PROLOGUE

From Cosmic History to Human History

History books in general, and world history textbooks in particular, share something in common with those Russian nested dolls in which a series of carved figures fit inside one another. In much the same fashion, all historical accounts take place within some larger context, as stories within stories unfold. Individual biographies and histories of local communities, particularly modern ones, occur within the context of one nation or another. Nations often find a place in some more encompassing civilization, such as the Islamic world or the West, or in a regional or continental context such as Southeast Asia, Latin America, or Africa. And those civilizational or regional histories in turn take on richer meaning when they are understood within the even broader story of world history, which embraces humankind as a whole.

In recent decades, some world historians have begun to situate that remarkable story of the human journey in the much larger framework of both cosmic and planetary history, an approach which has come to be called “big history.” It is really the “history of everything” from the big bang to the present, and it extends over the enormous, almost unimaginable time-scale of some 13.7 billion years, the current rough estimate of the age of the universe.¹

The History of the Universe

To make this vast expanse of time even remotely comprehensible, some scholars have depicted the history of the cosmos as if it were a single calendar year (see the Snapshot). On that cosmic calendar, most of the action took place in the first few milliseconds of January 1. As astronomers, physicists, and chemists tell it, the universe that we know began in an eruption of inconceivable power and heat. Out of that explosion of creation emerged matter, energy, gravity, electromagnetism, and the “strong and “weak” forces that govern the behavior of atomic nuclei. As gravity pulled the rapidly expanding cosmic gases into increasingly dense masses, stars formed, with the first ones lighting up around 1 to 2 billion years after the big bang, or the end of January to mid-February on the cosmic calendar.

Hundreds of billions of stars followed, each with its own history, though following common patterns. They emerge, flourish for a time, and then collapse and die. In their final stages, they sometimes generate supernova, black holes, and pulsars—phenomena at least as fantastic as the most exotic of earlier creation stories. Within the stars, enormous nuclear reactions gave rise to the elements that are reflected in the periodic table known to all students of chemistry. Over eons, these stars came together

Change
What have been the major turning points in the pre-human phases of “big history”?
in galaxies, such as our own Milky Way, which probably emerged in March or early April, and in even larger structures called groups, clusters, and superclusters. Adding to the strangeness of our picture of the cosmos is the recent and controversial notion that perhaps 90 percent or more of the total mass of the universe is invisible to us, consisting of a mysterious and mathematically predicted substance known to scholars only as “dark matter.”

The contemplation of cosmic history has prompted profound religious or philosophical questions about the meaning of human life. For some, it has engendered a sense of great insignificance in the face of cosmic vastness. In disputing the earth- and human-centered view of the cosmos, long held by the Catholic Church, the eighteenth-century French thinker Voltaire wrote: “This little globe, nothing more than a point, rolls in space like so many other globes; we are lost in this immensity.”

### Snapshot: The History of the Universe as a Cosmic Calendar

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big bang</td>
<td>January 1</td>
<td>13.7 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Stars and galaxies begin to form</td>
<td>End of January/mid-February</td>
<td>12 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Milky Way galaxy forms</td>
<td>March/early April</td>
<td>10 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Origin of the solar system</td>
<td>September 9</td>
<td>4.7 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Formation of the earth</td>
<td>September 15</td>
<td>4.5 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Earliest life on earth</td>
<td>Late September/early October</td>
<td>4 billion years ago</td>
<td></td>
</tr>
<tr>
<td>Oxygen forms on earth</td>
<td>December 1</td>
<td>1.3 billion years ago</td>
<td></td>
</tr>
<tr>
<td>First worms</td>
<td>December 16</td>
<td>658 million years ago</td>
<td></td>
</tr>
<tr>
<td>First fish, first vertebrates</td>
<td>December 19</td>
<td>534 million years ago</td>
<td></td>
</tr>
<tr>
<td>First reptiles, first trees</td>
<td>December 23</td>
<td>370 million years ago</td>
<td></td>
</tr>
<tr>
<td>Age of dinosaurs</td>
<td>December 24–28</td>
<td>329–164 million years ago</td>
<td></td>
</tr>
<tr>
<td>First humanlike creatures</td>
<td>December 31 (late evening)</td>
<td>2.7 million years ago</td>
<td></td>
</tr>
<tr>
<td>First agriculture</td>
<td>December 31: 11:59:35</td>
<td>12,000 years ago</td>
<td></td>
</tr>
<tr>
<td>Birth of the Buddha/Greek civilization</td>
<td>December 31: 11:59:55</td>
<td>2,500 years ago</td>
<td></td>
</tr>
<tr>
<td>Birth of Jesus</td>
<td>December 31: 11:59:56</td>
<td>2,000 years ago</td>
<td></td>
</tr>
<tr>
<td>Aztec and Inca empires</td>
<td>December 31: 11:59:59</td>
<td>500 years ago</td>
<td></td>
</tr>
</tbody>
</table>
Nonetheless, human consciousness and our awareness of the mystery of this im-
measurable universe render us unique and generate for many people feelings of awe
and humility that are almost religious. As tiny but knowing observers of this majes-
tic cosmos, we have found ourselves living in a grander home than ever we knew
before.

The History of a Planet

For most of us, one star, our own sun, is far more important than all the others, de-
spite its quite ordinary standing among the billions of stars in the universe and its
somewhat remote location on the outer edge of the Milky Way galaxy. Circling that
star is a series of planets, formed of leftover materials from the sun’s birth. One of
those planets, the third from the sun and the fifth largest, is home to all of us. Human
history—our history—takes place not only on the earth but also as part of the
planet’s history.

That history began with the emergence of the entire solar system about two-
thirds of the way through cosmic history, some 4.7 billion years ago, or early Septem-
ber on the cosmic calendar. Geologists have learned a great deal about the history of
the earth: the formation of its rocks and atmosphere; the movement of its continents;
the collision of the tectonic plates that make up its crust; and the constant changes of
its landscape as mountains formed, volcanoes erupted, and erosion transformed the
surface of the planet. All of this has been happening for more than 4 billion years and
continues still.

The most remarkable feature of the earth’s history—and so far as we know un-
repeated elsewhere—was the emergence of life from the chemical soup of the early
planet. It happened rather quickly, only about 600 million years after the earth itself
took shape, or late September on the cosmic calendar. Then for some 3 billion years,
life remained at the level of microscopic single-celled organisms. According to biolo-
gists, the many species of larger multicelled creatures—all of the flowers, shrubs, and
trees as well as all of the animals of land, sea, and air—have evolved in an explosive
proliferation of life-forms, punctuated by massive die-offs as well, over the past 600
million years, or since mid-December on the cosmic calendar.

Each of these life forms or species has also had a history as its members struggled
to find resources, cope with changing environments, and deal with competitors.
The history of dinosaurs, for example, from their rise to their extinction, occupied
about 165 million years, or about five days in late December on the cosmic calendar.
Egocentric creatures that we are, however, human beings have usually focused their
history books and history courses entirely on a single species—our own, Homo sa-
piens, humankind. On the cosmic calendar, Homo sapiens is an upstart primate whose
entire history occurred in the last few minutes of December 31. Almost all of what
we normally study in history courses—agriculture, writing, civilizations, empires,
industrialization—took place in the very last minute of that cosmic year. The entire
history of the United States occurred in the last second.
Yet during that very brief time, humankind has had a career more remarkable and arguably more consequential for the planet than any other species. At the heart of human uniqueness lies our amazing capacity for accumulating knowledge and skills. Other animals learn, of course, but for the most part they learn the same things over and over again. Twenty-first-century chimpanzees in the wild master the same skills as their ancestors did a million years ago. But the exceptional communication abilities provided by human language allow us to learn from one another, to express that learning in abstract symbols, and then to pass it on, cumulatively, to future generations. Thus we have moved from stone axes to lasers, from spears to nuclear weapons, from “talking drums” to the Internet, from grass huts to the pyramids of Egypt and Taj Mahal of India.

This extraordinary ability has translated into a human impact on the earth that is unprecedented among all living species. Human populations have multiplied far more extensively and have come to occupy a far greater range of environments than has any other large animal. Through our ingenious technologies, we have appropriated for ourselves, according to recent calculations, some 25 to 40 percent of the solar energy that enters the food chain. We have recently gained access to the stored solar energy of coal, gas, and oil, all of which have been many millions of years in the making, and we have the capacity to deplete these resources in a few hundred or a few thousand years. Other forms of life have felt the impact of human activity, as numerous extinct or threatened species testify. Human beings have even affected the atmosphere itself as carbon dioxide and other emissions of the industrial age have warmed the climate of the planet. Thus human history has been, and remains, of great significance, not for ourselves alone, but also for the earth itself and for the many other living creatures with which we share it.

The History of the Human Species . . . in a Single Paragraph

The history of our species has occupied roughly the last 250,000 years, conventionally divided into three major phases, based on the kind of technology that was most widely practiced. The enormously long Paleolithic age, with its gathering and hunting way of life, accounts for 95 percent or more of the time that humans have occupied the planet. People utilizing a stone-age Paleolithic technology initially settled every major landmass on the earth and constructed the first human societies (see Chapter 1). Then beginning about 12,000 years ago with the first Agricultural Revolution, the domestication of plants and animals increasingly became the primary means of sustaining human life and societies. In giving rise to agricultural villages and chiefdoms, to pastoral communities depending on their herds of animals, and to state- and city-based civilizations, this agrarian way of life changed virtually everything and fundamentally reshaped human societies and their relationship to the natural order. Finally, around 1750 a quite sudden spurt in the rate of technological change, which we know as the Industrial Revolution, began to take hold. That vast
increase in productivity, wealth, and human control over nature once again transformed almost every aspect of human life and gave rise to new kinds of societies that we call “modern.”

Here then, in a single paragraph, is the history of humankind—the Paleolithic era, the agricultural era, and, most recently and briefly, the modern industrial era. Clearly this is a big picture perspective, based on the notion that the human species as a whole has a history that transcends any of its particular and distinctive cultures. That perspective—known variously as planetary, global, or world history—has become increasingly prominent among those who study the past. Why should this be so?

Why World History?

Not long ago—in the mid-twentieth century, for example—virtually all college-level history courses were organized in terms of particular civilizations or nations. In the United States, courses such as Western Civilization or some version of American History served to introduce students to the study of the past. Since then, however, a set of profound changes has pushed much of the historical profession in a different direction.

The world wars of the twentieth century, revealing as they did the horrendous consequences of unchecked nationalism, persuaded some historians that a broader view of the past might contribute to a sense of global citizenship. Economic and cultural globalization has highlighted both the interdependence of the world’s peoples and their very unequal positions within that world. Moreover, we are aware as never before that our problems—whether they involve economic well-being, environmental deterioration, disease, or terrorism—respect no national boundaries. To many thoughtful people, a global present seemed to call for a global past. Furthermore, as colonial empires shrank and new nations asserted themselves on the world stage, these peoples also insisted that their histories be accorded equivalent treatment with those of Europe. An explosion of new knowledge about the histories of Asia, Africa, and pre-Columbian America erupted from the research of scholars around the world. All of this has generated a “world history movement,” reflected in college and high school curricula, in numerous conferences and specialized studies, and in a proliferation of textbooks, of which this is one.

This world history movement has attempted to create a global understanding of the human past that highlights broad patterns cutting across particular civilizations and countries, while acknowledging in an inclusive fashion the distinctive histories of its many peoples. This is, to put it mildly, a tall order. How is it possible to encompass within a single book or course the separate stories of the world’s various peoples? Surely it must be something more than just recounting the history of one civilization or culture after another. How can we distill a common history of humankind as a whole from the distinct trajectories of particular peoples? Because no world history book or course can cover everything, what criteria should we use for deciding what to include and what to leave out? Such questions have ensured no end of controversy.
among students, teachers, and scholars of world history, making it one of the most exciting fields of historical inquiry.

**Change, Comparison, and Connection:**
**The Three Cs of World History**

Despite much debate and argument, one thing is reasonably clear: in world history, nothing stands alone. Every event, every historical figure, every culture, society, or civilization gains significance from its inclusion in some larger context. Most world historians would probably agree on three such contexts that define their field of study. Each of those contexts confronts a particular problem in our understanding of the past.

An initial context in which the particulars of world history can be situated is that of time and **change**. In world history, it is the “big picture” changes—those that impact large segments of humankind—that are of greatest interest. How did the transition from a gathering and hunting economy to one based on agriculture take place? How did cities, empires, and civilizations take shape in various parts of the world? What lay behind the emergence of a new balance of global power after 1500, one that featured the growing prominence of Europe on the world stage? What generated the amazing transformations of the “revolution of modernity” in recent centuries? How did the lives of women change as a result of industrialization?

A focus on change provides an antidote to a persistent tendency of human thinking that historians call “essentialism.” A more common term is “stereotyping.” It refers to our inclination to define particular groups of people with an unchanging or essential set of characteristics. Women are nurturing; peasants are conservative; Americans are aggressive; Hindus are religious. Serious students of history soon become aware that every significant category of people contains endless divisions and conflicts and that those human communities are constantly in flux. Peasants may often accept the status quo, except of course when they rebel, as they frequently have. Americans have experienced periods of isolationism and withdrawal from the world as well as times of aggressive engagement with it. Things change.

But some things persist, even if they also change. We should not allow an emphasis on change to blind us to the continuities of human experience. A recognizably Chinese state has operated for more than 2,000 years. Slavery and patriarchy persisted as human institutions for thousands of years until they were challenged in recent centuries, and in various forms they exist still. The teachings of Buddhism, Christianity, and Islam have endured for centuries, though with endless variations and transformations.

A second major context that operates constantly in world history books and courses is that of **comparison**. Whatever else it may be, world history is a comparative discipline, seeking to identify similarities and differences in the experience of the world’s peoples. What is the difference between the development of agriculture in the Middle East and in Mesoamerica? Was the experience of women largely the same in all patriarchal societies? What did the Roman Empire and Han dynasty China have in
common? Why did the Industrial Revolution and a modern way of life evolve first in Western Europe rather than somewhere else? What distinguished the French, Russian, and Chinese revolutions from one another? What different postures toward modernity emerged within the Islamic world? Describing and, if possible, explaining such similarities and differences are among the major tasks of world history. Comparison, then, is a recurring theme in this book, with expressions in every chapter.

Comparison has proven an effective tool in the struggle against Eurocentrism, the notion that Europeans or people of European descent have long been the primary movers and shakers of the historical process. That notion arose in recent centuries when Europeans were in fact the major source of innovation in the world and did for a time exercise something close to world domination. This temporary preeminence decisively shaped the way Europeans thought and wrote about their own histories and those of other people. In their own eyes, Europeans alone were progressive people, thanks to some cultural or racial superiority. Everyone else was to some degree stagnant, backward, savage, or barbarian. The unusual power of Europeans allowed them for a time to act on those beliefs and to convey such ways of thinking to much of the world. But comparative world history sets European achievements in a global and historical context, helping us to sort out what was distinctive about its development and what similarities it bore to other major regions of the world. Puncturing the pretensions of Eurocentrism has been high on the agenda of world history.

The art of comparison is a learned skill, entailing several steps. It requires, first of all, asking explicitly comparative questions and determining what particular cases will be involved. If you want to compare revolutions, for example, you would need to decide which ones you are considering—American, French, Russian, Chinese, Cuban. Defining categories of comparison is a further step. Precisely which characteristics of these revolutions will you compare—their origins, their ideologies, the social classes involved, their outcomes? Finally, how will you present your comparison? You might choose a case-by-case analysis in which you would describe, say, the American Revolution first, followed by an account of the Cuban Revolution, which makes explicit comparisons with the former. Or you might choose a thematic approach in which you would consider first the origins of both revolutions, followed by a comparison of their ideologies, and so on. You will find examples of both approaches in this book.

A third context that informs world history involves the interactions, encounters, and connections among different and often distant peoples. World history is often less about what happened within particular civilizations or cultures than about the processes and outcomes of their meetings with one another. Focusing on cross-cultural connections—whether those of conflict or more peaceful exchange—represents an effort to counteract a habit of thinking about particular peoples, states, or cultures as self-contained or isolated communities. Despite the historical emergence of many separate and distinct societies, none of them developed alone. Each was embedded in a network of relationships with both near and more distant peoples.

Moreover, these cross-cultural connections did not begin with Columbus. The Chinese, for example, interacted continuously with the nomadic peoples on their
northern border; generated technologies that diffused across all of Eurasia; transmitted elements of their culture to Japan, Korea, and Vietnam; and assimilated a foreign religious tradition, Buddhism, which had originated in India. Though clearly distinctive, China was not a self-contained or isolated civilization.

The growing depth and significance of such cross-cultural relationships, known now as globalization, has been a distinguishing feature of the modern era. The voyages of Columbus brought the peoples of the Eastern and Western hemispheres into sustained contact for the first time with enormous global consequences. Several centuries later Europeans took advantage of their industrial power to bring much of the world temporarily under their control. The new technologies of the twentieth century have intertwined the economies, societies, and cultures of the world’s peoples more tightly than ever before. During the past five centuries, the encounter with strangers, or at least with their ideas and practices, was everywhere among the most powerful motors of change in human societies. Thus world history remains always alert to the networks, webs, and cross-cultural encounters in which particular civilizations or peoples were enmeshed.

Changes, comparisons, and connections—all of them operating on a global scale—represent three contexts or frameworks that can help us bring some coherence to the multiple and complex stories of world history. They will recur repeatedly in the pages that follow.

Second Thoughts

What’s the Significance?
big history, liv
comparative history, lx

cosmic calendar, liv
the three Cs, lx

Big Picture Questions
1. How do modern notions of the immense size and age of the universe affect your understanding of human history?
2. What examples of comparison, connection, and change in world history would you like to explore further as your course unfolds?
3. In what larger contexts might you place your own life history?

Next Steps: For Further Study


Patrick Manning, Navigating World History (2003). An up-to-date overview of the growth of world history, the field’s achievements, and the debates within it.