council of Ministers of the European Communities. The French president, Charles de Gaulle, vetoed Britain’s membership, which Britain had applied for in 1961.
1963 for the first time. Only after de Gaulle left office could Britain join the EC in 1973. At the same time Ireland and Denmark joined the EC. The Single European Act of 1987 created a single internal European market and abolished all trade barriers that might hinder the free flow of goods, services, and people. The community also further integrated political and social affairs. Almost ten years later Greece joined the EC in 1981, and Spain and Portugal joined in 1986. When Germany reunited in 1990 former East Germany was automatically absorbed into the community.

**From EC to the European Union**

In 1993 the European Community changed its name to the “European Union” (EU). The name change was established by the Treaty of the European Union, which was signed in Maastricht, the Netherlands, in 1992 and ratified by the EU member states in 1993. Its articles laid the foundation for the single European currency, the Euro, a central banking system, a legal definition of the EU, and a further integration in policy areas such as foreign and security policy. The treaty also replaced the Treaty of Rome of 1957. The European Union absorbed the functions of the Western European Union in 1999, which automatically gave the EU military capabilities. In 1995 the EU had invited Austria, Finland, and Sweden to join. Altogether, the EU now had fifteen member states.

On 1 January 2002 the Euro replaced the old national banknotes and coins. One year later, in 2003, the Commission of the European Communities started negotiations with Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Cyprus, and Malta for European Union membership. This latest enlargement became effective on 1 May 2004.

Benjamin Zyla

**Further Reading**


Evolution, Cultural

See Agrarian Era; Band, Tribes, Chiefdoms, and States; Foraging (Paleolithic) Era; Modern Era; Cultural Ecology; Race and Racism

Expansion, European

The dominant force in the shaping of a global society has been the expansion of European society and culture throughout the world following the voyages of Columbus. Some have seen the explosive movement of Europeans throughout the world as a consequence of centuries of repression and cultural darkness that had kept Europeans from exploring the world beyond Europe. One of the most striking examples of that perspective is Washington Irving’s biography of Columbus, in which Irving identified the expansion of Europe as one of the fundamental elements of modernity and Columbus as the first modern man, the one who cast off the blinders that had limited European development.

The Ancient World

In fact, however, the expansion of Europe and of European culture has a history that long precedes Columbus’s first voyage. The post-1492 expansion of Europe built upon the expansion of the previous five centuries and
reflects a characteristic of ancient European culture as well. The ancient Greek city-states expanded, establishing colonies in Sicily and southern Italy, to which they brought Greek cultural values and practices. The conquests of Alexander of Macedon (356–23 BCE) spread Greek cultural values throughout much of the Middle East and then into the Roman world. According to his biographer, Arrian, Alexander came to see his conquests as the beginning of a world-city, a worldwide community within which all mankind would live in harmony under the guidance of the Greeks.

The Roman empire also generated a wide cultural community as it expanded from its home in central Italy. Its influence extended well beyond the formal boundaries of the empire, as the barbarian societies along the frontiers adopted elements of Roman culture in the course of their contact with Roman soldiers and merchants.

Greek and Roman expansion was not worldwide, however. The Asian goods that the Romans desired traveled to Rome via ancient trade routes, so that there was no need to seek direct access to the Asian markets. Although Alexander of Macedon was said to have believed in some kind of world community, this was not a concept of much significance in the ancient world. Stoic philosophers did have some sense of a universal human community, but this was view of a small elite and had little practical consequence.

**Medieval Christendom Expands**

The beginning of the great era of European overseas expansion associated with Columbus is sometimes linked to the desire to have direct access to the markets of the East, and the creation of a world system beginning in the sixteenth century is often discussed in primarily economic terms, a world economic system. However, the desire to preach the Christian Gospel to all mankind was another spur to expansion. The Christian conception of mankind as a single family descended from Adam and Eve and redeemed by Christ motivated missionaries to spread beyond Europe and into regions inhabited by infidels. Christians, echoing the Stoics, could conceive of a universal community embracing all mankind, but they envisioned an institutional structure provided by the Church.

The role of Christianity in the expansion of Europe stretches back to the Byzantine imperial government’s support of missionary efforts to convert the Goths in the third century CE. From the imperial point of view, such an effort was in keeping with the older tradition of acculturating barbarians to the Roman way of life. The expansion of Christianity could thus go hand in hand with the expansion of the Byzantine empire, a kind of relationship that was to have a long history.

The Latin Church in the West was slower in getting involved in expansion beyond the boundaries of the Roman empire. Initially it was individuals who went forth to preach the Gospel in the lands of the barbarians. Saint Patrick (fifth century), for example, went to preach to the Irish, a people who had never been subject to the Romans.

The first pope to authorize a mission to a non-Christian society was Gregory I (c. 540–604) who sent a team of missionaries to England, where Christianity
### Expansion and Contraction of European Empires

<table>
<thead>
<tr>
<th>Century</th>
<th>Event</th>
</tr>
</thead>
</table>
| **15th Century** | Portuguese knights capture Cueta in North Africa from the Muslims.  
Columbus “discovers” the Americas for Spain and colonies are established in the Americas.  
Portugal claims Brazil under the Treaty of Tordesillas.  
Vasco da Gama of Portugal discovers an all-sea route to India. |
| **16th Century** | Portugal dominates the maritime trade in South and Southeast Asia.  
The Pacific Ocean is “discovered” by Vasco Nuñez de Balboa of Spain.  
Spain claims the Philippines.  
The Habsburg ruling house of Europe comes to power.  
France establishes a presence in West Africa.  
Portugal’s dominance in East Africa and Asia begins to decline. |
| **17th Century** | The English, Dutch, and French charter trading companies.  
The English settle Jamestown in Virginia.  
France establishes colonies in North America and the Caribbean.  
Russia colonizes Siberia. |
| **18th Century** | France loses American colonies and territory to England and Spain.  
The English lose control of their American colony.  
The Dutch Republic becomes a colonial power with the abolition of its private trading companies.  
The Dutch begin to lose most of their colonies to the British.  
The Spanish empire declines.  
By the time of the Treaty of Paris in 1763, England has become the dominant European colonial power. |
| **19th Century** | France under Napoleon regains territory in the Americas.  
Haiti gains freedom from France through a slave revolt.  
Brazil declares independence from Portugal.  
Slavery is abolished by all imperial powers.  
The Habsburg empire is transformed into the Austro-Hungarian empire.  
The German empire is established after the Prussian defeat of France.  
Russia colonizes Poland and Finland, the Caucasus, and Central Asia.  
England, France, Spain, Portugal, Belgium, Germany, and Italy solidify their colonies in Africa. |
| **20th Century** | European control of its African colonies intensifies.  
World War I starts when the Austro-Hungarian government declares war on Serbia.  
The end of World War I marks the end of the Austro-Hungarian empire and the German empire.  
Britain and France gain trust territories in Asia.  
The British Commonwealth of Nations is created.  
During World War II Japan takes Asian colonies from Britain, France, and the Netherlands.  
Following the end of World War II, the British, French, Dutch, and Portuguese empires shrink as many former colonies become independent nations.  
The Comunidade dos Países de Língua Portuguesa (CPLP) unites eight Portuguese-speaking nations.  
The Russian-Soviet empire disintegrates. |
had virtually died out after having been introduced during the Roman occupation of the island. The missionaries were followed by other figures who brought England into regular contact with the continental world. During the eighth and ninth centuries, missionaries from Ireland and from England in turn went to the borders of the Carolingian empire with the support of various Carolingian rulers and with papal blessing to preach to the Germanic peoples, bringing them into the Church and under Carolingian domination. This union of spiritual and temporal goals was to be a characteristic of subsequent European expansion.

The Internal Colonization of Europe

With the decline of Roman power and the population decline that accompanied it, only churchmen were at all concerned with expansion until about the middle of the tenth century. The end of the long series of barbarian assaults on the Roman and Carolingian societies and the beginning of a period of warmer climate from about 950 to 1300 contributed to population growth that reignited pressures to expand. This period began with what the historian Archibald Lewis described as the colonization of the internal frontier of Europe. Forests were cut down and new farming villages and trading towns established. Many of the techniques later used to organize migration to new frontiers on the edge of Christendom and to establish new communities overseas were first developed in the course of this process of internal European colonization.

From the tenth to the fourteenth century Europeans moved aggressively in all directions with varying degrees of success. To the east, the twelfth- and thirteenth-century Crusades to regain the Holy Land ultimately failed, but German expansion eastward into the lands of the Slavs that had begun in the early tenth centuries was successful. In the north, during the tenth and eleventh centuries Christian missionaries succeeded in converting the Scandinavians, bringing them into the European Christian cultural orbit, eventually leading to the settlement of Greenland from the eleventh century and the establishment of Christian churches there. Around 1000, Scandinavian adventurers even reached the mainland of North America. To the west and south, the Portuguese and the Spanish were pushing the Muslims back, and further to the west, the English were advancing into the Celtic lands that bordered England, reforming the Celtic branch of Christendom and bringing those churches into conformity with Roman practice.

Medieval thinkers developed legal justifications for expansion and conquest that supplemented the military and missionary justifications; these were later used during the Spanish conquest of the Americas in the sixteenth and seventeenth centuries. First developed in the course of Christian encounters with the Muslims and the Mongols during the thirteenth century, these legal justifications forced those who supported the Crusades and other forms of armed force against nonbelievers in the process of expansion to justify their actions in legal terms.

During the fourteenth and fifteenth centuries, as the climate turned colder and the Black Death reduced the
European population by at least one-third, and as the
Ottoman Turks moved further up into the Balkans, dom-
inating more of the Mediterranean, the era of medieval
expansion slowed but did not entirely stop. At the west-
ern edge of Europe, the Portuguese continued to have a
strong interest in expansion as they sought to find a sea
route to the markets of Asia that would circumvent the
traditional Muslim-controlled routes through the Near
East. This required establishing settlements to refit and
resupply ships that would make the long journey to the
East. The Portuguese were also anxious to protect them-
selves from Muslim counterattacks and were interested in
reconnecting with Christian communities of Asia that, it
was thought, might join in a last great crusade. Finally,
the Portuguese were interested in converting the non-
Christians of the East to Christianity.

Europeans Expand Overseas
All of these motives for a renewal of European expansion,
this time well beyond the geographical boundaries of
Europe, appear in the literature of the fifteenth century.
Portuguese expansion into the Atlantic and along the
west coast of Africa, popularly associated with Henry the
Navigator (1394–1460), led to the rediscovery of the
island chains of the Atlantic, Canary (1340–1341),
Madeira (1418–1419), Azores (1427–1431), and Cape
Verde (1455–1457) and to the establishment of trading
posts on the coast of Africa. Portuguese interest in find-
ing a water route to Asia was encouraged by Genoese fin-
cancers, merchants, and seamen who had suffered
financially when the Muslims had conquered the
Genoese settlements along the Black Sea.

The Age of Columbus
It is, then, no coincidence that it was an ambitious
Genoese sailor who had lived and worked in Portugal
who initiated the great age of European expansion that
eventually led to the development of an international
society, if not a true world community. In addition to the
motives for expansion mentioned earlier—a desire to find
new routes to Asian markets, to preach the Gospel to
nonbelievers, and to find Eastern Christian communities
to join in a last crusade, Columbus sought personal social
and economic advancement. He bridged the two periods
of European expansion, employing the motives and expe-
rience of medieval expansion in the course of his
encounter with the New World.

Columbus’s great significance is that he began the
process that opened up not only water routes to the
already known Asian world but also to entirely new
worlds, the Americas and the Pacific Ocean in particular,
as well. The novelty of these new worlds was not, how-
ever, initially appreciated. Until his death Columbus
claimed to have reached the outer edge of Asia, a belief
rooted in the medieval theory that the surface of the earth
was almost entirely land and that the Ocean Sea was a
narrow band of water, rather like a river, separating the
various landmasses. That being the case, the islands of
the Caribbean would have to be the outer edge of Asia.
Likewise, Columbus initially identified several plants
found in the Americas with the spices associated with
Asia, although later he changed his mind. From 1492 to
about 1600, Europeans tended to perceive the New
World in terms derived from the experience of the Mid-
dle Ages, approaching the peoples of the Americas as if
they were at a stage of development similar to that of the
barbarians who had invaded the Roman empire.

The European discovery of the Pacific Ocean by Vasco
Nuñez de Balboa in 1513 and then the circumnavigation
of the earth by Magellan’s fleet, 1519–1522, stimulated
the reexamination of European theories about the surface
of the earth and the peoples who lived there. One result
was the realization that the Ocean Sea was not an obsta-
Columbus' Impression of the Caribbean Islands

I understand sufficiently from other Indians, whom I had already taken, that continually this land was an island, and so I followed its coast eastward 107 leagues up to where it ended. And from that cape I saw toward the east another island, distant 18 leagues from the former, to which I at once gave the name La Spanola. And I went there and followed its northern part, as I had in the case of Juana, to the eastward for 178 great leagues in a straight line. As Juana, so all the others are very fertile to an excessive degree, and this one especially. In it there are many harbors on the sea coast, beyond comparison with others which I know in Christendom, and numerous rivers, good and large, which is marvelous. Its lands are lofty and in it there are many sierras and very high mountains, to which the island Centrefrei is not comparable. All are most beautiful, of a thousand shapes, and all accessible, and filled with trees of a thousand kinds and tall, and they seem to touch the sky; and I am told that they never lose their foliage, which I can believe, for I saw them as green and beautiful as they are in Spain in May, and some of them were flowering, some with fruit, and some in another condition, according to their quality. And there were singing the nightingale and other little birds of a thousand kinds in the month of November, there where I went. There are palm trees of six or eight kinds, which are a wonder to behold because of their beautiful variety, and so are the other trees and fruits and plants; therein are marvelous pine groves, and extensive meadow country; and there is honey, and there are many kinds of birds and a great variety of fruits. Upcountry there are many mines of metals, and the population is innumerable. La Spanola is marvelous, the sierras and the mountains and the plains and the meadows and the lands are so beautiful and rich for planting and sowing, and for livestock of every sort and for building towns and villages. The harbors of the sea here are such as you could not believe it without seeing them; and so the rivers, many and great, and good streams, the most of which bear gold. And the trees and fruits and plants have great differences from those of La Juana; in this [island] there are many spices and great mines of gold and of other metals.


cle to direct access to Asia but a highway that would enable Europeans to sail to all parts of the earth, a viable alternative to traveling overland. A second result was a growing realization that there existed a wide variety of peoples and societies throughout the world, ranging from the most primitive to the most sophisticated. This experience challenged traditional biblically based theories about mankind, eventually leading to the development of anthropology.

The Beginnings of a European World Order

The long-term consequences of the European encounter with the rest of the world can be illustrated graphically in several ways. By 1763 European powers were rising stars among the great imperial powers that politically dominated, at least nominally, the bulk of the globe. Seen in economic terms, the European encounter with the rest of the world generates a map showing the major trade routes that, when taken together, outline what the sociologist Immanuel Wallerstein has labeled the modern world system, a series of cores and peripheries linking all parts of the world in a single economic order.

Less easy to illustrate graphically is the interpenetration of cultures that was also occurring. In physical terms, this included the importation of a wide variety of products into Europe from elsewhere, products ranging from the traditional Asian spices and silks to such new items as tobacco and potatoes from the Americas. This latter was part of what the historian Alfred Crosby termed the Columbian exchange—the massive movement of flora and fauna (including agents of disease) in both directions across the Atlantic after the European discovery of the Americas.

Above all, the importation of a large amount of precious metal, especially silver, from the Americas had a significant impact on the European economy. Perhaps even more interesting was the fact that so much of that specie
Consequences of European Expansion

The desire of Europeans to acquire goods from elsewhere sometimes meant the restructuring of other economies to meet those needs. The demand for sugar that had originally led to the creation of sugar plantations on the islands of the Mediterranean in the Middle Ages led to the creation of similar plantations on the Cape Verde Islands and then on the islands of the Caribbean. This development generated a demand for labor, a demand that the European population could not (or would not) meet, thus generating a market for slaves. Eventually, Europeans turned to Africa as the source for such labor, redirecting the long-standing African slave trade to the New World and away from its traditional markets in the Muslim world.

There were other consequences of European expansion, as Christian missionaries accompanied merchants and adventurers around the world, preaching the Gospel to new ears. The impact of these efforts varied widely, from the mass baptisms that Catholic missionaries often employed in the initial stages of conversion efforts in Latin America to the tiny number of converts that the Jesuits made over several decades of sophisticated missionary efforts at the highest levels of Chinese society. Another result was the development of cults that blended Christian and local beliefs and practices, as well as the incorporation of local beliefs into the Christian context. There also emerged new populations, mestizos and creoles, who reflected the movement of peoples, voluntarily and involuntarily, around the world. Such peoples reflected not only new mixtures of physical characteristics but new languages and dialects as well.

The final consequence of European expansion was the gradual development of a conception of mankind as a community. This is reflected quite clearly in the development of a body of international law designed to regulate relations among the states of the world. This legal order was linked to a conception of mankind rooted in an anthropology that saw a progression from primitive hunter-gathers through pastoralists to agriculturists and from life in the fields to life in urban communities. On the basis of this anthropology, the powerful imperial states were able to assert their superiority, culturally as well as militarily, to all the other human societies and to restrict...
leadership of the worldwide legal order to the Christian nations of Europe. They could also justify their conquest and domination of large parts of the world on the grounds that they were assisting the development of peoples still at the lower stages to reach their full human potential, an attitude that evolved into racism.

The Decline of Empires

The overseas expansion of Europe that began in 1492 was not an abrupt change in the course of European history. It was an integral part of a process that had developed between 1000 and 1300. In that period, many of the intellectual and institutional structures associated with post-1492 expansion were first created, structures upon which the explorers, missionaries, and settlers who followed Columbus built. The ironic consequence of the success of European expansion was that by the late eighteenth century, the oldest European colonial possessions in the New World were on the verge of a series of revolutions that were to overthrow European political domination without separating the new states from the European economic and cultural world. This in turn was the first stage in a process that only ended in the late twentieth century in a wave of decolonization that destroyed the great European empires. In their place, to an extent not always appreciated, the modern conception of an international order with a legal and institutional structure as an armature has implemented the Stoic and Christian conception of an international community. The empires faded away, but the cultural legacy remained.

James Muldoon

See also British Empire; Dutch Empire; French Empire; Portuguese Empire; Spanish Empire

Further Reading


Expeditions, Scientific

Scientific expeditions are attempts to go beyond traditional limits of geography, culture, and survival in order to further human knowledge by answering specific questions using exact observation in a disciplined
Scientific expeditions are often motivated by a desire for adventure or national glory, yet they can also bridge or even erase cultural divides in the search of knowledge. In antiquity the Greeks undertook the first recorded observational voyages, and in the Middle Ages Chinese civilization mounted large sailing fleets for exploration. In the seventeenth century European scientific societies sponsored expeditions focused around solving specific problems. In the eighteenth century, European Enlightenment thinkers promoted both science and educated travel for the advancement of Western civilization, resulting in the great European circumnavigations and American continental expeditions. As scientific disciplines and training became more narrow and specialized, expeditions focused on specialized studies to push special disciplinary boundaries. In the twentieth century, expeditions focused on the last frontiers of scientific exploration, remote regions like the Arctic and the Himalayas, the deep sea and outer space.

**Observations in Transit: Antiquity–1500**

The earliest records of human civilization show clear interest in both science and travel, but it is not until classical antiquity that we have evidence of the two coming together. Alexander of Macedon (356–323 BCE) included philosophers and observers on his campaign throughout Asia and the Mediterranean (334–323 BCE) and established Greek scholarly and scientific tradition in many of the lands he conquered, thus adding a scientific component to an expedition of military conquest. The Greek Pythias traveled from Marseille to England around 300 BCE to purchase tin but also made a thorough scientific study of the journey, recording observations while on land and sea. Pythias was the first to systematically measure latitudes while at sea, and, going beyond mere observations, he hypothesized a correlation between the tides and the phases of the moon.

Many voyages of the Middle Ages and Renaissance counted botanists and other scientific observers among their passengers. None was close in scale or ambition to the vast expedition of the Chinese explorer Zheng He. His first voyage left Liujia harbor in July 1405 with some sixty-seven enormous ships and 27,800 men, the largest scientific expedition ever undertaken. Sent by the emperor of the prosperous Ming dynasty (1368–1644), Zheng He’s fleet was prepared to take measurements and record nautical information, including compass readings and other observations, in a regular logbook, a practice that appeared among European expeditions only later. The fleet crossed the South China Sea, visiting Java, Sri Lanka, and India, and returning in 1407. In subsequent voyages with fleets as large as three hundred ships, Zheng He traveled to Yemen, Mecca, Somalia, East Africa, and India. Zheng He was ordered to study carefully the customs of local peoples everywhere he went, and each voyage included a team of doctors, naturalists, and observers.

**Problem-Solving Expeditions: 1500–1750**

As the Ming dynasty lost its wealth and prominence on the world stage (seafaring expeditions were even forbidden by order of the emperor in the late fifteenth century), European developments in sailing and science accelerated rapidly. As European monarchs began to spread their power and influence beyond the Mediterranean world to Africa, South Asia, and the Americas, these became new arenas for scientific expeditions. At the same time, European science was becoming a professional and often state-sponsored activity with large organizations guiding research, such as the Royal Society of London (begun in 1660) and the Paris Academy of Sciences (begun in 1666). These societies sponsored a new kind of scientific expedition that was designed not merely to gather general information but to solve specific scientific problems. French voyages to the South Atlantic, such as that of Bouvet de Lozier in 1738, were aimed at determining the existence and location of the fabled Terra Australis, a vast southern continent believed to lie just below the tip of South America and to harbor great riches. Expeditions to find Terra Australis were often scientifically motivated, in hopes of discovering new species of plants and animals and illuminating the question of the spread of animal and human varieties around the globe, one of the pressing
questions of eighteenth-century natural history and biology. Even more narrowly focused was the 1735 Maupertuis-Lacondamine expedition to discover the exact shape of the earth. This voyage, sponsored by the Paris Academy of Sciences, was the product of a scientific controversy between the followers of the French philosopher and physicist René Descartes (1596–1650), whose theories predicted that the earth was slightly smaller around the equator than around the poles, and the followers of Isaac Newton (1642–1727), whose new physical system implied that the earth must instead be slightly larger around the equator. Two parties were sent to remote parts of the earth, one to Lapland, near the North Pole, and one to Peru, near the equator, to measure the earth’s curvature at each location and thus decide which system was correct. Besides a wealth of botanical and geographical information and specimens, the expeditions returned with measurements that supported the Newtonian world system, a great experimental triumph for Newtonian physics.

1750–1800: Great Scientific Circumnavigations
Inspired by the potential for both science and colonialism of expeditions like those of Bouvet and Maupertuis, European kingdoms began to fund large-scale scientific circumnavigations beginning in the 1750s. Louis Antoine de Bougainville sailed around the world with a team of scientists trained in Paris to record the plant, animal, and human varieties of the Americas and especially the Pacific. Bougainville’s voyage sparked the European image of Pacific Islanders, especially Tahitians, as an ideal human society and served as an inspiration for the three voyages of the British captain James Cook between 1768 and 1780. Cook’s voyages combined the specific and general modes of scientific expedition. He first sought to observe the passage of Venus in front of the sun at Tahiti (astronomers used these observations to determine with great precision the distance between the earth and the sun), but also had instructions to make a general scientific survey of the islands. On board was the botanist Joseph Banks, who quarreled with Cook and never traveled with him again, but who became a central figure in European botany after the voyage. Cook’s second voyage aimed to finally disprove the existence of Terra Australis, circling Antarctica at a low latitude and finding nothing but ice. His third voyage aimed to find a Northwest Passage between the Atlantic and Pacific oceans but focused on exploring the Pacific, ending with the discovery of.

An important element of scientific expeditions is the records kept by those on the journey. The page shown here is a page from the notebook of Henry Stanley kept during his travels in Africa. Although not a scientist himself, his notebooks did add to scientific knowledge of the region.
Hawaii, where Cook was killed after a dispute with natives. The French response to Cook was to mount a nationally sponsored scientific circumnavigation led by Jean François de Lapérouse, with unprecedented scientific preparation: four sets of elaborate instructions, including lengthy ones from the Paris Academy of Sciences and the Royal Academy of Medicine. After all trace of Lapérouse’s expedition was lost in 1788, the Revolutionary government outdid the monarchy by outfitting the most ambitious navigational survey and rescue ship to date, captained by D’Entrecasteaux, which failed to find Lapérouse but nonetheless returned with the most accurate hydrographic charts of the Pacific yet. The Spanish expedition under Alejandro Malaspina (1789–1794) used Spain’s American colonies as a base from which to make a botanical and hydrographic survey of the entire Pacific from Alaska to Australia. At the close of the eighteenth century, the last of the great Enlightenment scientific expeditions, Lewis and Clark’s survey of the American West (1800–1803) and German scholar Alexander Von Humboldt’s long overland journey (1799–1804) through North and South America, perfected the new mode of broadly defined scientific travel.

**Discipline-Specific Voyages: 1800–1900**

The nineteenth century ushered in a new form of scientific expedition that reflected the new professionalization and specialization in science itself. Probably the most famous scientific expedition of all time was the product of this shift: The voyage of the *Beagle* (1831–1836) included a young naturalist who made guided observations on the specific variations of plants and animals across geographical regions. It was these observations that led the naturalist, Charles Darwin (1809–1882), to propose his theory of evolution some twenty years later, revolutionizing biology. The U.S. Exploring Expedition of 1838 aimed to put advances in navigation and charting to use to master the geography of the Pacific. The Challenger expedition (1871–1875), under the Edinburgh marine naturalist Wyville Thomas, actually created a new discipline, oceanography. Sparked by a debate over how deep in the ocean life could exist, Challenger took advantage of new dredging techniques to study all facets of ocean life.

Astronomy had long been a component of travel, and astronomers were frequent members of scientific expedi-
tions, but in the late nineteenth century a wave of support grew for specifically astronomical expeditions, especially those to observe solar eclipses. When photography was introduced into astronomy around 1870, it became a key element in transporting scientific information from the expedition site to the sponsoring country or laboratory. Expeditions such as Norman Lockyer’s to Bekul, India, to observe the solar eclipse of 1871, were central to the rise of nationally funded science in Britain and took advantage of its growing colonial empire. Many of the key figures in creating government support for all kinds of science in Britain were themselves planners of eclipse expeditions. By the late 1800s, national scientific styles began to strongly influence astronomical travel: British and French expeditions depended on highly centralized funding, while American ones were locally organized and funded, usually by a university or observatory.

Expeditions to the Final Frontiers: 1900–Present

With the dawn of the twentieth century, the focus of scientific travel shifted once again to geographical exploration, this time in the last regions of the globe left unexplored. The Canadian Arctic Expedition of 1913–1918, led by Vilhjalmur Stefansson, marks the beginning of this trend. Stefansson’s goal was to cross the Beaufort Sea and study the balance of earth, ice, and water at the edge of the polar ice cap. He was trained as an anthropologist and had spent winters with the Eskimo of northern Canada. After only a month of travel, the largest of his three ships was stuck in ice and soon crushed in a storm, together with half the supplies for the expedition. Stefansson and a small group pushed north using dogsleds and Eskimo hunting techniques, and the breakaway party managed to gather scientific observations on much of the Beaufort Sea, discover five new islands, and remap many of the coastlines. Reunited with the rest of the expedition at Cape Kellett, they continued their polar exploration and data gathering for another three years before returning with a wealth of new information and launching a century of scientific polar expeditions.

After World War II, Asia came once again to prominence in science and scientific expeditions. The same drive to reach the last frontiers of scientific study on Earth that had motivated the Canadian polar expedition pushed a Japanese team to map the fauna and flora of the Nepal Himalaya in 1952–1953. This expedition displayed the dawning international character of scientific expeditions: While all the members of the exploration party were Japanese, the specimens they gathered were sent to specialists around the world for identification and analysis.

While both the Canadian and Japanese expeditions relied on local, traditional methods to survive extreme conditions, new technologies in the second half of the twentieth century were also crucial in allowing expeditions to penetrate previously inaccessible realms. Beginning in the 1950s, underwater submersible devices allowed explorers like Jacques Cousteau to continue the investigation of oceans to a depth and in detail unimaginable fifty years earlier. Similarly, since the early 1960s, space exploration based on the fueled rocket and computer controls has defined a new frontier for scientific expeditions.

New Frontiers in Scientific Expeditions

As scientific expeditions move beyond the earth, specialization of scientific disciplines has culminated in research projects developed and carried out by teams of specialists at home. Projects based on one national style of organization and funding are giving way to cooperative, international ventures in which teams from different countries provide specialized contributions. Yet for all its novelty, space exploration still displays the enduring and unique combination of forces that has characterized scientific expeditions since antiquity: the desire to go beyond the traditional human boundaries and the need to rely on disciplined observation to tame the profusion of information encountered in unknown lands; the tension between the drive for national prestige and the desire to see science, especially scientific travel, as transgressing all political boundaries; and finally, the belief in the unique
potential of science to guide the quest for knowledge of the unknown.

*Jordan Kellman*

**Further Reading**


**Exploration, Chinese**

Much important exploration has occurred through sea voyages, which were a starting point for globalization in the early modern era of world history. While Western explorers have received much attention, the Chinese were also active in exploration.

**China’s Three Early Sea Routes**

A land-based nation, China is also surrounded by four seas: the Bo Hai Sea, the Yellow Sea, the East China Sea, and the South China Sea, which link China to the Pacific and Indian Oceans. Mainland China has favorable conditions for sailing in terms of the climatic patterns, sea and ocean currents, and tidal patterns, and inland transportation to the coast.

China’s maritime activities underwent a long evolution. Although scholars have debated when and how Chinese maritime exploration began and how much Chinese sailors achieved in their pre-modern era (ending around 1840), the extent of China’s maritime undertakings can be seen from the sea routes that Chinese sailors used. There were three types of routes: local short-range routes along China’s own coast; medium-range routes to East Asia, South Asia, and Southeast Asia; and long-range routes to West Asia and East Africa.

By the Western Han period (206 BCE–8 CE), it is recorded that Chinese ships reached Simhala (now Sri Lanka). In the Eastern Han period (25–220 CE), Chinese ships went beyond Sri Lanka to reach destinations in West Asia. In 97 CE, Gan Ying, the Chinese envoy designated to the Roman empire, went as far as the edge of the Persian Gulf. From the Tang dynasty (618–907) onward, some of these sea routes were frequently used by the Chinese, the Indians, and Arabs; they formed the so-called Silk Routes (as compared with the overland Silk Roads).

**Maritime Growth Begins with the Song Dynasty**

By the tenth century, most of the sea routes used by the Chinese followed coastlines. Major maritime progress was made during the Song dynasty (960–1279), when China experienced its medieval economic revolution. For the first time, Chinese ships were able to cross some 4,000 kilometers of open waters in the Indian Ocean from Malacca to Sri Lanka, avoiding the coastal detour in the Bay of Bengal. They even sailed from Sri Lanka to Ghubbat al Qamar, an inlet of the Arabian Sea on the Arabian Peninsula, across another 4,000 kilometers.
A Chinese sailing ship, of a type used in Chinese explorations in the Indian Ocean.

of ocean. This was a huge leap in Chinese maritime advancement.

With ongoing incremental improvements in technology, the Chinese sailed faster and more accurately. As a result, sea voyages became progressively shorter. In Western Han times, a trip to the vicinity of Singapore took some 150 days, but the same journey took only 40 days during the Song dynasty. During the Sui dynasty (581–618) and the Tang, it took more than a month to travel from Sri Lanka to the Persian Gulf, whereas by the Ming dynasty (1368–1644), to cover a similar distance took just twenty or so days.

At the center of the Chinese progress in sailing was improvement in navigation and shipbuilding. Astronomical navigation became well established in China by the end of the ninth century, and it was enhanced by the use of the compass during the tenth century, which led to the stage of partial dead reckoning, that is, navigating in part without reliance on the stars, using measured travel distance and compass positions instead. Later on, sophisticated seaway compass charts became available among Chinese navigators; these contained information on main landmarks, star elevations at chosen locations in different seasons, travel distances, and compass readings for various sea routes. A good example is Zheng He hanghai tu (The Navigation Chart of Zheng He’s Voyages), from the fifteenth century.

In terms of shipbuilding, Chinese technology reached its maturity by the twelfth century with the “Fuzhou-type ship” (fuchuan), which was used exclusively for sea voyages. Its main features were a ballasted keel and bilge keels together with a low deck length-beam ratio for stability; a V-shaped bottom and multiple sails and jibs (three to twelve as recorded) for speed; multiple stern rudders for steering; and a hull of clinker-arranged planks with multiple holds for a stronger structure. During the same period, the versatile “shallow-water ship” (shacheuan), commonly known as the Chinese junk, was also invented; its distinctive features were a keel-less hull and a U-shaped bottom. The Fuzhou-type was the standard for the Ming fleet.

By the mid-fifteenth century, the Chinese were among the most knowledgeable, best-equipped, and widest-traveled sailors in the world, having come by 1440 to a total of 153 new places in such geographically dispersed regions as Southeast Asia, South Asia, the Arabian Sea, the Red Sea, the East African coast, and even the Mediterranean region.

**Ming Voyages: Their Glory and Outcome**

Undoubtedly, the best recorded case of Chinese exploration was that of Admiral Zheng He (1371–1433). Without Zheng He and his publicized seven voyages to the Indian Ocean, much of Chinese maritime ability and achievements may have been obscured in history, as happened with the Polynesians.

Recruited as a young eunuch to enter the inner circle of the Ming Court, Zheng was appointed in his early thirties to command a long ocean-going voyage in 1405, despite the fact that he had no apparent sailing experience. It appears that Zheng’s constant sailing for the next three decades (until 1433) served the Ming court the purpose of keeping him away from the state politics—a dignified way to achieve his exile following his involvement in a court coup. In this context, there was an element of sailing for the sake of sailing associated with Zheng’s journeys, all of which resulted in economic losses for the Ming dynasty. Nor did Zheng He’s voyages lead to greater prosperity in foreign trade, which might have let the court recoup the cost of the voyages.

In reality, the sole purpose of the ill-defined voyages was as a public relations campaign to win friends for China overseas. Indeed, Zheng and his men behaved like philanthropists, distributing gifts wherever they went. Even so, the actual effectiveness of the campaign remains
highly questionable. The number of countries that paid tribute to the Ming increased very little during and after Zheng’s voyages. The main evidence that “international peace” was promoted by Zheng’s visits comes from the fact that Zheng set up four regular stopovers in Champa (in present-day southern Vietnam), Sumatra, Sri Lanka, and Guli (Calicut in present-day India) instead of turning these places into China’s colonies.

Spectacular as they were, Zheng He’s multiple-legged trips were by no means unprecedented in Chinese diplomacy: Twelve centuries earlier, during the Three Kingdoms period (221–265), Sun Quan, the King of Wu, sent Zhu Ying and Kang Tai overseas for a twenty-year-long diplomatic mission, during which time they visited Southeast Asia, the South Asian subcontinent, and the Arabian Sea region. Similar efforts were made during Yuan rule (1279–1368). And Zheng He was not alone in his adventuring during the Ming: Another navigator, Shi Jinping (?–1421), toured Asia as Imperial Commissioner, traveling at least as far as Sumatra, Java, and Japan.

Due to the unclear motives, extravagant nature, and doubtful impact of Zheng’s voyages, the Confucian literati during the Ming did their very best to ignore them. Zheng’s records survived only in the hands of his closest aides, Ma Huan and Fei Xin, in the form of travelogues entitled Yingya shenglan (Tours to Great Sites Overseas) and Xingcha shenglan (Voyages on Heavenly Rafts), written in 1451 and 1460, respectively. Since then, most of Zheng’s findings have remained unknown to the large majority of the Chinese population.

However, the sheer scale of Zheng’s operation shows China’s organizational skills and accomplishments in the maritime sector: As many as 208 vessels and 28,640 marines were involved in a single voyage, taking multiple sea routes simultaneously with detachments in order to maximize geographic coverage. It has even been suggested that Zheng’s detachments may have visited Australia and part of America across the Atlantic Ocean.

In the end, Zheng’s voyages proved to be unsustainable. Cool-headed cost-benefit calculation finally prevailed among Confucian decision makers, and such wasteful voyages were never undertaken again. Chinese sailors during the Qing dynasty (1644–1911) were content to remain within the China seas. In a twist of historical fate, this made Zheng a legend and his journeys the pinnacle of Chinese maritime history; Zheng achieved a worldwide record that was only broken by Europeans with different political and economic institutions and agendas, as seen from the activities of Christopher Columbus and Vasco da Gama.

**Chinese Exploration in Historical Perspective**

China’s achievements in exploration over the long run (from the beginning of the Han in 206 BCE until the end of Zheng’s journeys in 1433 CE) were significant by pre-modern standards. But, as in many other areas, the Chinese were ruthlessly surpassed by the post-Renaissance Europeans, who enjoyed the fruit of the science revolution, the military revolution and, finally, the industrial revolution. All these revolutions took place after Zheng’s era.

 Ironically, during the late nineteenth century when Chinese took to the sea again in large numbers, they were no longer accomplished mariners on showy Chinese treasure ships. Rather, they were helpless coolie laborers on foreign ships on the way to sell their cheap labor to the West, showing just how poor and weak China became since Zheng’s time.

*Kent G. Deng*

*See also World Maps, Chinese*

**Further Reading**


Naval Institute of Ocean Cartography and Department of Maritime History, and Dalian Sea Transportation Institute (1988). *Xinhian Zheng*
Exploration, Space

Since the first people walked upon the earth, the heavens have beckoned to the human spirit and imagination. The drama of the sky has enthralled forty thousand generations of men and women. From prehistoric times, the sky and its celestial bodies have played key roles in mythology and religion throughout the world. Early American peoples, from the Aztecs of Southern Mexico to the Anasazi of the North American Southwest, used the movements of the sun, planets, stars, and moon for calendrical and agricultural purposes and worshipped gods embodying the sun and moon. Similar religious trends emerged throughout the ancient world on every continent, and until the spread of monotheism, nearly every world culture worshipped some aspect of the sky. Hence, although the ancients had relatively little knowledge of the universe, they recognized the power of the heavens.

By medieval and early modern times, astrology, or the belief that the motion of the stars and planets shape the fates of individuals, kings, dynasties, and empires, was influencing the decisions of both political leaders and peasants. Not until the scientific revolution of the seventeenth century was the idea of the stars and planets as physical bodies obeying regular laws accepted by influential people. For human space travel to become a reality, the work of Kepler, Newton, and Galileo first had to predict the movements and characteristics of bodies in space.

Early Development of Space Travel and Rocketry

Space travel didn’t become feasible until the twentieth century. Rocket technology, which would become the basis of all space travel, began with the rocket development work of Konstantin Tsiolkovsky (1857–1935) in Russia and Robert Goddard (1882–1945) in the United States. The Chinese had invented a rocket weapon in 1232 using gunpowder, which was ultimately adopted in technologically sophisticated societies throughout the world. During the eighteenth and nineteenth centuries, various pioneers improved the rocket’s effectiveness as a weapon. However, it is Konstantin Tsiolkovsky of Czarist Russia who is remembered as the “father of astronautics.” Although he dealt with many aspects of the rocket as an instrument of interplanetary travel, his most important contributions concerned propellants and the rocket design needed to achieve flight into the Earth’s orbit and then farther into space. In particular, he discussed the possibility of powerful, controllable liquid propellants, such as hydrogen and oxygen, and multistage rockets. Although Tsiolkovsky accurately predicted many future developments, his writings were not widely read during his life.

The work of the American Robert Goddard also concerned multistage rockets and liquid propellants. In 1926 at a farm in Auburn, Massachusetts, Goddard used liquid oxygen and petrol to send the first liquid-propelled rocket into the air at a rate of 60 miles per hour. He continued
his experiments, with a launch in 1935 ultimately achieving 1,000 feet and a speed of 700 mph. Despite his genius and some financial support from the U.S. government, the reticent and publicity-shy Goddard did not contribute directly to the American space program. However, his reticence paved the way for the Transylvanian and German rocket and space travel visionary, Hermann Oberth (1894–1989), who corresponded with Goddard. Like Tsiolkovsky, Oberth dealt with both detailed engineering and the broader issues regarding space exploration. He helped to spread popular awareness of the rocket and the possibilities of space travel throughout Germany. In the 1920s and 1930s, various rocket societies in Europe and the United States, which included engineers as well as visionaries, met to build rockets as well as to advance their general knowledge of space travel.

**Military Rocketry and the Imaginative Vision**

Meanwhile, leaders in the USSR, building on Tsiolkovsky’s ideas, formed a military organization in 1928 under young engineer Valentin Glushko (1908–1989). The laboratory, called the Gas Dynamics Laboratory (GDL), built solid-fuel war rockets. In 1931, Soviet leaders gained control of another key organization, the Group for the Study of Reaction Motion (known in the USSR as GIRD), which emphasized more powerful liquid-fuel rockets. GIRD had emerged from a core of Soviet engineers and space enthusiasts who dreamed of going to the moon and beyond. The Red Army funded this group as well as GDL. Sergei Korolev (1906–1966), the future mastermind behind the Soviet space program, was one of GIRD’s most enthusiastic members. During this era, Korolev focused on rocket aircraft and honed his organizational skills. Through the efforts of GIRD, the USSR launched its first liquid-fuel rocket in 1933. Its success caused Soviet leaders to take a greater interest in the use of rocket technology in weaponry. Ultimately, leaders consolidated GIRD and GDL into a single organization, RN-II, which made further contributions to rocket development. The tragic advent of Stalin’s purges in 1934 threatened the nascent Soviet rocket program. Many Soviet rocket pioneers and space visionaries perished in the purges. Stalin’s police imprisoned both Korolev and Glushko, but they managed to survive, working as state prisoners to advance rocketry.

In Germany, the state also harnessed space enthusiasts for military purposes. The most notable of these individuals was Wernher von Braun (1912–1977), who would play a vital role in the United States space program as well as in the German rocket program. Born to a prominent family, von Braun was active in the VfR (Society for Space Ship Travel). He joined the German Army Ordnance Department in 1932 to work on a liquid-fuel rocket with a range greater than any preexisting artillery. In 1937, the group moved to Peenemunde, a new proving ground on the Baltic. Von Braun, who was talented as a manager as well as an engineer, led the rocket development program.

Although the Nazi leadership supported the program only erratically, von Braun and his associates made progress as they dreamed of future trips to the moon and Mars. The V-2/A-4 rocket, or “vengeance weapon,” first flew in late 1942. It was much more powerful than any former rocket, standing almost fifty feet high, weighing 28,000 pounds, reaching a height of sixty miles, and carrying a heavy bomb. It burned liquid oxygen and ethyl alcohol and had sophisticated guidance and control systems. This rocket was ancestor to many American rockets, including the powerful Saturn V which would take the first humans to the moon. Workers enslaved by Hitler built most of the V-2 rockets used in World War II. Although the weapons were not accurate, their victims had few defenses against them. In September of 1944, Hitler launched a V-2 bombardment against targets in southern England and liberated Europe. However, al-
though powerful, these weapons made little difference in the war’s final outcome.

**Space Exploration and the Cold War**

As the Cold War between the United States and the Soviet Union intensified after World War II, both the Americans and the Soviets utilized the survivors of Nazi Germany’s military rocket teams. Stalin’s rocket program, approved in 1947, was intended to culminate in the production of an Intercontinental Ballistic Missile (ICBM). The Soviet army recreated the V-2 rocket through the SS-I and SS-II rockets, but the Soviet aviation industry avoided rocket technology. The first Soviet ICBM, the SS-6/R-7, was built to carry the heavy Soviet nuclear warhead. However, its most significant flight occurred on October 4, 1957, when it launched the first human-made satellite, *Sputnik I*, into Earth orbit. As euphoria overtook the Soviet Union, the American public reeled in shock. If the Soviets were capable of launching a satellite to fly over American soil, were they not also capable of launching a nuclear weapon to the United States? And why hadn’t the United States launched a successful satellite first? Nikita Khrushchev (1894–1971), who succeeded Stalin as Soviet premier in 1958, recognized the symbolic importance of Sputnik. The worldwide perception was that the USSR had overtaken the United States in science and technology; this implied military superiority.

As Americans panicked, the practical President Dwight D. Eisenhower (1890–1969) remained secure in his knowledge of America’s military superiority in the areas of intermediate-range missiles, miniaturized nuclear weapons, bases near the Soviet Union, and spy planes. Just a year after Sputnik, von Braun’s Army rocket team managed to launch the first American satellite, *Explorer 1*, with a modified Redstone rocket, the Jupiter-C. That fall, on 1 October 1958, Eisenhower announced the creation of the National Aeronautics and Space Administration (NASA), which would be based on the modest National Advisory Committee for Aeronautics (NACA). Although the military branches wished to carve out a place for themselves in the arena of spaceflight, they would not hold responsibility for the high-profile manned space programs of the 1960s.

NASA’s first mission, now that the Soviets had beat it into space, was to put a man in space first. NASA called the program *Project Mercury*. On 9 April 1959, NASA administrator T. Keith Glennan announced the names of the first seven American astronauts who would fly in *Project Mercury*. The American media and public went into a frenzy over the “Mercury 7,” one of whom they believed would be the first man in history to orbit the Earth. Americans viewed the photogenic military test pilots as space warriors who, through their bravery, would save the United States from the spreading “red tide” of communism. In the USSR, however, Khrushchev and Sergei Korolev, the Soviet space program’s chief designer, had likewise determined that a Russian should be the first man into space. Indeed, the Soviets won this particular race as well. On 12 April 1961, cosmonaut Yuri Gagarin, in his *Vostok* spacecraft atop a new A-1 rocket, launched into Earth orbit. The United States reacted strongly to the news, and NASA administrators and engineers accelerated the pace of *Project Mercury*.

The first American astronaut was Alan B. Shepard Jr. His fifteen-minute suborbital flight, launched on 5 May 1961, by the von Braun-designed Army Redstone rocket, did not match the Soviet achievement but it did put America back into the space race. However, the Redstone launcher, with a thrust of 75,000 pounds, did not have the power to place a manned spacecraft into the Earth’s orbit. For this objective, NASA used the U.S. Air Force’s Atlas ICBM, with a total thrust of 360,000 pounds.

**The Race to the Moon**

Following on the heels of Shepard’s flight, President John F. Kennedy (1917–1963) made a dramatic announcement to Congress on 25 May 1961. He called for the achievement of landing a man on the moon and returning him safely to the Earth before the end of the decade. Kennedy’s announcement accelerated the space race because it gave an increased sense of national importance and urgency to NASA. The agency continued with *Project Mercury*, but it accelerated development of its
lunar landing program, Project Apollo. In December of 1961, NASA announced Project Gemini, which would place two men into Earth orbit for extended periods. Gemini would practice many of the techniques used on Apollo, including the rendezvous of two spacecraft, the docking of two spacecraft, and spacewalking.

NASA successfully launched astronaut John H. Glenn Jr. into orbit on 20 February 1962, in the Mercury spacecraft, *Friendship 7*. This flight required much more effort on the part of the astronaut, the flight controllers, and the spacecraft, which had to perform critical maneuvers and keep the astronaut alive for several hours. The Mercury program continued with three more flights, concluding with Gordon Cooper’s successful 22-orbit flight on 15 May 1963. Mercury achieved its major objectives of placing a man into Earth orbit and recovering him successfully.

NASA announced Lunar Orbit Rendezvous (LOR) as the Apollo mission mode in June of 1962. With LOR, von Braun’s Saturn V rocket, with a thrust of 7,500,000 pounds, would propel a crew spacecraft, a service module with supplies, and a lunar module toward the moon. Once in orbit around the moon, the lunar module would separate from the command and service modules, carrying two astronauts to the moon’s surface while the command module pilot stayed in lunar orbit. The lunar module itself would have two stages, an ascent stage and a descent stage. When the astronauts finished their exploration of the moon’s surface, they would return to lunar orbit in the ascent stage, leaving the descent stage on the moon, and dock with the command module. On approach to Earth, both the ascent stage and the service module would be jettisoned. Only the command module would return to Earth. Although NASA originally thought this method too risky, its weight-saving advantages and the fact that each component could be engineered independently for a particular purpose ultimately made it the most practical of the modes considered. The LOR mission mode determined nearly every aspect of Apollo development, from crew training to spacecraft design to spacecraft maneuvering systems.

Mercury astronaut Gus Grissom and “New Nine” astronaut John Young piloted the first flight of Project Gemini, on 23 March 1965. The Gemini spacecraft, while based on the Mercury spacecraft, was larger and had a number of more sophisticated systems to allow performance in maneuvering, rendezvous, and docking. Later Gemini flights would dock with the Agena target vehicle, which was really the hollowed-out upper stage of an Atlas rocket fitted with docking adapters. But on 18 March 1965, Korolev dealt the United States another blow when Aleksei Leonov made the first spacewalk, lasting twelve minutes and nine seconds. Leonov and fellow cosmonaut Pavel Belyayev orbited the Earth in *Voshkod 2*, an updated version of Gagarin’s *Vostok* spacecraft.

Edward H. White III of Gemini IV performed the first American spacewalk on 3 June 1965. However, from this point on, American performance in manned spaceflight would consistently outstrip Soviet performance up to the lunar landings.

Between March 1965 and November 1966, ten Gemini flights took place. While the United States set one space record after another, no cosmonauts orbited the Earth. Gemini VI rendezvoused with Gemini VII in October of 1965, with the crew of Gemini VII spending two weeks in Earth orbit. The first successful docking of two spacecraft occurred during Gemini VIII, which was crewed by Neil Armstrong and David Scott. The final flight of the program, Gemini XII, solved many problems inherent to spacewalking and helped to refine flying techniques as well as spacesuit technology. With the conclusion of Project Gemini, spaceflight had become operational if not routine, and many of the skills needed for Apollo had been honed to sharp accuracy.

Although Project Gemini had seen some close calls in space, NASA’s first major catastrophe occurred on the ground. On 27 January 1967, during a routine ground test at the Kennedy Space Center, the Apollo One command module burst into flames and the three crew members, Gus Grissom, Ed White, and Roger Chaffee, perished through asphyxiation. Investigations showed that though faulty wiring was the immediate cause of the fire, neither NASA nor contractor North American Aviation had fully understood the need for all components to
work together in a complex system. Many at NASA and at North American believed that the fire gave them a new awareness of possible problems and actually facilitated the success of Apollo. The tragedy shook public confidence in Apollo, but, inspired by the memory of Kennedy, Americans continued to support the program.

With many changes built into the Apollo spacecraft, Apollo 7, a test of the command and service module in Earth orbit, launched on 11 October 1968. Apollo 8, launched on a Saturn V on 21 December of the same year, successfully circumnavigated the moon with the command and service modules after the USSR, with Zond 5, had managed to orbit the moon with an unmanned spacecraft. Satellite photos revealed that the Soviet moon rocket, the N-1, might soon be ready to take men to the moon. Project Apollo culminated in the Apollo 11 mission, launched on 16 July 1969, with commander Neil Armstrong, lunar module pilot Buzz Aldrin, and command module pilot Michael Collins. Two weeks before the launch, a Soviet N-1 moon rocket blew up on its launch pad, effectively ending the moon race. Armstrong and Aldrin touched down on the moon on 20 July 1969, with a television audience of approximately a billion people. Backed by many thousands of workers, managers, and engineering specialists, Armstrong, Aldrin, and Collins met Kennedy’s goal and fulfilled the age-old dream.

With Apollo now fully operational, the focus of the program shifted to scientific lunar exploration. With the exception of Apollo 13, subsequent missions made significant discoveries regarding the geological composition and history of the moon using new equipment, such as the lunar rover. The final Apollo mission, Apollo 17, splashed down on 19 December 1972. The crew had taken the first photograph of the full Earth from space, underscoring the planet’s fragility and interconnectedness.

In retrospect, it is not surprising that the Americans reached the moon before the Soviets, despite early Soviet success. The death of Sergei Korolev in 1966 sealed the fate of a Soviet moon program that was underfunded and subject to corruption, with resources spread too thinly over many design bureaus. The result was less equipment, fewer tests, and weaker technology. The American space program had the benefit of a thriving economy, largely due to its position after World War II, which was much stronger than that of the Soviet Union. Government and private enterprise formed strong partnerships in the United States that benefitted the space program through NASA’s practice of awarding contracts to aerospace companies who would then build space hardware. Ironically, the democratic-capitalist United States government had better command of its space resources than the totalitarian USSR.

**After the Space Race**

With the winning of the space race and the advent of détente, America’s political will to support large-scale space initiatives dissolved. The Skylab temporary space station project of the 1970s utilized leftover Saturn V rockets and increased knowledge of living and working in space. The Apollo-Soyuz test project of 1975, in which Apollo and Soviet Soyuz spacecraft rendezvoused and docked in the Earth’s orbit, marked the first major cooperative venture in space.

During the late 1970s, NASA completed the development of the space shuttle program. Originally intended to serve as a taxi with routine flights to and from a permanent orbital space station, the shuttle instead stood on its own because of NASA’s reduced budget. A private company built the shuttle fleet, which had its maiden voyage with the shuttle *Columbia* launching on 12 April 1981. During their twenty-three-year history, space shuttle...
flights have deployed military satellites, housed numerous science experiments, carried the Hubble space telescope into space, and helped build the International Space Station (ISS). Yet the two major disasters of the Shuttle program, the Challenger explosion on 28 January 1986, and the disintegration of Columbia on 3 February 2003, underscored the problems of constant, routine access to space that had plagued the shuttle program since its inception. In both cases, experts blamed the nature of NASA bureaucracy, which had become inflexible since the days of Apollo.

The Soviet policy of glasnost (openness) initiated under Premier Mikhail Gorbachev (b. 1931) meant that the successes and failures of the Soviet space program could be discussed openly. This policy certainly helped the success of the Mir space station (1986–2001), the world’s first long-term orbital structure for living and working in space. Assembled with updated versions of the Soyuz spacecraft, the station proved the feasibility of long-term space habitation, hosting several American crews during its tenure. The fall of the USSR in 1989, although difficult on the Russian program, opened up new commercial opportunities for spaceflight in Russia.

**International Cooperation in Space**

Since the end of the superpower space race, many other nations have begun to participate in the arena of space exploration. Major European nations joined the European Space Agency in 1980. The agency has contributed key satellites and scientific instruments to Russian, American, and joint endeavors. Additionally, the agency has produced many launchers for commercial use. Groups in Japan, including the National Space Development Agency (NASDA) have also made beginning strides into space with sophisticated technology. The Chinese space program, while younger and not as versatile as the European and Japanese programs, did succeed in putting a man into space on 15 October 2003.

The construction of the International Space Station (ISS) began in 1994. Although NASA has overall responsibility for the project, major components have been built by Russia, ESA, and NASA. The station has been widely criticized for cost overruns and delays that have consumed much of the NASA budget. However, the station has hosted important research, particularly in the area of pharmaceuticals, and has provided humans with a permanent place to live and work in space.

**The Future of Space Exploration**

Two major themes currently dominate much of the discourse surrounding space exploration: the possibility of a manned mission to Mars and the widespread privatization and democratization of space travel. For years space enthusiasts of many stripes have been lobbying for a manned mission to Mars. However, without a major political impetus, such as the need to upstage the Russians in the Cold War, American leaders have seen little reason to fund such an expedition, and countries other than the United States do not have the resources for such a mission in the near future. President George W. Bush (b. 1946) recently announced plans for a permanent lunar base with a Mars landing in the next twenty years, but even with careful budgeting, this will be difficult to complete without a strong national commitment.

The flight of the first privately funded spacecraft, SpaceShipOne, designed by Burt Rutan (b. 1943), on June 21, 2004, inspired many entrepreneurs who wish to expand the opportunities for human spaceflight. Yet SpaceShipOne did not go into orbit and could not prove that private companies, other than those already working for NASA, would soon be overtaking government efforts in the space sector. Existing space technology is extremely expensive and space travel is dangerous. These factors currently prevent space exploration from being immediately profitable and accessible to all. Yet if dedicated scientists and engineers continue to pursue solutions to the problems of propulsion, spacecraft control, and long-term human survival in space, the possibility of space exploration for all—both in the Earth’s orbit and in interplanetary space—will come closer to our grasp.

Kristen Starr
Further Reading


Extinctions

The fossil record reveals that the history of life has been a process of speciation, the diversification of organisms into new species, accompanied by extinction, the disappearance of existing species. Speciation and extinction are equal partners in evolution. In neo-Darwinian theory, genetic variation and natural selection are the primary agents in evolution. Natural selection favors genetic variation that improves an organism’s chances of surviving to reproduce within its environment. Successful variation is passed on to the next generation. Its frequency in the population increases from generation to generation until it eventually replaces the earlier, less advantageous trait. Acquisition of new traits sometimes enables organisms to invade new habitats. In neo-Darwinism, the environment is the prime source of selection. Therefore, environmental change—or change of environment, in the case of habitat invasion—is considered the chief cause of species evolution. New environmental conditions change selective pressures operating on populations of organisms. Populations must adapt to new circumstances or perish without descendants. In addition to natural selection, random factors and rare, catastrophic events also appear to play a role in extinctions.
Earth is some 4.6 billion years old. Geologists divide this time into eras, periods, epochs, and ages. (See table 1.) Life first appeared on Earth late in the Precambrian era some 3.5 billion years ago. The majority of species that evolved since that first appearance are now extinct. Through time, species generally disappear individually in “background extinctions.” However, during at least five mass extinction events, huge numbers of species perished together over (geologically) short spans. (See table 2.) By eliminating some previously successful species and allowing other, formerly minor, groups to expand and diversify, each mass extinction restructured the biosphere.

**End-Cretaceous Extinctions**

The Cretaceous (114 to 65 million years ago [mya]) was the final period in the age of dinosaurs. At its close, virtually all of these great beasts—together with more than 50 percent of Earth’s species—disappeared suddenly and entirely. Many scholars attribute their extinction to climate change, but the disappearances were not gradual and the dinosaurs appear to have been diversifying up to the end. Luis Alvarez et al. (1980) note that rock layers dating to the Cretaceous boundary commonly contain a thin clay layer of iridium, a rare metal resembling platinum, and spherules or tektites, spherical bits of glassy rock formed from molten silicate droplets. They interpret this as evidence that one or more mighty asteroids or comets struck Earth around 65 million years ago. They hypothesize that the impact generated a giant vapor cloud (out of which the spherules condensed), sent shock debris across the globe, created an immense fireball, and cast a huge plume of dust into the atmosphere. As this dust plume ascended, atmospheric winds spread it into a globe-embracing cloud that blocked sunlight from the earth’s surface for a year or more. In this scenario, mass extinctions resulted from both the initial impact and the disruption of the food chain that followed. Perhaps the collision also ignited vast global fires that added huge smoke plumes to the sun-blocking haze of the windblown impact debris. A crater between 200 and 300 kilometers

### Table 1.

*Geological Time Scale*

<table>
<thead>
<tr>
<th>Eras</th>
<th>Periods</th>
<th>Epochs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cenozoic</strong> (65 million years ago [mya] to present)</td>
<td>Quaternary</td>
<td>Holocene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pleistocene</td>
</tr>
<tr>
<td></td>
<td>Tertiary</td>
<td>Miocene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oligocene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eocene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paleocene</td>
</tr>
<tr>
<td><strong>Mesozoic</strong> (248 to 65 mya)</td>
<td>Cretaceous</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jurassic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Triassic</td>
<td></td>
</tr>
<tr>
<td><strong>Paleozoic</strong> (540 to 248 mya)</td>
<td>Permian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carboniferous</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Devonian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Silurian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ordovician</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cambrian</td>
<td></td>
</tr>
<tr>
<td><strong>Precambrian</strong> (4.6 billion to 540 million years ago)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2.

The “Big Five” Mass Extinction Events in Geological Time

<table>
<thead>
<tr>
<th>Event</th>
<th>Time Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-Cretaceous period</td>
<td>c. 65 mya</td>
</tr>
<tr>
<td>Late Triassic period</td>
<td>c. 210 to 206 mya</td>
</tr>
<tr>
<td>Late Permian–Early Triassic period</td>
<td>c. 252 to 245 mya</td>
</tr>
<tr>
<td>Late Devonian period</td>
<td>c. 364 to 354 mya</td>
</tr>
<tr>
<td>Late Ordovician period</td>
<td>c. 449 to 443 mya</td>
</tr>
</tbody>
</table>
in diameter of the proper age and aspect that has been identified in the subsurface of the Yucatan Peninsula of Mexico may be the impact point. Asteroid collisions may have caused the earlier mass extinctions of the Late Devonian, the Permio-Triassic and the Late Triassic as well. Whatever its cause, the Cretaceous extinctions ended the dinosaurs’ domination and provided empty ecological space that was ultimately filled by the mammals, a hitherto insignificant class of vertebrates.

**Pleistocene/Holocene Extinctions**

The Pleistocene epoch (1.8 mya to 8000 BCE) was preceded by the Pliocene and followed by the Holocene epoch (8000 BCE to present). It is called the Ice Age because continental scale glacial ice sheets cyclically advanced and retreated during this time. Near its close, anatomically modern people (*Homo sapiens sapiens*) evolved, probably in Africa, and spread throughout most of the earth. Although background extinctions occurred throughout the epoch, Pleistocene animal life remained rich. Then, between 10,000 BCE and 6000 BCE, extinctions occurred on a massive scale. “Megafauna,” species with large adult body sizes and body weights over 45 kilograms (100 pounds), were most severely affected.

Although extinctions occurred on all continents, they did not occur on them uniformly. The number of megafaunal species that disappeared in the New World was much higher than elsewhere. During the 4,000 years after 10,000 BCE, North and South America lost the Colombian mammoth, mastodon, horse, camelops, Shasta ground sloth, saber-toothed cat, and seventy other genera. Extinction rates in Europe and Eurasia were lower. Nonetheless, the woolly mammoth, woolly rhinoceros, Irish elk, and other cold-adapted creatures disappeared after 14,000 BCE. Musk oxen, steppe lions, and hyenas disappeared there but survived elsewhere. The distribution of horses and steppe bison became greatly restricted. Late Pleistocene extinction rates were lowest in Africa. Megafaunal extinctions that occurred there, frequently at the beginning of the epoch, were modest in number at its close.

**What Was the Cause?**

Rapid climate change at the Pleistocene’s close is a possible cause. During the last 128,000 years of the epoch, the Northern Hemisphere experienced long continental glacial advances punctuated by short-term ice contractions or interstadials. Glaciation terminated abruptly about 10,000 BCE and was followed by rapid deglaciation and a warmer, moister climate. During this interstadiol, European, Eurasian, and North American forests expanded northward, severely curtailing the range and population sizes of plains megafauna like the horse, mammoth, bison, and woolly rhinoceros. This interstadiol ended about 9000 BCE, and glacial conditions returned for another thousand years. However, extinctions were not entirely coeval with this deglaciation. Further, rapid climatic changes had occurred often during the Pleistocene without triggering similar waves of extinction.

Presumably, most Pleistocene species had evolved physiological tolerance for climatic change or could migrate in the face of it. Further, some species, most notably the horse, became extinct in North America but survived in Eurasia to be reintroduced to the New World in historic times. If the environment of North America had been fatal to the horse at the end of the Pleistocene, would the wild descendants of Spanish mustangs be able to roam the western United States with such success today?

While climatic change cannot explain the Pleistocene extinctions, perhaps “anthropogenic overkill,” human hunting on a limitless scale, does. Two kinds of evidence suggest this: (1) the asymmetry of worldwide extinctions and (2) the stratigraphic association between human stone tools and the bones of extinct species. Variation in the pace of extinction in Africa, Eurasia, and the New World may reflect the different arrival times of fully modern humans on each continent. Megafauna and the hominids evolved together in Africa over the last four to six million years and anatomically fully modern *Homo sapiens sapiens* probably evolved there some 150,000 years ago. Paul S. Martin, Quaternary palynologist (1984) suggests that the extinction rate of African megafauna was low by the terminal Pleistocene because the species had evolved behavioral means of coping
with human predation by that time. Anatomically fully modern *Homo sapiens sapiens* did not appear in Europe until around 35,000 years ago. The shorter period of association between European game animals and these new human predators may account for the greater rate of megafaunal extinctions in Europe compared to Africa.

The stratigraphic association between the stone tools and the bones of extinct megafauna found in the terminal Pleistocene age archaeological sites is also taken as evidence of human “overkill.” The vast quantities of mammoth bones recovered from the celebrated kill sites in the Ukraine indicate Eurasian hunters slaughtered prodigious numbers of these beasts there. Such evidence is strongest in North America where direct and primary association between the distinctive lanceolate-shaped Paleo-Indian stone projectile points and megafauna is well documented. In North America, the extinction of key elements of Pleistocene megafauna, including ground sloths, camelopses, tapirs, mastodons, various species of bison, mammoths, and horses between 10,000 and 8000 BCE is clearly correlated with the abrupt appearance of the Paleo-Indians between 9500 and 9000 BCE. If the specialized Paleo-Indian hunters were the first people to arrive in the New World, they would have found a hunter’s paradise filled with game but empty of human competitors. That paradise would have been unlike anything in the Old World as the animals in it had not evolved the behaviors they needed for dealing with two-legged human predators. As Paleo-Indian peoples grew in number, they would have expanded southward and across the continent in an advancing wave. By employing game drives and other wasteful hunting strategies that indiscriminately killed large numbers of game, these early hunters may have extinguished

### The Buffalo Hunt

The American bison or buffalo was almost driven to extinction in the nineteenth century. While the trade for hides was the major cause, traditional Plains Indian hunting practices also contributed. The following account of the traditional Blood Indian buffalo hunt was written by Mike Mountain Horse, a Blood Indian, who relied on information provided by his father and uncles about tribal life in the late nineteenth and early twentieth centuries.

There were two ways adopted by the Indian in despatching the buffalo. When following the first method, success depended upon numerical strength. This required the engaging of a large number of young men to participate in the hunt, which took place in the vicinity of one of the hundreds of natural “buffalo pounds” scattered throughout western Canada. These pounds were large, deep depressions in the ground at the foot of a steep bank. A runway or lane, cone-shaped, was constructed first, with large boulders on the flat at the top, in line with the depression at the bottom of the hill. These large rocks were placed at certain distances apart; behind each boulder a warrior concealed himself, armed with a robe. Mounted men previously detailed by the chief drove in a large herd of buffalo. As soon as the herd approached the first two boulders farthest from the bank, a member of the mounted warriors covered himself and his mount with a large buffalo hide and immediately galloped his horse to the head of the herd, for the purpose of decoying them through the lane of boulders. As the herd passed each boulder, the warriors crouching behind these huge rocks jumped to their feet and began shouting and yelling, accompanying this by waving their robes vigorously and extending their efforts by assisting the mounted men in driving the buffalo towards their doom, which was accomplished when they fell off the bank into the pound. Some of the animals were killed outright from the effects of the fall while others suffered broken legs and other injuries. The uninjured buffalo went round and round the inside of the pound while the warriors stood on the edge and shot them down with their arrows.

In this hazardous manner the primitive Indian acquired his supply of fresh meat which was the chief item on his menu.

megafauna on an ever-widening front. It seems plausible that anatomically modern humankind—practicing predation on the large and profligate scale reflected at kill sites like Solutré, Dolni Vestonice, and Olson-Chubbuck—tipped the balance against megafauna already stressed by changing climate. If these sites do indeed reflect human connivance in “megacide,” they provide a cautionary tale: once destroyed, species do not come back.

The extinction of the megafauna must have forced big-game-hunting peoples to realign their subsistence. Mark Cohen, the archaeologist, (1977) asserts that, by reducing available game, the extinctions initiated a “food crisis” after around 8000 BCE that forced people in Eurasia, Europe, Africa, and the Americas to expand their subsistence bases and exploit a greater range of species and habitats. Hitherto neglected species like fish, crabs, turtles, mollusks, land snails, migratory waterfowl, and rabbits became a routine part of the diet, and plants were exploited systematically for fruit, tubers, nuts, and seeds. Ultimately this food crisis may have stimulated the development of agriculture.

**Late Prehistoric and Historic Period Extinctions**

Extinctions at the hands of humans continued in the late Prehistoric and Historic periods through (1) habitat fragmentation and destruction, (2) the introduction of predators or foreign competitors (particularly on islands), (3) over-hunting, and, more recently, (4) hunting or gathering wild organisms for market sale. By late prehistory, few of the world’s habitats had not felt the impact of humankind. Nonetheless, all impact was not the same. While that of the hunter-gatherers was modest, agricultural systems transformed the landscape. Extinction of species through habitat loss has chiefly been due to the spread of agriculture and the competition between indigenous fauna and domestic animals. Yet domesticans are not the only new arrivals that generate extinctions. On islands, numerous bird species have vanished following the human introduction of rats, mongooses, or snakes. The brown tree snake, brought to Guam around 1950, extirpated nine of the thirteen native forest birds on the island. Species extinction has also resulted from intentional human persecution. A dramatic example is found in the archaeological record of New Zealand. Long isolated from mainland Asia, New Zealand supported a unique array of large, ground-dwelling, flightless birds called moa. Moa species ranged from the size of turkeys to giant, ostrich-like creatures ten feet or more in height. Having evolved in the absence of predators, they probably had little fear of the Polynesian colonists who probably arrived on the island sometime in the thirteenth century. Within one hundred years, the eleven species of moa had been hunted to extinction.

Human persecution is especially likely to result in extinction when species are exploited for the market. The passenger pigeon inhabited eastern North America in uncounted numbers; their migrations darkened the skies for days. In the nineteenth century these birds were systematically harvested for market, and the species was extinct by 1914. Similar fates befell the great auk, the dodo, and numerous other bird species. An equally grim fate faces chimpanzees and gorillas, currently sold as “bush meat” in parts of Africa. Rhinoceroses are nearly extinct because ground rhino horn is regarded as an aphrodisiac in Asia. Marine fisheries worldwide are threatened by systematic market and sport fishing. Future extinctions may include cod, tuna, blue marlin, swordfish, and some species of whale. The dismal list goes on and on.

**Extinction Matters**

Extinctions have affected world history profoundly. First, the mass extinction of the dinosaurs at the end of the Cretaceous period allowed the diversification of the mammalian order and, ultimately, the evolution of humans. That distant extinction event marks the nascent beginning of human history. Second, by forcing great changes in subsistence, the great extinctions in the Late Pleistocene may have triggered a “food crisis” that led to agriculture. Third, Late Pleistocene extinctions greatly impoverished the fauna of the New World. In the absence of key domesticable animal species, New World agriculture came to be based on plants. Old World peoples, living in...
an environment less impoverished by extinctions, domesticated many animal species and, as a result, were plagued by zoonoses, infectious diseases like smallpox and flu derived from them. As long as they remained isolated from the Old World, Native Americans remained free of such diseases. Following the arrival of Europeans and Africans, however, their lack of exposure and immunity laid them open to massive “virgin land infections” that contributed directly to their defeat and large-scale genetic replacement by peoples from the Old World. Late Pleistocene animal extinctions patterns thus helped to determine the human population makeup of the Americas.

A Sixth Mass Extinction?

Present rates of extinction appear to be between 1,000 and 10,000 times the rates seen through most of geological time. The possibility of global warming darkens the picture further as changing climatic patterns may cause extinctions by disrupting species distribution and abundance. Is the world on the brink of a sixth mass extinction event? And, if so, can anything be done to avert it? In the near term, international efforts at saving such critical habitats as the world’s forests and ocean fisheries must be intensified. Introduction of foreign species into new environments must be curtailed and the protection of endangered species increased. Such protection is never cheap or easy but experience with the California condor, the sea otter, the American bison, the whooping crane, and other species indicates that it can be done. Simultaneously, zoos and aquariums must act decisively to breed endangered species in their charge. Reproductive and developmental biology can help. Genome banking of sperm from endangered species is promising as are more experimental approaches like somatic cell cloning. Chinese biologists are seeking to increase giant panda populations using nuclear transfer techniques involving bears as egg donors and surrogate mothers. Attempts at genetically restoring vanished species like the Tasmanian tiger and the mammoth are in the offing.

Whatever we do, we must recognize that extinctions in the present age are caused by the inordinate success of our own species. Therefore, controlling our populations and bridling our destructive impulses are essential. Global economic underdevelopment intensifies both of these problems. Poor people do not kill rhinoceroses or hunt endangered apes out of malice. They do so to relieve their poverty. Stopping these practices demands eliminating the economic inequalities that necessitate them. No small task this, but, if we fail in it, the final impact of extinction on world history may be the elimination of our own species.

D. Bruce Dickson

Further Reading

Famine is a complex social phenomenon and is distinguished from starvation by its social aspect. Individuals starve to death as a result of reductions in food supply, but societies experience a more complex response. Not all members of society suffer equally from food shortages. As Amartya Sen has pointed out, the poorer and less privileged sections of society, whose entitlements to food are least secure, suffer more than the richer, more privileged sections. The history of famine is not simply a history of factors that cause a reduction in food supply, or of the imbalance of food production against population growth. It includes the history of social and political responses to these problems, the history of social formations, and the history of social differentiation concerning food entitlement. While there has traditionally been a classification between natural and politically induced famines, the distinction does not really hold. Every famine that develops to take on significant mortality consequences indicates a failure of famine avoidance and relief measures. Most famines have had multiple causes.

All previous social formations have experienced food shortages and famines. It is only in relatively recent times that agricultural development has progressed to such an extent as to enable sufficient food stocks to be accumulated to pose the possibility of the eradication of world famines. The fact that famines do still occur is no longer a consequence of there being insufficient food, but of political and social problems including those associated with local distribution.
Famine in Early Social Formations

At earlier times there had not been a progressive move toward the eradication of hunger. The shift from hunter-gatherer to settled farmer societies was not associated with improved nutrition. Mark Nathan Cohen has assembled anthropometric data that indicates that early settled society was more vulnerable to food shortages and he argues that starvation from this time may have been associated with political and economic issues more than with agricultural events. There is evidence in the earliest civilizations in Egypt, China, India, the Middle East, and classical Europe of considerable concern over food supplies and the establishment of large state granaries and famine relief and transportation systems.

In China the granary system dates back to antiquity and the tribute system was well developed before the Grand Canal was opened in 611 CE linking the Huang (Yellow) River in the north with the Chang (Yangzi) in the south. Part of this supply system was destroyed by the Mongol invasion of the thirteenth century and imperial food supply problems were complicated when first Kubilai Khan and then the Ming emperors established the capital at Beijing in the north rather than in the Huang River basin at Xi’an (Ch’angan) or Luoyang, or at Nanjing on the Chang. In 1325 there was a massive famine that is claimed to have killed between 4 and 8 million people. Faced with this challenge, the rulers revived the tribute system, granaries, and famine relief work and developed them to a new level. In the great drought of 1740–1743, at a time when the European subsistence crises were still causing a substantial number of deaths, the scale of Chinese famine relief was enormous and mass mortality was largely avoided. By the early part of the nineteenth century about 400,000 tons of grain a year were transported through the tribute system to feed the northern garrisons and a Beijing population of 800,000. Although the granary system began to decline from the time of the White Lotus Rebellion at the end of the eighteenth century, transport on the Grand Canal probably peaked in the first half of the nineteenth century, on the eve of the first Opium War of 1839–1842, before the British cut this vital supply link and plunged the country into turmoil and a period of famine and rebellion.

There is some dispute as to how efficient the Chinese empire was in the period before the troubles of the nineteenth century. Modern scholars argue that living standards were much higher than in Europe until the time of modern imperial troubles.

India under the Mughals had also developed successful ways of dealing with famines, before the British advance into India following Clive’s victory at the battle of Plassey in 1757. It was under British rule that economic growth slowed below the rate of population growth and per capita living standards fell to dangerous levels. There were few signs of major famine in India before the Great Bengal Famine of 1770 under the administration of the East India Company.

As the classical urban population of the south of Europe grew in size, more grain had to be imported into these regions and the authorities became increasingly concerned about establishing granaries and other food support systems. Governments provided support to assist the transportation of grain into the major cities. Famines
Monsoons, Famine and Disease

In agricultural villages in South Asia farmers depend on the monsoon to provide water for their crops. But, whether it arrives on time or late or not at all, it is also a source of disease and death as indicated by this account from a missionary among the Tamil people in South India in the late nineteenth century.

A monsoon that fails to arrive or comes late results, surely and inevitably, in the most dreadful famine, especially in the higher regions not touched by the rivers, which are altogether dependent on the northeast monsoon. This happened, for example, in 1877 where in the district of the small kingdom of Mysore north of Coimbatur, in a six-month period, 150,000 cattle and sheep succumbed for lack of fodder... An official from Mysore who did all he could to prevent famine in his district... wrote at the time: “In this taluk of my district 1500 persons died last month, and in the last few days I saw what I had never seen before, moving skeletons, skeletons too weak to walk or even speak, and human corpses lying by the wayside eaten away by dogs.”

The more indigent natives find the arrival of the monsoon and the temperature change less agreeable than do the Europeans living in the country. Because of their scant clothing and the poor state of their dwellings which give them little protection against inclement weather, they are obliged to suffer a great deal from bad weather, and actually the death rate among them is greater in November than in any other month. One therefore never hears the gruesome sound of the long death-horns more often, never are the devil’s temples, large and small, decorated as they are in the “calamity month” as November is called, when in the villages of the pariahs [untouchables] the piled-up refuse starts to ferment, making them centers of epidemics.


would occur when there was a breakdown in these supplies.

The European population then spread to the colder less hospitable areas to the north, where, given the technology of the time, the population was more vulnerable to the influence of the weather. The greatest recorded European famine was experienced in northern Europe from 1315 to 1322. Modern scholarship tends to question the Postan thesis, which presumed the existence of overcropping and soil exhaustion throughout a very large area of northern Europe. The exceptional damp weather for a number of years appears to have been the main factor. The result was massive social disturbance, food deprivation, and high mortality levels. The weakening of this generation may have contributed to the continued massive population losses from the Black Death a few decades later. Together the sharp population losses of these years appear to have caused a change in the relative values of land and labor, which probably contributed to the weakening of feudal relations and the growth of more commercial ones.

Subsequently European famines have never been so severe, although periodic subsistence crises would produce smaller-scale famines periodically down to the eighteenth century in many areas. The last of these great peacetime subsistence crises in the northern and central regions of Europe occurred in the early 1740s. The situation was worse in the extremities of Europe with major famines in Finland in 1696–1697, in Ireland in the 1840s, and in Russia in 1871, 1891, and into the twentieth century. The rest of the world experienced similar problems, but with the period of subsistence crises lasting much later, and with larger amounts of disruption to the traditional supply systems as a result of wars and colonial expansion.

Western colonialism is no longer seen as a benign process of modernizing the uncivilized world. There is a growing realization of the costs of the destruction of the local domestic economy and of the traditional coping practices, which made it difficult for these societies to respond adequately to the serious natural and political challenges that they faced at this time. The serious famines of the 1880s and 1890s in India, China, South America, and Egypt are presented rather provocatively as
“Victorian Holocausts” (Davis 2001) in which colonial administrators hindered the local government from responding to the challenges in the El Nino Southern Oscillation.

Twentieth-Century Famine

During the two major world wars of the twentieth century, both sides attempted to disrupt their enemies’ food supply channels and to cause famine and social disruption. The rationing and food securing operations of the main developed countries largely succeeded in avoiding this outcome. However, in several of the poorer countries in central and eastern Europe and Asia there were very serious consequences. Large amounts of food and famine relief were provided by the Americans to Belgium throughout World War I and to large areas in central and eastern Europe and Russia after both of these wars. This did largely contain the crisis in these areas. There was, however, a major famine in Russia in 1921–1922, which was partly related to the continuation of civil war following World War I and the revolution. During World War II there was a famine in the occupied Greek islands, in the Netherlands after the Battle of the Bulge in 1944, and throughout the war in occupied and besieged parts of eastern Europe and Russia. The famine in blockaded Leningrad is perhaps the best-known case.

In Asia World War II contributed to serious famines in China (1937–1945), India (Bengal, 1943), and Vietnam (1942–1944). In subsequent years famines have often accompanied minor military engagements between poorer countries.

There has been much controversy over the relationship between famine and Communism. While it is true that the three major famines of the twentieth century (USSR 1921–1922 with 3 million deaths, USSR 1930–1933 with 6 million deaths, and China 1958–1961 with 15–20 million deaths) all occurred in Communist countries, it is somewhat superficial to blame these famines on Communism per se. Both Russia and China had frequently suffered from famines before they became Communist, and in both countries the Communist revolution had taken place during and following a period of major economic collapse that had itself been associated with major famines. In China this was the extended period of troubles from the 1850s to 1948; in Russia it was a shorter period, 1917–1922. During these troubled periods the major cities experienced extensive famines as the state structure weakened and the traditional supply system broke down. The successor revolutionary states that were born out of these troubled times were anxious to develop the economy and rebuild supply structures.

In the railway and industrial age there appeared to be great prospects for these states, which both experienced remarkable growth in the first decades of their revolution. In both cases the second decade brought about excessively ambitious plans to escape from the poverty trap, which in combination with unexpected poor weather led to the onset of a series of factors that resulted in the largest famines of the twentieth century. Attempts were made by both regimes to conceal these “Great Leap” famines and to deny their existence. It was only years later that the true scale of these disasters became apparent.

Despite these early Communist disasters, the USSR and China did develop their economies and industrialized to a certain extent. They have proved to be no

In this drawing from the late nineteenth century, Chinese farmers suffering from famine take their house apart and rebuild it in a more auspicious location.
match for the advanced Western economies, but their experience in central planning was for a while highly popular in the newly independent former colonies, who were also looking for a way of industrializing in a hurry. It is the underdeveloped world that has failed to industrialize that continues to experience famine, especially in sub-Saharan Africa.

There are some scholars who claim that the Great Irish Famine of 1841–1845 and the Russian famine of 1931–1933 were both cases of genocide in which a major colonial power, Britain or Russia, attempted to weaken and control a troublesome region. Although in both cases the colonial power can be accused of acting insufficiently vigorously to reduce the famine, there is little evidence to support the case that these famines were caused on purpose.

Famine and Disease

Before the late nineteenth and early twentieth centuries famine had always been associated with major epidemic diseases, often typhus. Relatively few people had died from starvation, because other epidemic diseases killed them first. This applied to the Great Irish Famine of 1847, the Russian Famine of 1921–1922, and the Bengal Famine of 1943. But epidemic diseases have played a less important role in subsequent famines and especially in the Soviet Famine of 1931–1933 and the Chinese Famine of the Great Leap Forward, 1958–1961. We are now in a new age of famine demography in which simple medical and sanitary intervention can greatly reduce the likelihood of death from disease. Unfortunately, this has not resulted in an absence of great mortality in famines. It has, however, reduced the scale of mortality, which otherwise would have been considerably greater.

Outlook in the Twenty-First Century

The Malthusian threat of population growth outstripping growth in food supplies has failed to be realized in the twentieth century and is unlikely to emerge in the twenty-first century.

The threat of major world wars to cause famines by disturbing major supply channels also failed to emerge in the major countries in the twentieth century, although it has been an important factor in smaller poorer countries. It would be extremely rash to presume that any major conflict in the future would have a similar result. Disruptions in food supplies to the underdeveloped world are unfortunately continuing. Famine will remain a major challenge to the world in the twenty-first century, despite the ability of the world to produce food surpluses.

Stephen G. Wheatcroft

Further Reading

What is fascism? That is a question that has been debated since its appearance in the turbulent years following World War I. Defining what fascism is and, just as importantly, what it is not is crucial not only for understanding movements that appeared in the twentieth century, but also those that may arise in the twenty-first.

It is a common mistake to label any tyrannical, or seemingly tyrannical, political entity or individual as fascist. This applies both to premodern dictatorships and to more recent military dictatorships, which, while they may be authoritarian and oppressive, are not fascist. For while the few fascist movements that actually achieved power, such as in Italy and Germany, have been more or less tyrannical, most of the world’s tyrants have not been fascists, for they do not adhere to the core beliefs of the true fascists, such as a strident antiliberalism, anticonservatism, and especially anticommunism.

A more difficult delineation can be made between fascist movements and authoritarian regimes. The concern of authoritarians is to create a strong and stable nation and they usually do not alter society in any appreciable way. While these governments may espouse some tenets of fascism, such as anticonservatism, they generally leave traditional elite structures—powerful regional families, church officials, military leaders, and entrenched economic cartels—in place. Authoritarian governments rule over a largely passive or, perhaps more correctly, pacified populace, but they do not try to reshape those masses into instruments of radical social change. True fascist movements on the other hand attempt to energize and mobilize the masses in an effort to restructure and refashion society along specific ideological lines. Robert O. Paxton (2004) has recently argued, and this is sure to be contested, that Franco’s Spain, Salazar’s Portugal, and Peron’s Argentina, while ruling in an authoritarian manner, never envisioned nor attempted to create a new order, a world radically transformed through “redemptive violence.”

**The Emergence of Fascism**

The word fascism is rooted in the Latin fāscis, meaning bundle, and the fāceses, an ax girdled by a bundle of rods that was carried before the magistrates in ancient Rome. The fāceses symbolized both unity and authority as achieved through the absolute rule of law. Benito Mussolini (1883–1945), an Italian socialist turned rabid nationalist by World War I, employed the term fāscismo to express the sentiments of those who united in support for the Italian war effort and subsequently rejected those socialists and communists who, as internationalists, opposed it. Mussolini eventually formed a movement he termed the Fasci di Combattimento (Combat Group), to promote what was variously termed national syndicalism, national corporatism, or national socialism (a term that was bandied about Europe after World War I and used most notably by the German National Socialist or Nazi movement).

This “Third Way,” as many supporters called the path of fascism, hoped to combine the passionate nationalism of traditional conservative elites (while at the same time rejecting aristocratic hierarchies in favor of a meritocracy founded on strong male leadership) with a socialism based not on class conflict, but on a cooperation of classes that would result not only in more equitable economic distribution, but in a more unified and powerful nation. The fascists hoped to create a new order, a transformed world that eliminated or at least ameliorated what they saw as negative aspects of modernity, such as capitalism and its attendant consumerism (understood as wanton materialism), feminism (understood as an unnatural rejection of male supremacy), liberalism, and especially communism (understood as leading to an equally
unnatural social leveling that allowed mediocrity to rise to the heights of power). Since Mussolini's fascist movement was the first to achieve power and notoriety, the term fascism was quickly picked up by, or attached to, a number of similarly focused groups that emerged in the following decades throughout Europe, Latin America, Asia, Africa, and elsewhere.

**Fascism as a Response to Modernization**

The fascist rejection of prominent aspects of the modern world led some contemporaries and later scholars to see the movement as a reactionary rejection of modernity. Consequently opponents argued that fascism was an antimodern triumph of barbarity and irrationality—little more than nihilism empowered. However, such a view is at best only partially accurate. A closer look at the interrelationship of fascism, modernization, and modernity is warranted.

Modernization is a process of rapid change rooted originally in the Industrial Revolution. The many changes wrought by industrialization radically altered traditional political, social, and economic structures and patterns of behavior. For instance, urbanization and the resultant migrations of people from rural areas to cities changed patterns of work, which in turned changed traditional familial and gender relationships, often experienced against a backdrop of shockingly new cultural forms in art, music, and literature. All this change, often occurring rapidly, generated a strikingly new culture that was a tenuous fusion of remaining elements of the traditional preindustrial culture and the new industrial world. It is this fused culture that we call modernity.

While modernization originally began in Western Europe and the United States, the process quickly began occurring in other parts of the world, first generated by Western imperialism, but later through indigenous efforts to modernize traditional political, social, and especially economic structures. Although modernization as a process is fairly uniform, the traditional cultures around the world that have been and are being affected are myriad. Therefore the modernity that results from the fusion of traditional preindustrial and industrial societies will be different each place modernization occurs. It is best then to speak of multiple and culturally varied expressions of modernity.

Fascism is most likely to arise in those places where the delicate negotiation between traditional and modern elements breaks down. In other words, fascism tends to emerge where modernity fails. The fascist rejection of elements of modernity, such as unchecked capitalism, liberalism, communism, and feminism, is more than simply antimodernism. Indeed most fascist movements embraced modern technology, such as radio, film, amplified...
sound, planes, and automobiles, as a means not simply to return the nation to its preindustrial culture, but to transform the new industrial world into something different. Fascists are not simply rejecting modernity, but attempting to create an alternate modernity.

**Core Myths and Mobilizing Passions**

Recent scholarship has taken a closer look at how the fascists interpreted the modernity they lived in, and how they envisioned the alternate modernity they hoped to create. Griffin (1993) and Paxton (2004), while disagreeing on many issues, both see important similarities in what they term respectively the core myths or mobilizing passions of the fascists. These central beliefs impelled the creation of the movements, shaped their development, and mobilized the masses that supported them.

The fascists believed that the modernity they lived in was decadent and degenerate. It was in a state of extreme crisis approaching apocalyptic proportions. The nation, in fact the world, had reached a historic turning point, a time of apocalypse or salvation. The degenerative forces of modernization were often associated with what was variously termed Westernization or Americanization (meaning materialism or consumerism, female liberation, indecent art and music) and, in the case of Nazism, localized primarily in the imaginary machinations of the Jews. Cleansing the nation of those degenerating forces would lead to a rebirth of the nation and indeed, a regeneration of the world. The fascists saw themselves as a chosen elite under the command of a leader to whom they were attached with near messianic devotion. The leader and the led believed they had a mission to purify modernity, often through violence that was conceived as a redemptive. The nation resurrected and the world saved, the fascists hoped to usher in a new age, an alternate modernity that would combine desired aspects of an often mythologized glorious preindustrial culture with elements of the industrial world that were desired (such as the energy of the accelerated pace of urban life, which, if properly channeled, could transform the industrial masses from a chaotic horde into a unified, mobilized, and redirected community). The fascist conception of rebirth therefore is as future-oriented as it is backward-looking, combining the myth of the golden age with the myth of the emerging new age.

The Italian scholar Emilio Gentile (1996) called this use of myth a “sacralization of politics,” and argues that fascism is a form of political religion. However, it can be counterargued that fascism also includes a secularization of millennialism, as the core myth detailed above is clearly apocalyptic, millennial, and messianic. This is certainly the case with Nazism, a movement that was interpreted by its followers as being a spiritual response to a spiritual crisis of apocalyptic proportions. They believed their leader was sent by God to save not only Germany, but also the world. Millennialism itself is but one possible response to rapid and radical change brought on by any number of converging catalysts, the forces of modernization being but one. Seen in this light fascism may be a modern variant of millennialism, secularized in some cases, still sacred in others. Most likely it is a fusion of both the secular and the sacred, since fascism, like the modernity it responds to, is a hybridized phenomenon.

**The Future of Fascism**

When communism fell in the late 1980s, many Eastern European countries were challenged by sudden entry into free market economies, loss of welfare safety nets, and the rapid influx of Western and especially American culture. All this rapid change was accompanied by an increase in organized crime and a proliferation of prostitution and even sexual slavery. Not surprisingly, the 1990s and the dawn of the new century have seen the appearance of fascist or at least neofascist movements in former Soviet bloc countries like Germany, Poland, Hungary, and Slovenia and in the Balkans, as well as in the Soviet successor states Russia and Ukraine.

Western Europe, however, has not been immune from neofascist or populist movements, as socialist welfare systems struggle under an aging population and increased use of immigrant labor that has generated intense resentment amongst indigenous workforces. Moreover, one can
argue that the shift from industrial to postindustrial economies creates a new variation of modernity, as societies create a new cultural fusion of former industrial society with the emerging new postindustrial culture. Where this new modernity struggles to develop, fascist-oriented movements may continue to arise.

The United States, while it has never seen a single fascist movement with broad populace support, has had numerous right-wing movements that overlapped with fascism in both ideology and practice, such as the Aryan Nations of Christ and even the Ku Klux Klan. Many of these movements have had a strong evangelical Christian core, interpreting modern America as culturally decadent and morally bankrupt, and further believing that the country is both the seat of the coming New Jerusalem and a battleground with those liberal forces they believe are threatening apocalypse. The millennial core shared with fascism is clearly there, as is the rejection of modernity and the desire to create an alternate Christian modernity, a new America cleansed of ungodly materialism, liberalism, and Hollywood degeneracy. Most scholars believe, however, that a profound political crisis, unlike any seen in U.S. history, would be necessary to take such Christian fascism from the margins to the mainstream.

The failed modernity that has occurred in much of the Middle East (West Asia) and Indonesia, and the subsequent rise of radical Islamic militancy, has led some to interpret events like the Iranian revolution of 1979, the Taliban takeover in Afghanistan, and the rise of the al-Qaeda terrorist organization as forms of Islamic fascism. Contrary to traditional fascist movements, Islamic fascists hope to resurrect, not a strong, unified nation, but a purified multinational caliphate. However, unlike actual historical caliphathe, which were often models of pluralism and religious tolerance, the new Islamic fascists hope to cleanse their countries of all degenerate influences. Like earlier fascists, the degenerate forces of modernity are usually associated with the West in general, the United States in particular, and quite often projected upon the Jews of Israel. The Islamic fascists also share with other fascists an overly militarized culture that favors male dominance as being both natural and divinely inspired.

The emphasis on the control or protection of women is rooted less in Islamic religion than it is in a rejection of the so-called corrupting influences of modernity. Women therefore become pawns in a game between an imagined coming purified caliphate and the corrupt modern world. Much more research, however, needs to be done to ascertain if movements such as those that arose in Afghanistan or Iran are truly fascist, or simply religious tyrannies that share with fascism a rejection of modernity and employ a similar symbolic vocabulary.

If we see in fascism one possible response to the rapid and radical change brought on by modernization, and if we further see modernization as an ongoing and never-ending process, then we can expect fascist movements to continue to arise. Fascism then, unfortunately, may still have a future.

David Redles

See also Hitler, Adolf; World War II

Further Reading

Festivals are ludic (playful) performances, festive occasions that provide an atmosphere conducive to achieving a number of societal goals, among them the creation, preservation, and encouragement of societal unity. Often that unity must be maintained in the midst of diversity, whether of diverse people within society or of competing political and economic interests. An example comes from the United States: Because of the massive influx of immigrants into the United States after World War I, the government published a manual of suggestions to promote U.S. national solidarity and patriotism. Basically, the manual suggested performances of festival activities to promote “Americanization” of immigrants. One suggestion was to have immigrant children climb into a giant shoe that was wheeled onto a stage. Then the shoe would be unveiled as “America.” Children wearing clothing symbolic of their home countries would emerge from the shoe, take off their symbolic caps and kerchiefs, and appear transformed as “Americans.”

The element of reversal—immigrant children transformed into U.S. citizens—is present in all festivals. Newfoundland mummers (performers in a pantomime), for example, perform in what most people would term simply “fun.” Certainly, the riotous fun of their performance and its accompaniment provide a good time. However, it is a good time that allows even the most conservative members of the community to break the rules. It is a time of license, of what anthropologists refer to as “ritual rebellion” or “ritual of inversion.”

These occasions of festival or carnivalesque license tend to reaffirm unity. They not only provide breathing room, but also point to problems within society. By holding these problems up to ridicule, festivals enable people to laugh and prod those people who have the power to fix the problems.

The Palio festival of Sienna, Italy, is an example. The Palio is both a parade and a horse race. It is also a religious and political event. The people of Sienna use this festival to seek the regeneration of their city. The competitions that comprise the Palio—parade competition, horse races, political and religious maneuvering—are on a lower level of urban life. However, a higher level of urban life keeps these competitions within limits and works toward their resolution, leading to a restoration of unity.

Festivals of the dead are also common throughout the world. They frequently take place a year or more after the death of a person and involve villagers and relatives and age mates of the deceased. The cost and preparation are enormous. The festivals feature a great deal of eating, dancing, singing, and celebrating. Revelers sing songs and tell stories that recall the events of the deceased’s life. Objects associated with the deceased are displayed and may be given away. The festivals serve to renew ties within the community, bringing together old friends, relatives, and others.

The Iroquois of western New York state showed the incorporating purpose of festivals quite clearly. Among the Iroquois, prisoners were never exchanged. If the Iroquois did not kill a prisoner, they adopted him. That adoption meant that the prisoner had to change his identity. The prisoner had to run a gauntlet and then receive new names. At the next religious festival elders pronounced the new names, tribes, and families to the community. The opposition between one’s old identity and new identity...
was ended in the religious festival, as was the opposition between the former prisoner and his new nation.

The Ox Dance (Boi-Bumbá) festival in Parintins, Amazonas, Brazil, is performed during the last three days of June. It has become the largest and most magnificent folk festival in northern Brazil. It, too, supports the idea of seeking unity in opposition. On the one hand, it asserts caboclo (mestizo—a person of mixed European and American Indian ancestry) identity through use of cultural and ritual themes. On the other hand, it asserts that identity in a positive fashion as part of being Brazilian.

Anthropologists have long viewed U.S. town festivals as equivalent to public ritual in traditional society. Again the theme of public rituals’ reflecting community values and contemporary relations is present. For example, the U.S. West celebrates a number of festivals similar to Cheyenne, Wyoming’s Frontier Days. These festivals include competitive events that are resolved in unity, including parades, rodeos, carnivals, bazaars, livestock shows, and musical performances. These festivals unite people in a common heritage while releasing tensions and fostering pride and unity.

Many societies stage New Year’s festivals. Probably the most famous is the Chinese New Year festival. The Chinese observe a lunar calendar; thus, their New Year falls on a different date than that of the Western calendar. A number of rituals are associated with the festival, beginning about a month before the festival. People begin to purchase presents to give away, special food, clothing, and decorations. The festival preparation includes a massive house cleaning, including a thorough sweeping to sweep away bad luck. People also repaint doors and windows, usually in the lucky color red. The Chinese then decorate doors and windows with paper decorations representing good things such as happiness, wealth, and longevity. For many people the highlight of the festival takes place on New Year’s Eve. In fact, people pay greater attention to details of food, customs, and rituals on the eve of the new year. Food consists of seafood and dumplings. These foods represent good wishes. Other foods also have symbolic value. Prawns represent liveliness and happiness, and fish salad is said to lead to good luck and prosperity. Additionally, people usually wear red to ward off bad spirits. Similarly, people avoid black and white clothing because that represents sorrow and mourning. After an evening spent in family pursuits, people watch midnight fireworks.

On New Year’s Day married people give children and unmarried adults money wrapped in red envelopes. Families go visiting, wishing people happiness, indicating their willingness to forgive and forget offenses and asking others to do so in return. The festival seeks to restore peace and harmony in the community.

**African Festivals**

Throughout history African festivals have provided people with a means for making social and political commentary, even a structured form for rebelling and changing governing policy. Into the present day these festivals have the same social functions—to keep society open and to allow for commentary on mores, customs, and political organization.

As times change, the names of these festivals may change, but their purpose remains strangely familiar. For example, during the transformation of Hausa society that resulted from colonialism, the Wasan kara-kara ceremony underwent changes, including a change in name. During colonialism white administrators and other members of colonial society became the butt of humor. The Hausa introduced “white masquerades” because no white man would portray another white man in an African masquerade in a derogatory manner. Consequently, Hausa masqueraders put on a white face to mimic the white colonial administrators and to satirize those with political power so that they could mend their ways.

In other parts of West Africa the Poro and Sande/Bundu associations used festivals to maintain societal order. The Poro and Sande used spirits to aid in their occupations. Similarly, the Egungun masquerade societies of Yoruba in southwestern Nigeria used spirits to establish and control social order.

**Dance and Festival**

Generally, in Africa a festival is not a festival without masquerade dancers. These dancers are members of reli-
gious societies. Four kinds of masqueraders exist. Each kind has a particular role: (1) to represent gods or spirits of nature, (2) to embody ancestral spirits, (3) to soothe the gods through dance, and (4) to entertain.

Different kinds of masks also exist. The animal mask is common. It has different styles and represents different forms of animals. Some masks are small and graceful, whereas others are large and have swaying raffia (fiber of the raffia palm). Obviously, dancers adapt their style of dancing to fit the kind and size of the mask they wear.

For example, the Ikpelweme ancestral masqueraders of the Afemai people of Bendel State, Nigeria, wear costumes that are skin tight and deeply colored. They also wear masks and headpieces made of embroidered cloth. These dancers are able to execute rapid dance movements. The Yoruba Egungun ancestral masqueraders wear carved headpieces and loosely flowing robes. The masks are quite heavy and prohibit rapid dance movements.

Entertainers everywhere have evolved from ritual societies. They generally are hired to perform for a fee. They might perform, for instance, at a ritual festival. However, they also might perform at a private party. They are generally obliged to sacrifice to an ancestral spirit. After the sacrifice they perform acrobatic dances, tinged with magical quick changes. They also ridicule strangers, especially any Europeans in their view.

In Tanzania the ritualist who circumcises a child may also perform a dance.

Dance in Africa is joined with music and song and defines the function of individuals and groups within the community. The ruler in a complex African society must perform a formal ritual dance to state his authority. Among the Yoruba of Nigeria the ruler leads masqueraders through town while dancing within a carriage. His wives dance, as do subordinate chiefs. Then other members of society perform dances appropriate to their ranks —hunters, palace chiefs, women market chiefs, and so on until all have paid homage through dance.

**Secret Societies and Festivals**

The Poro and Sande associations of West Africa are generally presented as preeminent models of secret societies. However, other secret societies exist in Africa. The Egungun masquerade societies of the Awori and Egbado territories of southwestern Nigeria, for example, are of fundamental importance in the life of the people. The masqueraders play a basic role in the political life of the community, as they have for many centuries.

The Ogun festival is supposed to be a celebration of Ogun, the god of iron. However, the Yoruba masqueraders, in defiance of many born-again Yoruba Christians and the traditional ruler, use the festival to celebrate the prowess of the Yoruba people. The young men who take part in the festival assert their right to control Yoruba political life and help define the meaning of culture.

Thus, the masqueraders present another example of old forms being adapted to new circumstances, in this case, the changing political scene and the struggle between older and newer definitions of political power and culture.

**Types of Masks and Festivals**

Essentially three types of masks exist. One type is worn for theatrical effect. These masks impress instantly by their size. They exaggerate reality by being larger than the wearer’s body, for instance. Other masks conceal one’s human individuality. The person wearing such a mask takes on another identity, usually that of a more powerful person. Finally, some masks embody power, the ancestors. Because they are so powerful, such masks are not worn. Rather, masqueraders drag these masks behind them.

People usually wear masks at religious festivals. Such festivals feature dances and music. The dances tell a story; usually the story refers to good or bad ghosts. Good ghosts aid the harvest and chase the bad ghosts who try to spoil it.

Depending on whether the main crop is grain or yam, people stage either a grain or a yam festival. A yam festival generally is held at the end of the rainy season in early August. In Nigeria and Ghana people offer yams first to the gods and ancestors to give thanks. In Ghana people also celebrate the Homowo festival. It is a traditional
harvest festival among the Ga people. The word *homowo* translates as “hootling at hunger.” It comes from the mythical origin of the Ga and refers to their migration into Ghana. On that migration they were on the edge of starvation. However, through their mutual aid, they survived. When they succeeded at producing a surplus they had their first Homowo festival. The festival includes a masquerade, with people representing various royal figures.

**Characteristics of Masquerades**

Each masquerade has a number of statuses within its formal structure. Each group has a particular role to play in the overall cult. The cult helps keep the political process going. Within the lineage organization of Yoruba society each family group has its own particular function. Interestingly, the Yoruba use the masquerade as the Hausa use the Wasan, namely to control the political situation.

Essentially, the masquerade is a ritual that reflects the surrounding political structure. Behind the masks of uniformity, many interests compete. Masks represent these interests. Members of different groups negotiate which groups will control various aspects of the festival and, consequently, political life. Masks identify individuals as members of competing groups who ultimately work to control political decisions.

In Ikole in southern Nigeria the official and most important festival is the Ogun festival. The Odun Egun, a biannual masquerade festival in late spring, also is important. It lasts seventeen days and features masquerades that reflect the shift in power from the old to the young. The young masquerades get to be performed more frequently than the old ones as power shifts from one generation to another.

**Common Characteristics of Festivals**

Festivals occur in all societies and range from performances associated with major religious traditions to localized ritual entertainments. Festivals share a sense of license and play. They show that things can be other than they are. They do so by expressing meaning that is conveyed on a number of levels. Representation meaning is the first level. People attempt to represent the essence of what is portrayed. Next is an iconographic (representing something by pictures or diagrams) level of meaning. The thing represented, for example, is not just a bear or a woman but rather a sacred figure, a bear deity or the Virgin Mary. The next level is that of interpretation. Perhaps the festival represents the group itself. The metaphoric meaning represents some relationship in the wider society, perhaps conflict or tension. In addition, the aspect of mystery enhances the performance.

Finally, the festival performance itself has a social and cultural context. The location, participants, surroundings, and other aspects add to the meaning of the festival. Overtones of meaning exist, unique to the people beyond the formal presentation itself. Additionally, festivals have a cultural function; that is, they do things beyond themselves.

Festivals perform a number of functions in society. Anthropologist Frank E. Manning (1983) placed festivals in the category of celebration. Also, festivals and other forms of celebration give power to those people who normally do not exercise it. Festivals also provide an opportunity for people to comment on the political powers in society and to suggest that things may be other than they are.

Festivals, therefore, are part of the world of play, imagination, and creativity. They can be threatening to those people who control the levers of power because they suggest that there is also an anti-structure to match any formal structure, that the world as it is can be replaced by the world that is yet to be.

African festivals fit well within the ludic framework. The song, dance, and costumes are entertaining. However, their playfulness adds to the possible subversion of commonly accepted definitions of reality. These festivals both reflect and aid changes found in society, helping to ensure that changes appear to fit well within the cultural traditions of the group.
The fact that festivals are rituals in themselves and contain a series of rituals also allows them to mask change under the rubric (rule) of continuity. Festivals are frequently centers of competition, and the competition is incorporated within the formal structure of the festivals. By observing the same festival over time people see these changes. Festivals, therefore, both encapsulate much of the cultural history of the group and provide a means for change.

Further Reading


Feudalism

Feudalism is a much-contested term in world history. It is most often used to describe certain political (and sometimes economic) systems in the preindustrial world; however, there is no general agreement on what characteristics define a system as feudal. As a term that is paradoxically both too vague and too precise, an increasing number of historians consider it best avoided except in very restricted historical fields of study.

History of a Term

Feudalism has most often been used to describe the political fragmentation and arrangements for raising military manpower that allegedly arose in Europe around the ninth century and theoretically persisted for many centuries thereafter. Most historians of medieval Europe, however—especially military historians, for whom the term should ostensibly be most germane—now consider it a misleading term that does more to obscure than to illuminate our view of the past.

Though based on the medieval word *feudum* (Latin for *fief*), the word feudalism was coined by reformers in the eighteenth century to describe (unfavorably) the system of rights and privileges enjoyed by the French aristocracy, especially with regard to their landholdings and their peasant tenants. This broad socioeconomic meaning was taken up and extended by Marxist historians, for whom the “feudal mode of production” succeeded the classical mode and preceded the capitalist mode. For military historians, this definition has always been far too broad. Indeed, if a privileged landholding class and a subject peasantry constitutes feudalism, then most civilizations before the industrial revolution were feudal, and the term loses its analytic usefulness. In this sense feudalism
also becomes conflated with manorialism (the organization of rural production into manors held by lords and worked by subject peasant labor).

**Feudalism and Military History**

Military historians have usually taken a more restricted view of feudalism. For them, it is the system of raising troops in which a lord grants a fief—typically a piece of land—to a vassal (Latin *vassus*). In return, the vassal gave the lord a defined and limited term of military service, usually forty days a year and usually as a knight—a fully armed and armored horseman. Sometimes the lord provided the armor and weapons, but often the vassal provided his own. The fief was the payment for service and was also known as “the knight’s fee.” Feudalism in this sense has often been taken as the sign of a weak central authority with limited cash resources, forced to substitute land for cash and to devolve local power to its aristocracy; in fact feudal is often used simply as (somewhat misleading) shorthand for “decentralized polity dominated by a powerful warrior aristocratic class.” However, not all decentralized polities raised troops using land-for-service arrangements, nor were all polities that did utilize such arrangements weak, poor, or decentralized.

Indeed, these arrangements did not even characterize what has been regarded as the prototypical feudal society of northwestern Europe from the ninth to the twelfth centuries. Recent research has traced modern conceptions of feudal service to the terms and definitions of the *Libri Feudorum*, an Italian legal handbook written in the twelfth and thirteenth centuries. Its academic view of fiefs and vassals became the basis for the sixteenth-century interpretations of feudal institutions that have held sway ever since. However, this picture of feudal service and the legalistic hierarchy of landholding rights associated with it does not fit the medieval evidence. *Feudum* and *vassus* were vague and mutable terms, and European military systems from the ninth to the fourteenth centuries were far more varied, flexible, and rational than conventional interpretations have supposed.

Restricted service in return for granted land was inherently limited as a basis for a military force—leaders always needed soldiers available for more than forty days a year, at the least—and this system has been overrated as the source of medieval European armies. Soldiers did serve for land, but often they were “household knights”—young men who lived with their lord and served him in military and nonmilitary capacities—who were rewarded for long service with land of their own and served in anticipation of this reward. Even service for land already granted was far less defined and restricted than the traditional “forty days a year” formula implies. “Feudal” service (unpaid service by the vassals of a lord) worked best on an informal basis: a lord in need of armed support in his local disputes and in serving his own lord (if he had one) called together the young men who were his friends, relatives, hunting and drinking companions, and social dependents, and they campaigned together, sharing the risks and rewards of warfare. Social cohesion in the lord’s military household (Latin *familia*) translated into military cohesion, and constant hunting and fighting together imparted small-unit skills. Restrictive and legalistic terms of service played almost no role in such arrangements.

There are also problems, however, with defining feudalism more generally as a landed support system for unpaid military service. First, individuals and groups also served for pay in medieval Europe from an early date, wherever economic conditions made it possible and even when they owed “feudal” service. Paid service became increasingly common in the period after 1050. Second, in a global context there have been many forms of “soldiers’ lands” in different times and places, in combination with paid and unpaid service. Some involved the granting, not of possession of a particular piece of land, but of income rights over the land. Income rights were often, in fact, granted from several different pieces of land. Arrangements such as these, which entailed no direct link between the military manpower supported by landed income and the peasant manpower working the lands, differ fundamentally in type from arrangements in which the warrior who was granted the land assumed legal control over the peasant population and managerial control over the output of the estate.
Indeed, in some cases the military manpower supported by designated “soldiers’ lands” was not in a position of social and political dominance—it was not, in short, a warrior aristocracy, but instead constituted a sort of militia. Arrangements such as these also differ in type from those that were set up for a dominant warrior elite. Therefore, to call all land-for-service systems of supporting military manpower “feudal” is to arrive again at an overly broad definition, akin to the problem of the Marxist definition of feudalism, which makes no useful distinctions between systems and their individual characteristics. To try to distinguish some such systems as “feudal” while excluding others has inevitably involved privileging the characteristics of the European model in order to arrive at criteria for inclusion, for no reason than that it was studied (and called feudal) first—a pernicious instance of Eurocentrism. Military historians are thus increasingly avoiding the term, and are turning instead to functional descriptions of the world’s (and Europe’s) varied military systems of landed support, militia service, and the social hierarchies that accompanied them.

**Feudalism and Legal History**

Legal historians of high medieval Europe, on the other hand, can more confidently lay claim to the term feudal in their sphere of inquiry: In the more settled European conditions of the twelfth century and later, the informal arrangements of an earlier age tended to crystallize into formal legal arrangements with defined terms of service and inheritance rights on the part of the vassal. This process marked the decline of “feudalism” as a viable military system, but the rise of feudalism as a fundamental legal system. Indeed, the lord-vassal tie of landholding became crucial as one of two key bonds (along with marriage, which it resembled) among the European aristocracy. The twelfth-century English system of fief law became the basis of most later English estate law and thence of modern American property law.

Feudal property law has a definite history, but perhaps because that history is so clearly tied to the specific times, places, and legal systems that generated it, legal historians—whose stock-in-trade tends to be particulars

---

**Emancipating the Serfs in Russia, 1861**

*Serfdom, abolished in western Europe by the early part of the nineteenth century, lingered on for decades in Russia until 1861—when some 23 million serfs were emancipated by imperial decree on 3 March 1861. Below is an excerpt from the proclamation that freed the serfs.*

We thus came to the conviction that the work of a serious improvement of the condition of the peasants was a sacred inheritance bequeathed to us by our ancestors, a mission which, in the course of events, Divine Providence called upon us to faith.

In virtue of the new dispositions above mentioned, the peasants attached to the soil will be invested within a term fixed by the law with all the rights of free cultivators.

The proprietors retaining their rights of property on all the land belonging to them, grant to the peasants for a fixed regulated rental the full enjoyment of their close; and, moreover, to assure their livelihood and to guarantee the fulfillment of their obligations towards the Government, the quantity of arable land is fixed by the said dispositions, as well as other rural appurtenances.

But, in the enjoyment of these territorial allotments, the peasants are obliged, in return, to acquit the rentals fixed by the same dispositions to the profit of the proprietors. In this state, which must be a transitory one, the peasants shall be designated as “temporary bound.”

At the same time, they are granted the right of purchasing their close, and, with the consent of the proprietors, they may acquire in full property the arable lands and other appurtenances which are allotted to them as a permanent holding. By the acquisition in full property of their quantity of land fixed, the peasants are free from their obligations towards the proprietors for land thus purchased, and they enter definitely into the condition of free peasants—landholders...
rather than generalities—have not been tempted to see feudal property law as a transcultural historical phenomenon. The mistake for nonlegal historians is to read the legal history of high and late medieval Europe back into the political, military, and economic spheres of early medieval Europe, and then to extend that misreading to other areas of the world in the search for a general type of society.

Feudalism and Comparative History

An example of such a historical misreading is provided by the study of “feudalism” in Japan between the twelfth and sixteenth centuries. The dominance in Japan from Kamakura times of a rural warrior aristocracy in the context of somewhat weak central government has long invited comparison of Japan with medieval Europe, where similar conditions prevailed. Such comparisons have almost always been cast in terms of feudalism: Since the traditional model of feudalism arose from the study of Western Europe, looking for feudalism elsewhere risks shoehorning non-European histories into a European mold. This raises the possibility of misreading the evidence to find anticipated feudal characteristics, or, if a different trajectory is seen, of explaining what went “wrong” in the non-European case.

This tendency has afflicted Western views of Sengoku Japan, the period during the sixteenth century when Japan was divided into warring domains headed by daimyos, or local lords. The feudal model has led many historians to see the Sengoku age as the epitome of feudal breakdown and anarchy. Daimyo domains are equated with the small castellanies and lordships of northern France, the feudal kingdom (French and Japanese) taken as the unit of comparison because of the prominence of weak central authority in the feudal model. By emphasizing the division of the larger political unit, however, this view obscures important forces of unity and political cohesion that were developing within the daimyo domains during this period. Without the feudal preconception, daimyo domains appear more readily as independent polities within a Japan that is more akin to Europe as a whole than to any one kingdom within Europe.

At a lower level of the feudal model, the European norm has inspired numerous comparisons of the structures of warrior society—for example of Japanese landed estates with manors, and of Japanese income rights, granted to warrior families by the central government in exchange for military service, with fiefs—that often obscure the important differences between the two societies more than they illuminate their commonalities. This problem, too, is most critical in the Sengoku age, when massive daimyo armies must be explained, in the context of the feudal model, in terms of a more “impersonal and bureaucratic feudalism” than existed in Europe (J.R. Strayer, cited in Morillo 2003). “Bureaucratic feudalism” is a self-contradictory concept that dissolves on close inspection.

Application of the feudal model to Japan has also invited the equating of terms that occupy apparently analogous places in the model but that may not be so similar. The comparison of samurai to knights is the best example of this: The terms knight and samurai do not designate closely similar phenomena; the class connotations of the former make it closer to the bushi of pre-Tokugawa Japan. Equating samurai and knights also implies similarities between the fighting styles and techniques of the two kinds of warrior, when in fact their tactics differed significantly—especially, again, in the Sengoku age, with its samurai armies of disciplined mass infantry formations. The case of so-called feudalism in Japan thus serves as a caution against the hasty comparison of terms and models derived too narrowly from one culture.

A Term in Decline

In short, “feudalism” in world history is a historiographical phenomenon, not a historical one. “Feudal” and “feudalism” are terms that have failed to cohere into agreed-upon concepts. They purport to describe a type of society that is valid across cultures; but describing the fundamental elements of such a society entails imposing a Eurocentric privileging of a European model that itself

But what is government itself but the greatest of all reflections on human nature? If men were angels, no government would be necessary. • James Madison (1751–1836)
does not conform well to the most basic elements usual to a definition of the term. The alternative to clarity seems to be a broad definition of feudalism that fails to make useful conceptual distinctions among the societies to which the term is applied. As a result, it has become a term in decline.

Stephen Morillo

See also Early Modern World

Further Reading


Fire

The history of humankind is closely connected with the history of fire—so closely that the connection has become almost reciprocal. Of course, fire is much older than humankind; but ever since humans learned to exert some control over it, the frequency of fire and, even more, its manifold forms have increasingly been determined by human activities. Of all the fires burning on the planet earth today, only a tiny portion have “natural” causes; in the great majority of cases the source of ignition has been human.

These observations raise a whole range of intriguing problems concerning the history of the relationship between humankind and fire. How did this relationship begin? What were the conditions that made it possible? What were the feedback effects or functions that sustained it? How has the connection between humans and fire affected the course of history?

Our image of the first phases in the human domestication of fire was long dominated by mythology—as if the stories about Prometheus or other culture heroes who allegedly had stolen fire from the gods were the last word. Today we know better: with the aid of ecology and archaeology, of anthropology and sociology, it is possible to reconstruct the general trajectory of the historical relationship between humans and fire.

Origins

Like all natural forces, fire has a history. Chemically, fire is a process of highly accelerated oxidation of matter (fuel) induced by heat (ignition). Three conditions are necessary for it to occur: oxygen, fuel, and heat. During the first aeons in the history of the earth, at least two of these—oxygen and fuel—were absent. Oxygen did not become available in the atmosphere until life emerged between three and four billion years ago. And it was less than half a billion years ago, during the Devonian geological age, that life assumed the form of plants, providing matter suitable for burning. From then on, most places on earth with seasonally dry vegetation were regularly visited by fire, ignited on rare occasions by falling rocks, volcanic eruptions, or extraterrestrial impacts, but mostly by lightning.

Its domestication by humans opened an entirely new episode in the history of fire. Humans thoroughly altered the incidence and intensity of fires. They brought fire to regions of the planet where it seldom or never burned spontaneously, and they tried to banish it from places where without human interference it would have burned repeatedly. Thus, increasingly, “natural” fire receded and made way to “human,” or, more precisely, anthropogenic fire.

Wherever humans migrated, they took their fire along.
The presence of humans-with-fire deeply altered the landscape, including flora and fauna. The human impact is amply documented (though still controversial) for Australia—a continent that was colonized by humans rather late. Everywhere on the planet, areas such as rain forests, deserts, and the polar regions that were not receptive to fire proved to be hard to penetrate for humans too.

**A Human Monopoly**

Humans are the only species which has learned to manipulate fire. Control over fire has become a “species monopoly,” with an enormous impact on other species, both animals and plants, and on the civilizing process of humanity itself.

Evidence about the very first phase of the domestication of fire is still scanty and open to various interpretations. Some paleoanthropologists argue that *Homo erectus* may already have been tending the remains of natural fires between 1.5 and 2 million years ago. At the other extreme are archaeologists who hold that the oldest undisputable evidence of human control of fire can be dated back at most 150,000 years.

While acknowledging these controversies over the actual chronology of the first domestication of fire, we can still draw up some defendable propositions about its “phaseology”—the succession of phases. Three phases can be distinguished. During the first phase, there were no human (or hominid) groups possessing fire; there were only groups without fire. Then, there must have been a second phase, when there were both groups with fire and groups without fire. We do not yet know how long this phase lasted, but we do know that it was a transitional stage, leading up to the phase in which humankind has now been living for thousands of generations: the phase when there are no longer any groups without fire. For many thousands of generations, all human groups have been groups with fire.

The three phases are connected by two transitions. The first transition was marked by the initial domestication of fire by some human or hominid groups. Apparently they found it worthwhile not just to forage at the smoldering remains of a natural fire, but to see to it that the fire kept burning. They tended it, they protected it against rain, and they “fed” it with fuel. None of these activities were programmed in their genes; they had to be learned, and then transmitted, as traits of culture. But the capacity to learn all this had to be there, as a set of traits acquired in biological evolution. Those traits included physical features such as a bipedal gait, flexible hands, and a complex brain, as well as concomitant mental and social features such as an ability to cooperate and to defer immediate gratification for the sake of consciously conceived goals.

**The Franklin Stove**

Benjamin Franklin (1706–1790), statesman, philosopher, and man of many letters, was born in Boston. His brother James was the publisher of The New England Courant, where young Benjamin’s first articles, The Dogwood Papers, were published in 1723. In 1731, after considerable travels in England, he established the first circulating library in the United States, a significant accomplishment and contribution to society. During the next thirty-five years, Franklin devoted himself largely to politics and diplomacy, but continued to write about and was engaged by scientific ventures. Appointed Minister to France, he later returned to the U.S., and was elected President—a post that today would be considered Governor—of the Commonwealth of Pennsylvania. Always interested in the rights of individuals, he published papers encouraging the abolition of slavery. In the excerpt below, Franklin writes about a simple yet crucial element of nineteenth-century society: a new stove he had invented.

**The Advantages of This Fire-place**

Its Advantages above the common Fire-places are,

1. That your whole room is equally warmed; so that people need not crowd so close round the Fire, but may sit near the Window, and have the Benefit of the Light, for Reading, Writing, Needlework, &c. They may sit with Comfort in any Part of the Room, which is a very considerable Advantage in a large Family, where there must often be two Fires kept, because all cannot conveniently come at one.
Considering this combination of requisite traits we may find it almost self-evident that the control of fire became a monopoly, uniquely held by humans. The full significance of the monopoly can only be appreciated, however, if we regard it also in connection with the second transition, in which the monopoly became universally human. Whereas earlier hominid, and possibly human, groups had been able to survive without fire for many thousands of generations, a time came when apparently that was no longer possible.

If this sketch of phases and transitions is realistic (and it is hard to imagine why it should not be), it leaves us with an unavoidable conclusion: human societies with fire were in the long run more “fit to survive” than societies without fire for many thousands of generations, a time came when apparently that was no longer possible.

If this sketch of phases and transitions is realistic (and it is hard to imagine why it should not be), it leaves us with an unavoidable conclusion: human societies with fire were in the long run more “fit to survive” than societies without fire. If we then ask why all societies without fire eventually disappeared, there seems to be only one plausible answer: because they had to coexist with societies with fire—and in the long run that proved impossible.

Implied in this line of reasoning is the idea that a change in some human groups led to changes in other human groups. If Group A had fire, and the neighboring Group B did not, Group B had a problem. It could either try to minimize contact with Group A, or do as Group A had done and adopt a fire regime—which should not pose insurmountable difficulties as long as the potential to learn from the other group was sufficient.

In terms of its formation and spread, the fire regime may be regarded as a paradigm for other regimes developed at later stages in human history—a paradigm in more than one sense. First of all, the regime by which humans learned to extend their care of and control over fire could subsequently serve as a model for taking care of and controlling other nonhuman natural resources such as plants and animals. Secondly, we may regard the domestication of fire as a model case in a “heuristic” or methodological sense, since it shows us some basic principles which are at work in social evolution and human history.

Functions

The establishment of the species monopoly of control over fire amounted to a big step in the differentiation of behavior and power between humans and related animals, ranging from other primates to wolves or mammoths. As a new item in the behavioral repertory, tending fire tilted the interspecies balance of power greatly toward human dominance. The original breakthrough may have been precarious and fraught with risks; but it had far-reaching consequences—which were, of course, unforeseeable at the time. The history of the domestication of fire clearly illustrates the intertwining of intentional actions and unintended effects.

Fire became the focus of human group life in the form of the hearth. Here fire was tended and thus kept regularly available so that group members no longer had to go searching for it. Around the hearth they could create small enclaves in the wilderness where the nights were less cold and dark and which offered some protection against predators. On the fire itself they could cook their food—again a form of behavior which, like the domestication of fire upon which it is based, is both uniquely and universally human. Through the destructive force of fire, substances that otherwise would be too tough to eat, or even poisonous, could be made edible and palatable—a good example of “production through destruction.”

A second way in which fire was used from early on was by lighting the end of a stick in the hearth and turning it into a torch. Torches could be applied to burn down
dry vegetation, thus clearing land and making it safer and more hospitable for human habitation. Many prairies and similar secondary grasslands in various parts of the world were created by such burning practices. On a smaller scale, but no less effectively, humans could apply their torches to scare away big predators. Caves long inhabited by bears or hyenas were taken over by humans armed with fire.

**Fire and Socioecological Transformations**

If fire was the first great socioecological transformation in human history, it was a precondition for two more that followed: agrarianization and industrialization. Both were far more momentous in scope, but neither would have been possible without fire.

The rise of agriculture and animal husbandry, or “agrarianization,” in many respects resembled the domestication of fire. Humans added new sources of energy to their own as they had done before by taming fire, this time by incorporating certain plants and animals into their societies. Wild plants were cultivated, wild animals were tamed, and all these species were made part of the human domain.

In most parts of the world, the conversion of savannas and forests into fields and meadows was accomplished by means of fire. Flames and smoke marked the frontiers of agrarianization—as they still do today in Amazonia and elsewhere. Often agriculture remained closely associated with burning, as in the widespread practice of swidden farming, or shifting cultivation, in which tracts of land would be periodically burned and cultivated and left fallow again for a number of years, in a cyclical sequence.

Many agrarian societies passed through a phase of shifting cultivation, but then adopted more intensive techniques of working the land with higher average yields. As these societies gave rise to villages and towns, new uses of fire and new attitudes toward fire developed. During the long first phase of human fire use, the main concern always had been to keep the communal fire burning. In the agrarian towns, however, fire was no longer scarce. Its uses became increasingly more varied. Specialized pyrotechnic crafts emerged, such as blacksmithing and pottery. Public concern now turned mainly to keeping the many fires within their containers. Fire was regarded with greater anxiety, for with the proliferation of fires the risks of conflagrations increased, and with the accumulation of property, people had more to lose. Not surprisingly, blazes figure prominently in the local histories of towns and villages.

Of course, the eventual cause of destruction always lay in the very nature of the combustion process. But with the progressive domestication of fire, this natural force manifested itself more and more through manmade fires. With all the lamps and furnaces burning in a city, one moment of carelessness might spark a conflagration. People had to rely on other people’s caution. They had to deter any attempts at arson—that is, to punish severely anyone who deliberately set fire to property. And they had to build defenses against the greatest danger of all: the form of organized murder and arson known as war.

In the cities of medieval Europe it was mandatory to "cover" all fires before nightfall: an institution known as couvre feu, or curfew. The directive to cover fire almost symbolizes a general tendency in urban environments toward reducing the omnipresence of fire, and certainly toward making it less conspicuous. That tendency was interrupted temporarily, however, by the onset of industrialization.

**The Industrial Age**

Industrialization began, like agrarianization, with great displays of fire. Its frontiers were marked by the fire and smoke of steam engines driven by burning coal. Humankind was entering, to use the image of Rolf-Peter Sieferle, a newly discovered "subterranean forest," containing the fossil remains of hundreds of millions of years of organic growth, stocked in the mantle of the earth as unburned fuel.

Industrialization was the third great ecological transformation brought about by humans. It involved, once again, the tapping of newly exploited natural resources—first coal, later also oil and natural gas—and incorporat-
ing these into human society, as had been done before with fire and with certain selected plants and animals.

Just like the transition to agriculture, when forests were burned down to create fields and meadows, the rise of modern industry was heralded by a huge and conspicuous use of fire. The familiar pictures of the early industrial landscape in Lancashire readily evoke the manifest ubiquity of fire, with smoke rising from the factory stacks at day, and a red glow illuminating the sky at night.

As industrialization advanced, fire continued to be important in practically every variety of industrial production; but its presence has become less prominent. The vital combustion processes tend to be hidden away, in the furnaces of power stations or under the hoods of motorcars. Partly as a result of this general tendency, cities in the advanced industrial world today are far better protected against the risks of fire than were preindustrial cities. The incidence of conflagrations in peacetime is much smaller now than it used to be until a few centuries ago. In times of war, however, the twentieth century has seen urban blazes of unprecedented size and intensity.

**Current Developments**

Ancient Greek cosmologists used to distinguish four elements out of which the world was composed: earth, water, air, and fire. While earth, water, and air are indispensable for all land animals, only humans have also come to rely upon fire. Furthermore, all known human groups have done so. The use of fire is not just an exclusively human attribute; it continues to be universally human as well.

In retrospect, we can detect a clear sequence in the history of humans and fire. First, there were no groups with fire. Then there were some with fire, but still none with fields cultivated for agriculture and animal husbandry. Then, there were some with fire and fields, but none with factories for large-scale industrial production. Today, all human groups take part in a socioecological regime extending over the entire planet, involving fire, fields, and factories.

For thousands of generations, the control of fire has deeply affected the human condition. It has made human groups, on the one hand, more productive and robust, but at the same time also more destructive and more vulnerable. Seen in this light, the control over fire appears to be a double-edged sword, eliciting the same ambivalence that is typical of the present human self-image in general.

Nowadays fire is continuously present in all human societies. It is used in many different forms, some mainly ceremonial and highly visible, most others primarily technical and largely hidden from public view and consciousness. The moment we consider the part played by combustion processes in transport and production, it becomes clear how thoroughly our lives are enmeshed in structures which are kept going by fire and fuel. We live in highly fuel-intensive economies, and most fires burning today are generated by those economies. Fire has become overwhelmingly anthropogenic, or manmade. Where there is smoke, there is fire; where there is fire, there are people.

We may safely assume that every single step in the long-term process of increasing use of, and control over, fire has been the result of planned human action—of the deliberate and consciously steered efforts of individuals who knew what they were doing. It is more difficult to
imagine that the increases in dependency were also deliberately planned. And it is extremely unlikely that our early ancestors in the foraging era ever drew up a comprehensive plan covering hundreds of millennia and leading all the way to our present plethora of gas furnaces and internal combustion engines; the very idea is absurd. Clearly the succession and interaction of short-term planned activities has produced long-term processes that were neither planned nor foreseen. Here is one more way in which the control over fire can be seen as paradigmatic. It shows something of the stuff of which human history is made.

Johan Goudsblom

See also Energy

Further Reading


Firearms

The history of firearms can be divided into two eras: an age of smoothbore weapons (weapons whose barrel has an un rifled bore), up to about 1830, and an age of rapid technological innovation and industrialization after 1830. The first age saw relatively slow technological development and relatively few disparities in the impact of firearms around the globe. The second age, however, created vast disparities in military strength throughout the world and had a much broader impact upon society as a whole.

Invention and Spread of Firearms to 1830

Gunpowder first appeared in China during the Song dynasty (960–1279), probably during the eleventh century, an ironic by-product of a Daoist search for an elixir of immortality. It was used by the Chinese in fireworks and in warfare in the form of bombs launched by catapults, proving especially useful in naval warfare. Historians disagree over whether it then spread to Europe via Silk Road trade routes or whether Europeans invented gunpowder independently. Either way, once in Europe gunpowder was put to use as the moving force behind projectiles, and firearms were born. The earliest depiction of a gunpowder weapon in manuscripts dates to the late 1330s.

Gunpowder was used first in cannons. By the fifteenth century handheld firearms had also appeared in the form of muskets and their lighter cousin the arquebus (a portable gun usually fired from a support). Both forms of the technology spread not just through Europe but also to most of the rest of the world over the next century. The Ottomans had better cannons than the Europeans by 1450, specializing in huge siege guns that helped them take Constantinople in 1453 and also fielding a musket-bearing corps of janissary (slave) infantry. The Mughals made effective use of cannons in the early 1500s, as did the Ming Chinese. Muskets made it to Japan in 1542 on a Portuguese ship; Japanese smiths soon manufactured muskets as good as European models, and Japanese generals pioneered effective battlefield use of the weapons. African kingdoms traded for muskets and then fought European armies on equal terms in places such as Morocco and Angola in the sixteenth and seventeenth centuries, and Native Americans made effective use of
musketry against Europeans in frontier wars during the seventeenth century.

**Characteristics and Impact of Firearms to 1830**

Almost all the cannons and handheld guns in this age shared certain characteristics. They were smoothbore weapons and therefore fairly inaccurate individually (rifled muskets—i.e., weapons with spiral grooves cut into their bores—existed, but they were very slow to load and used only for hunting). Even smoothbores were somewhat cumbersome to reload, so rates of fire were low compared to bows—the best eighteenth-century units could manage only two to three shots a minute. To achieve a significant battlefield effect, these slow, inaccurate guns had to be employed en masse, either as cannon batteries or in large units of infantry, though skirmishing was also possible in the right terrain. But guns had advantages. The penetrating power of cannon shot was far superior to traditional torsion or tension artillery (catapults and the like); muskets likewise had great penetrating power, rendering much armor obsolete. Above all, handheld firearms were easy to learn to use: Several weeks’ practice could turn raw recruits into reasonably effective musketeers, whereas good archery was a skill acquired over decades.

The varied impact firearms had in this age derived from these characteristics. Their penetrating power and ease of use combined to pose a potential threat to mounted elite warriors, who found themselves and their mounts suddenly more vulnerable. Nevertheless, cavalry forces did not cease to be effective with the advent of firearms, and in fact the most formidable armies of the fifteenth and sixteenth centuries, including the Ottomans, the Manchus, and the Mughals, combined the tactical mobility of steppe cavalry with artillery trains and a corps of infantry musketeers. But firearms meant that steppe cavalry could no longer be an independent threat to sedentary armies, especially when their opponents added fortifications and firepower together. So gunpowder played a role in ending the long role steppe nomads had played in Eurasian warfare, but to characterize the great Asian powers of the age as “Gunpowder Empires,” as some historians do, is to overemphasize the role of cannon in what really were synthetic systems in which steppe-style cavalry was still vital.

The notion of “Gunpowder Empires” also derived from the impact of firearms on fortifications: They supposedly rendered pregunpowder forts obsolete, thereby facilitating wide conquests (at least until new forms of fortification were devised to counter cannon fire). While such an effect was briefly true for some areas of Europe, in many other places, such as India, fortifications could already withstand gunpowder, so guns had little effect on conquest. And in Europe, a new form of fortification arose in Italy around 1525. From one perspective, the *trace italienne* simply restored the defensive status quo. But some historians see in the new fortifications (or, alternately, in the tactical implications of handheld firearms for infantry battle in the European context) the seeds of a “military revolution.” Briefly, the various versions of this theory see gunpowder necessitating larger armies, either to besiege the new fortifications or to provide mass fire on the battlefield. Larger armies in turn required governments to become more organized in order to pay for them. Better governments and their bigger, better armies then launched Europe into its position of world leadership. The military revolution theory therefore inserts firearms as a causal factor in both the emergence of the modern state and the rise of Europe. The theory has been much debated, and is in its simplest form a vast and technologically determinist overstatement, at the very least; some historians doubt that there was a military revolution at all in early modern Europe. Certainly no area of the world derived a decisive edge from the use of gunpowder weapons alone before the nineteenth century, simply because the technology was so widely diffused. Whatever edge European arms had by the late eighteenth century was based on organizational techniques, not technology, and was limited in its reach by transport problems.

On the other hand, the combination of firearms, especially cannons, and full-rigged oceangoing ships did

*History is too much about wars; biography too much about great men.* • Virginia Woolf (1882–1941)
create a revolution of sorts at sea, though claims for even this must be qualified by the lack of serious competition from Asian powers (arising largely from different interests, not technological barriers). Still, effective exploitation of the seas lay at the heart of growing European influence in the world by 1800, and the European leader in this sphere, Great Britain, was arguably the first to create a “modern” fiscal-military state and military-industrial complex focused on the navy. By 1800, also, Napoleon and the armies of the French Revolution were bringing to a pinnacle the operational and tactical art of land warfare in the age of smoothbore firearms.

**Technological Innovations since 1830**

The first great change in the smoothbore equation came in 1830, when rifled muskets that could be reloaded as rapidly as smoothbores appeared, thanks to the invention of a bullet with a hollow base. The ball was smaller than the rifled bore and could be rammed home, but the base expanded when fired, filling the rifling. The spin imparted by rifling increased both accuracy and range, which almost tripled in effective terms. Suddenly, cavalry were driven from any significant battlefield role, and infantry attacks became much more expensive and difficult. Further innovations followed in the course of the nineteenth century. Breech loading allowed infantry to reload lying down and so take greater advantage of cover. Better metal casings allowed bigger, more powerful shells. Smokeless powder allowed further concealment. Mechanisms for rapid or multiple shots, including the invention of machine guns, gave two or three men the firepower of an entire Napoleonic brigade. Similar improvements affected larger firearms. Land artillery and naval guns saw the introduction of aerodynamic exploding shells, steel barrels, and armor-piercing points. Perhaps more important than any particular improvement was the introduction of interchangeable parts in gun manufacturing, which allowed the industrialization of weapons making. Mass production meant that armies could be supplied with new weapons more quickly, which encouraged more rapid technological change and soon led to the widespread commercialization of firearms beyond military uses. The twentieth century saw firearms mounted on motorized vehicles and carried into the air on planes, and by the end of the century munitions were becoming “smart” as computer technology began to change firearms significantly.

**The Impact of Firearms since 1830**

These changes in firearms technology vastly increased the impact of firearms in the world. In Europe and the United States, where the new technologies were developed, firepower led to a series of tactical revolutions first visible in the trench warfare around Petersburg, Virginia, in 1864. At first, almost all the changes favored the
defense in battle. Attempts to break the defensive power of artillery, machine guns and rifles led to the development of mechanization for increased mobility, including mobilization of armies via railroads and then the use of vehicles with internal combustion engines on land and in the air for troop transport and as fighting vehicles. Firepower also called forth the use of armoring, first on ships and later on tanks and other land vehicles. Greater and greater firepower carried by more mobile armies, air forces, and navies inevitably spread the impact of war far beyond the traditional frontline, increasingly blurring the distinction between combatant and noncombatant.

Very much unlike the firearms technology of the smoothbore age, firepower in the industrial age created (and continues to create) vast disparities in military capabilities around the globe. Small armies of Europeans armed with rifles and machine guns could by 1870 face down many thousands of indigenous warriors. Firearms, in other words, became central to creating the imperialism of the nineteenth century as well as to its maintenance well into the twentieth. But the widespread availability of firearms embodied in a worldwide arms trade, a trade later given impetus by ideological conflicts such as the Cold War, also helped bring down colonial empires in the second half of the twentieth century. Following in the footsteps of Mao Zedong and the Chinese Communist Army, the leaders of anti-colonial rebellions (and later of antigovernment insurgencies of all stripes) made use of firepower through guerilla tactics to cause major problems for conventional armies. The firepower of such groups also increased their ability to damage civilian populations, a problem often exacerbated by ethnic or nationalist tensions in civil wars. Arms-control agreements focused on weapons of mass destruction have done little to stem the worldwide flow of personal firearms to any group that wants them.

In addition, the industrialization of weapons manufacturing and the widespread availability of personal firearms—ranging from hunting rifles to handguns to paramilitary weaponry—that resulted from mass production carried the impact of firearms well beyond the military sphere. Given the potential for damage that modern firearms give to individuals and small groups, most governments that were capable of doing so moved to restrict the availability of firearms to the civilian population, an extension of previous policies aimed at disarming the general populace in favor of the central authority, thereby maintaining a monopoly on the legitimate use of force. But weak or faction-ridden governments proved incapable of enforcing such policies, with bloody results that often showed up in periods of civil war or insurgency. And the policies of the United States government (inspired by some readings of the Second Amendment) have traditionally imposed fairly minimal restrictions on gun ownership and use, resulting in high levels of gun-related violence and murder rates significantly higher than those in comparable industrialized countries with more restrictive policies. Meanwhile, the image of firepower has entered mainstream popular culture around the world through films and computer games, the “shoot-'em-up” being a major genre of each medium. The impact of firearms in world history, whether military, political, social or cultural, therefore stands as a case study of the growing complexity and interconnectedness of technology and human social relations visible in all areas of world history.

Stephen Morillo
See also Warfare, Land

Further Reading
In March 1946 the former British prime minister Winston Churchill declared that an “iron curtain” had descended across Europe, from the Baltic to the Adriatic. The curtain had divided the former allies into two distinct blocs: the First and Second Worlds. Churchill said this during a long speech in the United States. The First World included states, notably the United States and the nations of Western Europe, that pledged themselves to some version of partly regulated market capitalism and that would, in 1949, form the North Atlantic Treaty Organization (NATO), a military pact against the Second World.

The Second World rejected market capitalism for some version of socialist planning, and it generally worked in collusion with the largest socialist state, the Soviet Union. “Warsaw, Berlin, Prague, Vienna, Budapest, Belgrade, Bucharest and Sofia: all these famous cities and the populations around them,” Churchill told students at Westminster College in Missouri, “lie in what I must call the Soviet sphere, and all are subject, in one form or another, not only to Soviet influence but to a very high and in some cases increasing measure of control from Moscow” (Churchill 1945). In answer to the formation of NATO in 1949, the USSR created the Warsaw Pact in 1955, a military agreement with Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania.

The Cold War and the First and Second Worlds

The First and Second Worlds fell out openly when U.S. President Truman announced his support for anti-Communist forces in Turkey and Greece (1946), when the CIA helped the Conservatives defeat the popular Communists in the Italian and French elections of 1947, when the Soviet Union forced the hand of the Eastern European states into its orbit, and when the animosity attained dramatic proportions during the Second World’s blockade of Berlin from June 1948. In this melee, Bernard Baruch, an adviser to Truman, used the term Cold War to describe the conflict, and the columnist Walter Lippman made the term widely known. The Cold War defines how most people see the period from 1946 to the fall of the Soviet Union in 1991: the East-West conflict, intensified by nuclear weapons, dominated the stage for this crucial fifty-year period.

The phrase East-West conflict distorts the history of the Cold War, however, because it makes it seem as if the First and Second Worlds confronted each other in a condition of equality. In an insightful article from 1968, the Swedish sociologist Göran Therborn described the Cold War as an unequal conflict that both sides presented and experienced as being equal. The Soviet Union and the United States portrayed each other as equivalent adversaries, although the former had an economic base that was far inferior to the latter. Despite the great advances of the Soviet regime in the development of the various republics, the Soviet Union began its history with a battered feudal economy that was soon ravished by a civil war and then by the ferocious assaults of the Nazi war machine. In 1941 both the United States and the Soviet Union had populations of about 130 million, but whereas the United States lost upwards of 400,000 troops in the war, the Soviets lost between 20 and 30 million troops and civilians. World War II devastated the Soviet Union’s economy, its population, and its capacity to rebuild itself. Furthermore, the imperatives of rapid development tarnished the ideals of Soviet society, with most internal freedoms being sacrificed in the building of its productive base.
The dominant classes in the First World used the shortages and repression in the Soviet Union as an instructive tool to wield over the heads of their own working classes, and so on both economic and political grounds the First World had advantages over the Second. Therborn further argued that an unequal conflict such as the Cold War that is fought as equal only redoubles the inequality.

**The Third World**

But the First and Second Worlds only accounted for a third of the planet’s people. What of the two-thirds that remained outside the East-West circles? By the mid-1950s, most of the planet that had been held in one way or another by colonial powers had gained or were struggling to gain their independence. These new nations defined themselves outside the undertow of the Cold War division. In 1952 a French demographer, Albert Sauvy, coined the term *Third World* to refer to these nations. He explicitly used the term to evoke the French Revolution, an important inspiration for the decolonization process. Prior to 1789, the French monarchy divided its counselors into the First Estate (clergy) and the Second Estate (aristocracy), with a Third Estate being for the bourgeoisie. During the tumult of the revolution, the Third Estate fashioned itself as the National Assembly and invited the totality of the population to be sovereign over it. In the same way, Sauvy was suggesting, the Third World would speak its mind, find the ground for unity, and take possession of the dynamic of world affairs. This was the enlightened promise of the Third World.

At Bandung, Indonesia, in 1955, twenty-nine of these Third World nations gathered to constitute an alternative to the Cold War’s bipolar divisions. They demanded a world of peaceful coexistence, free of colonialism and injustice, in which economic cooperation and development topped the agenda, and in which political and cultural freedom had a priority over the rights of corporations. The Bandung conference, for all its divisions between pro- and anti-Communist delegates, provided a distinct voice in world affairs, one that refused to accede to the terrors of the Cold War and the demands of one or the other superpower. The Third World rejected the term *neutralist* because it smacked of renunciation; they favored terms such as *nonaligned* to indicate that they supported dialogue and debate without the threat of war as a means to enable the planet to redeem the promises of modernity.

The Third World’s efforts nurtured and one might even say *produced* the United Nations. At the U.N.’s founding conference in San Francisco (1945), the Latin American delegates insisted upon a comprehensive section on human rights for the Charter. They fought hard to get statements on education, work, health care, and social security. In London, some months later, at the founding conference of the United Nations Education, Scientific and Cultural Organization (UNESCO), the Third World delegates, led by India and the Arab nations, successfully fought to have the organization forge a strong social-justice agenda. Within the U.N., the Afro-Asian-Arab, later Latin American, Group offered an important measure of balance in the General Assembly in debates on international security and the crises of the Cold War. In forums such as the U.N., at Bandung, and in the nonaligned conferences (from 1961 onward), the Third World constantly stressed the importance of nuclear disarmament, and they forced the powers to come to the table for arms reduction talks. The Third World nations understood that the nuclear bias within the Security Council meant that the U.N. had an institutional bias against nuclear disarmament, which is why they fought to revise the membership rules for the Security Council (and its veto system). Finally, it was pressure from the Third World through its Group of 77 that provided the U.N. with an agenda for social and economic development (the U.N. Conference on Trade and Development), for a critique of transnational corporations (the U.N. Center for Transnational Corporations), for international policy on food insecurity (the Food and Agricultural Organization), and for other such matters. The Third World pushed on these lines and forged the multilateral institutions that are so much a part of our modern world.

Like the First and Second Worlds, the Third World was not so much a geographical entity as a political one. To
use the term *Third World* to refer to poverty and corruption is a distortion of the emergence of the term among the anticolonial and anti-imperialist forces of the 1950s and the 1960s. That the Third World agenda did not succeed has as much to do with the recalcitrance of the first two worlds and the unequal international finance system that favored the former colonial powers (mainly in the First World) as it does with the various internal problems of the countries that saw themselves as part of the Third World. A lack of investment funds, a lack of land reform, a lack of institutional probity, a failure to deal with internal power dynamics—all these were factors in the demise of the political project of the Third World. As the Third World began to founder in the 1970s, many of its countries welcomed investment funds from international lending agencies such as the International Monetary Fund and the World Bank. Those funds came with structural adjustment policies that not only ensured that wealth flowed upward, but also that democratic institutions were dismantled. These changes led to the end of the state-centered development and rights agenda of the Third World.

**The Fourth World**

In the 1950s, before the Third World collapsed, partisans of those who did not stand to benefit from its agenda had already begun to speak of a Fourth World. In 1957 a Catholic priest, Joseph Wrensinski, convened a gathering in Paris entitled Aide à Toute Détresse (Aid to All Distress). Like Sauvy, Wrensinski drew from the French Revolution, whose Fourth Estate, outside the government system, represented all those who languished in poverty. For Wrensinski and the ATD Fourth World movement that he created, the Fourth World represented those without power and means who lived in all parts of the planet. In 1974 Chief George Manuel of the Shuswap peoples in British Columbia, Canada, wrote an important book entitled *The Fourth World*, in which he defined the Fourth World as the indigenous peoples of the world, who no longer had the rights to their own lands and those lands’ riches. Manuel’s 12 million indigenous people around the world overlapped with, but were not identical to, Wrensinski’s international impoverished. Manuel added the crucial dynamic of aboriginality to the discussion to ensure that the millions who had been overrun by colonialism and by nationalism would not be lost in the planning process for modernity.

Subcomandante Marcos of the Zapatista Army for National Liberation (EZLN), active in the impoverished state of Chiapas in Mexico, uses the term “Fourth World War” to describe the condition of the Fourth World. The Third World War was the Cold War, which lasted from 1946 to 1990. After that, Marcos argues, there were no checks on neoliberalism’s appropriation of all the resources around the planet that had been held in trust as public goods or else by indigenous peoples in reserved areas. With the fall of Communism, neoliberal forces want to open up every resource to profit. This Fourth World War is not a war between nations, but a war of corporations against people. “For neoliberalism,” Marcos said in a 1999 speech, “everything is merchandise, it is sold, it is exploited. And these indigenous come along and say no, that the land is mother, it is the repository of the culture, and that history lives there, and the dead live there. Absolutely absurd things that cannot be entered on any computer and which are not listed on a stock exchange. And there is no way to convince them to go back to being good, to learn to think properly. They just don’t want to. They even rose up in arms” (Marcos 2003). The EZLN uprising in Chiapas in 1994, as the North American Free Trade Agreement came into effect, provided the first major salvo against the suppression of the Fourth World. But it is not alone. North of Chiapas, at Cancun, when the international community met in 2003 to define the international trade rules, they had to deal with twelve former Third World nations (the G-12) led by Egypt, India, Brazil, and South Africa, who wanted a more equitable system, one that would be favorable not only to the former Third World, but also to the Fourth World within.

Since the Four World’s framework is a political theory, its history is suffused with politics. The definitions are political and contested, and its future cannot be left to the cold calculations of analysis. We shall have to see if the
Fourth World develops any traction, if the Third World reemerges, if the First World is able to hold its fragile alliance together. The Second World has disappeared, but it too may reappear in another guise if the rise of Communism in the former Third World is any indication.

Vijay Prashad

**Further Reading**


**Food**

The act of exchanging food connects human beings with other species, with other human beings across diverse geographical regions, and with a notion of a divine being. Hence, food is an integral part of world history on both biological and cultural levels. *Food* is the collective noun that we use to describe the vast range of animal and vegetable products that we all consume for nutrition and survival. At its most basic biological level, food is the fuel that is required by human beings and extracted from other organic matter in the form of energy.

Food connects humans with the plant and animal kingdoms within a complex web of interconnections, commonly called an “eco-system,” thus bringing human existence into close symbiosis with the natural environment through processes of adaptation. Rock paintings in Europe, Africa, and Asia from more than twelve thousand years ago depict the collection of honey, one of human-kind’s most ancient and durable foods, and represent the symbiotic relationship between flowers, bees, and human beings. From the Cheyenne people of the U.S. western plains to the Jews, from the Greeks to the Amazonians, honey has also been an enduring motif in the creation myths and legends of world cultures.

The act of exchanging food is central to cultural identity and religious practice. The great Hindu epic, the *Bhagavad Gita*, states that all beings come into existence from food. The ancient Greeks worshipped Demeter (goddess of agriculture), and the Romans paid homage to their agricultural god Ceres (from whom we get the word cereal) in order to secure good harvests of wheat and barley. For the Aztecs, Chicomecoatl was the provider of maize from the heavens. The cultural importance of bread in both Christian and Jewish religious ceremonies is a further example of the cultural significance of food, and the Arabic term *halal* (sanctioned by Islamic law) and the Yiddish term *kosher* (sanctioned by Jewish law) remind us that rules of preparation and social interaction are guided by the sacred place of food in the human imagination.

**Emergence of Agrarian Society**

Archaeological evidence suggests that the earliest hominids (erect bipedal primate mammals comprising recent humans and extinct ancestral and related forms) in east Africa, *Australopithecus afarensis*, probably ate roots, leaves, berries, and fruit as well as fish and insects that were caught by hand but that they did not consciously manipulate the natural environment. However, not until the evolution of the direct ancestors of modern humans (*Homo erectus*) do we see changes in the varieties of food gathered and the manner in which food procurement formed the basic structure of societal organization. In particular, in the hunter-gatherer groups of 100,000 years ago we see a way of life that was socially organized around the search for nutrition. Anthropologists have used their studies of hunter-gatherer groups...
such as the !Kung San of the Kalahari Desert in Africa, the Hadza of Tanzania, and Australian aboriginal peoples to provide a window into the world of preagricultural human communities. Sometimes called “foragers,” these groups had a mobile way of life with few possessions, moving from food source to food source and eating a wide variety of nutritious vegetables, seeds, berries, and nuts as well as hunting the occasional animal or catching fish. Food was shared equally throughout the social group. Depending on the availability of food in a given area, subsistence changed, and the group moved to exploit new areas for nutritional purposes. In terms of labor and energy usage, hunter-gatherer groups have a relatively large amount of time to rest, sleep, and spend with each other in comparison with agricultural communities. For more than 90 percent of human history, the principal mode of food procurement was foraging.

The phenomenon of domesticating plants and animals with the intention of preserving food supply and the result of producing a surplus to horde or exchange marks a fundamental shift in human history known commonly as “agriculture.” In simplest terms agriculture is the shift from food collection to food production involving what historian David Christian calls “a shift from extensive to intensive technologies” (Christian 2004, 207). Due to the change in energy usage, the expenditure of labor power, and the fact that communities now tended to stay in permanent settlements, these practices gave rise to the emergence of the first agrarian civilizations. From the third to the middle of the first millennium BCE, these civilizations were found only in Afro-Eurasia, first clustered around the fertile banks of the Tigris and Euphrates rivers in southern Mesopotamia and the Nile River in Egypt but later emerging in the Indus River valley of Asia and northern China. The cultivation of cereal crops and the subsequent domestication of animals in separate regions gave rise to a surplus of food that was used for hording, internal exchange, or external trade.
Food and Trading Networks

Foodstuffs were an important part of the trading networks of agrarian civilizations. Although staples such as wheat and millet in western Asia and rice in India and China always dominated internal trade, highly prized exotic and luxury food items were integral commodities of exchange along the ancient trade routes that linked civilizations. More than two thousand years ago Indian spices and coconuts were traded with the Romans in ancient Egypt via the sea-faring route. During the time of trade along the Silk Road from the Roman empire to Han (206 BCE–220 CE) China, for example, foods such as anise seeds, dried dates, apricots, cherries, and pomegranates were exchanged. By far the most lucrative and profitable trade was in spices from the Malabar coast of India, which was monopolized by Arab and Indian traders for centuries, pouring great wealth into the Indian Ocean area. Europeans in particular sought black pepper. In the heyday of the overland spice trade, the European demand for pepper meant that it was worth more in weight than gold, bringing social prestige to traders and bestowing wealth and opulence to cities such as Venice, which prospered during the Middle Ages to become a leading center of culture and commerce. The monopoly of the trade, however, and increasing demand for broader consumption pushed the quest to find an alternative route to the Islamic-Eurasian spice networks through European sea exploration. As an exchange good from ancient times to the fifteenth century CE, pepper typifies the manner in which specialized foodstuffs became commodities of high value in emerging commercial networks, creating great profits for middle traders in particular. The trade in pepper ushered in the era of exploration as Europeans sought direct access to the market for lucrative spices.

The Columbian Exchange

The exploration of Christopher Columbus in 1492, however, did not find Indian spices but rather forged a new system of commercial exchange by which the trade in new foodstuffs would radically change global nutritional flows for the rest of human history. The opening of the sea route between Afro-Eurasia and the Americas brought together three world systems for the first time, and the European encounter with indigenous civilizations in the Americas would at once have a devastating effect on those civilizations as it benefited the European quest for new lands, new markets, and new sources for better nutrition. The European encounter with the Americas was also a confrontation with species of plants and animals that were unknown in Europe and that had evolved in isolation due

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apricots</td>
<td>China</td>
</tr>
<tr>
<td>Bananas</td>
<td>South America and Mesoamerica</td>
</tr>
<tr>
<td>Blueberries</td>
<td>North Europe</td>
</tr>
<tr>
<td>Cherries</td>
<td>West Asia</td>
</tr>
<tr>
<td>Cranberries</td>
<td>Europe</td>
</tr>
<tr>
<td>Dates</td>
<td>West Asia</td>
</tr>
<tr>
<td>Figs</td>
<td>India and West Asia</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>Caribbean</td>
</tr>
<tr>
<td>Grapes</td>
<td>West Asia</td>
</tr>
<tr>
<td>Kiwi</td>
<td>China</td>
</tr>
<tr>
<td>Lemons</td>
<td>India</td>
</tr>
<tr>
<td>Limes</td>
<td>India</td>
</tr>
<tr>
<td>Litchis</td>
<td>China</td>
</tr>
<tr>
<td>Mango</td>
<td>India</td>
</tr>
<tr>
<td>Melons</td>
<td>Asia and Africa</td>
</tr>
<tr>
<td>Nectarines</td>
<td>China</td>
</tr>
<tr>
<td>Oranges</td>
<td>East Asia</td>
</tr>
<tr>
<td>Papaya</td>
<td>Mesoamerica</td>
</tr>
<tr>
<td>Peaches</td>
<td>China</td>
</tr>
<tr>
<td>Pears</td>
<td>West Africa</td>
</tr>
<tr>
<td>Pineapple</td>
<td>South America</td>
</tr>
<tr>
<td>Plums</td>
<td>Europe</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>Tibet</td>
</tr>
<tr>
<td>Strawberries</td>
<td>Americas</td>
</tr>
<tr>
<td>Tangerine</td>
<td>China</td>
</tr>
</tbody>
</table>
to unique patterns of evolutionary development. The subsequent transatlantic swapping of peoples, plants, animals, and diseases that culturally transformed both sides of the Atlantic is commonly known as the “Columbian Exchange.”

The discovery of new indigenous food sources in the Americas brought the emergence of new webs of commercial exchange that profoundly affected the European diet. New plant varieties, integral to the diets of indigenous Americans, Aztecs, and Mayans—such as kidney beans, peanuts, squash, peppers, pumpkins, pineapples, and avocados—were introduced to the European diet, whereas rice, wheat, barley, oats, coffee, sugarcane, bananas, melons, and olives came to the Americas from Afro-Eurasia. Of particular significance for the increase in trade to Europe was the introduction of the potato, which radically changed net yields of crops per acre, was higher in calories than any European grain, and provided a new source of carbohydrates that was to eventually become a staple food for the northern and western European working class during the Industrial Revolution. Indigenous peoples in the Andes of Bolivia were cultivating potatoes and other tubers ten thousand years ago. Maize was domesticated seven thousand years ago in the Tehuacan Valley in Mexico and produces almost double the yield of wheat. Maize was introduced to Afro-Eurasia for both human food and livestock feed, providing a new source of protein.

Sugar also was a lucrative food commodity whose production and trade were intimately entwined with the slave trade as a result of this new network of exchange among Europe, the Americas, and Africa. An expensive and highly prized commodity, sugar had reached both the ancient and medieval European worlds via Arab traders, but its production shifted to the Mediterranean by the fourteenth century. By the fifteenth century sugar production flourished in the Portuguese plantations in Algarve and Madeira due largely to the free labor of slaves who were transported from the west coast of Africa.

The opening up of the New World provided traders with an opportunity to satisfy the increasing demand for sugar as production moved to the Caribbean, where it began to thrive during the early sixteenth century. The expansion of the plantation system was a direct result of the increasing demand for sugar in Europe. The demand increased as beverages such as coffee and tea became lower in price, lost their luxury status, and became

### Vegetables: Where They Originated

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artichokes</td>
<td>North Africa</td>
</tr>
<tr>
<td>Asparagus</td>
<td>West Asia</td>
</tr>
<tr>
<td>Beets</td>
<td>Mediterranean</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Europe</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Europe</td>
</tr>
<tr>
<td>Carrots</td>
<td>Europe</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>West Asia</td>
</tr>
<tr>
<td>Celery</td>
<td>Europe</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>India</td>
</tr>
<tr>
<td>Eggplant</td>
<td>India</td>
</tr>
<tr>
<td>Fennel</td>
<td>Greece</td>
</tr>
<tr>
<td>Green Beans</td>
<td>Mesoamerica</td>
</tr>
<tr>
<td>Leeks</td>
<td>Europe</td>
</tr>
<tr>
<td>Lettuces</td>
<td>Mediterranean</td>
</tr>
<tr>
<td>Okra</td>
<td>Africa</td>
</tr>
<tr>
<td>Olives</td>
<td>Mediterranean</td>
</tr>
<tr>
<td>Onions</td>
<td>Central Asia</td>
</tr>
<tr>
<td>Parsnips</td>
<td>Eastern Europe</td>
</tr>
<tr>
<td>Peas</td>
<td>West Asia</td>
</tr>
<tr>
<td>Peppers</td>
<td>South America and Caribbean</td>
</tr>
<tr>
<td>Potatoes</td>
<td>South America</td>
</tr>
<tr>
<td>Squashes</td>
<td>South America and Mesoamerica</td>
</tr>
<tr>
<td>Radishes</td>
<td>South Asia</td>
</tr>
<tr>
<td>Spinach</td>
<td>Iran</td>
</tr>
<tr>
<td>Sweet Potatoes</td>
<td>South America</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>South America</td>
</tr>
<tr>
<td>Turnips</td>
<td>Northern Europe</td>
</tr>
<tr>
<td>Yams</td>
<td>Asia</td>
</tr>
</tbody>
</table>
popular with the masses. Cargo ships left Europe loaded with manufactured goods such as textiles, glass, tobacco, and gunpowder and headed for the West African coast, where these goods were bartered for slaves who were taken to the Caribbean and then to America to work on the sugar plantations. Sugar was the first major “cash” or export crop cultivated in the Americas to satisfy market demand in Europe, and its production using slave labor exemplified the exploitive nature of new global networks of food exchange that operated not to provide nutrition but rather to serve the interests of European capital and demand in a new global market.

**Industrialization and Colonialization**

Hence, Europeans colonized foreign lands and used slave labor to increase their supplies of food. Before the Europeans, however, ancient world empires with growing populations, such as Greece and Rome, had found that they could not provide an adequate domestic surplus to feed their own populations. Through political conquest and military invasion, such empires secured plentiful food supplies from external sources. Hence, Greeks and Romans secured their wheat from Egypt and exotic fruits, such as cherries and peaches, and spices from the U.S. southwest.
Mediterranean and Persia. During the modern era, however, as the population of Europe rose substantially during the nineteenth century, demand was even greater for an external food supply. That demand was created by quite different circumstances. The twin processes of overpopulation and industrialization caused mass emigrations from Europe across the Atlantic and to Australasia and a corresponding need to import large quantities of food from the rest of the world. This need created a global trade in foodstuffs on a scale never seen before in world history. In 1850 world exports of food were less than 3.6 million metric tons but by the 1880s had increased to 16 million metric tons and to 36 million metric tons by 1914.

The conversion of new lands for cultivation in places such as Argentina, Australia, and New Zealand during the nineteenth century and the appropriation of colonial food sources from Asia enabled people to import food items to Europe from overseas markets and to move bulk food items over long distances in parallel with advances in shipping technology. Countries such as Britain shifted the focus of their food imports from exotic or luxury food items to the bulk staples that formed the basis of their diet, such as cereals, dairy products, and meat. By the early 1880s the use of refrigerated cargo ships enabled frozen animal carcasses to be exported from Australasia to Europe, allowing the export of bulk meat products. In sum this export was a movement of mass foodstuffs to feed millions of people. Moreover, the shrinking of the domestic agricultural sector in Britain in particular occurred in tandem with the consolidation of an overseas empire, creating a market for the export of manufactured goods to be traded for primary produce.

The Future
Changes in the manner in which food is gathered and distributed have caused the search for nutrition to become intrinsic to the development of world systems and networks of commercial exchange. Food has changed from being a source of nutrition that was exchanged for the purposes of survival to being a commodity that is traded for profit in a global system of

* I have no doubt that it is a part of the destiny of the human race, in its gradual improvement, to leave off eating animals, as surely as the savage tribes have left off eating each other when they came in contact with the more civilized. • Henry David Thoreau (1817–1862)
trade. The international trade in foodstuffs reached its peak during the 1930s but has been in decline since that time with the focus being on attempting to satisfy the levels of consumption in the industrialized world.

In this process by which food becomes an integral part of the world market, its fluctuating value often means that those people who need it most cannot afford it. The division between “developed” and “developing” nations and the continued prevalence of famine in undernourished parts of Africa and Asia on a planet of nutritional abundance are the legacies of the inequalities of the historical shifts by which networks of commercial food distribution and exchange have favored both the appetite and the economic growth of the developed world.

Adrian Carton

See also Agricultural Societies; Disease and Nutrition; Famine; Foraging Societies, Contemporary; Horticultural Societies; Pastoral Nomadic Societies

Further Reading


Food Production, Origins of

See Agrarian Era, Cereals; Food

Foraging Societies, Contemporary

Anthropologists call human groups who subsist by collecting foods from the natural environment foragers. Unlike food producers—groups who subsist by herding, gardening, or farming—foragers grow little or no food of their own. They hunt animals, fish, and gather plants, reptiles, insects, and other foodstuffs. Because their primary forms of food acquisition are hunting and gathering, they are also commonly referred to as hunter-gatherers or collectors.

For the 2–3 million years of human existence up to about ten thousand years ago, all humans were foragers, and therefore all cultures were foraging cultures. Foraging began to be replaced by herding and farming in West Asia about ten thousand years ago, and since then the percentage of humans who are foragers and cultures that are foraging cultures has steadily declined. In the modern era (since about 1750) foraging has been the primary subsistence strategy of only a very small percentage of people on Earth. As foraging people have come into contact with or under the rule of nation-states, many have disappeared, been absorbed into the dominant culture, or been reduced to a marginal existence on the fringes of society. Domination by modern nation-states is now so complete that in 2004 there are no purely foraging cultures, and there probably have not been any for several decades. Sensational claims in the media of the discovery of Stone Age peoples, such as the Tasaday of the Philippines in 1971, have proven on closer examination to be false or exaggerated. Those peoples that have continued to rely on foraging lifeways in recent times have rarely lived entirely independently and have been involved to varying degrees in local, regional, national, and global economies and political systems.

If modern foragers are so few in number and have minimal political and economic significance, why are they important in world history? They have drawn and continue to draw attention that far exceeds their numbers because they are viewed as surviving representatives of the foraging (Paleolithic) era, from whom it is often assumed that we can learn about the human past. Unfortunately, while the study of modern foragers can and does inform about the diversity of the human experience, much recent research suggests that there are narrow limits to what can be learned about our foraging ancestors from the ways of life of foragers in the present.

Distribution and Lifeways of Modern Foragers

In modern times foragers have lived on every continent except Europe, although their distribution has typically been limited to specific regions. In North America, modern-era foragers included the Inuit peoples of Alaska, Canada, and Greenland, the desert peoples of the American West; and the forest peoples of the northwest coast, the Great Basin, and the subarctic regions. In South America foragers were encountered in Amazonia, the Grand Chaco, and Tierra del Fuego. In Africa there were two major dispersals—in the tropical rainforests of central Africa and in the Kalahari Desert in the southwest. In Asia, foragers were found in the rain forests of the south and southeast (in India, Sri Lanka, Malaysia, Indonesia, and the Philippines) and in Arctic Siberia. Finally, in the Pacific, the aboriginal peoples of Australia were foragers. Among the foragers who have drawn considerable anthropological and popular attention are the Mbuti and Efe of central Africa, the San of Botswana, the Andaman Islanders in the Andaman Sea, the Copper Eskimos in Alaska, the Chukchi in Siberia, the Ache of Paraguay, the Yir Yoront and Tiwi in Australia, and the Semang and related groups in Malaysia.
Anthropologists now recognize that foraging societies are similar to one another in many ways but also differ in significant ways. The key difference is one of scale, with some groups being small and having a relatively simple social and political organization, while other groups are more complex, with larger populations and more specialized and differentiated social and political systems. To some extent, this variation is best viewed as a continuum, from simple to complex or, as it is sometimes labeled, from classic foragers to affluent foragers. Some of the better-known foragers fall at the classic end of the continuum; these include the Mbuti, San, Inuit, and many Australian aboriginals. Among those at the affluent end of the continuum were the Ainu of Japan, the Tlingit and several other cultures of the Pacific Northwest, the Tiwi, and several native peoples of central and northern California.

Classic foragers lived traditionally in small, migratory bands of less than a hundred people. They moved about to seek the best living conditions and to acquire food. Movement was not random, but was based on experience and knowledge of nature. The basic social group was the nuclear family of a father, mother, and their children. Bands were formed by groups of related families and grew or shrank in size in accord with available natural resources such as water, game, and plant foods. Social relations were based on ties of kinship, friendship, and trading partnerships. Exchange was based on reciprocity, and in the absence of personal property, sharing was the rule. The division of labor was based on sex and age, with women usually doing all or most of the gathering of plants and other foodstuffs, water, and firewood and caring for the children. Men did the hunting, sometimes alone and sometimes in groups, and were usually responsible for dividing the products of the hunt and for trading with other groups. Food was consumed soon after it was obtained. Conflict was resolved through gossip, physical fights, public ridicule, and ostracism. Leadership was fluid, generally going to the person best at the task, although men with much kin support or with oratorical skills might occupy a position of informal leadership. In some cultures animism and shamanism were the religious systems, with the environment often seen as uncertain and even hostile. Religious ritual generally centered on influencing the supernatural world of spirits and other forces to look and act benevolently toward the human world.

The key difference between classic and affluent foragers was that the latter lived in richer environments and thus were able not only to collect but also to process and store food for future use. The Tlingit gathered salmon and other fish in large quantities from spawning streams, and Native American groups in northern California gathered acorns and processed them into flour. Affluent foragers also developed more sophisticated technology to exploit the environment. The rich environment and steady supply of food led to other differences from classic foragers.
**The Transformation of a Foraging Society**

The following description of changes in the indigenous hunting practices of the Ojibwa of Canada shows the influence of a money economy on the traditional way of life.

Until the last two decades, the largest effective economic unit was the hunting (co-residential) unit (cf. Dunning 1959a:55–58), averaging from 20 to 30 individuals at Osnaburgh. Each co-residential unit is composed of several households or commensal units which form the winter bush settlements. In winter, hunting group members occupy a bush settlement in the centre of a communally owned trapping territory. Several males usually form trapping partnerships. Although members of the hunting group cooperate and share food, furs belong to the individual who caught them. In summer, co-residential units form tent clusters at fishing camps. Within the past decade the amount of time spent in the bush has decreased with the consequent decline of the hunting unit in social and economic importance. The weakening of bonds of solidarity can be correlated with a money economy and the relegation of control in many spheres of life to external agencies. As Dunning has noted for Pekangikum, these non-indigenous agencies exercise “considerable control in matters of trapping, fur trade, and credit; illness and hospitalization; schooling, and thus family allowance benefits; and less directly but equally influentially, religion and communal gathering for that purpose” (1959a:185).

Concomitant with these changes has been the decline in authority of the hunting group leader. Where in the past the efficacy of leadership was grounded in magico-religious power attained through the vision quest; missionary influence, improved medical treatment, and education have undermined this basis. Leaders could control the animals necessary for survival and trade, and apply sanctions through the fear of magical power upon wrongdoers. Today, the money economy and subsidies have lessened the importance of subsistence techniques with regard to survival, and the retributive sanctions are no longer feared. In a compact acephalous community composed of formerly dispersed hunting groups, many of whose functions have been taken over by outside sources, social control within such a community is largely restricted to gossip groups (cf. Dunning 1959a:184), and the household tends to emerge as a self-sufficient unit (cf. Rogers 1962:B81). Despite these recent changes, however, there is still the need for economic assistance beyond the household related to bush life at the fish camps and the spring trapping camps.


Affluent foraging communities were larger and permanent or semipermanent. There was more personal property, and there was occupational specialization, with some people acting as leaders, some specializing in crafts, such as canoe making, and some acting as religious specialists. Social status based on wealth, personal abilities, and family status was the rule, and individual families were defined in terms of their place in larger lineages or clans. Leaders of these larger kin groups were usually men who were socially adept at managing kin relations and marrying off or marrying in women to create kin networks loyal to them. The economic system was based on trade, not only of goods but also of personal services. As with classic foragers, conflict was not unknown, and relations with neighboring groups were often hostile.

**Impact of the Outside World**

The impact of the outside world, and especially of Western colonists on modern-era foragers, has been shaped to a significant extent by several stereotypes of foragers. Perhaps the earliest stereotype, adhered to by many colonial officials, soldiers, and missionaries, was that foragers were primitive savages who were intellectually and morally inferior to the colonizers and who needed to be civilized and converted to Christianity. This view empow-
ered colonial officials and their agents to take land and other resources, enslave foragers, relocate them, force them to convert to Christianity, remove their children for education in white-controlled schools, and enmesh them in a market economy. It also empowered scientists to study them as objects, to acquire, store, and exhibit forager material culture in museums, and in some cases to exhibit the foragers themselves or bones of their ancestors.

In many cases, what the colonists most wanted was the valuable natural resources found in the traditional territories of foragers. Those resources included sea mammals, fish, animal fur, minerals, trees, and the land itself for use in farming or ranching. Given their small numbers and lack of sophistication, foragers were rarely able to offer much resistance, and many individuals and groups disappeared either through extinction or assimilation. Perhaps the most notorious case was the purposeful hunting down and killing of the Tasmanians by agents of the British empire, which left no pure-blood Tasmanians on earth by the twentieth century. As destructive as colonial actions were, the infectious diseases that colonists brought with them were equally or more destructive. It is not hard to understand, therefore, why the foraging lifeway has disappeared as a distinct type of culture.

A version of the noble savage stereotype, which developed in the 1960s, was the near opposite, with foragers idealized and romanticized as Earth’s first environmentalists, living in harmony with nature. Because their numbers were small, it is true that by and large foragers have left a much smaller ecological footprint on the earth than have food producers. But it also true that affluent foragers often heavily exploited the environment and sometimes used wasteful techniques, such as driving animals over cliffs or netting enormous numbers of fish, to obtain what they wanted. In addition, since many modern-era foragers lived in economically marginal environments, they tended to view the environment as an uncertain and even hostile place.

Since the 1960s, as part of the broader indigenous rights movement, some foragers have used public opinion and the political and legal system to regain some rights, including political representation, control or ownership of some of their traditional territory and natural resources, and the return of their material culture and remains of their ancestors. Among the success stories are the growing indigenous rights movement in post-Soviet Union Siberia, protected areas set aside for groups in Brazil, legislation in the United States mandating the return of remains and material culture to Native Americans, the establishment of the Inuit homeland of Nunavut in northern Canada, and the legal recognition of land rights for Aboriginal peoples in Australia.

Can We Learn about the Past from Modern Foragers?
Anthropologists now generally agree that foragers in the modern era cannot be considered living guides to the lifeways of foragers of the past. This is the case for several reasons. First, no presently existing foraging society is a
simple survival from the past. Rather, every society has its own history and has changed over time. Second, some contemporary foraging societies were not always foragers. For them foraging is a recent adaptation to the environment and represents a devolution from a former lifeway based on gardening or farming. Third, nearly all foragers of the modern era live in harsh environments—deserts, tropical forests, the Arctic north—while foragers in the past lived in a wider range of environments, some of which were less hostile to human existence.

Fourth, most foragers of the modern era did and do not live in isolation. Rather, they have had extensive and long-term exchange relations with other foragers and nonforagers. For example, many aboriginal groups in Australia were directly or indirectly involved in trade with the Chinese and Malay for hundreds of years. Some Bushmen groups in southwest Africa have lived a symbiotic existence for over a thousand years with neighboring Bantu-speaking farmers and herders. After Western contact, foragers in North America and Siberia were quickly drawn into the fur trade. And some anthropologists argue that tropical forest foragers such as the Mbuti in the Congo have always had trade relations with neighboring farmers.

Fifth, in the twentieth century all foragers that were not already so involved have come under the political control of nation-states and become part of local, regional, national, and global economic exchange networks. For example, forest products such as soap produced by foragers in Amazonia, bark art created by Australian aboriginals, and soapstone sculpture by Inuit peoples are all marketed internationally.

Despite these limiting factors, there is some recent research that suggests that we can learn something about the human past from modern foragers if we are careful about what questions we ask and what information we use to answer those questions. For example, the lifeways and adaptations of modern foragers do tell us something about how humans adapt and have adapted to different and changing environments. Social relations among foragers tell us something about conflict and cooperation and the significance of kin relations in human evolution. Forager worldviews and religious beliefs tell us something about human cognitive processes. Finally, comparison of foragers with other primates can tell us something about the life course of prehistoric humans and the evolutionary processes that shaped the human journey. Research on these and other questions is in its early stages and may well produce noteworthy findings.

David Levinson

See also Foraging (Paleolithic) Era

Further Reading
Forms of Government—Overview

Serious discussion of the forms of government (or, as we also may call them, regimes or constitutions) that shape cities and countries begins with the classical Greek thinkers. It is in light of their discussion that we first analyze even those governments that preexisted the Greeks. Those early governments were either monarchies or extended villages that did not rise to the level of complexity that the Greeks discovered was necessary for a true city or country.

Greek Discussions of Government

Socrates (c. 470–399 BCE) was the first person to examine human affairs philosophically, and he saw that the core of ordinary human affairs was political. His arguments and views were developed by Plato (c. 428–348 or 347 BCE) in his dialogues. Distinguishing what belongs to the historical Socrates and what to Plato himself is largely a fruitless enterprise, less important than attending to the discussions themselves.

Plato’s purpose in analyzing forms of government was to understand what political life truly is, not what it merely appeared to be under changing circumstances. The rational search for what truly is is the defining element of philosophy and the sciences that later flow from it. The philosophical effort generally begins with Socrates’ predecessors, the so-called pre-Socratics, notably Parmenides (b. c. 515 BCE).

The Greek thinkers argued that politics is the core of human affairs because the polis, the Greek city, is sufficient in its size and complexity to allow the full display of human characteristics in their possible excellence, or virtue. Justice is central among the ethical virtues, and it is the central excellence toward which political organizations and rule aim. Anything smaller or less complex than a city, such as a village, falls short of virtue because it does not allow sufficient leisure or sufficient freedom of discussion among equals about what is better and worse in developing character, conducting war and peace, or pursuing rational arts and skills such as medicine. Smaller units remain too economic in their focus, dealing as they do largely with meeting necessities, and too paternalistic in their rule, being primarily extended families. Anything larger than the city, moreover, such as the Persian empire that the Greeks fought or the Egyptian empire that Greek historians such as Herodotus (c. 484–c. 425 BCE) examined, adds nothing vital to possible human excellence, even if it is sufficiently complex and diversified—which many large agrarian territories are not.

The central place of the city means that the Greek discussion of forms of government focuses on it; the fact that the city encompasses the full range of human virtue means that the discussion, if true, is in principle adequate for understanding larger units such as our contemporary countries. The most complete classic discussion of forms of government occurs in works such as Plato’s Republic and Statesman and, especially, in the Politics of Aristotle (384–322 BCE). Aristotle’s discussion sets forth the framework in which analyses of constitutions have been conducted from his time forward. Forms of government

**The best political community is formed by citizens of the middle class. • Aristotle (384–322 BCE)**
are divided by how many rule and whether or not the rule is just and serves the common good (rather than the private or class good of the rulers). The six basic forms are tyranny (rule of one for his own good), oligarchy (rule of a few for their own good), democracy (rule of many for their own good), monarchy, aristocracy, and good democracy (or “polity”)—rule of one, few, or many for the common good.

Aristotle develops this basic classification in a number of ways that make it increasingly subtle and complex. Oligarchy is not merely rule of the few generally but is usually rule of the few who are wealthy, and democracy is rule of the many whose central characteristic is that they are poor. Aristocracy is rule of the few who are ethically virtuous and possess practical wisdom, or “prudence.” Varieties of democracy exist that depend on which group from among the relatively poor dominates: farmers, merchants, or the urban poor, for example. Moreover, mixtures exist between the rich and the poor, where the gradations of wealth are so subtle that no group dominates, or where a middle class is superior to either the rich or the poor. Aristotle’s view is that such mixed regimes are the best forms of government one is likely to achieve in practice.

Good government, moreover, is generally characterized by the existence of law (as opposed to arbitrary commands) that citizens accept willingly, rather than government that is imposed involuntarily. The basic laws that distribute functions and offices, moreover, are good when they balance properly the claims to rule that are made by the ethically virtuous and prudent, the wealthy, and the many poor who are free soldiers. All contribute something important to the life or to the good life (the virtuous life) of the community. The good legal and practical balance that we see in mixed regimes or in the better democracies imitates the genuine but rare excellence of rule for the common good of one or a few who are virtuous.

Most governments will be either democracies or oligarchies, with varying degrees of pretension to excellence. Aristotle bases his discussion not only on the intellectual possibilities but on examining the forms of government...
of many cities, of which only his description of the Athenian constitution fully survives. Together with Plato (and Socrates’ contemporary, the historian Thucydides, d. c. 400 BCE), he is especially concerned with the two leading regimes of fifth- and fourth-century BCE Greece, Athens and Sparta, the leading democracy and oligarchy or, some would argue, aristocracy, respectively.

Plato and Aristotle treat the form of government not as a narrow administrative entity but as vital for the overall life of the city: Everything in the city is organized to promote the ruling class’s way of life. (We might as easily speak of, say, the democratic way of life as of the democratic regime.) The constitution shows us who rules, and all rulers make law according to a principle of distributive justice, equal to equals and unequal to unequals. This principle normally is made concrete by the unequal wealth or equal freedom in terms of which democrats and oligarchs, respectively, distribute offices and, through law, permit or encourage activities. This is why a significant place among the rulers for the virtuous—those of excellent character and practical judgment—is, for Aristotle, so vital, because to promote and serve the conditions for their excellence is also to serve the community as a whole. One of democracy’s advantages is that by allowing many activities it permits the philosophic or scientific life and, thereby, intellectual excellence. This democratic equality exists at some expense to outstanding moral excellence, however, and in any event, as the trial and death of Socrates makes clear, the Greeks of the time thought that an inevitable tension existed between the unbridled questioning engaged in by thinkers and the beliefs and opinions that cities and countries must take for granted. This difficulty is especially pronounced to the degree that religious belief belongs to or, indeed, forms, a community’s laws.

Monarchies before and after the Roman Republic

Aristotle’s and Plato’s analyses are the basis of subsequent discussion. Factually, monarchies—kingships or tyrannies—were the rule in the Aegean and surrounding areas after the conquest of the Greek city-states by Philip of Macedon (382–336 BCE), as they had been in China and Egypt. The most famous such regime was the empire of Alexander of Macedon (356–323 BCE). The outstanding exception was the Roman republic (509–27 BCE). Rome is analyzed and described extensively by residents and observers such as Livy (59 BCE–17 CE) and Polybius (c. 200–c. 118 BCE) and by later thinkers such as Niccolo Machiavelli (1469–1527) and the founders of the United States in the eighteenth century. The Roman Senate made Rome in one sense aristocratic or oligarchic, and growing power for the people added a democratic element. One might even say that short-term dictatorships and consulates involved a monarchical element. Rome was on the whole a mixed regime, emphatically republican (that is, not a monarchy) in its operation and self-understanding until it was replaced by the Roman empire.

The Roman empire was succeeded by various kingdoms and religious empires. The new element was revealed religion, especially Christianity and Islam. The place of priests and the link between rule and worship always was important in Greek cities and in Rome. Aristotle downplayed the question of piety in his political analysis proper, but the connection or even possible identity between obedience to law and to divine commands is clear. What apparently is new after Rome is universal and imperial religion and its connection to political life. Christianity in particular gave rise to new questions about the connection between monarchies and the organized priesthood, culminating in the papacy. The leading Christian thinker of the Middle Ages, Thomas Aquinas (1225–1274), did not emphasize these questions, however, but followed as best he could Aristotle’s analysis of regimes. We might think of feudal regimes as monarchies that were buttressed by the Church with an admixture of oligarchy. Ties to the land and the link between land and politics, moreover, often made medieval political divisions more hereditary than was common in Greece, with its active democracies, or in the Roman republic, where the democratic elements supplemented the more hereditary Senate.
Liberal Democracy

Machiavelli’s analysis of Rome was one element of the new understanding of forms of government and, especially, of their operation, that triumphed in the West from 1500 onward. It began as a return to Roman and Greek republicanism spurred by concern with the effects of monarchical and priestly dominance, and culminated in the Enlightenment, in the thought of Thomas Hobbes (1588–1679), John Locke (1632–1704), Montesquieu (1689–1755), and others and in the revolutionary governments of England and the United States.

These governments are best called liberal democracies or representative democracies, democracies that seek to protect and employ politically and economically the unequal degrees of wealth, learning, and moral responsibility that their equal freedom and competition often call forth. Such regimes were not fully developed until the founding of the United States, which features the first fully written constitution, and the culmination of Great Britain’s Glorious Revolution of the late seventeenth century in Britain’s party government of the nineteenth century. Liberal democracies are at the root of much that we consider democratic today. In one guise or another they are dominant in Europe and North America and in many countries in Asia, Latin America, and Africa.

Liberal democracies are variants of the rule of the people; like Greek democracy, they emphasize freedom, self-government, and an orientation toward equality. They differ, however, in several respects. They are based on the equal rights of all individuals rather than, as with the Greeks, on the mere fact of their freedom, defended militarily. As opposed to Greece and Rome, they therefore inevitably press away from slavery, which often was consequent to defeat in battle, even if, as in the United States, they begin by accepting it. They also press toward factual equality in rights for women; women in Greek democracies enjoyed more liberty, especially within the family, than in many other regimes then and now, but were not equal governors of the city. Liberal democracies, moreover, are based on consent of the governed as a matter of right and choice, not only as a necessity with which governments must deal. They are oriented to economic growth and acquisition, moreover, rather than toward equal distribution of resources or to aristocratic character and the use of leisure and wealth to develop and express this character. They help foster this acquisitive orientation and the intellectual and scientific efforts that aid it through religious toleration, whose effect is to control public religious strife by making religion basically a private affair. They also encourage the forming of counties of great size and diversity because they foster the existence of a variety of competing interests in order to encourage economic growth and to discourage democracy from degenerating to the poor lording or seeking to lord it over the wealthy or the wealthy or any other minority group lording it over the poor.

Because of all this the function of government in representative democracies becomes limited to regulating private freedom and competition, helping to advance equal rights and opportunity, and providing national security. These limited functions are compatible with extensive efforts and a plethora of laws. Nonetheless, these limits mean that state and society or public and private come to be split much more cleanly than in Greek cities or in the Middle Ages. Types of government no longer shape the whole country or city, but tell us how states are structured to serve society. Indeed, large and complex liberal democratic countries are governed indirectly through representatives rather than ruled directly in assemblies, as was the case with Greek democracies. Representation, however, is less a mechanical device to deal with size than a means to create distance between immediate popular passions and government’s decisions. It also permits the special skills, character, sense of responsibility, and enterprise of those who excel to benefit their countries rather than to be at odds with them.

This benefit also is promoted by federal structures and a variety of economic enterprises that enable many to rise to the fore and not compete disastrously over static resources and positions of leadership. In fact, unlike Greek democracies but with some similarity to the Roman republic as interpreted by Machiavelli and others, modern liberal democracies harness competition to useful
ends rather than seeking complete political agreement. By doing this they attempt to increase the longevity of democratic republics; previous democracies were short-lived because for the rich or others whose skills could not be accommodated in a democracy revolution was an attractive choice.

This competition is not only economic or federal, but is internal to governments themselves. Liberal democracies implement and feature political mechanisms such as separation of powers, which checks or limits overweening power should it arise anywhere in government, and political parties, which encourage legitimate opposition to the sitting government.

These principles and institutions were developed by Locke, Montesquieu, Thomas Jefferson (1743–1826), James Madison (1751–1836), Alexander Hamilton (1755–1804), John Jay (1745–1829), and others, primarily in the eighteenth century. Versions of the governments they set in motion became during the twentieth century the dominant governments in Europe, the English-speaking world, and much of Asia. Variants include cabinet or parliamentary systems such as the one in Great Britain, in which the executive and legislative are essentially jointly elected, the U.S. presidential system, which separates the electoral sources of executive and legislative power, and mixed variants in other European states. Some countries even maintain constitutionally limited monarchs. These governments all basically agree in the chief features mentioned above, however, as well as in others such as an independent judiciary, extensive freedom from government interference of speech and press, and an independent civil service.

The domination of liberal democracy did not come easily, nor is it altogether secure. Many French revolutionaries at the end of the eighteenth century supported a smaller, more direct democracy in which civic virtue, not economic enterprise, and more unitary government, not separation of powers and representation, were the watchwords. Such governments, advocated by Jean Jacques Rousseau (1712–1778), hearkened back in size, although

Niccolo Machiavelli on "How a Prince Should Keep His Word"

How praiseworthy it is for a prince to keep his word and to live by integrity and not by deceit everyone knows; nevertheless, one sees from the experience of our times that the princes who have accomplished great deeds are those who have cared little for keeping their promises and who have known how to manipulate the minds of men by shrewdness; and in the end they have surpassed those who laid their foundations upon honesty.

You must, therefore, know that there are two means of fighting: one according to the laws, the other with force; the first way is proper to man, the second to beasts; but because the first, in many cases, is not sufficient, it becomes necessary to have recourse to the second. Therefore a prince must know how to use wisely the natures of the beast and the man. This policy was taught to princes allegorically by the ancient writers, who described how Achilles and many other ancient princes were given to Chiron the Centaur to be raised and taught under his discipline. This can only mean that, having a half-beast and half-man as a teacher, a prince must know how to employ the nature of one and the other; and the one without the other cannot endure.

Since then, a prince must know how to make good use of the nature of the beast, he should choose among the beasts the fox and the lion; for the lion cannot defend itself from traps and the fox cannot defend itself from wolves. It is therefore necessary to be a fox in order to recognize the traps and a lion in order to frighten the wolves. Those who play only the part of the lion do not understand matters. A wise ruler, therefore, cannot and should not keep his word when such an observance of faith would be to his disadvantage and when the reasons which made him promise are removed. And if men were all good, this rule would not be good; but since men are a sorry lot and will not keep their promises to you, you likewise need not keep yours to them. A prince never lacks legitimate reasons to break his promises.

not in subtly developed liberty or sensible expectation, to Aristotle. Rousseau’s thought also set the stage intellectually for the attempt to connect government to the nation and to think of states as needing to be nation-states. The kingdoms that made up Germany, for example, were amalgamated by Otto von Bismarck (1815–1898) into a national government, a monarchy that in some respects moved in the direction of constitutional principles. Similar activity occurred in Italy. Such a connection between government and nation was not essential in the original multiethnic representative governments of the United States or United Kingdom, nor in ancient Greek cities, which were not defined by their dominant ethnic groups or tribes.

Socialism and Communism

The other counter to liberal democracy’s spread in Europe was socialism and Communism. Socialism in its benign form is a large degree of state ownership of economic resources that, however, does not seek to change liberal democracy fundamentally. The division between state and society, or the limited purpose of government is, on the whole, still meant to obtain. Such socialism has proved in general to be inefficient economically and to restrict free entrepreneurship. British and Israeli government by their Labor parties after World War II and Swedish government for much of the last half of the twentieth century are examples of its successes and failures. Other forms of socialism, associated with, say, Robert Owen (1771–1858) in the nineteenth century, do seek a more thoroughgoing economic and sometimes noneconomic commonality than the individualism that liberal democracy defends, but such socialist communities never have mastered extensive territories and have lived short lives. Like anarchism and many variations of socialism associated with African and Asian rulers after World War II, they have had minimal effect beyond a single generation in a single place.

The notable exceptions to the very short life of socialist communities are Communism in the Union of Soviet Socialist Republics and its satellites in Eastern Europe, and Communist China. Together with fascism, Communism is the most powerful contemporary version of tyranny and one of the major rivals of liberal democracy. The key analytic question with Communism and fascism is whether they herald or display a new form of tyranny that differs in principles from ancient tyranny, or whether they are at root variants of it. The key practical question is whether liberal democracy has succeeded in overcoming them over the mid or long term.

Many contemporary tyrannies differ little from ancient tyranny except in size and in the modern weaponry and communications that enable them to be especially murderous. This is true of several twentieth-century regimes in Latin America, Africa, and the Middle East. Communism and fascism, however, seem different enough to have earned the name totalitarian. They differ from ancient tyranny in being based or claiming to be based on principles or ideas (what, under their influence, we call ideologies), in the utter totality of their control of all areas of public, private, and professional life, in the amount of fear and terror they employ, in their level and degree of political and social bureaucracy and organization, in their imperial aggression, in their pretense to great longevity, permanence, and imperial sway, and (sometimes) in their ethnic base.

Their effect, nonetheless, is not different from that of ancient tyranny in the sense that what is bad about tyranny is at root similar in the ancient and modern understanding. The harm does not differ but, rather, is exacerbated by modern totalitarianism’s completeness and scope. Ancient tyranny is rule over the unwilling by one (or in an extended sense by a few and even perhaps by many) solely for their private good, that is, solely for satisfying their desires, for exercising their cruelty, or even for giving unbridled reign to their wish to be admired or worshipped. As Plato discusses it, the tyrant seeks to enjoy any pleasure in any manner, even, perhaps especially, the most extreme. As Aristotle explains it, tyranny uses ways and means whose goal is to prevent free men from exercising their own political spirit. It restricts

Knowledge will forever govern ignorance: and a people who mean to be their own governors, must arm themselves with the power which knowledge gives. • James Madison (1751–1836)
privacy and friendship because it seeks to limit discussion and opposition and to increase fear. It stunts not only freedom, but virtue as well.

The stunting of freedom and virtue and the proclivity to murder opponents and take what is theirs—in a word, extreme injustice—are the hallmarks both of ancient tyranny and modern totalitarianism. Contemporary fascism—Nazism in particular—employed complex political organization and bureaucracy to smother citizens and potential opponents, fully controlled education, communications, and culture, and, as the rulers’ willfulness or supposed necessity required, arbitrarily directed the economy, science, and religion. The immediate justification for these practices was the hardening, development, and dominance of the Aryan race or, more visibly, the destruction of the Jews and the Nazis’ other invented enemies. Such arbitrary narrowness, irrationality, and cruelty attempted to justify itself intellectually through Hitler’s writings and those of Nazi ideologues.

Communism under Lenin (1870–1924), Stalin (1879–1953), and Mao Zedong (1893–1976) was similar to Nazism in method, goal, and effect. It sought total control of all areas of life, stunted freedom, virtue, and independent political action, aggressively expanded its sway over other countries, and believed or pretended to believe itself justified by the arguments of Karl Marx (1818–1883) about the inevitability and propriety of Communist rule. It differed from fascism in claiming its principles to be universal rather than seeking domination of one particular race. Like Nazism, however, its reality was more in its effects than in its pretenses, in its denying liberty and virtue, and in the tens of millions killed under its regimes. Like fascism it is essentially ancient tyranny writ large with extraordinary scope for its brutality and with large numbers of people complicit with the rulers. The chief new element is the intellectual justification, which, however insincere, adds to the scope and defense of the brutality and impinges directly on freedom of thought by claiming truth in all things. However, even this element of tyranny’s intellectual or pseudo-philosophical justification was not unknown to ancient thinkers.

**Totalitarianism Defeated?**

Totalitarianism fell, among other reasons, because of external opposition in the mid and late twentieth century to the Nazis and Communists. This opposition was organized into alliances and international structures in World War II and the Cold War that brought together but did not eliminate separate, free, governments. The history of international political structures is still another element in the history of forms of government. The founders of the United States, most notably the authors of *The Federalist*, studied ancient and early modern federations as part of their attempt to devise a federal republic. The philosopher Immanuel Kant and others at the end of the eighteenth century devised plans for and predicted the emergence of federations among liberal republics that would help preserve peace. Such plans became the basis for the League of Nations after World War I and for the United Nations after World War II. Such alliances and structures, and still others such as the European Community, have not developed in the direction of a world state, however, nor has this been widely advocated. A world state necessarily limits free political participation and would seem to be an aid rather than a counter to tyranny should its control fall into the wrong hands.

Totalitarianism also fell because of the essential unnaturalness and therefore instability and distastefulness of its combination of extreme economic, scientific, and bureaucratic organization, complete common ownership, and overwhelming cruelty, arbitrariness, and irrationality. Together and separately these elements are unstable and undesirable. The effect of Nazi and Communist aggression and ideology, however, made their wide or even universal spread possible, especially had they not been countered. Would the unnaturalness of overwhelming brutality, stultifying organization, and completely common ownership have guaranteed their fall, or was the vigorous and armed opposition of free peoples also necessary to prevent their victory?

Contemporary theocracy forces us to raise such questions again; our final topic concerns theocracies or
religious regimes generally. Some regimes that are dominated by notions of divine law and do not practice liberal toleration may nonetheless avoid willful or tyrannical demands of their citizens. This can occur if the law respects the free, virtuous, and reasonable as part or indeed the bulk of what is divine in man, and, therefore, if the law permits or encourages actions that stem from these qualities. Such regimes can be monarchies, oligarchies, or even democratic republics as long as the domination of divine law permits extensive differentiation between priests and governors, or between church and state.

An imperial religion that irrationally opposes free thought and inquiry, however, and the virtues of character such as pride and enterprise and the activities that follow from them, is hardly different in its effect from tyranny or totalitarianism. In their opposition to equality of rights and in their wish for total control of thought and action, some contemporary Islamic extremist leaders are quite similar to fascists; indeed, some were taught by or have allied themselves with ethnic particularists. In other cases, the hoped-for totality of control together with extreme violence and doctrines that reject reasonable discussion are similar to the tyrannies of Stalin and Mao. In any event, theocratic tyranny or totalitarianism is at the beginning of the twenty-first century perhaps the chief opponent of liberal democracy.

Mark Blitz

Further Reading


Freedom

Freedom can be defined in either positive or negative terms, the former as the presence of choice in developing the human potential and the latter as the absence of constraint. It is usually regarded as synonymous with liberty, the term “freedom” being a descendant of the German language and “liberty” of the French. Some commentators use “liberty” to refer primarily to the political context of freedom.

In the modern West (itself a problematic term, here defined as Europe and its cultural descendants in places like North America), freedom has most typically been understood in its negative sense, as an absence of constraint. In most other cultures in the world, however, as well as in Europe itself until the Renaissance, freedom was—and is—more often understood in its positive sense as representing the opportunity to fulfill the potential latent in the human personality. This essay will first consider the modern definition, then the global (and traditional Western), concluding with some reflections on the larger significance of freedom.

Modern Definition

The dominant modern western understanding of freedom as an absence of constraint is a consequence of numerous developments beginning with the Protestant Reformation. The assertion by Martin Luther at the begin-
The Four Freedoms, from Franklin D. Roosevelt’s
State of the Union Address, January 1941

In the future days, which we seek to make secure, we look forward to a world founded upon essential human freedoms.

The first is freedom of speech and expression everywhere in the world.

The second is freedom of every person to worship God in his own way everywhere in the world.

The third is freedom from want, which, translated into world terms, means economic understandings which will secure to every nation a healthy peacetime life for its inhabitants everywhere in the world.

The fourth is freedom from fear—which, translated into world terms, means a world-wide reduction of armaments to such a point and in such a thorough fashion that no nation will be in a position to commit an act of physical aggression against any neighbor anywhere in the world.

That is no vision of a distant millennium. It is a definite basis for a kind of world attainable in our own time and generation. That kind of world is the very antithesis of the so-called new order of tyranny which the dictators seek to create with the crash of a bomb.

Source: State of the Union Address, 77th Cong. 87 Cong., Rec. 44–47 (1941).
society is secondary. The rights of the individual thus take precedence over duty to society, the purpose of the latter now being only to serve the former.

Global and Traditional Western Views

The modern Western understanding of freedom and rights is separated from that of the rest of the world, and from the traditional Western understanding, by a vast gulf. From the perspective of most cultures in world history, freedom was understood in its positive sense, as the opportunity to fulfill the human potential. In its political form, freedom was a condition that could not be separated from its complementary partner, namely, responsibility (or duty). Like two sides of a coin, each was understood to have meaning only in relation to the other. Politics, therefore, was inseparable from morality. The purpose of government was not to cater to individual wants, but to foster a society that fulfilled the noblest aspirations of the human personality. For the early Greeks, for example, that meant serving the community through perfecting the rational and moral faculties. In all cases, it was assumed that the purpose of life was not primarily to serve oneself but to serve others, and the proper exercise of freedom—or choice—was therefore to carry out one’s responsibility to the common good. In this understanding, politics was also education, in the root sense of the term, to “lead out” (educere) that which is latent in each individual. Education and politics and morality, then, were intimately linked with freedom.

In its social context, this traditional, and global, understanding of freedom worked itself out in much the same way. The relationship between the individual and society was not adversarial but complementary. Freedom was understood to be not a natural attribute of individual autonomy but a gift that can exist only within the larger context of social responsibility and moral authority, without which it degrades into license. The purpose of freedom, therefore, was to carry out the responsibilities that come with each role we are called to play in life. In India, for example, those responsibilities were expressed in following the dharma, or law, appropriate to one’s station in life.
In the economic realm of the premodern West, as well as most of the rest of the world, freedom and politics have been closely related. In the premodern context of world history, the role of government was not usually seen as inhibiting prosperity but facilitating it. The doctrine of mercantilism, against which Adam Smith wrote his masterpiece, embodied this understanding. The freedom of merchants to conduct their business depended on the peace and security (and high tariffs) provided by the state. Whether one speaks of the economic prosperity of the Mediterranean world under the Pax Romana or the countries served by the Silk Road, the political responsibility of states to maintain law and order guaranteed the economic freedom of merchants to trade. Obviously, of course, when the state failed to carry out those responsibilities and became itself an instrument of oppression and exploitation, the economic freedoms of the people were compromised. When that happened, prosperity usually declined, and with it the eventual power of the state as well. To some degree this paradigm still holds true, as when critics of globalization argue that the real culprit is not the global trade itself but the absence of a global structure of law capable of punishing those who abuse their power.

In its religious forms, the positive understanding of freedom contains a fascinating paradox in which the differences between it and the negative understandings of freedom tend to dissolve. From a negative perspective, freedom manifested itself as a liberation of the immaterial soul from the constraints of the material body [for Christians, it was salvation; for Hindus swaraj (self rule) and moksha (liberation), for Buddhists nirvana (extinguishing of self)]. From a positive perspective, however, this liberation could come only by surrendering oneself entirely to one’s duty or to God’s will. The only way to transcend constraint, in other words, was to accept constraint. The religious realm of human freedom also raises profound moral questions about the nature of good and evil. Put simply, the freedom to choose between good and evil, or right and wrong, implies that some will choose the former and others the latter. Evil, or suffering, in this view, is a necessary price of freedom. The most famous exposition of this problem is contained in Fyodor Dostoyevsky’s (1821–1881) rightfully famous chapter from The Brothers Karamazov entitled “The Grand Inquisitor,” in which Christ returns to earth during the Spanish Inquisition only to be arrested by the Grand Inquisitor himself and interrogated in prison. In a long monologue, the Spanish priest accuses Christ of having made a tragic mistake by giving freedom to humankind. No sooner do people have the power to choose, he asserted, than they abuse it by making choices that cause needless suffering to themselves and others. Better to take away their freedom and force them to do what is right. Since the Grand Inquisitor’s proposition leads to tyranny, of course, we reject it, but often without remembering that the possibility of freedom—which insures that some will choose badly—contains a tragic imperative that can be mitigated but never eliminated.

In its artistic incarnation, freedom takes the form of the creative power of the imagination to express the deepest yearnings of the human spirit. The creative impulse in the human personality has been evident from the very earliest transition to modern Homo sapiens 100,000 years ago. Tools and ceramics were made to be not only practical but also beautiful. The astonishing diversity of cultural expression throughout the world, in every realm, whether music, dance, literature, painting, sculpture, ceramics, or a host of others, is wonderful testimony to the creative power of the human imagination. Those who worry that globalization will inevitably bring about an inevitable homogenization of culture can derive some comfort from knowing that this drive for freedom will resist that process. Cultural interaction, in the end, has been both a stimulus for artistic development, as well as, occasionally, an obstacle. The Silk Road, for example, brought many influences from West to East, and vice versa, but in all cases the cultural life of the Eurasian continent was immeasurably enriched. Some of the most splendid examples of world architecture, such as the Taj Mahal, are witness to this remarkable capacity of humankind to absorb influences from without and then produce a synthesis that represents an entirely new level of achievement.

I submit that an individual who breaks a law that conscience tells him is unjust, and who willingly accepts the penalty of imprisonment in order to arouse the conscience of the community over its injustice, is in reality expressing the highest respect for the law. • Martin Luther King Jr. (1929–1968)
In science and technology the exercise of freedom in developing new tools has vastly increased the power of the human species to dominate both nature and other people. In terms of the interaction between people and the environment throughout world history, freedom has made it possible for humans to control the processes of nature far more than any other animal, but has also, especially when divorced from its complementary twin—responsibility—raised the specter of the potential extinction of the species. The tragic, as well as the beneficial, potential of human freedom is perhaps best illustrated by the progress made in the last 10,000 years in technology and science. The domestication of fire, for example, brought about a much greater array of human freedoms than ever before—humans conquered the night, overcame the seasons, and migrated to all regions of the world. But fire can destroy life as well as serve it. Just as a knife can kill game, it can also kill one’s neighbor. Every advance in choice brought an equivalent burden of responsibility, right down to the detonation of the first atomic device in 1945. It was, in fact, a failure of ideas and institutions to respond responsibly to this tragic potential of science and technology that led to the terribly destructive world wars of the twentieth century. Whether the human species, at the dawn of a new century and a new millennium, will be able to balance our new technological freedom with responsibility and thus avoid extinction is an open question.

Implications
Freedom, in its negative sense of an absence of constraint, has been identified in this essay as the underlying ideology of liberal capitalism and (in the nineteenth century) of human progress. This optimistic view of capitalism, it should be said, was challenged by socialists who held that free market competition had produced an unacceptable level of inequality and exploitation. The ensuing conflict between those champions of capitalism on the right who defined justice in terms of freedom and those advocates of socialism on the left who defined justice in terms of equality has lasted to the present and shows no signs of disappearing. The former praise globalization; the latter attack it. Both assume that freedom and equality are incompatible, and that an increase in one can come only with a decrease in the other. The two sides might find more common ground for agreement if they were to take an intellectual bath and then change into a new suit of definitions. By defining freedom in its positive sense as human fulfillment, and defining equality in terms of opportunity rather than condition, the proponents of “capitalist” and “socialist” views of the world might discover many of their differences melting away. In addition, they would be much more likely to cooperate effectively to reduce what both find most harmful to human progress, namely global poverty. If it is true, as the nineteenth-century writer Samuel Taylor Coleridge is once supposed to have remarked, that people are usually right in what they affirm and wrong in what they deny, then one could argue that each party in this dispute is
right in affirming its own definition of justice and wrong in denying the other’s. In the end, the richest fruits of freedom are to be found through a positive understanding of its deepest meaning.

Alan T. Wood

Further Reading

French Empire

The first French empire was founded in the seventeenth century. Around 1600 the French had begun to travel to Asia, and in 1604 the French East India Company received a royal charter. This enterprise was not a success, however, and its activities were discontinued in 1609. In 1642 the Company of the East was founded, which never really got off the ground either. In the same period French colonization in North America (Canada, Louisiana) and in the Caribbean (Martinique, Guadeloupe, Saint Domingue) had also begun.

Under the monarchy, France built up a colonial empire of consequence, but by the end of the Seven Years’ War (1756–1763) most of it had been lost. Under the terms of the Treaty of Paris (1763), France’s Louis XV (1710–1774; reigned 1715–1774) relinquished to England all of France’s possessions in North America to the east of the Mississippi and ceded to Spain all French possessions to the west of the Mississippi (in 1803 Napoleon would recover the latter possessions from Spain and subsequently sell them to the United States, the so-called “Louisiana purchase”). France also gave up all political claims to India. This largely put an end to the first French colonial empire. What remained, however, was the French West Indies (French Antilles), which became very important in the eighteenth century. The pearl of the French West Indies was Saint Domingue—the French, western part of the island of Hispaniola (present-day Haiti and the Dominican Republic). The basis of the French West Indies’ prosperity was sugar and coffee, grown on the islands, which only French companies were allowed to trade. The French West Indies, which produced half the world’s sugar and coffee, were the richest colonies in the world. In the second half of the eighteenth century Saint Domingue became the largest producer of sugar in the Caribbean. In the 1780s it also produced half the world’s coffee.

The French Revolution put an end to the economic foundation of the French colonial economy, namely, slavery. After the revolt in 1791 of Toussaint-Louverture (1743?–1803), Saint Domingue was lost to France. Napoleon reintroduced slavery, however, and tried to regain control of the island. This resulted in a war, which lasted until 1804, when Saint Domingue gained its independence and changed its name to Haiti. During the days of Napoleon (1769–1821; reigned as emperor 1804–1814, 1815), France itself became an important producer of beet sugar, and therefore the interests of the sugarcane planters overseas had to be weighed against those of the sugar beet farmers at home. During the same period, the English took possession of the remaining French colonies one by one, and only a few of them were
**Expansion and Contraction of European Empires**

<table>
<thead>
<tr>
<th>Century</th>
<th>Events</th>
</tr>
</thead>
</table>
| 15th Century | Portuguese knights capture Cueta in North Africa from the Muslims.  
Columbus “discovers” the Americas for Spain and colonies are established in the Americas.  
Portugal claims Brazil under the Treaty of Tordesillas.  
Vasco da Gama of Portugal discovers an all-sea route to India. |
| 16th Century | Portugal dominates the maritime trade in South and Southeast Asia.  
The Pacific Ocean is “discovered” by Vasco Nuñez de Balboa of Spain.  
Spain claims the Philippines.  
The Habsburg ruling house of Europe comes to power.  
France establishes a presence in West Africa.  
Portugal’s dominance in East Africa and Asia begins to decline. |
| 17th Century | The English, Dutch, and French charter trading companies.  
The English settle Jamestown in Virginia.  
France establishes colonies in North America and the Caribbean.  
Russia colonizes Siberia. |
| 18th Century | France loses American colonies and territory to England and Spain.  
The English lose control of their American colony.  
The Dutch Republic becomes a colonial power with the abolishment of its private trading companies.  
The Dutch begin to lose most of their colonies to the British.  
The Spanish empire declines.  
By the time of the Treaty of Paris in 1763, England has become the dominant European colonial power. |
| 19th Century | France under Napoleon regains territory in the Americas.  
Haiti gains freedom from France through a slave revolt.  
Brazil declares independence from Portugal.  
Slavery is abolished by all imperial powers.  
The Habsburg empire is transformed into the Austro-Hungarian empire.  
The German empire is established after the Prussian defeat of France.  
Russia colonizes Poland and Finland, the Caucasus, and Central Asia.  
England, France, Spain, Portugal, Belgium, Germany, and Italy solidify their colonies in Africa. |
| 20th Century | European control of its African colonies intensifies.  
World War I starts when the Austro-Hungarian government declares war on Serbia.  
The end of World War I marks the end of the Austro-Hungarian empire and the German empire.  
Britain and France gain trust territories in Asia.  
The British Commonwealth of Nations is created.  
During World War II Japan takes Asian colonies from Britain, France, and the Netherlands.  
Following the end of World War II, the British, French, Dutch, and Portuguese empires shrink as many former colonies become independent nations.  
The Comunidade dos Países de Língua Portuguesa (CPLP) unites eight Portuguese-speaking nations.  
The Russian-Soviet empire disintegrates. |
eventually restored to France. By 1815, therefore, France had very few colonies. The only French possessions in the Indian Ocean were the island of Bourbon (called Réunion after the French Revolution) and a few trading posts on the coast of India, such as Pondicherry. On the coast of West Africa, the French held sway in a few cities in Senegal, such as Dakar, Saint-Louis, and Gorée. France’s most important colonies were still those in the West Indies: Martinique, Guadeloupe, and several smaller islands and, on the mainland, French Guyana. But they were no longer as important as they had been.

**A Colonial Interlude, 1815–1881**

The Bourbon monarchs who were restored to power after the defeat of Napoleon, were not very interested in colonial expansion or in military adventures. All the same, the final act of the last Bourbon king, Charles X (1757–1836; reigned 1824–1830), was to launch an expedition to Algiers. The reasons for this are to be found in French domestic politics. The regime was very unpopular and the only means of restoring its prestige—or so it was thought—was to launch a successful military expedition. Therefore on 31 January 1830 the decision was taken to send an expeditionary force to Algiers to punish its ruler (the dey) for an insult inflicted on the French consul.

On 14 June 1830 the French troops landed, and on 5 July the dey surrendered. It was too late, however, to save the Bourbons: Charles X fled the country after the July revolution, which brought a new king, Louis-Philippe of Orléans (1773–1850; reigned 1830–1848), to the throne. The new king did not know what to do with Algeria. The aim of the expedition had been to punish the dey, not to turn Algeria into a French colony, although that happened all the same. The French decided to stay, and eventually Algeria became France’s most important overseas possession and its one and only colony of settlement. The surrender of the dey had been quick, but it was a long time before the country was under French control. Abdelkader (1808–1883) was the very capable leader of Algerian resistance, and he defeated the French on several occasions. The French

Marshal Thomas Robert Bugeaud (1784–1849), who knew about guerrilla warfare from his years in Spain during the Napoleonic era, finally prevailed, eliciting Abdelkader’s surrender in 1847.

A colonial administration was set up. Algeria was considered a part of France and administratively followed the French model. There were three départements (provinces) each with a prefect at its head, who was directly responsible to the minister of the interior in Paris. This so-called “assimilation” policy would later become the model for French colonial administration in general.

During the reign (1852–1870) of the emperor Napoleon III (1808–1873), France saw some colonial revival. An active policy was followed in West Africa whereby the old French possessions in Senegal formed the base for further colonial expansion. Under Napoleon III France also became active in Indochina (present-day Vietnam, Laos, and Cambodia). The reasons for this were partly economic (colonial expansion was increasingly seen as a means of promoting economic growth, particularly in port cities and industrial cities such as Lyons, Bordeaux, and Marseilles) and partly political: The British and Americans had become active in East Asia, and if France was also to continue to play a role there, the feeling was that it had better hurry up.
In 1859 the French took Saigon, and in 1862 the Treaty of Hue, signed by the emperor of Annam (a kingdom in the eastern portion of present-day Vietnam) granted France sovereignty over Saigon and the neighboring area. In 1863 the King of Cambodia placed himself under French protection. But, like in Africa, true French expansion in Indochina did not gain momentum until the Third Republic.

**The New French Empire, 1881–1962**

After France’s defeat in the Franco-Prussian War of 1870–1871, there was only one urgent call: *revanche* (revenge). Therefore in the beginning colonial expansion was out of the question. But by the 1880s, as revenge turned out to be an illusion, new ideas about French foreign policy developed. Propagandists of colonial expansion argued that it was possible to restore French grandeur by expansion overseas. The main advocate of this policy was Jules Ferry (1832–1893) who served as prime minister from 1880 to 1881 and again from 1883 to 1885. Ferry was not only the man behind two major interventions (in Tunisia in North Africa and in Annam and Tonkin in Indochina), he was also a colonial theorist. His motives were partly economic (he advocated the export of capital and goods, not of people), partly humanitarian (the higher races, he reasoned, had a duty to civilize the lower ones), but primarily political: He wanted France to recover her former glory and to take up her place in the sun.

**North Africa**

The first French expedition was to Tunisia. An incident on the Algerian-Tunisian border provided the pretext. A French expeditionary force crossed the border and marched for Tunis. On 12 May 1881 the bey of Tunisia signed the Treaty of the Bardo, which placed Tunisia under French protection. The protectorate was a new concept, and implied that the bey would remain sovereign in name. In fact, however, the French representative (with the title of resident-general) was all-powerful. The protectorate formula was later also used in Indochina and Morocco. It was a break with the French tradition of assimilation and direct rule, though in actual practice the protectorates were almost as strictly controlled by the French as the colonies proper.

With the acquisition of Tunisia the eastern border of Algeria had been secured, but not the western border, with Morocco, and thus that country now became of compelling interest to France. The Shereifian empire, as Morocco was known at the time, was in decline in the nineteenth century. European penetration took place in an informal way, by economic influence and special privileges for Europeans. Spain, Italy, Britain, and Germany were France’s competitors for influence in Morocco. France compensated Britain for giving up its claims in Morocco by permitting Britain a so-called “free hand” in Egypt; Italy was compensated in the same way with Libya. Spain was promised a part of Morocco, and after two major diplomatic crises, Germany was compensated elsewhere (in West Africa). After that it was possible for France to install its protectorate in Morocco in 1912. However, it took a long time before the whole of Morocco was effectively brought under French control. The name of Louis-Herbert-Gonzalve Lyautey (1854–1934), the first resident-general of Morocco, is inseparably connected with the subjugation of Morocco.

In 1911 Algeria’s population was 5 million, 715,000 of them Europeans, of whom 500,000 were French. The European population was concentrated mainly in the cities, the most important of which were the capitals of the three départements: Algiers, Oran, and Constantine. There were also colonists elsewhere who engaged in farming and winegrowing; the state put free land at their disposal. After the Franco-Prussian War of 1870–1871, most of those who took advantage of this opportunity were Frenchmen emigrating from the regions of Alsace and Lorraine that had been transferred to Germany. Tunisia’s population was much smaller. In 1911, of a total population of just over a million, there were 148,000 Europeans (the great majority of them Italians, not Frenchmen). In Morocco, European immigration
had also been concentrated in the port cities. In the three years between the establishment of the protectorate in 1911 and the outbreak of World War I in 1914, the European population grew from nearly 10,000 to nearly 50,000, of whom 25,000 were French.

Agriculture (grain, wine, tobacco, and olive oil) was important everywhere in North Africa. There was no industry to speak of, though phosphates were important in Tunisia. In Morocco their presence was known, but it was not until 1914 that the Service des Mines first started prospecting. Foreign trade was controlled by France. Algeria was responsible for two-thirds of all trade from North Africa. Before 1914 Morocco’s economy was hardly developed, the value of its foreign trade being only one-sixth that of Algeria.

Algeria had been conquered in order to restore the prestige of the monarchy, Tunisia in order to restore the prestige of the nation. In neither case there had been a grand design. Morocco was a different matter. It was part of a geopolitical concept that had been developed in the 1890s by the parti colonial—the French colonial lobby. According to that vision, North Africa had to be turned into a new France on the other side of the Mediterranean, and French West Africa was to form the hinterland for that.

**Jacques Cartier claiming Canada for the King of France in 1534.**

**French West Africa**

The French presence in West Africa goes back to 1659, when Saint-Louis was founded, on the mouth of the Senegal River. In the 1850s Senegal became the starting point for French territorial expansion into West Africa. French colonial policy in West Africa was dominated by the military, who often ignored the wishes of and orders from Paris. It aimed at penetrating Africa via the Senegal River, eventually reaching from the Upper Senegal to the Upper Niger. This policy led to a series of wars with local Islamic empires that lasted until the end of the 1890s. In February 1890, Ségou, the capital of the Tukulor empire, was taken by the French without much difficulty. This broke the power of its ruler and actually put an end to the Tukulor empire. Meanwhile the French had become entangled in a much more protracted and difficult conflict with the man who would become their most formidable opponent in West Africa: Samory.

Samory (c. 1830–1900) was a born leader with great military and organizational
The Manifesto of the Laodong Party, February 1951

In the document below, the aims of the Laodong Party (the Vietnamese Communist party), are set forth by the party’s leader, Ho Chi Minh.

The main task of the Viet Nam Laodong Party now is:
To unite and lead the working class, the working masses and the entire people of Viet Nam in their struggle to wipe out the French colonialists and defeat the American interventionists; to bring the liberation war of the Viet Nam people to complete victory, thereby making Viet Nam a genuinely independent and united country.

The Viet Nam Laodong Party fully supports the Government of the Viet Nam Democratic Republic, unites and co-operates closely with other parties and organisations in the Lien Viet Front in order to realise fully the peoples democratic regime—politically, economically, socially and culturally.

The Viet Nam Laodong Party stands for guaranteeing the legitimate interests of all strata of the people.

It recommends that special care should be taken to raise the material and moral standards of living of the army, which fights for the defence of the country against the enemy, and which had been enduring the greatest hardships.

The workers, who are fighters in production, must have the opportunity continually to improve their living conditions and to take part in running their own enterprises.

The peasants, who are production combatants in the rural areas, must benefit from the reduction of land rent and interest and from appropriate agrarian reforms.

The intellectual workers must be encouraged and assisted in developing their abilities.

Small tradespeople and small employers must be assisted in developing trade and handicrafts.

The national bourgeoisie must be encouraged,

skills, and he built a big empire in West Africa. French expansion brought them into conflict with him. This led to a number of campaigns and battles in the years 1881–1885 that turned out badly for Samory because of the superiority of French firearms. Therefore on 28 March 1886 he concluded a peace and trade treaty, the terms of which included the demarcation of the borders between the French sphere of influence and that of Samory. In May 1891, however, Samory broke with France after a series of border incidents. This marked the beginning of the so-called Seven Years’ War against Samory. After a long interlude from 1894 to 1898, the French launched a new campaign in the spring and summer of 1898, and on 29 September Samory was captured. The French governor banished him to Gabon, where he died of pneumonia on 2 June 1900. In the meantime France had also acquired possessions on the Ivory Coast and in Dahomey. After a delimitation of the French and British spheres of influence, the French became masters of the majority of West Africa.

The French territories in West Africa originally consisted of a number of separate colonies. These were later united to form one large federation, Afrique Occidentale Française (AOF), or French West Africa. The total area of the AOF eventually amounted to 4,674,000 square kilometers (in 1919). This made the AOF by far the largest colony in Africa, covering a territory more than eight times that of France itself. With a population of 12 million people, the AOF was the showpiece of French Africa. It was a federation consisting of the former colonies of Senegal, Côte d’Ivoire (Ivory Coast), Dahomey, Guinea, Upper Senegal–Niger (in present-day Mali), Mauritania, and Chad-Niger. The governor-general, who exercised total power over these territories, had his seat in Dakar. The governors of the various regions were subordinate to him. Although local rulers were kept on at first, they were gradually phased out. The kingdom of Abomey, for example, was abolished in 1900 simply on the orders of the governor of Dahomey. It took a long time, however, for the whole of the AOF to be brought under French control. The rain forest regions and the Sahel (semiarid edges of the Sahara) were particularly difficult to subdue. The decisive phase in this process took place between 1908 and 1912. In Mauritania pacification took even longer to accomplish.
Trade in French West Africa consisted mainly of bartering. The trading houses supplied European goods (textiles, hardware, trinkets, as well as weapons and liquor), and exchanged them for African agricultural products (peanuts, palm oil, rubber, and ivory). Trading houses from various European countries were active at first, but trade gradually became the near monopoly of a few large French enterprises. In the Sudan and Senegal these companies came mainly from Bordeaux, those active on the coast of Guinea chiefly from Marseilles. There was relatively large-scale public investment in the AOF, in any case more than in the French Congo. In 1914 the total length of the railway network in use in the AOF was 2,494 kilometers. These lines had been funded primarily by subsidies from France or loans guaranteed by the colonial government. There was very little mining. French West Africa was therefore of limited economic importance.

French Central Africa: The AEF
After the Berlin Conference of 1884–1885, in which European colonial powers negotiated the future course of central Africa, two Congos came into being: the French Congo and the Congo Free State of the Belgian King Leopold II (1835–1909; reigned 1865–1909). Initially the French Congo comprised various administrative units—Gabon, Congo, Shari, and Chad—which were governed in different ways. In 1906 a federation was established, and in 1908 a governor general was appointed for the territory that in 1910 would be renamed Afrique Equatoriale Française (AEF), or French Equatorial Africa. This federation consisted of three colonies: Gabon, Middle Congo, and Ubangi-Shari. Its total area—2,510,000 square kilometers—was slightly more than half that of the AOF. With only 3 million inhabitants, it was sparsely populated and of very limited economic importance.

Madagascar
The interest France took in Madagascar, most of which was ruled at the time by the local Merina kings, was prompted mainly by Catholic missionaries and by the French colonists on Réunion. After some incidents in which French inhabitants were killed, the decision was taken to send a French force to the great island. In December 1894 the navy occupied the harbor of Tamatave and several other ports. A large expeditionary force was raised. On 26 September it reached the capital, which surrendered a few days later. The next day the treaty was signed that made Madagascar a French protectorate. But the protectorate system did not work out well: revolt and anarchy were the result of it. On 20 June 1896, Madagascar was annexed, and in September a governor-general was appointed, in whom all military and civil authority was vested. This governor-general was Joseph Gallieni (1849–1916); his second-in-command was Hubert Lyautey. Together they set about pacifying the island. By the time Gallieni left the island in 1905, it had largely been brought under French control.

Indochina
The French presence in Indochina went back to Napoleon III’s Second Empire, when Cochín China (in present-day southern Vietnam; the region had been ruled by the emperor of Annam) was acquired and Cambodia came under French protection. This was the starting
Victory at Dien Bien Phu

The defeat of the French at Dien Bien Phu in 1954 was perhaps the key event in the demise of French rule in Southeast Asia. In the excerpt below, Vietnamese General Vo Nguyen Giap describes the Vietnamese effort that led to the victory.

Truck convoys valiantly crossed streams, mountains, and forests; drivers spent scores of sleepless nights in defiance of difficulties and dangers, to bring food and ammunition to the front.

Thousands of bicycles from the towns also carried food and munitions to the front. Hundreds of sampans of all sizes, hundreds of thousands of bamboo rafts crossed rapids and cascades to supply the front.

Convoys of pack-horses from the Meo highlands or the provinces headed for the front. Day and night, hundreds and thousands of porters and young volunteers crossed passes and forded rivers in spite of enemy planes and delayed-action bombs.

Near the firing line supply operations had to be carried out uninterruptedly and in the shortest possible time. Cooking, medical work, transport, etc., was carried out right in the trenches, under enemy bombing and cross-fire.

Such was the situation at Dien Bien Phu . . . Never had so many young Vietnamese travelled so far and become acquainted with so many distant regions of the country. From the plains to the mountains, on roads and jungle trails, on rivers and streams—everywhere there was the same animation."

The tax burden on the Indochinese population was high. The consequences of this were predictable: protests and resistance, which in turn, fueled the nationalist movement.

When pacification had been completed, Paul Doumer, who was governor-general from 1897 to 1902, set up a new fiscal system. In place of the old Annamite poll tax and forced labor, direct taxes were introduced, namely, a land tax and a personal tax. The most painful burdens, however, were the government monopolies of opium, liquor, and salt. The salt monopoly in particular encountered a lot of resistance. Administratively, the system was a success, however. There was a budgetary surplus, and the budget of Vietnam even exceeded that of Algeria. The surpluses made it possible to float colonial loans, creating a substantial public debt. Government revenues also made it possible to invest heavily in the infrastructure. Because private capital was not forthcoming, the government offered financial support and developed initiatives itself. The largest project was the construction of the railways.

Thus the 1930s were the heyday of the French colonial empire. But even in that decade the end of the empire had already become visible. Nationalist movements in the colonies were growing in importance, particularly in Vietnam, where it had begun as early as 1904. The soldiers who returned to Africa from World War I's Western front were also influenced by nationalist ideas. World War II was the shock from which the empire would never recover. During the Japanese occupation of Indochina, the nationalist leader Ho Chi Minh (1890–1969) waged guerrilla warfare against the Japanese. After the war he wanted independence. Negotiations with France broke down, resulting in a war that went badly for France. After a military disaster at Dien Bien Phu in 1954, the French withdrew from Indochina. In 1956 Morocco and Tunisia, and in 1960 all French colonies in Sub-Saharan Africa became independent. The bitter war that had broken out in 1954 in Algeria ended in 1962, with Algeria’s independence. It had also brought about regime change in France itself, with the establishment in 1958 of the Fifth Republic. The French colonial empire was no more.

Henk L. Wesseling

See also Napoleon; Napoleonic Empire; Revolution—France; Revolution—Haiti

Further Reading


Ganiage, J. (1968). *L’Expansion coloniale de la France sous la Troisième*
Frontiers

Frontiers are the boundaries between societies with strong state structures and societies without a state, or, in some cases, boundaries between highly populated and relatively unpopulated regions. Frontiers have existed since the beginning of civilization and have played an important role in the interactions between different types of societies. Historically, the Roman frontier in western Europe against the Germanic tribes fostered the growth of militarism in Roman society; the vast stretches of Siberia conquered by Cossacks and other Russian pioneers from the late sixteenth century onward led to the creation of a highly centralized state; and the North American frontier from the seventeenth to the nineteenth centuries has, according to some, made the United States unique, different from Western European societies.

How interaction across the frontier was regarded depended on which side one occupied. On the one hand, stateless societies have been eager to trade with or raid the more highly structured societies on the other side of the frontier, since highly structured societies tend to be richer in material goods than less complex societies. On the other hand, although trade and other exchanges were often essential to both sides, structured states generally disdained and feared those on the other side, whom they considered barbarians. On occasion the less highly structured societies have conquered the states across the frontier. For example, in the thirteenth through fifteenth centuries, the Mongols, a frontier people from the north of China, conquered both the Chinese and Arab civilizations, bringing destruction but also creating one of the most extensive land empires of human history, and thereby making possible widespread trade and contacts between civilizations on the Eurasian landmass in ways that had not occurred before. Thus, an Italian merchant such as Marco Polo could travel from one end of the landmass to the other and back, bringing tales of European society to the Mongol court and tales of Asia home to Venice.

Military Considerations

Civilizations tried to protect themselves from marauders from the other side of their frontiers, with uneven success. Attempts at protection brought about some of the most important military engineering works in human history, such as the Great Wall of China, initially built around 200 BCE by the Qin emperor and later elaborated upon, especially during the Ming dynasty (1368–1644). Another famous wall meant to keep out barbarians was Hadrian’s Wall, a Roman defense built in Northumberland, Britain, in 122 CE. The Romans built other defensive walls, called limes, in the first century CE on the central European frontier. Walls alone were never enough; they had to be supported by forts and, most importantly, by alliances with peoples on the other side of the frontier. Although tribal peoples were able occa-
sionally to raid their neighbors across the frontier, usually the armies of those neighboring states were militarily superior. Only when strong states grew weak, as happened to Rome after 200 CE and to China at various points in its history, were tribal peoples able to overcome and conquer them. After the seventeenth century, the development of field artillery gave states the upper hand, and no stateless society was able to conquer a state again.

The last victory for tribal peoples was the 1644 Manchu overthrow of the Ming dynasty in China; like the Mongols before them, the victorious Manchu embraced the state structure and established the Qing dynasty (1644–1912).

Along most frontiers there lived marginal people who moved between the stateless societies and the states, living at different times in either society. They served as buffers between those on either side and, when mobilized by the states, as troops. In Russia, the Cossacks, peoples living in the northern regions between the Black and Caspian seas (and later along the Dneiper and Don rivers in western Russia) explored Siberia and served as the Czar’s troops from the sixteenth century onward. Although the Russian state made use of them, it also feared them, and they came to have a reputation as unruly rebels. The Cossack Ermak, who initiated the conquest of Siberia, had been a river pirate before working for Ivan the Terrible (1530–1584). Likewise, in the nineteenth century the gauchos of the pampas in Argentina and the llaneros of the tropical plains of Venezuela and Colombia served as the soldiers of the patriot forces that liberated the continent from Spanish rule. They were the quintessential tough marginal peoples who, habituated to hard living on the frontiers, were superb soldiers.

**Cultural and Economic Exchanges**

Although much of the information we have on frontiers relates to defense (for defense preoccupied the states, and it was the states that wrote the histories), frontiers have also been areas of vital cultural change and important in economic terms. Stateless societies adopted the cultural practices or technologies that suited them (such as ironworking), and on occasion the states adopted elements from the stateless societies (as with the Chinese court’s adoption of “barbarian” musical modes or European colonists’ adoption of the foodstuffs of the New World, introduced to them by the indigenous peoples). Frontier peoples also often provided labor, either coerced—prisoners of war were turned into slaves or serfs—or voluntary.

**The North American Frontier Myth**

One of the great frontiers was the one created in North America with the coming of the Europeans. Like the Russian frontier, the North American frontier engendered many myths that provided a sense of national identity. The U.S. historian Frederick Jackson Turner (1861–1932) asserted in 1893 that the United States was defined by its frontier. According to Turner, the frontier inspired and elicited individualism, democratic values, and vigor as the settlers moved westward. In his view, the most valued characteristics of the United States came from the struggle to claim new land from indigenous peoples and adverse conditions. Although a popular and enduring national myth, this analysis has many flaws. In the American South, for example, frontier development went hand in hand with slavery—a fact that does not sit well with the notion of the frontier as a place of democratic values. Nor did Turner’s analysis address the moral problem of displacing the land’s original inhabitants. By the time Turner wrote his essay, the frontier had effectively closed in the United States, but his analysis nevertheless resonated deeply and maintained a powerful hold on the national consciousness.

**Frontiers & Environmental Degradation**

Although the development of the North American frontier had calamitous effects on the Native American populations, it and other frontier development from the late
nineteenth century onward have had another devastating effect with long-term consequences: environmental degradation. Ill-conceived farming practices in the Great Plains resulted in the dust bowls of the 1930s; intensive cultivation of cotton along tributaries of the Aral Sea in Central Asia have reduced the sea’s volume by 75 percent. Industrial development in Russia’s Siberian frontier has resulted in extremely polluted sites, threatened the survival of wildlife, and affected the health of inhabitants. The development of the last great frontier, the Amazon, continues to be plagued by environmental problems, as mining brings with it such ills as mercury contamination, and the establishment of ranches and large-scale agriculture results in erosion and species loss. As with the development of earlier frontiers, it is indigenous populations and the marginal frontier populations that suffer the negative consequences of current frontier development most heavily.

**Fur Trade**

The fur trade of North America, which came to dominate the trade from Russia (the only other major supplier of furs), transformed the way Native Americans obtained their food and other subsistence needs and made available to them a wide variety of new consumer goods. It also led to the exploration of much of North America by Europeans. The fur trade grew out of the early contact between Native Americans and European fishermen who were netting cod on Newfoundland’s Grand Banks off the eastern coast of Canada. Contact at first was haphazard, and only during the late sixteenth century, when the wearing of beaver hats became fashionable, were firms established to deal exclusively in furs.

The first firms to participate in the fur trade were French, and under French rule the trade spread along the St. Lawrence River, through the Great Lakes region, and down the Mississippi River. During the seventeenth century the English developed a trade through Albany, New York. Then, in 1670, a charter was granted by the British Crown to the Hudson’s Bay Company, which began operating from posts along the coast of Hudson Bay in Canada. With the British conquest of New France in 1763, the French trade shifted to Scottish merchants operating out of Montreal. In 1794, the year Jay’s Treaty ceded territory from England to the United States, the fur trade along the Mississippi passed to U.S. interests, culminating in the American Fur Company under U.S. fur trader and financier John Jacob Astor. In 1821 the main Canadian participants merged under the name of the Hudson’s Bay Company, and for nearly two centuries this merged company continued to trade in furs.

The fur trade was based on pelts that were destined either for the luxury clothing market or for the felting industries, of which hatting was the most important. Hats for centuries were a mandatory part of everyday dress for both men and women, and, although styles changed, the material from which hats were made—felt made from wool—remained the same. The wool came from various animals, but beginning in the sixteenth century beaver
wool hats became increasingly popular, eventually dominating the market.

In Russia the felting industry was based on the European beaver (Castor fiber), but by the end of the seventeenth century Russian supplies were declining. Coincident with the decline was the emergence of a North American trade. The pelts of North American beaver (Castor canadensis) were classified as either parchment or coat. Parchment pelts were from freshly caught beaver, whose skins were simply dried before being presented for trade. Coat pelts had been worn by Native Americans for a year or more. By the middle of the seventeenth century felt makers were combining parchment and coat pelts to produce top-quality felt for the hat market.

The records of the Hudson’s Bay Company allow us to see a clear picture of what items Native Americans were buying with the beaver pelts and other skins that they brought to trading posts. The items can be categorized by use. The producer goods category was dominated by firearms, including guns, shot, and powder. Native Americans traded for guns of different lengths. The 1-meter gun was used mainly for waterfowl and for game in heavily forested areas where game could be shot at close range. The 1.2-meter gun was more accurate and suitable for open spaces. Kettles and blankets were the main items in the household goods category. Luxury goods can be divided into two broad categories: (1) tobacco and alcohol and (2) other luxuries, dominated by cloth. The breakdown of categories varied by trading post and through time. In 1740 at York Factory, the largest of the Hudson’s Bay Company posts, the distribution in terms of value was producer goods, 44 percent; household goods, 9 percent; alcohol and tobacco, 24 percent; and other luxuries, 23 percent.

Like many Europeans and most American colonists, Native Americans were taking part in the consumer revolution of the eighteenth century. In addition to consuming necessities, they were consuming a remarkable variety of luxury products. Cloth, including baize, duffel, flannel, and gartering, was by far the largest class of luxury products, but Native Americans also purchased beads, combs, looking glasses, rings, shirts, and the pigment vermillion.

During the 1720s the price of furs began to rise in response to an increasing demand for beaver hats in Europe. The higher price in turn led to greater fur harvests. Thus, although some contemporaries described Native Americans as “lazy and improvident,” Native Americans seized the opportunity provided to them by the strong fur market by increasing their effort in the commercial sector. The result was higher living standards, but also a use of European technology that permanently changed many aspects of Native American society.

Frank D. Lewis

See also Hudson’s Bay Company

Further Reading

Galileo Galilei
(1564–1642)
Italian physicist, mathematician, and astronomer

Galileo Galilei is considered the father of modern experimental science. He pioneered dynamics as an exact science of motion, and through the use of the telescope he demonstrated the validity of the Copernican thesis in the face of denial from Aristotelian academics and Roman Catholic theologians.

Galileo was born in Pisa 15 February 1564, the first of the six children of Vincenzo Galilei, a Florentine merchant and part-time musician. At the age of eleven he was sent to the Camaldolese School in Vallombrosa, and except for his father’s opposition he would have become a monk. In 1581 he entered the University of Pisa to pursue a medical degree, but he soon developed a far greater interest in mathematics. With his father’s reluctant consent, he abandoned medicine. Leaving the university without a degree, he led an impecunious existence from 1585 to 1589, scraping together teaching assignments in mathematics. During these years he published his first book, The Little Balance, inspired by his study of the mathematician Archimedes. It described a hydrostatic balance he had invented to measure the specific gravity of objects.

In 1589, with the recommendation of German Jesuit mathematician Christopher Clavius and fame achieved through lectures at the Florentine Academy, Galileo obtained an appointment at the University of Pisa, where for the next three years he taught mathematics based on
the prevailing Aristotelian and Ptolemaic beliefs. In 1592
Galileo secured a more prestigious appointment at the
University of Padua, in the Republic of Venice. His eight-
een years at Padua, where he taught Euclid’s geometry
and Ptolemaic astronomy, were the happiest of his life.
During ten of these years, he had a relationship with a
Venetian woman, with whom he had three children, a
boy and two girls.

Galileo began investigating the Copernican theory in
the early 1590s. In a letter to Johannes Kepler in 1597
he said that he had been a believer in Copernicanism for
many years, but fear of ridicule prevented him from
openly expressing his views. However, in 1604, when a
new star appeared, Galileo began lecturing against Aris-
totle’s astronomy. About the same time, he resumed an
erlier study on motion, and using inclined planes, con-
cluded that objects fell at the same speed regardless of
weight.

In 1609 Galileo perfected a telescope that had been
invented by a Dutch optician and used it to point out the
fallacy of the geocentric theory. In his first major scien-
tific publication, The Starry Messenger (1610), written in
Italian instead of the traditional Latin, he described the
lunar mountains, the Milky Way, and the satellites of
Jupiter. To flatter Cosimo II, Grand Duke of Tuscany,
Galileo dedicated the book to him, in the hope that a
major appointment in Florence would follow. He was
not disappointed: Cosimo named him “Chief Mathe-
matician and Philosopher.” In 1611 Galileo visited
Rome, where the Academy of Lynxes, composed of the
scientific elite, invited him to become a member, and the
Collegio Romano honored him with a dinner.

Shortly after publishing in 1612–1613 his Discourse
on Falling Bodies and Letters on Sunspots, Galileo entered
the growing debate on the relationship between the
Copernican or heliocentric thesis and the Scriptures,
which supported the Ptolemaic, geocentric theory. In Let-
ter to the Grand Duchess Christina (mother of Cosimo II)
Galileo stated that a figurative interpretation of the Scrip-
tures was necessary because physical reality demon-
strated that the sun was the center of the universe.
Galileo was entering the theological domain at a time
when the Counter-Reformation was at its height and the
reigning pope, Paul V (papacy 1605–1621), was hostile
to new ideas.

In 1616 the Holy Office (the Inquisition) unequivoc-
cally condemned the Copernican theory. Cardinal Robert
Bellarmine, the pope’s Jesuit theologian and an adviser
to the Holy Office, was delegated to inform Galileo in
person that he was forbidden to teach or defend Coper-
nicanism either orally or in writing. But as Galileo seems
to have understood, there could be a discussion of
Copernicanism as a mathematical construct, but not as
a philosophical truth. Accordingly Galileo carried on an
extensive correspondence on this subject with his sup-
porters throughout Europe. His daughter, Sister Marie
Celeste, who lived in nearby Arcetri, was very supportive
and became a major presence in his life.

In 1623 Cardinal Maffeo Barberini, an old friend of
Galileo’s and a noted patron of the arts, was elected pope,
taking the name of Urban VIII (papacy 1623–1644).
Barberini as pope was far less receptive to Copernican-
ism than he had been as cardinal. In his audiences with
Galileo, Urban clearly stated that God was omnipotent
and that to speak of Copernicanism as other than hypothetical was to deny divine omnipotence.

Between 1624 and 1630 Galileo wrote the book that would lead to his condemnation by the Holy Office, *Dialogue concerning the Two Chief Systems of the World: Ptolemaic and Copernican*. Published in Florence in 1632, the *Dialogue* represents Galileo as the epitome of the Renaissance man, reflecting as it does his ideas as an astronomer, physicist, and humanist. The book took the form of a discussion among three philosophers, one ably defending Copernicanism, another acting as a facilitator, and the third ineptly supporting the Ptolemaic thesis. Written in Italian in a popular style, the book speedily attracted a wide readership. The Holy Office ordered Galileo to appear in Rome on “suspicion of heresy.” His trial, held between April and June 1633, ended 22 June 1633 with the Holy Office judging him guilty of the “suspicion of heresy.” The condemnation was based primarily on his failure to abide by the Holy Office’s injunction of 1616. For reasons that remain unclear, Galileo signed an abjuration. He was sentenced to imprisonment at the pleasure of the Holy Office and to the recitation of the penitential psalms once a week for three years. The sentence was subsequently commuted to house arrest in Arcetri.

Galileo spent the rest of his life in relative seclusion, beset by poor health and blindness. Nevertheless, he managed to have published in Holland in 1638 his *Discourses and Mathematical Demonstrations concerning the Two New Sciences*, in which he developed his ideas on the acceleration of bodies in free fall. He died 8 January 1642 and was buried in the Church of Santa Croce.

In 1979 Pope John Paul II reopened the case of Galileo. In 1992, on the basis of the report of the investigating commission, he declared that the theologians had been mistaken in condemning Galileo. Thus nearly four hundred years after his condemnation, Galileo was vindicated. In the interval he had effected an intellectual revolution that provided the basis for modern science.

*Elisa A. Carrillo*

**See also** Renaissance; Scientific Revolution

**Further Reading**


**Gama, Vasco da**

(c. 1460–1524)

Portuguese explorer

Vasco da Gama was among a handful of explorers who reshaped trade and labor among Europe, Africa, Asia, and the Americas. His three voyages between 1497 and 1524 opened an ocean route for trade between Europe and Asia; his three landings on the east coast of Africa in 1498, the first by a European, furthered the Portuguese goal of using Africans as a source of labor. His voyages led Portugal to dictate the terms of trade in the Indian Ocean and to enslave Africans for shipment to plantations first in the Mediterranean and islands off the African coast, then around the globe. The racism that arose from the enslavement of black Africans and their descendants remains a central problem of history and of contemporary culture.
As is true of Buddha, Jesus, and several other important people in history, the early days of Vasco da Gama remain a mystery. He was the third son of Estevao da Gama, a nobleman from Alentejo, a town in southwestern Portugal. Some historians cite 1460 as the year of Vasco da Gama’s birth, whereas others cite 1469. A third group of historians rejects both years, and controversy continues. Da Gama may have studied mathematics and navigation at Evora, Portugal, although again the matter is in doubt. What is clear is that da Gama might have remained a minor nobleman in Portugal. Instead ambition led him to seek fortune overseas. He distinguished himself in command against a French fleet in 1492, and three years later King Manuel of Portugal chose da Gama to lead four ships to India, a Portuguese goal since the 1420s.

Economics and religion led Portugal to persist for nearly eighty years in its quest for an ocean route to India. At the western end of Europe, Portugal bristled at the price of pepper, cinnamon, nutmeg, and other spices after they had changed hands several times, with an increase in price at each exchange, along the land route west from India. Worse, many of the middlemen in these exchanges were Jews and Muslims, the enemies of Christendom whom the Portuguese and Spanish had banished from the Iberian Peninsula in 1492. God, country, and king, da Gama believed, had appointed him to circumvent by water this spice route controlled by infidels. After the Portuguese—devout Catholics—had the spice trade, they, rather than nonbelievers, would dictate the price of spices.

However, the Genoese sailor Christopher Columbus complicated matters. In 1492 Spain had tried to beat Portugal to India by sending Columbus west across the Atlantic rather than east around Africa. Columbus believed he had reached India and was at sea again in 1495 when da Gama began to amass supplies for his voyage east. His compatriot Bartolomeu Diaz had in 1488 rounded the southern tip of Africa, opening the way to India, but no one knew the distance between the two. Nor did anyone have an accurate map of the east coast of Africa. As had Columbus, da Gama sailed into uncharted waters upon leaving Lisbon, Portugal, on 8 July 1497. After more than 7,500 kilometers and ten months, the longest ocean voyage to that date, da Gama reached Calicut, India, on 22 May 1498. Da Gama led two more expeditions to India—one in 1502 and his final voyage in 1524. Reaching Cochin, India, that September as viceroy of India, da Gama died on 24 December 1524. Only in 1538 was his body returned to Portugal for burial.

By then Portugal had established ports in Asia from Diu on the western tip of India to Malacca near the southern tip of Malaysia, giving the Portuguese control of the Indian Ocean. This control enabled Portugal to capture half the spice trade between Europe and Asia. Merchants who once sailed the Indian Ocean at will now had to hire Portuguese ships for transit or pay a 6 to 10 percent duty to sail their own ships through the ocean.

The wealth from the trade that da Gama’s voyages had made possible returned to Portugal both as money to establish sugar plantations in Portugal and on islands that Portugal controlled off the African coast and as slaves to work these plantations. Between 1450 and 1500 Portugal enslaved 150,000 Africans as plantation workers. By 1800 Portuguese, Dutch, and English traders shipped more than 20 million African slaves around the globe, many of them to the Americas. In the United States racism and poverty remain the consequences of slavery and the legacy of Vasco da Gama.

Christopher M. Cumo

See also Expansion, European; Maritime History; Navigation; Portuguese Empire

Further Reading

Games

Games are universal, or very nearly so, in the cultural inventories of known societies, past and present. In their classic 1959 article *Games in Culture*, the anthropologists John M. Roberts, Malcolm J. Arth, and John J. Bush defined games as recreational activities “characterized by: (1) organized play, (2) competition, (3) two or more sides, (4) criteria for determining the winner, and (5) agreed-upon rules” (p. 597). This definition has been particularly influential in anthropology and in the cross-cultural study of games even though it excludes some activities that are commonly referred to as games, including mother-infant activities such as patty-cake, or play activities such as top-spinning or making string figures. Roberts and his colleagues referred to such noncompetitive play activities as “amusements.” Roberts and his colleagues also provided an extremely useful classification system for games. This system is based on the factor that is most critical in determining who wins and who loses. They indicated that:

Some outcomes are determined primarily by the physical abilities of the players, some by a series of moves, each of which represents a player’s choice among alternatives, and others either by non-rational guesses or by reliance on the operation of some mechanical chance device, such as a die; some are determined by combinations of these patterns. All of these ways of determining outcomes are widely distributed among the societies of the world, and it is therefore possible to offer the following general classification of games: (1) physical skill, (2) strategy, and (3) chance (p. 597).

While others have developed alternate definitions of games and game classification systems, none of these has proven to be particularly useful in cross-cultural research on games and cultural correlates of game types.

The Origins and Evolution of Games

Archeologists and antiquarians have found numerous examples and large varieties of ancient artifacts of game play, such as balls, hoops, marbles, dice, game boards, board game pieces, and playing cards, in sites around the world. Possibly the earliest known game board with pieces was found in an excavation of a predynastic cemetery at El-Mahasna in Upper Egypt in 1909. Alquerque, the ancestor of draughts (checkers in the United States) was played as early as 600 BCE in Egypt.

A Mesoamerican ball court at Uxmal, in the Yucatan.
Early Athletic Games
The development of sporting games, including track and field, wrestling, boxing, and archery, among the ancient Greeks and Romans is well known from archeological, artistic, and narrative sources. Various forms of art, such as painting and sculpture, from around the world often depict game play. The Greek historian Herodotus (fifth century BCE) described games and other pastimes in Lydia (in the west of present-day Turkey) and Egypt while the Roman historian Tacitus (55–120 CE) described dice games as played among Germanic tribes.

The Mesoamerican ball game is one of the best-known ancient games of physical skill. The game and its play are depicted artistically in frescoes, stone carvings, on painted pottery, and in clay figurines of players found in Mexico and Central America. The oldest known ball court, at the archeological site of Paso de la Armada in the state of Chiapas in western Mexico, dates to approximately 1400 BCE. The ball court at Chichén Itzá, the largest in Mesoamerica, was built between 900 and 1100 CE. Simplified versions of the game are still played in northwestern Mexico, principally in the states of Sinaloa, Sonora, and Durango.

Early Games of Strategy
While the precise origins of games of strategy (such as chess or wei qi in China; also known as pa-dok in Korea and Go in Japan and the West) are either unknown or contested, some aspects of their histories are relatively clear. Wei qi means “surrounding game” or “surrounding chess” and has as its goal the capture of territory on the playing board by the placement of markers. While some claim that the game was invented in China more than 4,000 years ago, others suggest that the game originated in Central Asia and diffused through Nepal and Tibet to China. The game is mentioned in the writings of the philosopher Mencius from around 400 BCE, and writings specifically about it date to the Tang dynasty (618–907). Wei qi diffused to Japan in 754 as a gift from the emperor of China to the emperor of Japan.

Chess probably is a descendant of shaturanga, a four-player game from India that involved battle between armies that included infantry, cavalry, elephants, and boats, commanded by a raja (king). In a later version, called shatranj, the four armies were collapsed to two, much like modern chess. Shatranj diffused to Persia from India in the sixth century and reached the Arab kingdoms, Greece, and Medina by about 650. It probably was brought to Europe during the Crusades and became popular in southern Europe by the end of the fifteenth century. Thereafter it rapidly spread throughout the continent.

Mancala (also called wari or variants thereof), the third major game of pure strategy found in the preindustrial world, is widespread in Africa. It might have evolved there from an accounting system that used boards similar to those used in the game. Mancala boards carved into temple roofs in Memphis, Thebes, and Luxor indicate that the game existed in Egypt prior to 1400 BCE.
Early Games of Chance
Games of chance are based either on the use of a randomization device, such as a die, shuffled playing cards or a roulette wheel, or on non-rational guessing. Early dice included “knucklebones” (usually bones from the ankles of sheep or pigs) that were marked on several sides, but numerous other materials, including antler, pebbles, walnut shells, peach or plum stones, pottery disks, walrus ivory, and beaver or woodchuck teeth, were used as well. Greek and Roman dice were most often made of bone or ivory but amber, marble, porcelain, and other materials were also used. Cubical dice are common, but dice of pyramidal, rectangular, pentahedral, and octahedral shapes also existed.

Playing cards were probably invented in China, perhaps as early as 1000, and may have been based on Chinese dominoes, a game played more like card games than the positional form of modern dominoes. From China, playing cards apparently diffused westward, arriving in Egypt by the twelfth or thirteenth century and Europe by the 1570s. Card games arrived in England around 1520, and the oldest surviving deck of cards from England dates to about 1590. Ordinances directed at regulating card-game playing passed in various parts of Europe in the late fourteenth century indicate both their rapid spread and the alarm that their appearance created among civil and ecclesiastical authorities. The primary concern with cards, as well as dice, was with their use in gambling games, and prohibitions aimed at gambling have waxed and waned since the end of the fourteenth century. For example, Napoleon legalized casinos in France in 1806, but they were outlawed in 1837. In the American colonies, the Puritans of New England and the Quakers in Pennsylvania generally prohibited gambling, while areas colonized by other English settlers usually viewed it as a harmless pastime. Now, gambling is common worldwide except in those areas where cultural prohibitions still hold sway, such as in Muslim societies and most of China.

Guessing games of chance are also common worldwide. Native North Americans played numerous versions of the moccasin game, for example, in which the object was to guess the location of objects hidden under moccasins. “Rock, paper, scissors” is a modern example of a guessing game.

Games as Models
Roberts and his colleagues claimed that games model important real-world activities with greater or lesser degrees of verisimilitude. Chess, for example, is transparently a game of war between two armies, replete with ranks. Wei qi is more abstract but still a game of war. Risk is a relatively recent (first published in 1959) war game played on a stylized world map that, unlike chess and wei qi, involves chance as well as strategy. While there is no evidence to indicate that board games, such as chess or wei qi, were used for training purposes, other competitive events, including the knightly tournaments in medieval Europe and the Afghan horsemanship game, buzkashi, provided excellent training for warfare.

Monopoly, a model of real estate transactions that also involves strategy and chance, became a popular board game during the Great Depression of the 1930s even though an all but identical game had been patented in the United States in 1903.

Games of chance are commonly held to be models of divination designed to seek supernatural guidance about, or assistance in dealing with, the unpredictable forces of nature that govern human existence. In his monograph Chess and Playing Cards, Stuart Culin, the great America game ethnographer, claimed that dice developed from efforts to divine the future by the throwing of arrows (or sticks, straws, or reeds) on the ground and interpreting the result while reciting magical incantations. The “casting of lots,” mentioned in the Bible, was a form of divination based on the interpretation of thrown sticks. Craps players around the world commonly recite “prayers,” saying things such as “Come on, seven!” or “Baby needs a new pair of shoes,” or put their essence on the dice by rubbing them between their hands or blowing on them in the hope of controlling the outcome of the game.

We stand today at a crossroads: One path leads to despair and utter hopelessness. The other leads to total extinction. Let us hope we have the wisdom to make the right choice. • Woody Allen (b. 1935)
Games of physical skill commonly model either warfare or hunting. Examples include ancient sports such as wrestling, boxing, and spear or javelin throwing as well as the activities of medieval tournaments and fairs, such as jousting, the melee, and competitions with bows and arrows. Modern sports such as soccer, rugby, and American football bring two opposing armies onto a field of battle while target shooting and trap shooting model hunting. Soccer, or association football, is the world's most popular participatory and spectator sport. While the modern version was born in nineteenth-century Britain, precursors were played as early as the eighth century. Often known as "mob football," these games involved an indeterminate number of players (sometimes whole villages pitted against each other), and rules were vague. The origins of mob football are uncertain but its play was associated with Shrove Tuesday. This game modeled combat closely enough to include numerous injuries and often fatalities. According to an ancient document from Workington, England, Shrovetide football players could use any means other than murder and manslaughter to get the ball to the goal. Because of the violence that it engendered, Edward II banned Shrovetide football in 1314, but it is still played in some areas, such as Ashbourne in Derbyshire.

**Recent Developments in Games**

New games in traditional formats are continually being developed and marketed by game manufacturers but the most radical development in the recent history of games is their mating to the computer. In 1971, Atari marketed the first commercially successful arcade video game, Pong, a two-person game in which an electronic ball was batted back and forth on a video screen by two paddles controlled by the players. Other arcade games such as Tank (1974), Asteroids (1978), and Pac-Man (1980) soon followed. Odyssey, marketed by Magnavox in 1972, was the first home video game. In 1975, Atari introduced a home version of Pong, and dedicated video game consoles from other companies were on the market soon after. Arcade games were introduced to personal computers in the late 1970s.

Contests between computers (and programs) and master players for classic games such as chess and *wei qi* have captured public interest in recent years. In 1997, an IBM computer named Deep Blue defeated reigning world chess champion, Gary Kasparov, two games to one (with three draws), and chess programs for personal computers can now play very strong games. However, to date, no computer has been able to defeat good human players at *wei qi*.

**The Future of Games**

New games are continually being invented, while older ones may either be modified or disappear. Watching others play games—spectatorship—is growing, as well. While games of physical skill, such as soccer, baseball, or tennis, draw the most spectators, championships in games of strategy, such as chess, and games of strategy with chance, such as poker, attract many viewers as well. The first casino (from the Italian word “casini,” meaning “little house”) opened in Venice in 1626, but the Monte Carlo casino in Monaco quickly became the world's most glamorous gambling establishment after its opening in 1863. Each of the thirteen American colonies established lotteries and proceeds aided various public works, including the establishment of libraries, churches, and universities such as Harvard, Yale, and Princeton, but all forms of gambling were illegal in the United States by 1910. The state of Nevada again legalized gambling in 1931 and the first state lottery was established by New Hampshire in 1963. Now, only two states (Hawaii and Utah) do not have some form of state authorized gambling. The legalization of gambling in much of the world has led to increased participation in games of strategy with chance (such as blackjack, poker, baccarat) and games of pure chance (such as craps, roulette, and lotteries). Casino gaming and lotteries, while providing governments with a new source of revenue, outlets for recreational gamblers, and economic development in areas supported by casinos, also have negative aspects. Gambling addictions
are now more common, and the need for policing, access roads, parking, and waste disposal strains local resources. So, while some forms of game playing, such as card games in the home, may be declining because the social gatherings that supported them in the past are themselves declining, more people are participating in and watching games being played outside the home, and that trend is likely to continue in the future.

While traditional board games and card games may be waning in popularity, computer-based home video games, as well as online games, constitute a huge growth industry and one of the most rapidly expanding forms of entertainment worldwide. A recent survey indicates that the average American spends about 75 hours per year, while boys in the eight-to-thirteen age range spend an average of 7.5 hours per week, or nearly 400 hours per year, playing video games. Home use of video games, as well as the increased popularity of Internet game parlors, has led to a steep decline in the popularity of arcades and arcade games. As video and Internet games are most often played alone, either against the game program or distant opponents, they have resulted in less social play than takes place in traditional card or board games and even in arcade video games. Whether such games model the real world of today, as Roberts and his colleagues suggested in the late 1950s, is a question worth pondering.

Garry Chick

See also Leisure; Sports

Further Reading
Levinson, D., & Christensen, K. (Eds.). Encyclopedia of world sport: From ancient times to the present. Santa Barbara, CA: ABC-CLIO.

Gandhi, Mohandas
(1869–1948)
Leader of independence movement in India

Gandhi’s significance lies in his uncompromising reliance on nonviolence—or, in Hindi, ahimsa—as a moral force for reforming and transforming unjust established authority. Gandhi mobilized the largest nonviolent mass movement known in world history under the banner of satyagraha—the active pursuit of truth through love and nonviolence. Gandhi’s ideas of truth and justice have contributed immensely to the development of moral and political thought, and his demonstrations of the positive and revolutionary power of nonviolence has had a worldwide impact. His support for nonviolent campaigns dedicated to social and political change around the world gave a sense of power to the powerless and of hope to the hopeless.

Although Gandhi was a prolific and inspirational author whose writings gave guidance to thousands of people around the world, as well as the founder of many ashrams (spiritual retreats) and communal settlements, his life was his biggest message. He is regarded as a mahatma, or great soul, and lived a life of simplicity, nonpossession, celibacy, truth, and nonviolence.

Mohandas Gandhi was born to Putlibai and Karamchand Gandhi on 2 October 1869, in the city of Porbandar, Gujarat, in western India. His father was the prime minister of Porbandar. At thirteen, Mohandas was married
to Kasturbai, also thirteen, and in 1888 sent to Britain for higher education in the field of law. Unable to secure a job on his return to India, Gandhi sailed to South Africa in 1893. There he discovered the oppressive and unjust policies of the British when he was thrown off the train for having a first class train ticket and sitting next to white citizens of the Empire. This was a transforming event in Gandhi’s life. A South Africa rife with racial discrimination against colored people became the laboratory for Gandhi’s initial experiments with satyagraha. Later Gandhi built on these experiments to launch mass satyagraha movements during India’s struggle for freedom from British rule.

On his return to India in 1915, he became a “pilgrim of truth,” uncovering the roots of mass poverty and unrest over the next five years, and in 1920 he assumed the leadership of the Indian National Congress, the body officially pursuing the struggle for India’s independence from the British. Gandhi led several mass campaigns of nonviolent noncooperation and civil disobedience against British rule, and India gained its independence in 1947.

But for Gandhi, national self-government, or swaraj, meant more than just independence. To him it meant peoples’ total moral authority over themselves so as to require no external coercion. Therefore, Gandhi became an active social reformer, crusading against the Indian caste system, the exploitation of women, and cruelty to animals.

Gandhi’s radical insistence on the oneness of human beings, and his persistent efforts to keep Indian Hindus and Muslims united, set him in opposition to fundamentalist Hindus. Earlier attempts on his life had failed, but on 30 January 1948, he was shot during his prayer meeting at the Birla House in New Delhi by a Hindu nationalist, Nathuram Godse. Although Gandhi’s assassination appears ironical to some, for others it became a symbol of his fearless dedication to the principles of truth and nonviolence.

While Gandhi’s nonviolent philosophy and actions evolved in response to larger social and political problems he personally experienced, he records in his autobiography three major influences on his life and thought: the religion of Jainism, with its core principle of nonviolence; Unto This Last, an 1860 collection of essays critiquing classical economics by British writer John Ruskin; and Leo Tolstoy’s treatise on Christian nonviolence, The Kingdom of God is Within You.

Gandhi tirelessly endeavored to understand the roots of political and social problems he confronted and to devise means to address them effectively but nonviolently. He felt that violence resulted from poverty, injustice, lack of self-discipline, selfishness, and ill will. In his seminal work, Hind Swaraj, Gandhi offers an enduring solution to these problems in his vision of a civilization that encourages love, truthfulness, social service, equality, and cooperation. Gandhi’s ideal society discourages politics without principle, wealth without work, commerce without morality, education without character, pleasure without consciousness, science without humanity, and worship without sacrifice.

Tara Sethia

See also British Empire; Civil Disobedience

Further Reading


Gay and Lesbian Rights Movement

Gay men and lesbian women have existed throughout history, although attitudes toward them have varied in different eras. In ancient Greece people tolerated homosexual liaisons under certain circumstances, whereas certain verses of the Hebrew, Christian, and Islamic scriptures speak of homosexual behavior as a grave sin. Negative attitudes toward homosexuality often evolved from interpretations of these scriptures and were written into the civil law in numerous countries. Today more than seventy countries have laws that criminalize homosexuality, and in some countries homosexuality is a crime punishable by death. In 2002, according to Amnesty International, Saudi Arabia executed four men for homosexuality.

During the Enlightenment the punitive attitude toward homosexuals was replaced in many European countries by the belief that being gay is a mental disease. (The Enlightenment was a philosophic movement of the eighteenth century marked by a rejection of traditional social, religious, and political ideas and an emphasis on rationalism.) Instead of being executed, homosexuals were committed to insane asylums. However, in England the Labouchere Amendment (named after the British Member of Parliament Henry Labouchere) was passed in 1885, making homosexual conduct punishable by two years in prison. This law would be used to convict the Irish author Oscar Wilde in 1895. It was also exported to all of the British colonies, many of which still had a version of it on the books well into the 1980s. (It was repealed in England in 1967.)

For centuries people seemed to have a “don’t ask, don’t tell” attitude about sexual orientation. Famous people were believed to be homosexual, but modern historians often have a difficult time finding proof because in the past people considered writing in any detail about private sexual conduct to be vulgar. The so-called Boston marriage of Victorian times is a good example: Strong and independent women established loving friendships and lived together as companions, but few documents conclusively show whether these relationships included sex or were mainly platonic.

What we know as “gay liberation” is a comparatively modern phenomenon. In countries such as Germany people made sporadic efforts to change the laws or change society’s attitudes. In Berlin the little-known author Karl Maria Benkert (who later changed his name to “Karl Kertbeny”) became an advocate for the rights of homosexuals (in fact, he is credited with inventing the term): in 1869 he wrote several essays challenging the myths that homosexuals are effeminate or defective and stating his belief that homosexuality is natural (a person is born that way) rather than a moral failing. Although he was a man ahead of his time, Benkert’s assertions did not become the prevailing views of his era. Occasionally an enlightened doctor or educator would take up Benkert’s views. In Germany in 1897 Magnus Hirschfeld, a neurologist, founded the Scientific Humanitarian Committee. Hirschfeld regarded homosexuals as a “third sex” and advocated unsuccessfully for the repeal of laws that criminalized their behavior. When the German Nazi leader Adolf Hitler took power in 1933, groups who taught tolerance of gays were banned, and thousands of homosexuals were later put to death by the Nazis.

In England in 1914 the psychologist Havelock Ellis co-founded the British Society for the Study of Sex Psychology. In addition to educating the public about human sexuality, Ellis taught tolerance of homosexuals; he believed that being homosexual (educators and doctors used the term sexual inversion) is not a disease and should not be considered a crime, but his ideas found little support in England at that time. In 1928, when the British
novelist Radclyffe Hall published *The Well of Loneliness*, a book that was sympathetic toward its lesbian characters, the British government immediately judged it to be obscene, and all copies were seized.

**Early U.S. Gay Rights Organizations**

In the United States the Chicago Society for Human Rights was perhaps the first U.S. gay rights organization. Postal clerk Henry Gerber founded it in 1924, but by 1925 Chicago police had shut it down. Gerber was briefly arrested, he lost his job, and his efforts at advocating for homosexuals received little public support.

In 1951 Los Angeles music teacher Harry Hay and several of his colleagues founded another U.S. homophile organization, the Mattachine Society. It was followed in 1955 by the Daughters of Bilitis, founded by Phyllis Lyon and Del Martin as an advocacy group especially for lesbians. These organizations provided support and encouragement but often did so quietly. Although they sought more respect and tolerance, they also advised members to assimilate as much as possible and to avoid dressing or behaving in ways that would call attention to their lifestyle. Later some militant members of the emerging gay liberation movement would regard the Mattachine Society and the Daughters of Bilitis as accommodationist, too willing to remain in the closet and too afraid to stand up for greater acceptance; but in a society dominated by the conservative politics of U.S. Senator Joseph McCarthy, when homosexuals were often arrested for “lewd conduct,” the 1950s were not a good time to be vocal about one’s sexual orientation.

Although no single event created the U.S. gay rights movement, most historians agree that the Stonewall Riots were a defining moment. In June 1969 in New York City police raided a gay bar called the “Stonewall Inn”; such raids were common and usually resulted in numerous arrests. However, this time the bar’s patrons decided to fight back, leading to three days of civil unrest. In the United States this was the era of the civil rights and women’s rights movements, and that environment may have encouraged homosexuals to actively oppose the prejudice they often encountered. The Stonewall Riots mobilized the homosexual community and led to an increasing unwillingness to assimilate or accommodate.
What happened at Stonewall would happen in other cities. In Canada Toronto’s gay community was subjected to a series of raids of bath houses in February 1981. Police used sledgehammers and crowbars and arrested 338 people. Members of the gay community were horrified by what they felt was overkill, and the next night four thousand gay men and lesbian women staged a protest march, the largest demonstration of its kind in Toronto. Like Stonewall, the demonstration energized the gay community, making members even more determined to fight for better treatment.

In India, a country where gay and lesbian acts are still criminal offenses, a defining event occurred in December 1998. A movie by the director Deepa Mehta premiered, but this one was unique. *Fire* featured a subplot in which two women fall in love. Religious conservatives were outraged and attacked the theater in Mumbai (Bombay) where the movie was being shown, breaking windows, beating up patrons, and vandalizing the building. Similar events occurred in other Indian cities. However, this time a coalition of civil libertarians, human rights activists, and free speech advocates joined with members of the lesbian community to march and protest both the attacks and the government’s efforts to censor the movie. This protest march marked one of the first times that lesbians had been visible in India; most lived hidden lives, afraid to call attention to themselves. The protest march led to the founding of the Campaign for Lesbian Rights. In June 2003 a rally and march were held in Calcutta to protest laws that make homosexuality punishable by ten years in prison; several hundred people marched peacefully in one of the few public demonstrations held by India’s gay community.

A number of groups emerged in the United States during the 1970s and 1980s to fight for the rights of gay men and lesbian women. One of the best known was the National Gay Task Force (NGTF) in 1973; in 1985, it changed its name to the more inclusive “National Gay and Lesbian Task Force” (NGLTF). The organization not only advocates for changes in discriminatory laws in the United States, but also conducts sociological studies about society’s changing attitudes, works with the government to develop strategies to combat violence against gays, monitors the media for antigay content, and conducts international conferences about gay issues. When AIDS first appeared in the United States during the 1980s, NGLTF was at the forefront in combating myths and prejudices and educating the public about HIV. A more vocal and sometimes controversial organization is ACT-UP (AIDS Coalition to Unleash Power). Founded in 1987, it is known for its slogan “Silence=Death” and its commitment to speak out against discrimination in a demonstrative manner, using tactics of civil disobedience called “direct actions.” ACT-UP works to change both policy and attitudes about AIDS. Another advocacy group is GLAAD (Gay and Lesbian Alliance Against Discrimination), which was founded in 1985 to monitor the media and advocate for an end to antigay stereotypes in print, broadcasting, and film.

**British Activist Groups**

In England one of the best-known activist groups is OutRage, founded in 1990. It, too, uses civil disobedience, staging unique and often provocative direct actions to call attention to discrimination and to defend the rights of England’s gay community. OutRage is especially good at getting media coverage: Members have staged “kiss-ins,” performed a ceremony described as an “exorcism of homophobia,” and staged noisy but nonviolent demonstrations at police stations when the group felt that the police were not doing enough to arrest people who attack gays. Another gay rights group in the United Kingdom is Stonewall, which was founded in 1989. It uses lobbying, working with government officials and members of Parliament, to improve the legal rights of gays. Stonewall has also done research on attitudes about homosexuality and sponsored workplace forums so that employers can better understand and support diversity.

Australia seems to have been influenced by the U.S. gay rights movement. Melbourne has a chapter of Daughters of Bilitis. Australia also has a number of activist groups, such as the Tasmanian Gay and Lesbian Rights Group, which has fought for the decriminalization of
homosexual behavior. Economic advocacy groups, such as the Australian Gay and Lesbian Tourism Association (AGLTA), also work to find gay-friendly and gay-tolerant hotels and places for visitors to shop.

**Criminality**

Even in countries where homosexuality is still regarded as a sin or a crime, advocacy groups exist, but they run the risk of being shut down by the government. For example, in Nepal in June 2004 the Supreme Court imposed a ban on the Blue Diamond Society, which advocates on behalf of gay men and lesbian women and conducts HIV/AIDS education. Advocacy groups exist in a handful of Muslim countries (most notably Turkey), but in more theocratic cultures gay men and lesbian women have turned to the Internet to discuss issues while avoiding government crackdowns. In the United States some Muslim immigrants started Al Fatiha (the Opening) in 1997; when it held a conference in 1998, participants came from all over the United States and from South Africa, Canada, Belgium, and the Netherlands to discuss the problems facing gay Muslims worldwide.

Although advocacy has been helpful in many parts of the world, Amnesty International stated in its 2000 report that more than eighty countries still have laws that define homosexual behavior as criminal; twenty-six of these countries are Muslim. In some countries such laws are rarely enforced, whereas in others homosexuals are persecuted. In 2003 Human Rights Watch wrote a report critical of how the government of Egypt rounds up, jails, and possibly torments homosexuals. In Tanzania the government in April 2004 passed legislation that would make homosexual acts punishable by twenty-five years in jail. In Poland marchers who attempted to stage a peaceful demonstration in favor of gay rights in June 2004 were attacked and beaten by members of a far-right group called the “Mlodzie Wszechpolska” (All Polish Youth), part of the nationalistic and militantly antigay Liga Polskich Rodzin (League of Polish Families).

Perhaps the first country to add to its constitution a provision that outlaws discrimination against gays is South Africa, which did so when its new constitution was written in 1994; an advocacy group, the National Coalition for Gay and Lesbian Equality, had much to do with getting the provision approved. Led by professor Edwin Cameron and gay activist Simon Nkoli, the coalition also has litigated to have laws that criminalize homosexual acts overturned and gained medical benefits for same-sex couples.

Same-sex marriage and civil unions have become a hot-button issue for gay men and lesbian women, and activist groups fight to expand benefits and rights to gay couples. Some people, mostly religious conservatives, have resisted the idea of gay marriage. In the United States, Massachusetts became the first state to permit gay marriages in May 2004; Vermont recognized civil unions in July 2000. However, no other states currently recognize gay marriage or civil unions, and in a conservative backlash, thirty states have passed laws banning such partnerships. Worldwide the Netherlands, Belgium, and three provinces of Canada permit same-sex marriage, and a few European countries—France, Norway, Denmark, and Germany—offer limited forms of civil union. In June 2004 controversy erupted in France when two gay people were married by the mayor of Begles, a suburb of Bordeaux. The mayor, Noel Mamere, was promptly suspended for a month, and the marriage was nullified by the French courts.

Worldwide many people now see gay rights as a human rights issue, and certainly more acceptance exists than did when the Stonewall Riots occurred. However, as long as conservative religious views predominate, and as long as stereotypes persist, members of the gay and lesbian rights movement will continue their work.

Donna L. Halper

Further Reading


Gender

See Contraception and Birth Control; Gay and Lesbian Rights Movement; Global Imperialism and Gender; Human Rights; Literature and Women; Marriage and Family; Matriarchy and Patriarchy; Sex and Sexuality; Women’s and Gender History; Women’s Emancipation Movements; Women’s Reproductive Rights Movements; Women’s Suffrage Movements

General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (GATT) was a relatively informal document created after the Second World War to coordinate policies on international trade. Its major aims were the abolition of quotas, reduction of tariff barriers, and promotion of nondiscriminatory free trade. Its origins trace back to 1947 when twenty-three states met in Geneva and negotiated a statement of principles for international trade. This agreement originally was intended to be part of a draft charter for an International Trade Organization (ITO), the third leg of the Bretton Woods economic order, along with the International Monetary Fund and World Bank. The “Havana Charter” of the ITO contained the GATT, as well as provisions relating to employment, commodity agreements, restrictive business practices, international investment, and services. The 1947 GATT, which consisted of negotiated trade concessions and rules of conduct, entered into force as the GATT Protocol of Provisional Application on 1 January 1948, although the rest of the Havana Charter never was ratified, primarily because of opposition in the U.S. Congress. For forty-seven years, the ever-expanding group of contracting parties to the GATT (128 states in 1994) treated the instrument as if it were a permanent commitment, though actually it was merely a provisional legal agreement. A small secretariat and administrative staff for the GATT was created in 1955 in Geneva, though not as a formal international organization. These personnel were tasked with implementing trade objectives of participating states, namely to apply a nondiscriminatory, most favored nation approach toward trade relations, with tariff reductions presumably based on the principle of reciprocity.

From its creation until 1994, the GATT states engaged in eight negotiating sessions, called “rounds,” to reduce tariffs and produce in piecemeal fashion rules to govern international trade. Nontariff barriers were dealt with after 1965, among them, antidumping measures, subsidies, countervailing duties, import licensing procedures, and selective government procurement. These agreements were contracted by only a few of the GATT members, mainly those who were members of the Organization for Economic Cooperation and Development (OECD).

The final GATT negotiating session, the Uruguay Round, proved the most prolonged and most comprehensive. It lasted from 1987 through 1994 and established a legal institution—the World Trade Organization—to replace the GATT of 1947 with all its amendments. Established by the Marrakesh Protocol on 1 January 1995, the WTO is a multilateral institution charged with administering rules of trade among member countries. Legally it embodies an international intergovernmental organization, possessing international personality (that is, the WTO possesses international legal rights and duties, with the capacity to bring or defend legal claims between states) and competence in its own right independent of its member governments. Consequently, the WTO enjoys legal privileges and immunities necessary for the exercise of its mandate. As a body of legal rules, the WTO contains the GATT of 1994 and other non-goods-related agreements.
The WTO represents the preeminent international body dealing with the rules of trade between states. The 146 members of the WTO in 2004 account for more than 95 percent of world trade, and its decisions affect nearly all the goods and services moving in international commerce. At its core are the WTO agreements, which operate as the ground rules for international commerce and trade policy. The main objectives of the WTO agreements are to assist trade to flow freely, achieve liberalization through negotiation, act as a forum for trade negotiations, and ensure impartial settlement of disputes. Succinctly put, the WTO’s aim is to facilitate the free, fair flow of trade in a predictable fashion for its member states.

The WTO provides both a code of rules and a forum for governments to discuss and resolve trade disputes and to continue negotiations toward expanding world trade opportunities. The WTO includes all the GATT provisions for trade in goods, plus rules developed for trade in services and intellectual property, as well as rules and procedures governing the settlement of disputes. It operates as the principal international body concerned with multilateral negotiations on the reduction of trade barriers and other measures that distort competition. In this regard, drawing heavily from the GATT legacy, the WTO embraces five fundamental principles that establish the foundation of the modern multilateral commercial system: (1) nondiscrimination through most-favored-nation treatment (MFN); (2) freer fair trade; (3) more predictable trade policies; (4) encouraging open and fair competition; and (5) concessionary treatment for less developed countries.

The WTO’s rules, called agreements, were negotiated during the GATT’s Uruguay Round. These rules run some thirty thousand pages in sixty agreements and separate commitments (called schedules), and set out acceptable procedures for customs duties and opening markets. Through these agreements WTO members operate in a nondiscriminatory trading system that upholds their rights and obligations. Each state is guaranteed that its exports will be treated fairly and consistently by other members of the WTO. The Uruguay Round produced 22,500 pages of text that list individual countries’ commitments to cut and bind customs duty rates on imports of goods, which entailed the most ambitious set of trade-liberalization agreements in the GATT’s history. The WTO agreements cover goods, services, and intellectual property. They articulate principles of liberalization and permissible exceptions. They prescribe special treatment for developing countries. They require governments to make their trade policies transparent. With the formal conclusion of the Uruguay Round on 15 April 1994, the GATT went out of existence.

Christopher C. Joyner

Further Reading


Genetics

The most recent common ancestor (MRCA) to humans and to the nearest Primates, chimpanzees, lived in Africa, most probably in the tropical forest, 5 million years ago (mya), a date that some prefer to set somewhat earlier, by 1 or 2 million years (my). The forest is still the environment where chimpanzees and earlier ancestors like gorillas and orangutans lead arboreal lives. Because bone conservation is not good in forest environment almost every known intermediate ancestor in the direct line to humans comes from drier environments in the Rift Valley, extending from East Africa to South Africa. This is where almost all the earliest human fossils were found. Two major evolutionary changes were observed in the human line but not in the simian lines: the transition to the erect, bipedal posture, which favored...
greater speed on the ground and also freed the hands for the making and use of tools, and an apparently continuous increase in brain size. The latter, and the development of phonation organs, may have facilitated the genesis of articulated speech, which is not present in Primates, although they can be taught the meaning of hundreds of words, using special teaching techniques. The capacity to form complete sentences makes the transmission of complex thoughts possible. The capacity to communicate using language that is typical in the human species is a real source of human superiority to all other Vertebrates, probably the most important one. It must have been the major skill that made it possible for a relatively small group of East Africans to grow and expand across the whole Earth, starting about a hundred thousand years ago. The information about this comes from paleoanthropological and archeological observations that supply dates and places. The evolution from the MRCA to modern humans was, however, long and slow, with several culs-de-sac, but a common evolutionary theme throughout the human line is an increase in brain size, by a factor of four times, as judged from the size of the brain case.

One particularly well-dated woman, *Australopithecus afarensis* (Lucy), 3.2 my old, may be at the origin of the bifurcation into an extinct line leading to several Australopithecine species, and that leading to *Homo sapiens sapiens* (the species to which we all belong). The genus *Homo* is given an age of about 2.5 my and is characterized by the first use of rough stone tools, hence the first species of the human genus is called *Homo habilis*. Some improvement in shape and increased variation of shapes and uses of tools is noticeable at the time of *Homo erectus* (dated about 2 mya). There is currently a tendency to rename these fossils, but we retain the simpler, earlier terms. *H. erectus* is the human who, starting 1.7 mya from Africa (where the Rift Valley is still the only source of finds) relatively quickly settled most of Europe and Asia. The slow increase in brain size stopped around 300 kya (300,000 years ago). For a long period, between 500 kya and 40–30 kya, two types of humans in different parts of the world were particularly successful and left a greater number of fossil proofs of their existence. One type, Neanderthal, lived in Europe and extended to western Asia, reaching the Middle East between 80 and 60 kya. According to some anthropologists, Neanderthal was the ancestor of modern Europeans, but recent genetic work on fossil remains has shown that it became almost certainly completely extinct. According to others, the branch leading to all modern humans developed in Africa, in the Rift Valley. The only fossil predecessors of

---

**Watson & Crick and the Double Helix**

In 1953, James Watson and Francis Crick discovered the molecular structure of the chemical deoxyribonucleic acid (DNA) in terms of the now-familiar double helix, which carries the code that transmits hereditary traits from animal parents to their offspring. Watson was working at the Cavendish Laboratory, University of Cambridge, in early October 1952. He met Francis Crick there and they agreed that, working together, they should be able to discover the structure of DNA that had eluded others. After presenting their findings to the world, they penned a famous article in *Nature* magazine in which they predicted, albeit humbly, the significance of their discovery. They wrote: “This structure has novel features which are of considerable biological interest.” In 1962, Crick, Watson, and their associate, Maurice Wilkins, were awarded the Nobel Prize for their work.

As a result of their discovery, scientists have been able to identify that the causes of some illnesses are genetic. Some of the most recent breakthroughs are the use of DNA in crime cases, the determination of blood relatives and the cloning of Dolly the sheep. The ethics of genetic cloning—and the legal structures that may be put into place to regulate or prevent such activity—will remain a major issue for years to come as scientists contemplate the ultimate genetic experiment: cloning human beings.

modern humans were found in Africa. Two recent finds, an *erectus* of 1 mya found in Eritrea, and a 150 ky-old almost perfectly modern skull found not very far away in Ethiopia, filled important gaps and have helped to show a continuous evolution in East Africa of modern humans from the earliest types.

**Genetic Analysis and Human Migration**

Genetic analysis of human evolution was started very soon after the discovery of genetic variation. At the beginning the only frequent (polymorphic) genetically variable traits inherited in a clear-cut way according to Mendel’s laws were blood groups ABO, RH, and others. These traits are inherited equally by both parents and could be used to prove the influence of the four standard factors of evolution and to follow their effects quantitatively thanks to the mathematical theory of evolution, developed in the 1920s and 1930s by R. A. Fisher, J. B. S. Haldane, and S. Wright. The first factor, *mutation*, is the source of all inherited differences, which we now know are changes in DNA: a linear molecule formed by a chain of four simple substances called nucleotides or bases—A, C, G, T—attached one to the other, that are reproduced and passed to descendants in the same order in which they were in the parents. Human DNA is made of 3.1 billion bases divided in twenty-three filaments of unequal length, the chromosomes. Mutation is a transmissible change in DNA: the smallest and most frequent one is the replacement of one of the nucleotides by another of the four. It happens spontaneously at a very low rate. A mutant (an individual carrying a new mutation) may increase in relative frequency over the generations because of *natural selection*, when it has an advantage over the parental type, either because it survives some disease or other unfavorable environmental condition better and/or is more fertile. When mutation is more disadvantageous or even deleterious than advantageous, carriers tend to be eliminated by natural selection and then the mutation disappears. Most mutations, however, are neither advantageous nor disadvantageous (are selectively “neutral”) and their permanence in the population, their decrease, increase, or even fixation at the end, are determined exclusively by chance. This phenomenon, called *random genetic drift*, causes, like natural selection, changes in the frequencies with which all the types of genes caused by mutation are found in populations in successive generations. Both selection and drift tend to differentiate a population from all the others. Natural selection causes adaptation to the environmental conditions in which an organism is living that change with time or place, while drift acts only according to the laws of probability. Drift therefore causes changes of greater relative magnitude in populations that are of smaller size. *Migration* of individuals from one population to the other tends instead to homogenize populations whose genetic differences have been caused by selection or drift or both. But when a group migrates to a previously unsettled area, it may expand demographically and create a new population that, if successfully settled, will eventually grow and differentiate from the original one. Under these conditions migration of a group to a new area may cause differentiation, and it enhances drift effects, especially if the migrating group is small.

Genetic considerations make us conclude that modern humans derive from one small population of perhaps one or few thousand individuals in East Africa that started expanding slowly across Africa about 100 kya. Members of this small group, a tribe, must have almost by definition spoken a single language, which was probably as sophisticated as any language existing today. Like practically all humans until then, they were hunter-gatherers (also called foragers), living in small groups at very low density (on the order of 0.1 inhabitants per square kilometer), and roving seminomadically within their hunting territories.

Around 50 kya, a group in a very similar area started expanding more rapidly, demographically and geographically. They were probably helped by some innovations, like rough navigation means, and a new, more-sophisticated stone tool set, in addition to modern language, which they most probably shared with those ancestors who were responsible for the first slower expansion of 100 kya. They may have traveled along the southern coast of Asia,
using rough navigation means; evidence for this comes mostly from the fact that from Southeast Asia they reached New Guinea and Australia and had to cross various long tracts of sea. They also reached central Asia from which they moved out in all directions: east to East Asia, north to Siberia and America via the Bering Strait (probably all emerged at the time of the crossing, before 10 kya), and west to Europe. The expansion from central Asia was especially rapid. After more than 10 kya, all the land inhabited today, except Polynesia, had been settled (it was settled between 6 and 1 kya, using sophisticated boats and navigation systems, starting from Taiwan or the Philippines).

After 13 to 12 kya, the last glaciation ended and there were changes in the flora and fauna as a result of the weather change. In many parts of the world, especially in temperate areas like the Middle East and the Nile Valley, in China and on the Mexican highlands, people started living on cereals (wheat and barley in the first region, rice in southern China and millet in the north, and in Mexico corn and many other vegetables). In areas in which cereals became the major food source, it became convenient to practice agriculture, which brought crops closer to home and made it useful to build more permanent houses. Nomadic habits were largely replaced by domestic ones. In some regions wild animals were easily domesticated. In the Middle East it was possible to domesticate sheep and goats, pigs, cattle, and later horses (north of the Black Sea and the Caucasus). In northern Syria, a mixed agropastoral economy was already developed by 11,500 years BP (before the present). It is possible that Europe owes its presently flourishing economy to having been able to develop the most effective domestic animals.

The story of the recent peopling of the world was first modeled by reconstructing trees of populations tested for standard genetic markers and using genetic distances between population pairs calculated from the frequencies of genetic traits in pair members. One way to reconstruct a tree is to start from the nearest populations (having the smallest genetic distance) and continue bringing all the population pairs together in order of increasing distance until the root of the tree is reached. The best way to reconstruct the root involves using remote ancestors for traits comparable to those used in the analysis of the group of populations. It became clear that trees reconstructed were the same irrespective of the genetic traits used, provided adequate numbers of traits are employed. The independence of conclusions, irrespective of the type of genetic traits studied, is an important guarantee that we can trust them. In the last twenty-odd years, it has become possible to reconstruct trees of markers that are found only in males (Y chromosomes) or are found in both sexes but are transmitted only by females (mitochondrial DNA or mtDNA). These can be studied in single individuals rather than in populations, and the trees reconstructed in this way are true genealogies. For technical reasons they are particularly accurate and free from doubt for the Y chromosome, but there also is significant agreement between genealogies of mtDNA and Y chromosomes, apart from well-understood exceptional behavior in specific populations that have specific marriage customs. These studies have entirely confirmed results obtained on gene frequencies of populations for markers carried in the usual chromosomes and have contributed sharper conclusions on dates and places of major events in human prehistory.

The Importance of Agriculture

The introduction of agriculture was probably a reaction to need: the hunting-gathering economy practiced until then was not sufficient to guarantee enough food, making food production necessary. It inevitably started a continuous raise of population density, in spite of fluctuations due to accidental severe disturbances. In the 90,000 years prior to the beginnings of agriculture, the population had increased from the initial one or few thousand at the start of growth, by a factor of at least 1,000. In the last 10,000 years, agriculture raised population numbers by another 1,000. The spread of farming around the places of origin is an unavoidable effect of the increase in the
number of farmers made possible by the increase of available food that farming generated. When local population growth rapidly reached saturation, it caused migration to nearby areas in search of new fields. This search also was promoted by the rapid exhaustion of the soil caused by primitive agricultural methods. There were continuous technological improvements like plowing and irrigation over long periods of time, which also created new problems, for example, desertification due to soil salinization in the Middle East or overgrazing in the Sahel. Nevertheless, farming expanded from the place of origin over long periods at a constant rate, estimated at 1 kilometer per year toward Europe (where a better archeological coverage permits an accurate average estimate of the rate of spread). The expansion was determined both by the higher growth rate of the number of farmers (called demic diffusion) and by technological adaptation by local hunter-gatherers (cultural diffusion of the technology). Genetic studies show different results for the relative role of the genetic/cultural contribution of original farmers to the genetic constitution of European men and women. The problem gave rise to an intense scientific debate, still not completely settled, but the results indicate from 50 to 60 percent demic diffusion for males, and 20 percent for women, or an average for the two sexes that is around one-third genetic and two-thirds cultural. Another example of demic diffusion due to agriculture is found in the Bantu expansion from Cameroon to South Africa, which started about 3,000 years ago and only recently came to an end. Here also, there is a less well investigated but clear male-female difference in the same direction. Hunters-gatherers are everywhere considered socially inferior, and passage to the social class of “farmer” ordinarily was permitted only to females through marriage to a member of the higher class (hypergamy). Male polygamy (polygyny), probably more frequent among farmers, also helped in the same direction.

Farming was initiated everywhere while tools were still made of stone. In Europe (but not in Japan), the term neolithic as opposed to paleolithic refers to the presence of agriculture, which caused a change. The European neolithic adopted ceramic around 3,000 years after the inception of farming, while in Japan ceramics developed much earlier (almost 12 kya), but agriculture entered from Korea only about 2,000 years ago. Technological developments have driven genetic, cultural, and social evolution of modern humans from the very beginning. The next major innovations after farming were the introduction of metals, first bronze, beginning some 5 kya, probably in eastern Europe, followed by iron 3,500 years ago. The spread of these two major technical developments to the rest of the world was much more rapid than that of agriculture. Metal technology contributed greatly to the development of war. Its beginnings tend to be similar in several areas to that of writing (and therefore of history).

**Benefits of Genetic Variation**

The recent origin of all modern humans from a single, small population living in a narrow area explains why human living populations show small difference: There was not enough time for the generation of much genetic differentiation among the populations that dispersed over the earth. We can, however, guess the geographic origin of individuals on the basis of some external traits like skin color and facial and body traits that represent the adaptation to a highly varied set of environments, and that differ by climate, flora, and fauna. But each population, even if small, harbors considerable genetic variation, which insures its survival in the face of new and unpredictable challenges. In general, high genetic variation is beneficial to a population. Pure races are a fiction, and even if they were possible, they would be truly undesirable. By contrast, cultural differentiation, for instance, the linguistic one, tends to be greater between than within populations. Culture—intended as the knowledge, customs, habits, and values accumulated over generations—needs to be sufficiently homogenous for the harmonious life of a society, in the same way that language spoken by individuals living together must be
similar enough for it to achieve its major purpose, mutual understanding.

L. Luca Cavalli-Sforza

See also Human Evolution—Overview

Further Reading

Genghis Khan
(c. 1162–1227)
Mongol conqueror

Genghis Khan was born with the name of Temujin. Although Genghis Khan has a negative image in the West, he is one of history’s most charismatic and dynamic leaders. After surviving tribal wars in Mongolia, Temujin built a tribal confederation that restructured Mongolia and established an empire that encompassed more territory than that of any other conqueror. His successors continued to expand it, making it the largest contiguous empire in history.

Born to the noble family of Yesugei and Ho’elun of the Borjigin Mongols, Genghis Khan was betrothed as a child to Borte of the Onggirat, another Mongol tribe. Yesugei was assassinated on his way home from leaving Temujin with Borte’s family, after which Temujin returned to his own family. Temujin endured many additional hardships in his youth, including tribal warfare and the kidnapping of his wife Borte, but slowly he recruited supporters and assumed a mantle of leadership among the Mongols.

After rising to power in 1185, Temujin experienced several setbacks, but eventually he emerged victorious. A key to his success was an alliance with Toghril Ongkhan, ruler of the Keraits, a powerful tribal confedera-

tion. With Toghril’s support, Temujin regained Borte and became a major power in Mongolia. Eventually, relations between Temujin and Toghril soured, but Temujin was victorious in the ensuing war between them. By 1206 Temujin was the paramount power in Mongolia and received the title Chinggis (or, traditionally in English, Genghis) Khan (thought to mean Oceanic, or Firm, Resolute Ruler).

After uniting the various tribes of Mongolia into a single nation, Genghis Khan went on to conquer much of northern China and central Asia. His wars were as often occasioned by his desire for retaliation for perceived wrongs as for territory or riches. In 1207 the Mongols began operations against the kingdom of Xi Xia, which comprised much of northwestern China and parts of Tibet. This campaign lasted until 1210, when the Xi Xia ruler submitted to Genghis Khan.

Genghis Khan did not rest long. In 1211 he led his armies against the Jin dynasty, which ruled northern China. War continued against the Jin until 1234, well after Genghis Khan’s death. Meanwhile, in 1219, during the war in China, a caravan under the protection of Genghis Khan was massacred in Otrar, a city of the empire of Khwarizm, which consisted of much of modern Uzbekistan, Turkmenistan, Iran, Afghanistan, and Tajikistan.

With his armies engaged in China, Genghis Khan attempted to find a peaceful solution, but the ruler of Khwarizm forced the issue by refusing to turn over the governor of Otrar. Genghis Khan left a trusted general, Muqali, to battle the Jin and led an army into central Asia. The war lasted from 1219 to 1222, and the Mongols destroyed Khwarizm. Striking from several directions, Genghis Khan’s armies carried out a campaign that is still considered strategically remarkable even today. Yet despite having conquered Khwarizm, Genghis Khan kept only the territories north of the Amu Dar’ya River so as not to overextend his armies.

In 1226 his armies invaded Xi Xia once again to quell an uprising there. During the campaign, Genghis Khan fell from his horse and later died from internal injuries suffered in the fall. His followers completed the reconquest of Xi Xia and then buried Genghis Khan in a secret
In the scope of world history, Genghis Khan’s achievements are many. An organizational and strategic genius, he not only created one of the most highly disciplined and effective armies in history, he also gave birth to the core administration that ruled his empire. His nonmilitary achievements included the introduction of a writing system to the Mongols, the promotion of religious tolerance throughout the empire, and unity among the Mongols. Furthermore, Genghis Khan fostered transcontinental trade. The empire secured trade routes and encouraged merchants from all regions to travel and do business within the empire. Because of this, new goods, technologies, and ideas spread across Eurasia. But Genghis Khan’s most enduring accomplishment is the presence in the twenty-first century of a Mongol nation and culture. Mongols today still venerate him as the founding father of Mongolia.

Timothy M. May

See also Mongol Empire

Excerpt from The History of the World Conqueror

In this extract from his classic work about Genghis (Chingiz) Khan, 'Ala-ad-Din Ata-Malik Juvaini (1226–1283) describes the laws and yasas (ordinances) put in place by Genghis Khan after he came to power.

God Almighty in wisdom and intelligence distinguished Chingiz-Khan from all his coevals and in alertness of mind and absoluteness of power exalted him above all the kings of the world; so that all that has been recorded touching the practice of the mighty Chosroes of old and all that has been written concerning the customs and usages of the Pharaohs and Caesars was by Chingiz-Khan invented from the page of his own mind without the toil of perusing records or the trouble of conforming with tradition; while all that pertains to the method of subjugating countries and relates to the crushing of the power of enemies and the raising of the station of followers was the product of his own understanding and the compilation of his own intellect. And indeed, Alexander, who was so addicted to the devising of talismans and the solving of enigmas, had he lived in the age of Chingiz-Khan, would have been his pupil in craft and cunning, and of all the talismans for the taking of strongholds he would have found none better than blindly to follow in his footsteps: whereof there can be no clearer proof nor more certain evidence than that having such numerous and powerful foes and such mighty and well-accoutred enemies, whereof each was the faghfur of the time and the Chosroes of the age, he sallied forth, a single man, with few troops and no accoutrement, and reduced and subjugated the lords of the horizons from the East unto the West; and whoever presumed to oppose and resist him, that man, in enforcement of the yasas and ordinances which he imposed, he utterly destroyed, together with all his followers, children, partisans, armies, lands and territories.


Further Reading


Genocide

The word genocide is a modern term for an ancient practice. It was first coined by a Polish jurist, Raphael Lemkin, who sought to describe the Nazi occupation of Poland as one designed to eliminate Polish identity. Lemkin’s initial work is sometimes erroneously linked to the Holocaust. Nevertheless, it was the Holocaust and its
aftermath in the postwar United Nations that led to the formulation of the 1948 United Nations Convention on Genocide, which remains the principal accepted definition of the practice. Article II of the convention defines genocide as follows:

In the present Convention, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:

a. Killing members of the group;

b. Causing serious bodily or mental harm to members of the group;

c. Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;

d. Imposing measures intended to prevent births within the group;

e. Forcibly transferring the children of the group to another group.

(Chalk and Joassohn 1990, 44–49).

While this formulation is not without controversy, it is plain that massacre, a practice most commonly associated with genocide, is only one aspect of its perpetration. This is because genocide is essentially a crime of identity: Its objective is to eliminate some form of cultural identifier rather than, necessarily, to slaughter those who identify with it. Historically, however, the most direct means of achieving a genocidal objective has been mass murder, although other, more indirect means have also had currency from time to time. Moreover, one controversial aspect of the convention is its omission of political groups. This reflects its origin as a document negotiated in the senior echelons of the United Nations, and has led some scholars to seek to supplement the term genocide with a further term: “politicide” (Harff and Gurr 1988, 359–371).

It is also worth noting that the disappearance of any culture, or cultural group, is not in itself evidence for genocide. In world-historical terms, cultures have their own lives. The processes of decay, decline, and assimilation are often unforced, driven by voluntary cultural shifts in response to the realities of social and linguistic hegemonies. Over centuries, for example, the dominant Zoroastrian faith of Iran has given way to Shia Islam; languages like Oscan, Lycian, Coptic, Sogdian, and Breton gave way to Latin, Greek, Arabic, Pathan, and French. As a comprehensive phenomenon, genocide is more modern than it is ancient. Cultures like the Assyrians and Hebrews talked genocide in the ancient world, but lacked the technology to achieve it. The Book of Joshua makes claims about the utter destruction of the peoples of pre-Hebrew Palestine which cannot be borne out archaeologically. In the same way, the Annals of the Assyrian kings make extravagant claims about the utter annihilation of peoples who were not, actually, annihilated (Leadbetter 1999, 273). The ancient Greeks, with the more limited objective of the elimination of rival city-states, were more successful, inventing the practice of *andrapolismos*: the slaughter of the adult males of a city and enslavement of the remainder. This was visited by the Crotonians against the Sybarites; the Athenians upon the Melians and Scionians; the Thebans upon the Plataeans; and Alexander’s Macedonians upon the Thebans. The Romans inherited this practice, killing and enslaving all of the Carthaginians and sowing their fields with salt (Leadbetter 1999, 272–274).

These massacres remain the exception rather than the rule in antiquity. There were social identifiers for ancient people, as for modern, which invited genocidal intent. What prevented a wider and more savage manifestation of genocide was the lack of requisite technology to carry out such acts. The principal identifiers which have emerged over time are religion; imperial identity; nationalism; political identity; and ethnicity, sometimes nuanced as race.

**Genocide and Religion**

Religious conflict has been common in world history. From time to time, these conflicts have been genocidal, particularly with the emergent dominance of exclusivist monotheistic religions in the Middle East and Mediterranean from the fourth century CE onwards. Traditional
polytheistic religion was, nevertheless, not immune from the genocidal impulse, principally because it was embedded in the ideological structures of the state. In the third century, for example, the Roman state made a systematic attempt to eliminate the Christians and Manichaeans, who threatened the religious foundations of imperial ideology. Likewise, in the eleventh century the Hindu king of Pandya in India sought to eliminate the Jains, impaling over eight thousand of them.

While such instances of genocidal practice are linked to traditional pagan and polytheistic religions, a significant impetus for genocidal violence also came with the emergence of Christianity as a hegemonic religion in Europe. This violence initially focused on the emergent Islamic communities of the Middle East. The crusading movement, in particular, was principally directed at the Muslim communities of the Levant. While this aspect of the crusading movement failed to eliminate Islam in Palestine, other crusades had more murderous success. The most notable of these was the crusade against the Albigensians, or Cathars, a Manichaean community centered in the Languedoc region of southern France. This crusade took the form of a series of military campaigns conducted between 1208 and 1226, which were marked by atrocity and indiscriminate massacre, notably the massacre of the entire population of Béziers in 1209. Even after the conclusion of military hostilities, the Inquisition continued the work of eliminating Albigensianism.

The Inquisition, founded largely as a consequence of the emergence of Catharism, was the principal genocidal agency in Europe until the Reformation. It hunted Hussites, witches, Waldensians, and, from time to time, Jews. The Reformation entrenched religious diversity in Europe, but genocidal massacres still occurred from time to time, most notably the St. Bartholomew’s Day massacre of French Protestants (Huguenots) in 1572. Christians could be victims too. The Jesuit missionaries based in Japan were expelled in the early seventeenth century and Japanese Christian converts were tortured and killed, with the result that Christianity was eliminated from Japan until the Meiji period.

Rwanda International Criminal Tribunal Pronounces Guilty Verdict In Historic Genocide Trial

ARUSHA, United Republic of Tanzania, 2 September 1998 (International Criminal Tribunal for Rwanda)—"Despite the indisputable atrociousness of the crimes and the emotions evoked in the international community, the judges have examined the facts adduced in a most dispassionate manner, bearing in mind that the accused is presumed innocent."

With these words, among others, the International Criminal Tribunal for Rwanda, in the first-ever judgement by an international court for the crime of genocide, today found Jean-Paul Akayesu guilty of genocide and crimes against humanity.

Mr. Akayesu, former bourgmestre (mayor) of Taba, was indicted on 15 counts of "genocide, crimes against humanity, and violations of Article 3 common to the Geneva Conventions and Additional Protocol II thereto”. In its judgement, Trial Chamber I (Judges Laity Kama (Senegal), presiding, Lennart Aspegren (Sweden) and Navanethem Pillay (South Africa)) unanimously found Mr. Akayesu guilty of nine out of the 15 counts on which he was charged, and not guilty of six counts in his indictment. The former Rwandan official had pleaded not guilty to all 15 counts.

Specifically, he was found guilty of “genocide, direct and public incitement to commit genocide, and crimes against humanity (extermination, murder, torture, rape and other inhumane acts).” But the Tribunal also held that he was not guilty of the crimes of complicity in genocide and violations of Article 3 common to the Geneva Conventions (murder and cruel treatment) and of Article 4(2)(e) of Additional Protocol II (outrage upon personal dignity, in particular, rape, degrading and humiliating treatment and indecent assault).

More recently, the emergence of an intolerant version of political Islam has seen eliminationist assaults on the Baha’i community of Iran. Almost inevitably, genocide on religious lines is associated with the use of religious language by political authorities. This reflects the fact that genocide is a crime only committed by those who have political power over those who do not.

Genocide and the Imperial State

Genocidal practice has been inherent in the practices of imperial states from the earliest times. While most empires have been consciously multicultural, they are all established and maintained by violence, a class of which is designed to eliminate particularly recalcitrant opponents in order both to prevent further resistance and also to terrorize the remainder into acquiescence. The Persians destroyed Miletus during the Ionian Revolts; Alexander obliterated the city of Plataea; the Romans targeted and sought to eliminate the Druids; in the fourteenth century Timur (Tamerlane) established an empire across Eurasia based upon the terror inspired by genocide. In his campaigns in India, he slew all of the inhabitants of Batnir and Meerut, marking his progress with vast pyramids of heads. He marked his 1399 capture of Delhi with four of these, at each corner of the city. He punished the rebel-

---

The Horror of Dachau: Irving Ross Remembers

At age 26, Irving Ross saw the horrors of the Nazi concentration camps, as a soldier in the U.S. military force that liberated Dachau. Ross, now a retired business owner in Punta Gorda, Florida, recounts what he witnessed.

At the end of April 1945, the most traumatic event of my life was about to begin—the liberation of the Dachau concentration camp. As usual, Colonel Doud was always the leader and the first to be in the midst of the action. We were with the infantry as they cut off the electricity from the barbed-wire fences and then proceeded to go after the guards that were still in the camp and in the towers. The infantrymen threw the guards to the ground and butted them to death. Later on we found out that they were mostly Russian and Polish inmates who had special duties and were given better treatment by the Germans in exchange for being guards.

Before entering the camp, I saw boxcars on the railroad tracks full of bodies. Along the track were bodies that had fallen out of the boxcars when they were opened. As I approached with amazement, I could see some of the bodies were still breathing—a sight that haunted me for years. The following morning our outfit took over the administration of the camp, and we went back to the entrance of the camp and found a military hospital on the grounds. Before I could go back into the camp I had to get a tetanus shot.

I had confiscated a German camera a few weeks before, and I started to take photos of the camp. We were issued M.P. armbands and given duties to perform. On the road into the concentration camp stood a row of well-built houses that housed the commandant and the administrators of Dachau. Our outfit took over these buildings and from there we were given our daily orders.

I believe it was the day after the liberation that I was a driver for Colonel Doud and a few other officers. We entered the main administration building and went up a flight of stairs and into a large room where the 45th infantry were holding, I believe, six or seven top Nazis that ran the camp. (Most of the other camp officials had escaped.) Against the Geneva Convention rules relating to prisoners of war, we had them look at spots on the wall with their hands raised, and they were whipped by inmates that were strong enough to do the whipping. Colonel Doud also took a whip and beat them. When the Nazis fell to the floor, they were given water and made to stand again and the beating continued. I've never seen this fact written about in any publication.

The following day I was put on a detail to comb the buildings for papers that related to the inmates.
We never found any documents; all the paperwork was probably destroyed by the Germans. Many inmates from other camps started coming to Dachau to try and find their parents or relations, not knowing that we had no records. They would often burst out crying, and I tried to console them—saying that I would try and get some information for them.

While on this detail many dignitaries from all over the world wanted to get a tour of the camp, and I was chosen to give tours and explain how the camp operated. I remember taking around Dorothy Thompson, a well-known reporter, and many other newspaper correspondents from different countries. My tour went as follows: I first took them along the railroad bedding where the boxcars were. (The first few days there were still piles of bodies on the railroad siding.) Then I took them toward the main gate, which had above the gates in large German letters, Arbeit Macht Frei (“Work Shall Make You Free”). Then I went to the barracks to show them how camp inmates were bunked, and continued to the field hospitals to show them the condition of the inmates. A terrible sight.

I moved on to show where they would line up prisoners (mostly Russian soldiers), make them kneel, and then shoot them in the back of their heads. The Russians would fall forward, and the heads would go into a trench so that the blood would run off into a pit. The Germans were very well organized and clean. From there I took them to show where they tied up some inmates and had vicious dogs rip off their testicles. We then continued to the crematorium.

I went down a flight of stairs under the ovens and showed them how all the ashes fell into a large metal pan. Above the pan on shelves were dozens of small bottles where the Germans would take some ashes and ship them back to the relatives of these people telling them that they died from some disease or from natural causes. This was probably done during the early years of the camp, because in the later years the inmates were probably Jews, and the Nazis didn’t have to make excuses for them. The remaining ashes were used as fertilizer because outside of the camp there were small farms tended by the inmates and the soil was almost black from human ashes.

I recall Colonel Doud getting a detail together to find residents of the city of Dachau and have them marched through the camp. Most of them claimed that they knew something was going on but they didn’t know that they were burning bodies. They uttered the words ich glaubisch nicht (“I don’t believe it”). Some of them broke down, but I have my doubts if they were telling the truth. I could fill a book with what I saw at Dachau.

a vast indigenous population. This was a process facilitated by disease, but also marked by an especially ruthless brutality toward indigenous peoples which can only be described as genocidal. There was resistance, but the strength of native arms was sapped by disease and thwarted by technology. Arrows and spears might match muskets, cannon, and rifles in occasional skirmishes, but they could not win the long wars of attrition waged in North and South America, and in Australia, by colonial occupiers. Many of these policies have persisted until relatively recently. In Australia, the genocidal practices which marked the frontier conflict between indigenous people and British colonists resulted in massacres and campaigns of extermination. These were succeeded, during the course of the twentieth century, by a more subtle policy of marginalization and the forced removal of children to “breed out the colour.” This policy even persisted after 1967, when indigenous Australians were granted full citizenship rights, and was the subject of a major investigation in Australia in the 1990s (Tatz 2003, 67–106).

In the same way, the economic development of the Paraguayan countryside was accompanied, in the 1950s and 1960s, by the slaughter of indigenous Aché (or Guayaki) people. The Paraguayan government, charged with genocide in 1974, pleaded in its defense to the U.N. Human Rights Commission that no genocide had been committed since there had been no intent to eliminate the Guayaki as such, merely the pursuit of an economic objective, which had been hindered by people who happened to be Guayaki.

Colonial occupations in those instances were genocidal in nature principally because the occupying colonizers were also settlers. In other places, colonial empires took a different form, with minority colonizing elites dominating majority indigenous populations. In such places, the colonists’ principal interest lay in the economic exploitation of the colony and its peoples. In these circumstances, genocide is less likely to occur although, as Sartre has argued (1968), the imbalance in the power relationship between the colonizer and the colonized is frequently maintained by the practice of genocidal massacre.

There were a number of spectacular examples of this in Africa during the colonial period. In the Belgian Congo, the quota system for the harvest of wild rubber imposed upon the inhabitants by the personal administration of Leopold II was genocidal in impact rather than intent.

In the following passage, Armenian-American author, William Saroyan makes clear the powerful will to survive of the Armenians despite over one thousand years of persecution.

I should like to see any power of the world destroy this race, this small tribe of unimportant people, whose wars have all been fought and lost, whose structures have crumbled, literature is unread, music is unheard, and prayers are no more answered. Go ahead, destroy Armenia. See if you can do it. Send them into the desert without bread or water. Burn their homes and churches. Then see if they will not laugh, sing and pray again. For when two of them meet anywhere in the world, see if they will not create a New Armenia.


Some of the methods used to drive Native Americans from their land by European colonizers fit the modern definition of genocide. This drawing shows dogs set upon Native Americans in Maine in the 1600s.
The devastation which it wrought upon the peoples of the region led, in 1907, to the Belgian Parliament humiliating their own monarch by the formal annexation of the Congo, thereby replacing Leopold’s authority with their own. A clearer and more unambiguous case is the response of German authorities to the uprising among the Herero people of Namibia in 1904. Initially successful because of the group’s numerical superiority, the Herero rebellion soon faced a counterattack under the command of General Lothar von Trotha. The general so disposed his forces as to drive the Herero into the waterless Omaheke desert, within which they were contained until they perished of thirst and exposure. In 1903, there were eighty thousand Herero; a few years later, a scant fifteen thousand remained. This was a clear attempt at colonial pacification through genocide, and was followed up by a similar assault on the Nama people, of whom over half were slaughtered between 1907 and 1911.

Just as the process of colonization generated genocidal conflicts, so did decolonization. In many cases, colonial borders were defined by the colonial power without regard to the cultural and religious identifications of the subject population. Since those colonial boundaries persisted in the postcolonial period genocidal civil conflict frequently occurred. In the Sudan, a bitter genocidal conflict between the Arab Muslim north and the Christian/animist Bantu south has persisted for decades, and was noted for an attempt by the north to subjugate the south by the imposition of permanent famine conditions.

**Genocide and the Nation-State**

The problem that decolonized regions face, and that has resulted in genocide, is the need for colonial territories to reinvent themselves as nations. The nation is the principal form of post-Enlightenment state, invented in Europe to redefine polities which had been created by centuries of dynastic competition. The nation-state emerged after the French Revolution, which first embodied and articulated a clear nationalist principle. Nations construct themselves through a matrix of linguistic, religious, and cultural identifiers.

**Inherent Genocides**

Sometimes those identifiers are inherent. The most obvious of these is heredity, or “race.” It was a particular concept of race which the Nazis used to construct their peculiar vision of Germany. They used it, more specifically, to seek to eliminate all Jews. The Holocaust has a particular standing in the history of genocide since the victims were defined biologically, and so could not thwart the Nazi perpetrators by conversion. It also meant that the perpetrators were compelled, by the logic of their own vision, to slaughter all of their victims. The most sophisticated technology (for its day) was employed: railways to transport the victims; gas chambers to kill them en masse. Alongside that, simpler technologies were also employed: shooting; starvation; exhaustion; disease.

The Nazi vision of a biological utopia led them also to target groups other than Jews. Famously, they sought to slaughter all the Roma and Sinti (“Gypsies”) despite their Aryan origins. They also targeted Jehovah’s Witnesses, homosexuals, and (what Nazis thought of as) similar groups of adherence, although in these cases, it was possible to escape death through a denial of the relevant identity. Alongside these directed policies was also the

---

**The Iroquois Perspective on Genocide**

The Iroquois are an indigenous people of the northeastern United States, centered in what is now northwestern New York State. Like some other indigenous peoples around the world they see western culture as the primary force in destroying their indigenous ways of life. The following is an extract from Akwesasne Notes (1978, 78), the newspaper of the Mohawk, one the Iroquois nations.

The destruction of the Native cultures and peoples is the same process which has destroyed and is destroying life on this planet.... And that process is Western Civilization.... The process of colonialism and imperialism which has affected the Hau de no sau nee are but a microcosm of the processes affecting the world.
genocidal policy adopted in Poland which led Raphael Lemkin initially to devise the term.

Nazi policies have rarely been imitated, although it is certainly arguable that the ethnic identifiers used in the genocides in Burundi and, later, Rwanda, are of the same type. The situations in these states are more or less identical to one another. Both are postcolonial states; both were occupied by the Germans, and then, as mandatory power, by the Belgians, who continued the German policy which privileged one ethnic group, the Tutsi, at the expense of the other, the Hutu. This has resulted in a post-independence history of mutual massacre. Between 1972 and 1975, at least 100,000 Hutu were killed in Burundi by the (all-Tutsi) army; in 1994, approximately 1 million Tutsis were murdered in Rwanda by Hutu Interehamwe militias. The Rwandan genocide at least was a last-ditch attempt by Hutu hardliners to prevent the implementation of a compromise peace (the Arusha accords) reached with the Tutsi-dominated Rwandan Patriotic Front. Along with ethnic Tutsi, the victims included the Hutu president who had signed the accords, Juvenal Habyalimana, the prime minister, Agathe Uwilingiyimana, and other supporters of ethnic compromise.

Adherent Genocides

Nation-building can also result in what might be called adherent genocides. This occurs particularly in cases where the nation is aligned with a particular religious or ideological view. A prime example of this is the Terror during the French Revolution, when as many as twenty thousand people were executed because they either were, or identified with, members of the old French aristocracy. In the same way, the late Ottoman state, struggling to redefine itself as ethnically Turkish, and deeply mistrustful of the Christian Armenians straddling the Russian border, slaughtered over 1.5 million Armenians during the latter half of 1915. It was possible for Armenians to escape death, through conversion to Islam, and some accepted this road to survival, thus rendering this a genocide more based on adherent than inherent qualities. The most notable case of adherent genocide is the Soviet Union under Stalin. Stalin routinely used genocide as a tool of state control, attacking both social classes (kulaks) and ethnic groups (notably the Ukrainians and Tatars) through a deft combination of massacre, deportation, and enforced famine. There is no accurate estimate of the total number of Stalin’s victims although it can reasonably be assumed that there were in excess of 30 million. In the late 1970s, a peculiar case of adherent genocide occurred in Cambodia. There, a militant Stalinist regime led by Pol Pot, the Khmer Rouge, sought to reimagine the country as a series of peasant collectives. Any person not meeting the state’s definition of a Cambodian peasant was liable to be slain: intellectuals (often perceived simply as people who wore spectacles), the Muslim Cham people, Buddhists, and all non-ethnic Cambodians. Over 1.5 million people were killed before the slaughter was brought to an end by the fall of the Khmer Rouge regime.

Genocide Denial

One ongoing feature of the historiography of genocide is the unwillingness of many perpetrator states, or their successors, to accept the fact that genocide has occurred. The Turkish state, for example, has long denied the fact of the Armenian genocide, despite the mountain of evidence to the contrary. Neo-Nazis deny the Holocaust, and colonial successor nations are frequently unwilling to acknowledge the more sordid deeds committed by their pioneers. It is both embarrassing at a time when new nations are seeking to construct more heroic foundation narratives, and legally problematic since it opens up the possibility of lawsuits and compensation claims.

The Future of Genocide

The 1990s were a particularly bloody decade. The breakup of the former federated republic of Yugoslavia resulted in a series of Balkan wars and two converted genocidal assaults, one on the Bosnian Muslims, the other on the Albanians of Kosovo. These, together with the genocide of the Tutsis in Rwanda in 1994, resulted, first, in the creation of the U.N. War Crimes Tribunal for
the Former Yugoslavia and Rwanda and, later, in the 1998 formation of an International Criminal Court for Genocide and Major Human Rights Violations. The latter provides the first international standing court through which redress can be sought from perpetrators by both survivors and bystander communities. The conditions which generate genocide still exist in states and parastate organizations (that is, liberation and paramilitary organizations), although a number of early warning systems are in place to try and detect potential genocides before they occur, and there is greater opportunity for judicial redress after the fact. The twenty-first century might, nevertheless, be said to have commenced with the September 11, 2001, atrocity, which was the product of an exclusionist, extremist, murderous, and, therefore, inherently genocidal ideology.

Bill Leadbetter

See also Holocaust; Human Rights; World War I; World War II

Further Reading

Geographic Constructions

In order to grapple with the complexities of global geography, it is necessary to construct abstract models of the world, ordering space into comprehensible frameworks. All intellectual traditions are marked by such geographic constructions. Through spatial categories, people divide their known worlds into regions that can be named and known in relationship to one another.

Ethnocentrism and Cosmology

Typically, geographical constructions are based on an ethnocentric conception of space, focused on a particular group’s homeland. In pre-modern times, most peoples placed their territories at the center of the world. For the ancient Greeks, the ritual center at Delphi formed the navel of the earth, whereas the Chinese literally regarded their country as the “Central Kingdom.” Religious ideas and legacies of cultural borrowing, however, sometimes displaced the “center” into foreign lands. Medieval Europeans thus typically regarded Jerusalem as the global heartland, while the Japanese framed their islands as “eastern” due to the centrality accorded to China in the Confucian tradition and to India in Buddhist scriptures.

Ethnocentrism has also molded the scales on which regional divisions have been constructed. Typically, a given society’s own lands are subdivided into a fine mesh of distinctive regions, whereas vast expanses of terrain in more distant reaches are lumped together. A text from tenth-century Persia (Hudud al-‘Alam), for example, divides the world into fifty-one units, nine of which cover portions of present-day Iran, whereas one suffices for all of Europe north of Spain and west of Russia. In traditional South Asian global visions, China and Arabia were so marginal as to virtually disappear from view.

A second feature of most pre-modern geographic constructions was their cosmological orientation. Patterns of
terrestrial order, in other words, were mapped onto those of the cosmos, as interpreted through religious or philosophical doctrines. Hindu and Buddhist concepts of the world, for example, were ordered around the notion of a central “continent”—Jambudvipa—that was in turn surrounded by a series of concentric, ring-like oceans and landmasses. While Jampudvipa had features that could clearly be identified with real places, the outer continents existed largely as conceptual space. Medieval Europeans’ constructions of place were similarly guided by religious ideology. Thus in the so-called T-O maps of the time, which literally showed a “T” figure inscribed within a circle, the Mediterranean Sea and the Nile and Don rivers form a central cross that structures the world, separating the three continents: Europe, Asia, and Africa. This Trinitarian division of the world (held to reflect the patrimony of Noah’s three sons, Ham, Japhet, and Shem) was so deeply ingrained that the discovery of a fourth landmass, the Americas, resulted, according to Eviatar Zerubavel (1992), in “cosmological shock.”

Constructions of the Classical and Islamic Worlds

Not all pre-modern systems of world geography were wedded to overtly religious doctrines. The constructions of classical Greek and Roman geographers, for example, were based more on geometrical and astronomical theorizing. Central to their conceptual schemes was the notion of clima, or latitudinal belts, distinguished from each other by differences in day length and sun angle. Different clima supposedly produced different kinds of human bodies, with corresponding customs and forms of government. Abstract theorizing often led classical geographers to imagine alter-worlds that were no less fanciful than the ring-like continents of Buddhism. To preserve the symmetry of the globe, for example, it was often thought that a large landmass, roughly equivalent to Europe, Asia, and Africa, had to exist in the southern hemisphere. This notion was not fully put to rest until the eighteenth century.

Traditional Islamic conceptions of the world relied heavily on classical Greek models, giving precedence to latitudinal belts. Muslim geographers, however, also mapped their historically embedded religious concepts across the face of the earth. Their main division contrasted an ideally expanding realm of submission to God (dar-al Islam), where peace would theoretically prevail, with a realm of war (dar al-harb), where religious error and strife reigned.

Imposition and Evolution of the European System

In the last hundred years, traditional non-Western geographic constructions have been largely replaced by those of European origin. After the age of exploration, European knowledge of the world surpassed that of any other civilization, and as European power expanded, ideas of Western origin were forced on, or adopted by, peoples of other regions. The traditional Japanese three-country global model, based on the primacy of Japan, China, and India, for example, could no longer be maintained after Dutch atlases began to circulate in the early modern period. Yet while Western concepts of global geography by this period were informed by a much more complete map of the world, they continued to be based on constructed categories of spatial understanding.

The foundational construct of the Western system, for example, remained that of continental landmasses. The idea of continents goes back to ancient Greek navigators, who differentiated the lands found on either side of the Aegean and Black seas. Throughout the classical and medieval periods, the three known continents (Europe, Asia, and Africa) were conceptualized less as discrete landmasses than as connected portions of a singular world-island, the orbis terrarum. The discovery of the Americas forced a reconceptualization of global geography, as the “wheel of the earth” came to be more cleanly divided into its original three parts, which, along with the Americas, now formed the “four quarters of the world.” Gradually, these “quarters” were reconceived as continents, which allowed the number of recognized major landmasses to increase. The Americas were eventually
split in two, just as Australia and Antarctica were added to the continental roster, yielding the familiar sevenfold continental scheme.

**The Continental Scheme**

That Europe is still regarded as a continent shows both the manufactured nature of the scheme as well as the fact that it was devised by Europeans, who, not surprisingly, magnified the extent of their own homeland. In the original Greek formulation, Europe and Asia were considered separate landmasses because they seemed to be all but sundered from each other by a series of seas and straits: the Aegean Sea, the Dardanelles, the Sea of Marmara, the Bosporus, the Black Sea, the Straits of Kerch, and the Sea of Azov. The expansion of geographical knowledge eventually revealed that these two supposed continents were actually part of an undivided mass of land. Geographers thus competed during the eighteenth century to locate a suitable line of division. In due time, the Ural Mountains came to be accepted, even though this none-too-formidable range vanishes in the steppes of Kazakhstan. The separation of Europe from Asia thus violates the definitional basis of the continental idea, as continents are supposed to be more or less discrete masses of land largely separated from each other by bodies of water.

Even if Europe is classified merely as a segment of a Eurasian continent, as it occasionally is, the continental scheme remains an intellectual construction rather than an unproblematic reflection of the world’s underlying patterns of land and water. The actual building blocks of the earth’s surface, tectonic plates, fail to conform to the architecture of continents. In geological terms, India and Australia would have to be classified together, as both sit on the same plate. No consistent argument has ever been put forward, moreover, to support cataloging Australia as a small continent rather than a large island—or Madagascar as a large island rather than a small continent.

**Maritime Constructions**

Oceans are no less capricious than continents. The supposedly separate oceans are interconnected by broad passages, as is clearly evident when one looks at a globe from the perspective of the South Pole. The boundaries between the oceans have been established by convention rather than discovered through empirical inquiry. In earlier periods, the maritime expanse had been
conceptualized differently. During the eighteenth century, for example, European cartographers usually depicted “oceans” as arcs of water that wrapped around landmasses, potentially connecting distant lands. In Enlightenment-era atlases, an “Ethiopian Ocean” thus covered large expanses of what we now call the South Atlantic and southern Indian oceans, snaking around the contours of southern Africa.

From Continents to World Areas

Although the standard sevenfold continental scheme is still used in reference works, it has recently begun to lose favor in public discourse. Although the term Asia is still routinely employed, it now generally refers only to East, South, and Southeast Asia rather than to the formal continent. Both Southwest Asia (the “Middle East”) and North Asia (Siberia) have been, with little acknowledgment, excised from the Asian continent. Other continental labels are used with similar imprecision. “North America,” for example, sometimes refers to the United States and Canada, sometimes to those countries plus Mexico, sometimes to all three plus Central America, and sometimes to all of the areas mentioned above as well as the islands of the Caribbean.

Given these inadequacies, the continental scheme began to yield in the mid-twentieth century to a global architecture based on world areas. In the area studies framework, the fundamental geographical units are broad sub-continental blocks, ideally defined by shared cultural, political, or historical patterns. The various world areas were constructed at different times and in accordance with different ideological or political designs. The term “Latin America,” for example, was put forward by French geographers during the period of Napoleon III, when France was seeking influence in the Western Hemisphere and wished to stress the commonalities of its Spanish-, Portuguese-, and French-speaking territories. The term was subsequently taken up by “Latin Americans” themselves, although it has never been without controversy.

The replacement of continents by world areas in the academic imagination was propelled by political events. During World War II, U.S. military planners concluded that the existing framework of global division was inadequate. As a result, the government commissioned an “ethno-geographical” board to remap the world. In the process, Asia was subdivided into East, South, and Southeast Asia, while Southwest Asia was appended to North Africa to form an expanded Middle East. Sub-Saharan Africa, the Soviet Union and its satellites, Western Europe, Latin America, North America, and Australia and the Pacific rounded out the roster of world regions. During the Cold War, the U.S. government funded area studies centers, while new area studies associations emerged to facilitate inquiry into regionally based cultural, social, and political formations. The newly minted world regional labels were sometimes taken up by political elites in the areas so designated. Southeast Asian leaders thus built ASEAN (the Association of Southeast Asian Nations), which they rigorously limited to the area that had recently been defined by Western scholars as “Southeast Asia.”

New Schemes of Geographic Construction

The end of the Cold War brought another round of geographical re-construction. When the Soviet Union imploded, scholars were forced to grapple with the geographical positions of newly independent republics in the Baltic, Caucasia, and Central Asia, as well as with those of former Soviet client states in Eastern Europe. At the same time, the entire area studies framework came under attack by scholars who objected to its rigid spatial divisions, its roots in Cold War geopolitics, or its general lack of theoretical rigor. By the turn of the millennium, many scholars were turning to an alternative form of global geographical construction based not on discrete regions but rather on webs of interaction, on the dispersed patterns of transnationalism, and on the widespread phenomenon of globalization.

Despite the rise of such non-bounded spatial concepts, alternative regionalization schemes at the global scale have retained salience. In the Cold War, a popular tripartite division of the globe, based on economic and geopolitical criteria, yielded the so-called First, Second, and Third Worlds. With the end of the Soviet Union, the Second World disappeared, undercutting the conceptual
basis of that formula. While the First and Third Worlds linger in the public imagination, a more common gambit is to bifurcate the world into a wealthy “North” and an impoverished “South.” This construct, while polemically useful, is geographically imprecise, as certain countries in the southern half of the terrestrial landmass (Australia, Singapore, the United Arab Emirates, for example) are far more prosperous than some countries of the North (Albania, Ukraine, and Tajikistan, for example).

In short, while no single scheme of geographical construction is ever adequate for all purposes, most shed some light on the global order, whether of the past or the present.

Martin W. Lewis

See also Cartography; Cultural and Geographic Areas

Further Reading


German Empire

Any discussion of the impact of the German Empire on world history has to begin with an apparent paradox: Despite its short duration, approximately from 1884 to 1919, the German Empire has received historical attention that parallels that given other European empires whose colonial possessions were larger and longer lasting.

Chronology of Empire

In a narrow chronological sense, German colonialism can be divided into four phases: 1884–1890, 1890–1906, 1906–1914, and 1914–1919. In 1884 the German government, under Chancellor Otto von Bismarck, annexed areas in Africa and the Pacific Ocean. Bismarck was a reluctant colonialist who attempted to place the estimated high administrative costs of these colonies on a number of chartered companies. The majority of these attempts, however, failed. Eventually German authorities assumed administrative duties in the colonies. Increasing governmental involvement in colonial affairs led to the establishment of the Colonial Division within the German Foreign Office by 1890, which marks the beginning of the second phase of German colonialism. Four years later this division gained more independence through the appointment of a colonial director. Despite this appointment, the Colonial Division remained the stepchild of German foreign policy because few German civil servants desired colonial appointments. The prestige of the Colonial Division suffered further in the selection of its directors. Chosen less for their colonial expertise than for their loyalty to the Imperial Court, the directors had a high turnover rate and provided little stability for the division.

Violent indigenous uprisings in the German colonies of East Africa and Southwest Africa between 1904 and
## Expansion and Contraction of European Empires

<table>
<thead>
<tr>
<th>Century</th>
<th>Events</th>
</tr>
</thead>
</table>
| 15th Century | Portuguese knights capture Cueta in North Africa from the Muslims.  

Columbus “discovers” the Americas for Spain and colonies are established in the Americas.  

Portugal claims Brazil under the Treaty of Tordesillas.  

Vasco da Gama of Portugal discovers an all-sea route to India. |
| 16th Century | Portugal dominates the maritime trade in South and Southeast Asia.  

The Pacific Ocean is “discovered” by Vasco Nuñez de Balboa of Spain.  

Spain claims the Philippines.  

The Habsburg ruling house of Europe comes to power.  

France establishes a presence in West Africa.  

Portugal’s dominance in East Africa and Asia begins to decline. |
| 17th Century | The English, Dutch, and French charter trading companies.  

The English settle Jamestown in Virginia.  

France establishes colonies in North America and the Caribbean.  

Russia colonizes Siberia. |
| 18th Century | France loses American colonies and territory to England and Spain.  

The English lose control of their American colony.  

The Dutch Republic becomes a colonial power with the abolishment of its private trading companies.  

The Dutch begin to lose most of their colonies to the British.  

The Spanish empire declines.  

By the time of the Treaty of Paris in 1763, England has become the dominant European colonial power. |
| 19th Century | France under Napoleon regains territory in the Americas.  

Haiti gains freedom from France through a slave revolt.  

Brazil declares independence from Portugal.  

Slavery is abolished by all imperial powers.  

The Habsburg empire is transformed into the Austro-Hungarian empire.  

The German empire is established after the Prussian defeat of France.  

Russia colonizes Poland and Finland, the Caucasus, and Central Asia.  

England, France, Spain, Portugal, Belgium, Germany, and Italy solidify their colonies in Africa. |
| 20th Century | European control of its African colonies intensifies.  

World War I starts when the Austro-Hungarian government declares war on Serbia.  

The end of World War I marks the end of the Austro-Hungarian empire and the German empire.  

Britain and France gain trust territories in Asia.  

The British Commonwealth of Nations is created.  

During World War II Japan takes Asian colonies from Britain, France, and the Netherlands.  

Following the end of World War II, the British, French, Dutch, and Portuguese empires shrink as many former colonies become independent nations.  

The Comunidade dos Países de Língua Portuguesa (CPLP) unites eight Portuguese-speaking nations.  

The Russian-Soviet empire disintegrates. |
1907 brought the colonies to broad public attention. Several hundred German settlers lost their lives, and thousands of German soldiers found themselves dispatched to the colonies in an attempt to regain control. Increasing violence and expenditures made the German colonial endeavor a favored target of the German Parliament (Reichstag). When, in late 1906, Chancellor Bernard von Bülow requested further appropriations for the African colonies, a majority of delegates rejected his request. Disappointed, Bülow dissolved the Reichstag and called for a new election. The press deemed the elections “Hottentot elections” (Hottentot was a rather derogatory name for the Herero Nama population of German South Africa) due to the colonial connotations. Bülow’s broad coalition ultimately emerged from the election victorious to put forward a detailed program of colonial reform. This program involved the creation of an independent Colonial Office led by a secretary of state, improvement of colonial civil servant education, and economic self-sufficiency in the colonies. Bülow’s choice for colonial secretary of state was Bernard Dernburg, a prominent banker.

The so-called Dernburg era ushered in the third phase of German colonialism, which stood under the rubric of “scientific colonialism.” In classical fashion Dernburg envisioned using colonial resources for metropolitan development. At the same time he sought to improve the lives of Africans and Pacific Islanders through the benefits of “higher” German civilization. In practice this meant improving infrastructure, especially railways for the African colonies, and increasing German economic investments. Dernburg’s program also invited establishment of colonial schools designed to train colonial civil servants (the most important of these schools was the Colonial Institute in Hamburg) and scientific stations throughout the colonies to further economic development. When Dernburg stepped down from his office in 1910, his two successors, Friedrich von Lindequist (1910–1911) and Wilhelm Solf (1911–1918), continued his program. The fourth and last phase started with the outbreak of World War I. This war prevented any long-term success of Dernburg’s program, however, and ended German colonialism. Blockaded by the British Royal Navy, the German government was unable to assist its colonies. Nor did Germany ever intend its colonies to become a major battleground. Colonial troops, aptly called “Protective Forces” (Schutztruppen), existed only on the African continent. Hastily assembled settler militia and indigenous police forces proved no match for Australian, Japanese, and New Zealand contingents who occupied the German Pacific colonies by the end of 1914. In Africa the fighting continued beyond that time, although Togo, the smallest of the German African colonies, surrendered after only three weeks. By 1915 German Protective Forces surrendered to South African troops in Southwest Africa. A year later fighting ceased in Cameroon. After 1916 only East Africa remained at war. Here a small, unintentionally racially integrated, rag-tag army continued a guerrilla campaign against a combined force of Belgian, British, and Portuguese soldiers until the end of the war. The leader of the East Africa campaign, Lieutenant-Colonel Paul von Lettow-Vorbeck, returned to Germany to a hero’s welcome and was highly decorated for preventing the deployment of Allied troops to the western front in Europe. His loyal colonial Askaries (designation for indigenous soldiers or policemen in German East Africa) fared much worse because the government withheld soldiers’ wages until the 1960s. The Treaty of Versailles in 1919 sealed the fate of German colonialism because all the German colonies became mandates under the newly formed League of Nations.

Comparative Geography of Empire

With the exception of a small 643-square-kilometer enclave on the Chinese mainland administered by imperial naval authorities, most of Germany’s colonies were located in Africa and Oceania (islands of the central and south Pacific). Most of these colonies, including Cameroon, East Africa (today’s Tanzania), Southwest Africa (today’s Namibia), and Togo, were located in Africa. In Oceania the German Empire made up the second-largest colonial presence, after Great Britain. Germany occupied the northeastern corner of New Guinea, which
is today part of Papua New Guinea, and the surround-
ing Bismarck Archipelago, as well as the northern
Solomon Islands. Most annexations were made after
the year 1884, with only a fraction of annexations—Micron-
esia and the western isles of Samoa in Oceania, as well
as a small increase of existing colonies in Africa—made
during the so-called New Course policy that followed
Bismarck’s dismissals. All in all, Germany’s colonies con-
tributed little to its economy. Investments in the colonies
rarely accounted for more than 1 percent of German over-
seas trade, mainly because the colonies were deficient in
resources. Southwest Africa provided some copper and
diamonds after 1906, but the bulk of the economy
remained tropical agriculture. Agricultural products could
be quite diversified in Africa, including such products as
cotton, rubber, and even ostrich feathers. In the Pacific,
on the other hand, agriculture was closely tied to coco-
u nut plantations.

The differences in resource exploitation aside, histori-
ans recently proposed a closer understanding of varia-
tions in the German administration in Africa and the
Pacific Islands. Frequent military campaigning and
 crackdowns on indigenous people were the norm in
Africa and commanded considerable attention in the
national and international media. Most telling of Ger-
man administrative abuses are the operations against the
Herero and Nama people in Southwest Africa (1904–
1907) and the Maji-Maji rebellion in East Africa (1905–
1907). Southwest Africa was Germany’s lone settlement
colony (the German presence in the other colonies never
surpassed a few hundred settlers) in the empire and
attracted several thousand ranchers. Already strained
relationships with the cattle-herding Herero further dete-
riorated when an introduced plague decimated the herds.
German authorities used herd reductions as a welcomed
excuse for further land alienation. When open warfare
erupted by 1904, German Protective Forces brutally
crushed the Herero. Lieutenant General Lothar von
Trotha issued the famed extermination decree, ordering
his troops to fire upon every Herero, regardless of age or
gender, who chose not flee to the desert. Although Berlin
officials soon deemed Trotha’s policy excessive, it proved
frighteningly effective. By 1907 the Herero population
had been reduced by 75 percent. When the Nama, tra-
ditionally enemies of the Herero, rose up against the Ger-
man overlords, they fared little better; their numbers
were reduced by 50 percent.

For comparative purposes the German policies of
extermination in Africa were in contrast to German
administration of the Pacific Islands. Traditionally histo-
rarians recognize in the German African colonial policy the
origins of Nazi expansionism and extermination. Recent
studies, however, are cautious about such generalizations.
Violence and abuses did occur in the Pacific, but they were
the exception rather than the rule. Indeed, the relative
remoteness of the Pacific colonies allowed for a number
of administrative experiments. Governors ruled for unusu-
ally long periods in German New Guinea and Samoa,
thus providing stability and continuity. Their paternalist
rule incorporated indigenous language and legal pat-
terns. They also encouraged anthropological studies in
the Bismarck Archipelago, Micronesia, and Samoa, which
sparked ethnographic (cultural study) monographs that
still figure as important reference works today.

**Contemporary Studies in German Colonialism**

Traditionally studies of German colonialism have
emphasized diplomatic history. Brisk attempts to gain a
colonial “place in the sun” for Germany are frequently
cited as one of the main conflicts leading to World War
I. The best-studied examples of such conflicts are the two
Morocco crises (1905 and 1911) in Africa and the tan-
gle over the Samoan Islands in the Pacific (1889–1899).
The Samoa conflict would ultimately result in a partition
of the Islands, the western isles became the protectorate
of German Samoa.

The German Empire has gained importance among
scholars in the postcolonial realm. Although “Orientalist”
scholars—who believe in the existence of a clear link
between scholarship and colonialism—argue that the
German Empire did not last long enough for German
writers to develop a clear link between scholarship and
colonial administration, recent investigations have indi-
cated otherwise. Literary scholars argue that an absence of colonies did not prevent Germans from developing “colonial fantasies” that formed templates for future colonial rule. In essence, such “colonialism without colonies” placed Germany on an expansive path similar to that of other European powers.

Equally revealing are contemporary studies of the development of German anthropology during the imperial age. Shunning simple-minded explanations that anthropology and colonialism went hand in glove, these studies reveal the Germans’ intense interest in non-European peoples. Many German anthropologists perceived artifacts as important historical sources of information about so-called non-literate peoples of the world. These intellectuals argued for storage of these artifacts in museums specifically designed for this purpose. Consequently, German anthropological museums developed into premier institutions in the world. Their holdings surpassed those of similar museums in England and France, both countries with far greater colonial empires. Similarly, Germans developed a popular interest in Völkerschauen (commercial ethnographic exhibitions) that brought the empire home to the public. In short, despite its brevity, recent studies have rediscovered and reassessed the German Empire. Far from being marginal, German colonialism in Africa and the Pacific has important implications for world historians.

Rainer F. Buschmann

See also World War I

Further Reading


Ghana

See Wagadu Empire

Glass

Glass is a physical entity that has mechanical, chemical, optical, and thermal properties. Different varieties of glass result from natural or human-made variations in combinations of these properties. Natural glass forms from rocks that melt as a result of high-temperature natural events such as volcanic eruptions and the impact of meteorites.

Natural glass in the form of obsidian—a hard, sharp-edged natural glass formed from rapidly cooled volcanic lava—was a key material for the human tool kit as a source of sharp blades for knives and spear and arrow points. It was also an important prehistoric trade item in the Mediterranean basin, Europe, Mexico, North America, and Oceania. Anatolia was a key source of obsidian for Mesopotamia beginning about 8000 BCE.

Development of Human-Produced Glass

Human-produced glass in the form of glass beads was probably first made in Egypt and Mesopotamia in about 3500 BCE. Hollow glass technology, which produces functional vessels, dates to about 1700 BCE in Mesopotamia and Egypt, and glass was beginning to be produced in northern Europe, Greece, and China at about this time.
Glassblowing, a far more efficient method for producing vessels, was developed in the Babylon region around the time of the BCE/CE transition.

The Romans were the first major exploiters of and innovators in glassmaking technology. They used molds for blown glass, developed flat glass suitable for windows, and spread the use of glass throughout the empire and beyond. Much wider use of glass for windows followed refinements in production techniques by the Germans in the eleventh century and by the Venetians in the thirteenth century—techniques that led to higher quality and more attractive sheet glass. Mirrors came into widespread use in the eighteenth century following innovations in France in 1688.

Glass became a major industrial product during the industrial revolution when scientific research produced high quality optical glass and mass production methods. These refinements continued in the twentieth century with glass products becoming cheap, household goods.

Uses of Glass
The role of glass in world history is perhaps best understood as but one example of a common pattern in world history in which the generation of new knowledge leads to significant innovations and the embedding of a richer understanding in new or improved objects. These objects, which anthropologists call material culture, if they are useful, in demand and relatively easy to produce, are often disseminated in huge quantities. These objects then change the conditions of life and may well feed back into the possibilities of further exploration and innovation. This can happen in two ways: (1) by generating the wealth that enables more effort to be applied to the generation of new knowledge; or (2) by providing better tools for improved understanding. This pattern of innovation and change has occurred in many spheres of life. The pattern is enduring when objects are widely disseminated and it can be a cumulative process.

There have been five major uses of glass around the world over the course of history, and only a few were universal before 1850.

Glass has long been used for decorative purposes in the forms of glass beads, counters, toys, and jewelry in many cultures across Eurasia. For this purpose, glass blowing is not absolutely required, nor does this use have much influence on thought or society, but rather on luxury goods and aesthetics. Basically glass is a substitute for precious stones.

Galileo on the Telescope

In the selection below from his classic work The Sidereal Messenger, Galileo records how he developed a working telescope.

About ten months ago a report reached my ears that a Dutchman had constructed a telescope, by the aid of which visible objects, although at a great distance from the eye of the observer, were seen distinctly as if near; and some proofs of its most wonderful performances were reported, which some gave credence to, but others contradicted. A few days after, I received confirmation of the report in a letter written from Paris by a noble Frenchman, Jaques Badovere, which finally determined me to give myself up first to inquire into the principle of the telescope, and then to consider the means by which I might compass the invention of a similar instrument, which a little while after I succeeded in doing, through deep study of the theory of Refraction; and I prepared a tube, at first of lead, in the ends of which I fitted two glass lenses, both plane on one side, but on the other side one spherically convex, and the other concave. Then bringing my eye to the concave lens I saw objects satisfactorily large and near, for they appeared one-third of the distance off and nine times larger than when they are seen with the natural eye alone. I shortly afterwards constructed another telescope with more nicety, which magnified objects more than sixty times. At length, by sparing neither labour nor expense, I succeeded in constructing for myself an instrument so superior that objects seen through it appear magnified nearly a thousand times, and more than thirty times nearer than if viewed by the natural powers of sight alone.

Source: Galilei, G. (1880). The sidereal messenger (E. S. Rivington, Trans.). London: Rivington's. (Original work published 1610)
Another common use is for vessels, vases, and other containers. Before 1850 this use was largely restricted to the western end of Eurasia. Glass was little used for vessels in India, China, and Japan, where pottery was the primary medium. In the Islamic world and Russia, the use of glass declined dramatically from about the fourteenth century with the Mongol incursions. The great developers of glass for vessels were on the Italian peninsula, first the Romans, and later the Venetians.

A third major use of glass was and is for windows. Until the late nineteenth century, window glass was found only at the western end of Eurasia. Before that time, China, Japan, and India hardly made use of glass for windows, using bamboo and paper shades instead. The most dramatic development of window glass was even more limited, taking place mainly in Europe north of the Alps.

The fourth major use comes from the reflective capacity of glass when silvered. The development of glass mirrors covered the whole of western Europe, but largely excluded the Islamic world. Glass mirrors were less popular in India, China and Japan.

The final major use of glass is for lenses and prisms and in particular their application to human sight in the form of eyeglasses. The concept of the light-bending and magnifying properties of glass was probably known to all Eurasian cultures, and was certainly known to the Chinese by at least the twelfth century. Yet only in western Europe did the practice of making lenses really develop, mainly from the thirteenth century. This coincides precisely with the dramatic new developments in optics and mathematics, which fed into all branches of knowledge, including architecture and painting.

**Glass in World History**

The reasons for the differential development of glass across the globe are largely accidental—differences in climate, drinking habits, availability of pottery, political events, and many other localized situations. The reasons have little to do with intention, planning, or individual psychology, nor are they the result of superior intellect or superior resources. Glass did not directly cause deepening of knowledge in Renaissance Europe and during the scientific revolution of the seventeenth and eighteenth centuries, but it did contribute to these movements by providing new scientific instruments such as microscopes, telescopes, barometers, thermometers, vacuum flasks, and many others. At a deeper level it literally opened people’s eyes and minds to new possibilities and turned the Western world from the aural to the visual mode of interpreting experience. The collapse of glass manufacturing in the Islamic world and its minor role in India, Japan, and China made the type of knowledge revolution that occurred in western Europe impossible in those places.

Without glass instruments, such sciences as histology, pathology, protozoology, bacteriology, molecular biology, astronomy, physics, mineralogy, engineering, paleontology, vulcanology, and geology could not have developed. Without clear glass there would have been no laws about gases, no steam engine, no internal combustion engine, no electricity, no light bulbs, no cameras, and no television. Without clear glass, scientists could not have seen bacteria, and there would have been little understanding of infectious diseases.

Chemistry also depends heavily on glass instruments. For example, without glass there would have been no...
understanding of nitrogen and so no artificial nitrogenous fertilizers. Consequently, much of the agricultural advances of the nineteenth century would not have occurred without glass. As for astronomy, there would have been no way of demonstrating the structure of the solar system, no measurement of stellar parallax, no way of substantiating the conjectures of Copernicus and Galileo. These findings initiated a line of inquiry that, through the application of glass instruments, has revolutionized the understanding of the universe and deep space. And in biology, without glass we would have no understanding of cell division (or of cells), no detailed understanding of genetics, and certainly no discovery of DNA. Without eyeglasses, a majority of the population in the Western world over the age of fifty would not be able to read this article.

The role of glass in history goes far beyond science. Without mirrors, lenses, and panes of glass the artistic developments of the Renaissance would not have occurred. The new understanding of the laws of optics, along with the new accuracy and precision in painting were largely dependent on glass instruments of various kinds. The divergence of world art systems in the period between 1350 and 1500 is impossible to conceive of without the development of fine glass, which only occurred at that time in Venice.

Glass is not just a tool to aid in understanding the world, but also a tool to enhance comfort, efficiency, and health. Glass lets light into interiors and is a hard and cleanable surface. This was one of its attractions to the fastidious Romans as a raw material for vessels, and likewise for the Dutch—in whose country the use of glass developed most. Transparent glass lets in light so house dirt becomes more visible. The glass itself must be clean to be effective. So glass, both from its nature and the effects it has, makes hygiene easier to achieve. And, glass not only altered the private house, but in due course transformed shops, which began to arrange their merchandise behind glass windows.

Glass also helped transform agriculture and knowledge about plants. The use of glass in horticulture was not an invention of the early modern Europeans. The Romans had used forcing houses and protected their grapes with glass. This Roman idea was revived in the later Middle Ages, when glass pavilions for growing flowers and later fruit and vegetables begin to appear. As glass became cheaper and flat window glass improved in quality, greenhouses improved the cultivation of fruit and vegetables, bringing a healthier diet to the population. In the nineteenth century, glass containers made it possible for seeds and plants to be carried safely on long sea journeys from all over the world to add variety to European farms and gardens.

Among other innovations that altered daily life were stormproof lanterns, enclosed coaches, lighthouses, and street lighting. Thus travel and navigation were safer and easier. The sextant requires glass and the precision chronometer cannot be used at sea without glass. Glass bottles created a revolution in drinking habits by allowing wine and beers to be more easily stored and transported. Glass even affected what humans believed (stained glass) and how they perceived themselves (mirrors).

Thus, at first through drinking vessels and windows, then through lanterns, lighthouses, greenhouses, telescopes, and microscopes, and later through cameras, televisions, and computer screens, the modern world built round glass emerged.

Alan Macfarlane and Gerry Martin

See also Scientific Instruments

Further Reading
Global Commons

The global commons are domains that lie beyond the exclusive jurisdiction of any state, but which may be used by all states and their nationals. Among areas traditionally considered as global commons are the world’s oceans, the Antarctic, the atmosphere, and outer space, all of which today are governed by international regulatory regimes.

Oceans

The oldest recognized commons are the world’s oceans. Ocean space covers 71 percent of the earth’s surface, touches 150 states, and serves as a main conduit for international trade and commerce, as well as a vast storehouse of food, mineral, and energy resources. The 1982 United Nations Convention on the Law of the Sea is the framework instrument for managing the ocean commons. Its 440 provisions incorporate generally accepted principles relating to activities on, over, and under the world’s oceans. With respect to offshore delimitation, the convention adopts a 12-mile territorial sea, over which the coastal state enjoys all rights of sovereignty. The convention creates a new delimitation, the exclusive economic zone (EEZ), which establishes offshore state jurisdiction over the exploration for and exploitation of natural resources. It provides objective criteria for delineating the outer limits of the continental shelf and the high seas, and it articulates certain freedoms for use of the high seas, including vessel navigation, aircraft overflight, and the rights to fish, lay pipelines and cables, and conduct marine scientific research. The convention also establishes the right of vessels (and aircraft) to pass unimpeded through international straits, as well as obligations for all states to protect the marine environment and to regulate scientific marine research. The most difficult issue negotiated in the convention concerned deep seabed mining and who has the right to mine manganese nodules from the deep seabed—states with the technology to do so or an international regulatory body? The convention establishes an international organizational structure to regulate future deep seabed exploitation.

The Antarctic

The Antarctic commons encompasses the massive ice-covered continent surrounded by the Southern Ocean. Antarctica approximates the size of the United States and Mexico combined (14 million square kilometers), and is the highest, windiest, most desolate continent. It is also the world’s largest desert (in terms of precipitation), yet paradoxically contains 70 percent of the world’s fresh water frozen in its massive ice cap. Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom claim territory in the Antarctic. Following the successful International Geophysical Year during 1957–1958, these seven states, along with Belgium, Japan, South Africa, the Soviet Union, and the United States, agreed that preserving international cooperation in the Antarctic was essential. In 1959, the governments of all twelve nations negotiated the Antarctic Treaty, which in 2004 has forty-five parties. This agreement totally demilitarizes the continent, freezes the claims, and ensures freedom of scientific investigation. Additional agreements for the Antarctic have been negotiated, including the 1964 Agreed Measures for the Conservation of the Antarctic Fauna and Flora, the 1972 Convention for the Conservation of Antarctic Seals, the 1980 Convention for the Conservation of Antarctic Marine Living Resources, a 1988 Convention on the Regulation of Antarctic Mineral Resource Activities (which never entered into force), and the 1991 Environmental Protection Protocol to the Antarctic Treaty. Serious problems still confront the Antarctic commons, among them increasing shipborne tourism to the region, the accelerating depletion of fisheries in circumpolar seas, and the effects of global warming resulting in disintegration of Antarctic ice shelves.

The Atmosphere

The atmosphere includes the troposphere (where weather patterns begin), as well as the stratosphere (where the ozone layer is located), the mesosphere, and beyond. The atmosphere provides virtually limitless sources of oxygen, carbon dioxide, and nitrogen essential for all life, as well as the water needed for living resources. At the same time it shields the earth from ultraviolet radiation, cosmic rays, and meteors.
Three manmade threats to the atmosphere required creation of special regimes. The first of these occurs in the stratosphere and relates to human-released chlorofluorocarbons (CFCs) that react photochemically, thereby eroding the ozone layer. This process permits more intense ultraviolet radiation and greatly amplifies the risk of skin cancer for larger numbers of people in the Southern Hemisphere. Reaction to this threat in 1985 produced the Vienna Convention for the Protection of the Ozone Layer, but this instrument does not contain specifics on how to arrest ozone depletion; it merely calls for action. Consequently in September 1987, governments negotiated the Montreal Protocol on Substances that Deplete the Ozone Layer, which sets out a schedule for progressively phasing out CFCs.

A second atmospheric threat concerns global climate change. Human activities—most importantly deforestation and the burning of fossil fuels such as coal, oil, and natural gas—are known to be altering the atmosphere’s composition and contributing to global warming, although uncertainty still surrounds its severity or future effects. These changes cause glaciers and polar ice caps to melt, thereby raising sea levels and threatening islands and low-lying coastal areas. The international response to the climate change threat came in the U.N. Framework Convention on Climate Change, adopted at the Rio Summit in 1992. This instrument establishes a process for voluntary reduction of greenhouse gas emissions. In December 1997 the Kyoto Protocol was negotiated to legally commit industrialized states to reduce greenhouse gas emissions. Final negotiations on the protocol in 2001 require industrialized states to reduce their combined annual greenhouse gas emissions by 2012 to 5.2 percent below the levels measured in 1990.

A third threat to the atmospheric commons is airborne transnational pollution. The air serves as a medium for...
pollutants, most notably transnational acid precipitation from the United Kingdom over Scandinavia and from the United States over Canada. In 1979 the International Treaty on Long-Range Transboundary Air Pollution (LRTAP) was negotiated, which remains the preeminent attempt to regulate transboundary air pollution. At least eight protocols have been negotiated to curb specific pollutants, such as sulfur emissions and nitrous oxide.

**Outer Space**

The final global commons is outer space, which extends beyond the earth’s atmosphere. As humans seek to use this region, the need for regulating it grows. Special international agreements now comprise a legal regime for managing the outer space commons. The main agreement is the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space. This agreement sets out core duties for states using outer space. Among these are the stipulation that exploration and use of outer space shall be carried out in the interests of all countries; outer space shall be free for exploration and use by all states; outer space is not subject to national appropriation by claim of sovereignty; no weapons of mass destruction may be placed in orbit or on celestial bodies; the moon and other celestial bodies shall be used exclusively for peaceful purposes; and states shall be liable for damage caused by their space objects.

Other major space law instruments include the 1968 Convention on the Rescue and Return of Astronauts and the Return of Objects Launched into Space, the 1972 Liability for Damage Caused by Space Objects Convention, and the 1975 Convention on Registration of Objects Launched into Outer Space. A fifth accord, the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the Moon Treaty), has attracted few parties and no space-faring state.
The industrial revolution profoundly changed how the global commons are used, particularly in terms of resource exploitation and environmental degradation. If the oceans, Antarctica, the atmosphere, and outer space are to provide future benefits for all humankind, governments will have to cooperate more closely to regulate and enforce the legal regimes created for their protection and conservation.

Christopher C. Joyner

Further Reading


Global Imperialism and Gender

From the late nineteenth century until the end of World War II, all of the most powerful nations on Earth (along with others that aspired to great power) pursued the strategy of imperialism in an attempt to achieve national political and economic goals. Although imperialism was not new (Great Britain is a notable example of a country whose pursuit of empire began two centuries earlier), this period is historically unique because so many nations became involved in imperial ventures and because the territories they claimed were so extensive. Between 1885 and 1914 alone European countries added 2.8 billion hectares to their imperial territories, the United States and Japan joined European countries in the pursuit of empire, nearly all of Africa came under colonial domination, and the British empire grew to include one-quarter of the world's population.

Societies and systems established by imperial nations varied greatly across time and space. Some became settler colonies, where colonizers would establish large, permanent communities. Others were created because of the resources that could be extracted or because of their strategic location and were ruled by small numbers of administrators backed by military force, or even by indigenous groups overseen by colonial administrators. Whatever form imperial societies took, they all profoundly affected both rulers and ruled economically, socially, culturally, and politically. Moreover, during the last two decades scholars have begun to understand that imperial systems around the world were maintained and legitimized, at least in part, through the use of language and policies based on gender ideals. These ideals included beliefs about the appropriate behaviors and sexualities of both men and women and were frequently used to mark distinctions between colonizing and indigenous cultures. They were also frequently inseparable from beliefs and attitudes about racial difference and were often used to shore up notions about the inherent inequality of colonized peoples. In addition, colonial encounters between rulers and ruled—varied though they were—changed local gender relationships and ideals in ways that deeply affected culture in the colonies as well as in imperial metropolises. These changes were not uniform in all colonies, or even within the various “national” empires. Rather, they depended on existing indigenous cultures, the presence or absence of natural resources, the presence or absence of colonial settlers, the degree of incorporation into the global economy, access to land, and many other factors. When examined from a global perspective, then, the relationship between imperialism and gender emerges as a complex phenomenon. At the
same time, we can also detect several broad similarities that elucidate global connections and patterns.

**Gender as a Means of Marking Hierarchy**

Beliefs about gender, sexuality, and gender roles were central to imperial endeavors around the world because such beliefs provided legitimation for preserving distinctions between rulers and the ruled and because they helped colonizers categorize—and hence divide—indigenous peoples into distinct and knowable groups. Although the precise form that such beliefs took varied across time and space, the need to clearly mark the boundaries between colonizer and colonized through language and practices associated with gender and gender difference was widely shared across many imperial systems.

Nearly every imperial system sought to justify the unequal distribution of power between rulers and ruled—and even the existence of colonies themselves—by concerning itself with the sexual behaviors, appetites, and attitudes of colonized men and women. One recurring theme in French Indochina, British India, the Dutch East Indies, and British South Africa—to name only a few—was the idea that white women were in constant danger from the voracious and perversive sexual appetites of colonized men. The fear of rape, and the need to protect white women from it, hence came to justify the strict separation between colonizer and colonized as well as the careful control of both colonized men and white women. As a result, white women often found their lives in colonies paradoxically quite comfortable (because of servants, privilege, and leisure time) as well as quite restricted. Colonized men, for their part, were routinely excluded from positions in which they might have even a remote chance of exercising power over white women. They also found themselves at risk of severe punishment if they transgressed the boundary between themselves and colonizing women. Perhaps not surprisingly, rhetoric about the need to control colonized men and to protect white women grew more intense during times of high colonial tension.

One example of the ways in which gender could be employed to maintain distinctions between rulers and ruled was the 1883–1884 Ilbert Bill controversy in British India. The bill had been designed to concede a small amount of power to Indian civil servants by allowing Indian judges jurisdiction over some European cases. However, Britons in India vehemently opposed even the slightest suggestion that Indians might be able to pronounce judgment over Europeans and openly attacked the bill on the grounds that it threatened the safety of white women. Although the bill itself said nothing about women, opponents argued that it opened the door for Indian civil servants—whose ultimate fantasy, they asserted, was the possession of a white woman—to use their new power to take sexual advantage of British women. Moreover, opponents claimed that Indian men could not be expected to treat British women with decency because they were said to treat their own women so poorly. In the end opposition to the bill among the British community in India was so strong that it had to be dropped. Indian men had been kept firmly in a subordinate role through rhetorical claims about the gendered consequences of conceding power to colonized men.

Anxieties about racial mixing—miscegenation—also echoed widely across imperial systems during the last half of the nineteenth century, and here again beliefs about gender and sexuality played critical roles in maintaining the separation between rulers and ruled. Most imperial systems were predicated on the belief that colonizing men needed sex in order to be satisfied. The problem, however, was a shortage of colonizing women in many colonial societies—even those that encouraged settler families. As a result, colonizing men frequently established sexual relations with indigenous women through prostitution, concubinage, or, less commonly, marriage. Such relationships were rarely based on true partnership: Even when colonized women entered into them of their own choice (abundant evidence suggests that the use of force and manipulation was quite common), they enjoyed few rights or privileges and could be discarded at will. Moreover, these sexual relationships produced a whole set of new problems. Chief among
these was how to maintain distinctions between colonizers and colonized given the existence of such intimate relationships. Even more problematic was how to classify and treat the mixed-race children who resulted from these relationships.

In the East Indies Dutch efforts to confront these issues illustrate both the centrality of sex management to imperial projects as well as the ways state policies about the regulation of sex could change over time. Prior to the twentieth century the Dutch East Indies Company sharply restricted the immigration of Dutch women to the East Indies. The company reasoned that Dutch men would be more likely to remain in the East Indies if they established long-term relationships with indigenous women. Moreover, indigenous women were less expensive to maintain than European women and could be expected to perform domestic labor in addition to their sexual functions. For these reasons the company advocated that Dutch men keep concubines—women who shared all of the duties of wives without the legal protections and entitlements of marriage. By the 1880s concubinage was the most common domestic arrangement for European men in the Indies, a situation that produced tens of thousands of mixed-race children. Yet, by the turn of the twentieth century, the existence of this large mixed-race population had begun to worry the Dutch East Indies Company and the Dutch government because it threatened to blur the divide between the colonizers and the colonized. To which group did these children belong? Were they Dutch or Indonesian? Would they support Dutch rule, or would they try to subvert it?

As part of these worries, Dutch officials increasingly began to argue that Indonesian concubines had neither the skills nor the morals to raise their mixed-race children to be adults worthy of Dutch citizenship. As a result, during the early twentieth century the Dutch government reversed earlier policy by seeking to ban the practice of concubinage and to encourage instead the immigration of Dutch women to the Indies. These women, the government now believed, would provide a civilizing influence on Dutch men and would have the cultural skills to raise their children to be proper Dutch citizens. For European men who could not afford Dutch wives, the government now encouraged prostitution as a means of side-stepping long-term, family-style liaisons with indigenous women. In both the pre- and post-twentieth-century East Indies, government concerns with the sexuality and sexual behaviors of both men and women, colonizers and colonized, highlight the central importance of sex management—and the gender relationships such management depended upon—to the imperial state.

Beliefs about gender also contributed to imperial policies of divide and rule—that is, policies that emphasized differences between subgroups of colonized peoples as a way of minimizing unified opposition to imperial rule. In places as far-flung as India, Indonesia, South Africa, and French West Africa, to mention only a few, such policies encouraged preferential treatment of certain groups, which tended to pit these groups against less-preferred groups. Moreover, colonizing powers often bestowed favor on groups who seemed to embody colonizers’ own notions of ideal masculinity. In French Algeria, for exam-
ple, French colonial administrators articulated stark divisions between the two major ethnic groups in the region: Kabyles and Arabs. Kabyles, the administrators argued, were superior to Arabs in nearly every way. Kabyles were sedentary rather than nomadic; they lived in mountains rather than the plains; they spoke an Aryan language rather than a Semitic one; and they were secular rather than religious. Gender ideals were also central to Kabyle superiority. The French, for instance, perceived Kabyle men as tall and athletic and likened their bodies to French ideals of the male physique. Kabyles were also said to be brave and fierce warriors who had proven themselves worthy foes of the French. Finally, despite their ferocity, Kabyles were said to treat their women with respect, which again resonated with French notions about themselves. Arabs, on the other hand, were perceived as physically small, lazy, slovenly, and cowardly people who brutally oppressed their women. These perceptions of gendered difference were neither trivial nor matters of simple representation. Rather, they encouraged preferential treatment for Kabyles, imposed a strict division between two indigenous groups, and deeply influenced French-Arab interactions in Algeria. Indeed, the language of gender difference in imperial situations served not only to maintain distinctions between rulers and ruled, but also to maintain distinctions between different groups of colonized people.

Gender and the Colonial Encounter

Colonial encounters between rulers and ruled had profound social, cultural, political, and economic effects all over the world. In terms of gender, such encounters frequently disrupted local ideologies, relations, and traditions and often led to changes in all three. In virtually every colonial encounter, the gender ideals of the colonizing powers helped to shape colonial practice, law, and culture. However, the way such ideals were translated into policy depended upon the response of colonized peoples, and thus the effect of such ideals was neither uniform nor predictable. Moreover, the disruptive effects of the colonial encounter on gender ideals were not a one-way street because they influenced gender ideals in imperial home countries as well.

Nineteenth-century Hawaii illustrates the ways colonial gender ideals could interact with indigenous gender ideals in unexpected ways. Prior to contact with westerners during the eighteenth century, Hawaiian culture had imposed sexual separation between men and women and had mandated that women follow certain eating taboos. In other respects, however, Hawaiian women played important social, economic, political, and spiritual roles and maintained a large degree of personal autonomy. As Western—especially U.S.—influence increased in Hawaii during the nineteenth century, Hawaiian culture had imposed sexual separation between men and women. Thus, as a result of U.S. intervention into Hawaiian society, Hawaiian women’s legal and social positions deteriorated. Yet, these same interventions also led to an improvement in Hawaiian women’s position as landholders during the last half of the nineteenth century. This unexpected improvement was the result of the Great Mahele of 1848, when the Hawaiian government—under duress by U.S. interests—divided Hawaiian land into salable pieces. The overall result for Hawaiians in general was massive dispossession from the land. For Hawaiian women, however, the results were much more ambiguous because the number of women who inherited land in the post-Great Mahele period dramatically increased. In part this increase was a result of indigenous choices and beliefs about women as effective guardians of Hawaiian land. The net effect was the preservation of Hawaiian women’s economic and social importance even as their legal status diminished as a result of discriminatory U.S. policies.

Further cases illustrating the interaction of colonial and indigenous gender ideals abound in colonial Africa. In northern Ghana, for example, the implementation of the British judicial system brought about a deterioration in indigenous women’s legal status. In particular, colonial rule sought to introduce and enforce the notion that wives were the property of their husbands—a notion that, although foreign to Ghanaian gender ideals, allowed men...
to claim increasing legal control of their wives. In colonial Tanganyika European authorities instituted policies—such as taxation and the conversion of cattle sales to cash—that increasingly defined Masai men as heads of households and allowed them privileged access to the political domain. Masai women, who had long played vital economic and social roles within their communities, were thus increasingly marginalized by colonial policies that clearly favored men as political and economic actors. At the same time African women were not merely passive victims of a patriarchal partnership between colonizers and indigenous males. Rather, African women in many colonial states manipulated colonial court systems for their own benefit, ventured into independent economic enterprises, and moved into new occupations—as teachers or midwives—opened up to them by the colonial encounter.

Colonial encounters could also shape gender relations in imperial home countries. In Britain imperialism informed the gender identities of both women and men and often provided the context within which claims about appropriate gender roles were made. A case in point was the British feminist movement, which developed and grew during the last half of the nineteenth century—and thus coincided with the massive expansion of the British empire. British feminists advocated equal legal rights with British men, but they justified their claims to equality by arguing for the need to represent and civilize colonized—especially Indian—women. Indeed, feminists argued that the oppressed condition of Indian women necessitated their own political participation so they could utilize their superior moral authority to “uplift” their Indian “sisters.” In this context British feminists’ sense of themselves as women depended heavily on their perception of gender relations in the wider imperial world.

**Gender and the Nationalist Response to Imperialism**

Given the centrality of gender ideologies to imperial projects around the world, we should not be surprised that they were similarly central to a variety of nationalist responses to imperialism. Yet, gendered responses to imperialism did not follow set patterns across time or space and varied widely in relation to both the colonial power and local culture. One pattern that did emerge in places as diverse as post-1945 India and Indonesia, 1960s and 1970s Zimbabwe, and 1950s and 1960s Algeria was the formulation of an aggressive, hypermasculine nationalistic rhetoric. Where this pattern emerged, colonized women sometimes became targets of nationalist violence. In other cases they were idealized and made to stand as symbols of purity and tradition. Both strategies tended to marginalize women’s roles in nationalist struggles and tended to complicate postimperial gender relations. A second, paradoxical pattern was the active participation of women in most nationalist movements all over the world. Indeed, women from French Indochina to Jamaica to Angola served in critical roles as messengers, providers, and even as soldiers.

The case of Zimbabwe in Africa illustrates the complex ways gender could help constitute the language and practices of anti-imperial nationalist movements. Under colonial rule Zimbabwean men felt increasingly emasculated as they lost status to white Europeans, were treated as children, and were unable to protect Zimbabwean women from the sexual advances of colonizing men. Emasculation took more material forms as well because colonial rule had made it progressively more difficult for Zimbabwean men to achieve those goals that were thought to mark ideal masculinity—including especially taking a wife, buying land, and providing for a family. As a result, Zimbabwean nationalism during the 1960s and 1970s took on an aggressively masculine posture (the two main parties styled themselves after the cock and the bull) that emphasized the importance of being manly, virile, and heterosexual. Incidents of violence against women increased dramatically during this period, evidenced by a spike in the number of rapes and attempted rapes. At the same time, women’s actual participation in the Zimbabwean nationalist movement was crucial to its eventual success. They provided information to nationalist guerrillas, gave food and shelter to nationalist fighters, and, after 1975, were trained as guerrilla fighters themselves. Yet, in spite of such active women’s participation, Zimbabwean independence in 1980 did not lead to equality for Zimbabwean women. Instead, like many other states that emerged in the wake of
successful anti-imperial movements, patriarchy was simply reconfigured in new ways—boosted and encouraged by the aggressively masculine ways that many colonized men responded to their colonial overlords.

The Indonesian nationalist movement during the immediate post-World War II period shared the hypermasculine tone of the Zimbabwean nationalist movement. As in Zimbabwe, Indonesian men had long endured denigration by Dutch colonizers, who consistently referred to Indonesian—and especially Javanese—men as weak and effeminate. Moreover, Dutch men had gained privileged access to Indonesian women. To combat this sense of emasculation, Indonesian nationalists in the anticolonial war of 1945–1949 consciously adopted an aggressively masculine ethos by celebrating toughness, virility, and militarism and broke with established (Javanese) cultural traditions of courtesy and gentleness. In this revolutionary movement, women and female sexuality were seen as dangerous and even traitorous. Women’s colonial roles as concubines (nyais) had made them suspect as potential spies, and weakness associated with women was viewed as a potential drain on, and distraction from, the cause of revolution. Indeed, because so many Indonesian nationalists felt it necessary to fight European imperialism with a new, hypermasculine gender identity, the movement turned against its female supporters in a bid to create a new sense of masculinity on the European model.

Implications
The relationship between global imperialism and gender was complex. It was not uniform across space and time, and its precise form varied widely according to local conditions, the colonial culture being imposed, and the specific issues involved. Moreover, the consequences of gender ideals in imperial situations often worked themselves out in unintended, ambiguous, and unexpected ways. What is clear, however, is that beliefs about gender were central to imperial projects around the world and that they had real, observable effects in the material world as well as in the realm of representation, discourse, and psychology. In addition, gendered responses to imperial control played a role in shaping gender relations in many newly independent nations, with effects that can still be felt in the present.

Heather Streets

Further Reading


