

THE OXFORD HANDBOOK OF

# WORLD HISTORY

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CHAPTER 6

## EPISTEMOLOGY

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WHAT is the 'epistemology' of world history? What are the ways in which we know the world and its history? What are the categories through which we observe and perceive the world? What aspects of the world do we assume to be essential and unchanging? In what arenas do we believe change to be taking place? What are the limits on what can be known about the world?

This chapter poses questions and offers reflections on the most general type of thinking entailed in the study of world history. The chapter addresses the common and contested ways of knowing the world and its past that are shared among us. Epistemology has a history itself, but we will not attempt to review it here. This is a discussion of epistemology in world history at the present moment, with only brief and illustrative references to the development of global epistemology. It is about current issues and current debates, regardless of whether they are new debates or old debates. That is, the pronoun 'we' here represents contemporary writers and readers of world history.

How do we revise our understanding of the world in the context of the growing information overload? This problem, while it has surely arisen before, arises now with insistence: out of all the available information, how does one select appropriate information and process it to make possible an understanding of the world?

Indeed, what is the world? What are its synonyms and antonyms? In English-language noun forms, the terms world, globe, and planet are relatively synonymous. In adjective forms, the term 'global' is more widely used than 'worldly' or 'planetary.' But 'the world' can mean the entire universe. And 'world,' when modified by an adjective, can have meanings on numerous scales: 'a child's world,' 'the Islamic world.' Similarly, the adjective 'global' can refer to a totality at any scale. As a result, the terms 'world' and 'global'—and their equivalents in many other languages—have multiple and overlapping meanings, and need to be specified more closely when used in specific contexts. One can attempt a definition: 'the world' represents the outer boundaries or the entirety of that portion of the universe that we inhabit and seek to explain. Even this relatively unambiguous definition allows for variants and categories

within it. Thus, the task of selecting a definition shades into that of creating an ontology, where the latter represents the set of categories through which we seek to classify, describe, and ultimately explain aspects of the world. The propensity to categorize and classify is arguably an inherent human characteristic.

What is history? The most dependable if not the most common definition of 'history' is the actual events and processes of the past. The 'historical record' consists of the currently available evidence on past events. It can expand as more evidence is added with time and as new discoveries and new methods enable the retrieval of additional information on the past. But the historical record can contract as information is lost or forgotten. Finally and most common in usage is 'history' as representations of the past—that is, the current and past writings and other representations that recall, describe, and interpret the past.

## CONCEPTUALIZATION

The world as we know it is complex and multidimensional. The present exploration of knowledge about the world and its historical analysis is displayed along six dimensions. These dimensions of the world and its apprehension are topic, space, time, scale, philosophy of the analyst, and verification of interpretation.<sup>1</sup> The first four of these dimensions refer principally to the realities of the world itself, and the last two refer principally to human apprehension of the world—but all six, in some measure, are at once aspects of the world and aspects of human comprehension of the world. In addition, one must assume that the dynamics or forces for change that we apprehend are part of the world itself. These forces that change the world—or hold it within its existing state—include interactions of matter, of biological forms, and of ideas.

The topical subject matter of the world is infinite, and it is probably the case that any given subject, however defined, can be subdivided infinitely. The categories and subcategories of topics or subject matter are far more heterogeneous than those of space and time. As a result, creating ontologies for topics is a complex task: for instance, not only is it difficult to describe topical categories with precision, but ranking topical categories and subcategories is a complex and often arbitrary task. The criteria for categorization may vary sharply from topic to topic, making it difficult to create an overall ontology for the topics of history.<sup>2</sup> For instance, the topic of textiles is sure to be categorized in far different ways from the topic of racial identifications. The heterogeneity of topics is a particular challenge to the study of world history as it is evident that, since there can be no general rules for categorizing and analyzing topics, there exists no deterministic procedure for summing aspects of history to get an overall result. This does not mean that world history is impossible; rather, it means that some constraints must be set by the analyst on the topics to be analyzed (and on space and time) in order to create an interpretation of world history within those limits.

The precise size and shape of the world has been known for some 500 years (though its spherical form was suspected by leading scholars for the previous 1500 years). The surface space of the earth is limited, and its limits can be experienced directly. The surface of the earth can, however, be infinitely subdivided. Space is three-dimensional, though it is often represented in two dimensions on maps and is also represented as the single dimension of distances between points. Further, space can be thought of in ways other than simple units of contiguous land: as archipelagos or multiple levels. Historical study has focused principally on studies of specific and limited spaces. In addition, comparisons, links, and interactions among spaces are standard aspects of spatial analysis in history.

An essential subdivision of time is given in years, which have been universally understood, often with great precision, because of the annual circuit of the earth about the sun; similarly the day has been of dependable length for all of human history. Seasons within years are more arbitrary. Time is apparently one-dimensional and one-directional, moving only forward. As with space, time can be infinitely subdivided. And just as space can be thought of in ways different from a contiguous terrain, time can be thought of not only as continuous progression but also as discrete periods, 'archipelagos' of such periods, and recurring cycles. The boundaries between events (treated as momentary) and processes (which unfold over time) are flexible, and exist as much in the mind of the analyst as in the reality of the past. Time can appear to have more complex dimensions when combined with space: an event at a given moment in one place will only be experienced in another place at a later time. Similarly, one must ask whether an event is confined to a locality, or whether it can take place worldwide.

The notion of scale addresses the question of how far along each dimension we go in our assessment of a world-historical issue. Scale is not actually a dimension but a measurement along dimensions, yet it is useful to treat it as a dimension to keep it in mind along with topic, space, and time. Scale can be considered in both quantitative and qualitative terms. That is, for each dimension of the world, the issue of scale addresses what domain along that dimension—what portion of the totality—is under consideration. It addresses variations in the extent of the world that enable us to discuss small worlds, parallel worlds, and the world as seen by a range of historical protagonists.

Knowledge of the world consists at once of evidence and also the apprehension or experience of that evidence. These basic categories are neither discrete nor straightforward; instead they are complex, overlapping, and undergo continuous interaction. For instance, this section has to account both for formal, academic knowledge of history and for informal, popular knowledge of history, as well as the knowledge and use of history by all sorts of social interests.

Evidence begins with information on the world, described in the previous section in terms of topic, space, time, scale, and dynamics. The category of 'evidence' begins with directly observable information about the world; it expands, with varying degrees of certainty, to types of information gained indirectly. Evidence created at a known time and place—for instance, written documents or artifacts of material culture or

architecture—has a particular importance in providing testimony on that time and place. Testimony that is passed through time, as by oral tradition or by copying of texts, is subject to modification and transformation into myth. But just as some evidence is attenuated in value through transformation, in other cases the assembly and transformation of available records can expand the precision and value of evidence. Thus, the historian may combine retrieval of local records, interpolation to estimate missing data, and theory-based simulation to generate evidence on regional and national populations, birth rates, and death rates for past times.

For generations historians have labeled their evidence as 'primary' or 'secondary': primary evidence is assumed to be original and largely eyewitness evidence, while secondary evidence is taken to be mediated through an intermediate authority. This simple categorization, however, inappropriately suggests that most world-historical evidence is secondary and, by implication, inferior. Instead, rather than a two-level categorization of evidence, world-historical studies require a more complex system of description for data, indicating the original sources and the various types of selection and transformation that data have undergone to prepare them for use in global analysis. For instance, the transcription of a speech by an ancient orator must be translated to a living language to be understood by an audience today. The photograph taken today of an ancient monument provides a transformed view of a monument that has surely changed over time. National and continental statistics on population and income are not original observations, but are transformed and mediated through aggregation. Evidence, in sum, comprises a complex category.

What is apprehension? It is the collection and processing of evidence by an observer or analyst. Apprehension or perception of evidence depends on one's location (in time and space) and one's lens. The location of the observer is almost inevitably parochial. Since there is no way for an observer to view the world from all directions at once, the infinite possible perspectives become an important aspect of the apprehension of knowledge. Geographic and temporal location of observers provides basic elements of perspective. In addition, the notion of perspective distinguishes between local and global outlooks; between elite views of history and history from below; between the views of participants in and observers of a historical process; between views of contemporary events and views of past times.

The lens or outlook through which we perceive evidence begins most basically with the distinction between 'self' and 'other': the vision of 'self' can be restricted to an individual but can expand to a broad community; the remaining 'other' can be categorized into successively distant subgroups. In scholarly terms, lenses can be described especially through the academic disciplines (natural and social sciences, humanities and arts). Each discipline tends to focus on particular variables and on particular dynamics of change. As the experience and interaction of the various disciplines have developed, new distinctions and new commonalities in their lenses appear.<sup>3</sup> Thus, migration history and interdisciplinary migration studies have become gradually closer, while ecological studies and health studies have become more distinctive. Philosophy colors and shapes the lens with varying assumptions about the

fundamental nature of the human situation, such as good and evil, free will and destiny, and change through simple causation or complex interaction.<sup>4</sup>

The results of apprehension, after further processing in the human mind, can lead to historical interpretation and analysis. These forms of knowledge, in which evidence and logical structures are combined to reveal statements about historical change, are to be explored in detail below. Modeling is an inherent aspect of interpretation and especially analysis: it is the systematic and often explicit logic of historical dynamics. Meanwhile the creator of a historical interpretation or analysis has the option of presenting it to an audience. That is, most people learn world history not as analysts but as 'readers' of representations created by others: the representation of world history is addressed in the concluding section of this chapter.

Apprehension of the world is arguably more complex than the world itself. Though the evidence through which humans perceive the world is limited, comprising only a tiny portion of all the reality from which evidence is collected and perceived, the range of locations, lenses, and philosophies through which humans apprehend the world adds many complexities to the world itself. History, as the representation of human apprehension and analysis of the past, is destined inevitably to be filled with controversy and reinterpretation.

To summarize this section, it is useful to compare the epistemology of global history with that of national and local history. In fact, the epistemology of world history is not much more complex than the epistemology of historical studies at a local or national level. The difference is that, because it remains a novel experience to explore the history of the world, there is a need for and an interest in the formal and explicit definition of the boundaries of study and the ways of knowing. For local and national history, certain limits tend to be given for the time, space, and even topic and scale of study, so that there remain fewer epistemological unknowns: the identity of the local community is easily taken for granted, as is the struggle of each nation for a place in the wider community of nations; the notions of a global human identity and of global patterns in family life have yet to gain easy acceptance among historians. With such exceptions, however, the epistemology of world history is not fundamentally different from that of history at any other level.

## INTERPRETATION AND ANALYSIS

Historical analysis combines several levels of thinking and study: posing a question about the past, setting up the problem in a form intended to facilitate its solution, solving the problem, and verifying the solution or interpretation. Academic history relies on formal analysis, based on rational and systematic apprehension of relevant evidence. Yet such formal analysis can be seen as a subset of the broader category of interpretation, including responses to evidence that are impressionistic and informal rather than formal and logically structured. Indeed, the many genres of academic and

popular history run the full gamut from logically systematic to impressionistic. The main lines of discussion in this section refer to academic analysis; however, most of the distinctions apply as well to impressionistic interpretation of the past.

Historians come from a widely varying range of philosophical traditions, and the varying philosophies lead to quite different ways of posing questions and answers. The distinctions among philosophical principles sketched here help to show how it is that different analytical priorities arise on the main topics proposed for analysis; they also show how historians can rely on similar data yet come to different or conflicting conclusions. Nineteenth-century philosophical outlooks remain central to world-historical analysis: most notably, the idealism of G. W. F. Hegel and the materialism of Karl Marx. Another great nineteenth-century current of thought was positivism, elaborated by Auguste Comte and focusing on study through breaking large problems into small ones, seeking deterministic relationships within the smaller problems. Philosophies of structuralism and postmodernism have developed in more recent times, rejecting the positivist separation of problems into discrete sub-problems and emphasizing interactions among aspects of a problem. Further work by specialists in philosophy has given pragmatic and interactive attention to such issues as evolution, consciousness, and objective vs. subjective views of truth, so that world historians may sharpen their interpretive choices by reading from the philosophical literature.<sup>5</sup>

World-historical analysis remains in consistent and expanding tension with positivistic thinking. Positivism, despite many shifts and currents in philosophy, remains the most influential philosophy of analysis, so that its terminology and categories have very great influence in analysis of any sort. Positivism allows for large-scale phenomena but focuses on breaking them down to smaller pieces and analyzing variables only a few at a time, leaving others as parameters that are assumed not to vary for purposes of the analysis. Positivistic thinking emphasizes simplified, cause-and-effect thinking; it traces incremental shifts of large systems toward equilibrium. World historians have increasingly abandoned monocausal interpretations, turning to analyses emphasizing feedback and interaction of several historical factors. Nevertheless, the majority of knowledge in the natural sciences and social sciences has been constructed on positivistic principles, so that world historians, in developing systemic approaches to the past, can be seen as eclectically balancing positivistic approaches against other approaches.

This discussion of philosophical differences is by no means exhaustive, but it should suffice to show that the categories of analysis in the remainder of this section, while they can be proposed as the core categories of world-historical analysis, will consistently produce differing and perhaps contradictory results because of the varying philosophies through which they are mediated.

The work of framing is the task of setting up a problem for historical study. In this discussion, the overall task of framing is broken down into setting the external frame or boundary conditions of a study, the internal frame or the systems and sub-systems under study, and the disciplinary frame that provides the tools of study.

The most basic step in framing the external boundaries of study is to set the topic. Then the frame is completed by setting the limits on space and time for analysis. In fact,

historians often select the space and time of their analysis first, and the topic subsequently. That is, scholars defining themselves as historians of ancient China or medieval Europe or modern Africa may find that these boundaries are not the best for studying such a topic as silk textiles or monarchical government. For all of the selections and directions required for framing a historical analysis, there is need for attention to clarifying a typology of materials under study and for attention to units of analysis and scales of analysis. The topical, temporal, and even geographical scope of historical study has been expanding. The notion of 'history' has been successfully generalized so that it escapes the ancestral focus on politics and war and now is understood to apply to any arena of human activity or natural process that can be shown to have a temporal dimension. Inherited topical categories of social, political, economic, cultural, and intellectual history have now been supplemented by environmental history. In practice, the range of topics considered in historical analysis has raced far beyond the capacity of these categories. The effort to update libraries and create large-scale datasets seems likely to lead to more comprehensive ontologies that organize the topics of historical study and perhaps set them in systematic relationship to each other.

In defining limits of space and time, the historiography of the twentieth century gave primacy of place to the nation in recent centuries as the site of analysis and the object of analysis. Scholarship in the early twenty-first century gives attention to a fuller range of units of analysis. The wider range of units—each definable by space, time, topic, and scale—includes individual, family, nation, society, culture, civilization, race, religion, region, continent, oceanic basin, hemisphere, and the world as a whole. The recent expansion of studies in 'transnational' history means that, even for historians focusing principally on the national level, the unit of analysis is not a neatly defined nation but spills across boundaries to analyze as well at supra-national and sub-national levels. The problem raised by this greater variety in the units of historical analysis is that, as the author ranges across the scales of human activity, the reader may be confused as to the principal focus of analysis. Thus, a work on 'world history' might focus simply on interpretation at the planetary level alone, or it might privilege the interplay of the global whole, racial groups, and ethnic subgroups. Both author and reader must be clear on the principal unit or range of analysis for any given work.

The internal frame of analysis is as important as the external boundaries of historical studies. For global historical studies, framing the analysis in terms of systems is especially helpful. Systems are historical entities or analytical constructs for which the whole is composed of elements and sub-systems. The sub-systems generally have distinctive functions so that their interconnections enable the whole system to function. World-historical interpretation benefits greatly from a systemic framing, especially since it encourages analysis at multiple levels.<sup>6</sup> The particular approach to systems, however, varies rather sharply according to the philosophy of the analyst. Some historians have been critical of systemic approaches to world history, assuming that such approaches privilege a totalizing view of history that only considers interactions at the global level. World-systems analysis, for instance, is one sort of systemic

approach to world history, but there are many other sorts of systemic approaches to the world.

The disciplinary frame provides a set of tools and an academic subculture within which problems are set up for study and then investigated. The principal organization of academic life is by disciplines that are studied within academic departments. The disciplines are organized for the study of certain types of phenomena; they are specific in their use of theory and method and develop literatures to publish their results. World history, while it falls most obviously within the discipline of history, also ranges across the disciplines.

The discipline of history was long categorized among the humanities. As such, history emphasized the skill of presentation as much as the depth of analysis. Historical scholarship was also parallel to studies in the arts such as art history and music history and parallel to study in such professions as religion, law, and education. As the social sciences formed in the eighteenth and especially nineteenth centuries—bringing into existence such disciplines as economics, politics, anthropology, and sociology—history took up a growing affinity to social sciences. The social sciences emphasized theoretical approaches from the beginning; fields of the humanities and the arts developed theories beginning in the late twentieth century, notably in literary theory. The discipline of history developed deep ties to the social sciences but also developed new links to the humanities, arts, and professions. In addition, historical analysis began to expand to the natural sciences and medicine. This was in response to the substantial expansion of historical studies in such fields as geology, biology, and medicine. For world history, its position as a developing subfield within the discipline of history became somewhat uncomfortable as world historians reached steadily into other disciplines and, in the same process, found themselves with an expanding need of theoretical knowledge in various fields. Meanwhile, two competing organizations of academic study—area studies and global studies—developed to provide both new support and new problems for world-historical analysis.

Area-studies analysis has been important in the development of world-historical analysis. The combination of history, anthropology, political science, sociology, and cultural studies, focusing especially on the past two centuries of experience outside of Western Europe and North America, has been the principal source of interdisciplinary analysis in world-historical studies. In somewhat parallel groupings of disciplines, American studies arose in the 1950s as a multidisciplinary framework for study of the United States, and cultural studies arose in Britain as a cross-disciplinary framework for analyzing culture and society.

As a disciplinary framework for understanding the world, 'global studies' is arguably an alternative to 'world history.' World history gives systematic attention to change over time but draws eclectically on the range of data and analytical frameworks in completing its temporally structured analysis. Global studies gives systematic attention to disciplinary and cross-disciplinary analysis but applies its analysis eclectically over time. In practice, 'global studies' has focused on some disciplines more than others, giving particular attention to international relations, economics, and environmental

issues. Further, the field of global studies has tended to restrict its temporal frame to the very recent past and to the immediate future. Nevertheless, a consideration of the possibilities of world history and the possibilities of global studies suggests that there might develop, in the years to come, a more structured attempt to develop a more systematic, historical, multidisciplinary framework of analysis of human society and its interaction with the natural world. Of course it is utopian to imagine that scholars would be able to analyze everything at once. On the other hand, it is possible that consideration of the full range of possibilities will result in development of new constellations of disciplines and new domains of analysis that will explore larger realms of data and experience than are now studied. Historians, because of the relative breadth of their view, should consider taking positions of leadership in the reconfiguration of global studies.

To conclude this review of frameworks for world-historical study, it is relevant to return to the question of scale. The term 'scale' refers at once to the breadth of topical scale, the breadth of geographical scale, and the range of temporal scale. In the most elementary approach to world history, privileging the dimension of space, only studies that address a large geographic space can be considered as world or global history. In an expanded approach to world history, studies that address a long period of time, even if limited to a small region, can also be considered as contributing to world or global history. Further, historical studies considering the interaction of a wide range of topics, even within a small territory and for a short period of time, adopt a wide scale along the dimension of topics. Such studies can also be considered as global history, though many might be reluctant to use the label of 'world history' for such a study. Most historical study is limited to the past 200 years, although the experience of our species, *Homo sapiens*, is now estimated to reach back some 200,000 years and the history of the genus *Homo* to which we belong goes back some four million years. To the degree that the term 'history' is restricted to the recounting of the past (rather than the actual events of the past) its application had long been limited to the times and places for which written records were available, and thus to the past four or five thousand years. The term 'prehistory' was adopted for study of the events of times before 5,000 years ago; it was also applied to more recent but preliterate times in other areas, so that 'prehistory' could include times from two to five centuries ago for most of the Pacific world. But the field of history has expanded its source materials to include many sorts of evidence in addition to written records. For this reason the term 'prehistory' has arguably lost its relevance and should be replaced with 'history.'

All of the above is a review of framing the world-historical study: we turn now to world-historical analysis within these limits.

The work of analysis brings together the tasks of exploring historical evidence and interpreting the dynamics of change. The exploration of evidence involves locating relevant evidence and then ordering it. Evidence, as argued in the previous section, is of several sorts and levels, including direct and 'primary' evidence, indirect evidence, and calculated or estimated evidence. The term 'data' is used for evidence that is undergoing analysis. The data include previous interpretations and analyses, so that

the analysis is seen to be recursive from the start. Dynamics of historical change and continuity are believed to exist in the real world. Interpreting the dynamics of change consists of creating models and theories of those dynamics, based on beliefs about the nature of stasis and change in the world and in human society and on the way traditions and innovations are passed on. Thus, terms such as statics, dynamics, interactivity, and equilibrium have been developed and applied across varying scales of time, space, and topic. The combined completion of these tasks of exploring evidence and interpreting dynamics yields, as a result, a set of historical interpretations of greater or lesser specificity, analytical rigor, or relevance to the historical situations analyzed or those in which they were composed. The direction of the interpretation can be signaled by a thesis statement or an interpretive conclusion: these are found both at the beginning and end of historical works. Such statements are presented sometimes as hypotheses to be tested and sometimes as conclusions resulting from exhaustive analysis; sometimes they are labeled as 'theory.' They can focus on the identification of a dynamic or a historical trajectory or the consequence of an origin.

Analysis is interpretation through systematic and logical study of change. But there are many sorts of logic. Analysts can choose between inductive and deductive approaches. They can give preference to qualitative or quantitative evidence. In explaining change, they can emphasize cause-and-effect mechanisms of change or feedback and change. Analysts can give most attention to finding the dominant influences and the dominant relations within a set of data, or they can focus on identifying the strongest connections and the widest range of connections. These varying approaches to interpreting the past are generally related to the philosophical approach of the investigator.

Attention to models in historical interpretation and analysis is a particular emphasis within world history. Historians, in making sense of the past, interpret or explain change—that is, the dynamic processes of human life. Inevitably, they carry simplified models of the dynamics of change. Analysts focusing on qualitative, descriptive approaches, using inductive logic, tend to be wary of the term 'model,' but nonetheless can generally be found to follow a systematic logic in their handling of data. The facts cannot speak entirely on their own, and need to be represented through authorial choices that are necessarily simplifications of reality. For this reason, it is important to emphasize that historical metaphors are models. That is, the metaphor of the ship of state provides a clear if indirect statement of the organization and dynamic character of the state.

For historians who are emphasizing formal analysis relying on deductive logic, models often take the form of theories. In certain arenas of study, specific theories have been developed to formalize analysis. The term 'theory,' as with all important words, has multiple meanings. Theories in natural sciences and social sciences have long existed; theories are being developed more recently in the arts and humanities. For the most fully developed theories in the social sciences—for quantitative work in economics, sociology, and political science—a theory identifies specific variables for analysis, data on those variables, and assumptions on the relationships among

variables; it proposes a stable relationship among variables wherever the variables appear. Competing social science theories seek out improved correlation with available data by modifying variables, assumptions, and hypotheses. But for theory in the arts and humanities, where variables and relationships are more complex and interdependent, the identification of key variables is sometimes the main point of the theory.<sup>7</sup>

The study of connections—linking areas of human experience to each other—is the most effective and practical way to expand knowledge of world history. The practice of studying connection is that of seeking out links and parallels among events, processes, perspectives, and other aspects of the past. The systematic study of connections leads in many directions. It highlights interactions and dynamics in human affairs and leads to improved work in modeling and theorizing. It contributes to historical synthesis, in which the historian constructs an overall description of large-scale historical processes. It reveals the existence and the functioning of systems in human society and the natural world. Although most of the methodological specifics of world historical work are very similar to those of the various disciplines and other scholarly fields on which they draw, the manner of their application must be tailored to the nature of world-historical analysis. Put in simple terms, the world-historical method involves always looking for additional connections of the analysis to more places, different times, or related topics.

Here is the formulation of the full range of stages in world-historical method that I have proposed in an earlier study.<sup>8</sup> The process begins with the investigator selecting a topic of study; selecting a topic almost necessarily entails adopting a framework within which to explore the topic. The next step, which can be called 'exploratory comparison,' consists of looking at the topic from as many angles as possible—and comparing it with as many parallel topics as possible—to ensure that one has not neglected important aspects of the problem. The third step, once a real familiarity with the topic has been established, is to specify the precise research design, consisting of an analytical model of the historical dynamics of the topic, a method for documenting those dynamics, and a working hypothesis on what results the analysis is expected to show. This definition of the model includes setting its topical, geographic, and temporal scale. The next step is the collection of additional data and fitting them to the model: at this stage there should be particular attention to locating connections within the evidence and connections among historical sub-systems. While the specification of the project's model of historical dynamics necessarily involves simplification of the past, the attention to connections should identify complications that require further study.

Once the processes of defining and conducting a world-historical analysis have been completed, the investigator must hope to be able to confirm or verify the interpretation. How do we know about the world? How does a reader assess the validity of a historical narrative or interpretation developed by an analyst? The concept of verification was developed out of localized and experimental studies. Yet it is applied as well to cosmological studies of the universe. Is there a way to verify interpretive statements about the earth and its human history? Unfortunately there exists no dependable single process for confirming a world-historical interpretation.



Approaches to confirming interpretations vary widely. At one pole one finds works that give no confirmation beyond the simple affirmation and reaffirmation of interpretive statements. A slightly stronger approach consists of confirmation by documentation of the interpretation with examples, though this approach may stop short of testing for weaknesses in the argument. Both of these approaches rely on the plausibility of the interpretation.

Advancing the world-historical literature, however, requires that analysts go beyond asserting the plausibility of their interpretation. Two existing procedures are the testing of interpretations by hypothesis testing (for cause-and-effect analysis), requiring systematic handling of data and assumptions, and a more informal process of confirmation by feedback testing (for feedback analysis). These procedures are useful for suggesting the logic of confirmation, but world-historical analysis is generally too complex to fit the specific criteria for applying these techniques.

Perhaps the most practical approach for moving toward verification in world history is the effort to provide multiple narratives and multiple interpretations of historical processes, to pose the question of which is most satisfactory. That is, at present it seems that the best way to make progress in confirming interpretations in world history is for investigators to produce multiple interpretations of a given issue, thereby encouraging debate which will further sharpen the issue. The conduct of multiple analyses of a given world-historical topic offers the hope of locating where the real variance is.

The above steps constitute a single iteration of a world-historical research project. But an essential element of world-historical method is the reformulation of the issue and the conduct of another iteration of the research from a different perspective. That is, the investigator should shift perspectives and repeat the analysis with slightly different assumptions, to see if the results of successive analyses from different perspectives converge to give a common interpretation.

## REPRESENTATION

The representation of world history is the aspect of world-historical study that gains the largest audience: it consists of the practices of writing and reading in world history. Initially the writing and reading of world history take place within national limits or within the limits of a given language. Ultimately world history takes place at a broader scope. It can include readers from multiple regional and cultural backgrounds, looking for analysis and interpretation on a global level. Fundamentally, authors are writing for a transnational audience, developing and invoking rhetorical devices calling up the global past, and portraying global dynamics.

The methods of presentation, as distinguished from methods of analysis, are equally central to the completion of a historical work. Historical works are most commonly presented in textual form: the author may choose among such forms as description, interpretation, narrative, and analysis. More broadly, the creator of a historical work

may choose among such media as text, images, video, and multimedia assemblages. Most commonly in recent years, world history has been represented through textbooks. In any of these media, the creator faces the question of how to convey the logic of interpretation. As a general rule, it is best for the creator to break free of recapitulating the actual stages of discovery of the interpretation: once the conclusion is known, it may be possible to discover more elegant and heuristically comprehensible ways to read it.

Various approaches to the interpretation and representation of world history have arisen from the range of disciplines and schools of history that have taken on study of large-scale historical issues. In one description of this range of approaches, Diego Olstein has categorized current global historiography into the approaches or analytical paradigms of world history, world-systems, civilizations, comparative history, historical sociology, and area studies. He has distinguished among their substantial vs. analytical ways of crossing boundaries; study of several enclosed units vs. the world as the unit of analysis; diachronic vs. synchronic use of time; and endogenous vs. exogenous sources of causation. He argues that, taken together, these approaches have the potential to articulate the full range of approaches to large-scale or macro-historical issues in history.<sup>9</sup> In sum, an effort to encompass the full range of writings at the macro-historical or world-historical level can advance the breadth of discussion and the breadth of understanding.

Debate among authors is essential for developing wider understanding of an issue. For world history, as for other fields in which there are few researchers and an immense range of topics to be studied, the tendency is to allow a single scholar to become the expert in a given field of study. The result is that analytical frameworks and conclusions tend not to be challenged. Instead, there is an advantage to having multiple scholars and multiple approaches contesting the interpretive ground of the various topics of world-historical study.

To present historical interpretations at a global level, it will be necessary to communicate with readers in understandable terms at various scales of the past. Up to the present, certain conventions have dominated the world-historical literature, including continents (for space), centuries (for time), and societies (for social complexity). These conventions have undergone some useful critique, but there has been no systematic evaluation of the language for describing the past in terms most useful for assessing global patterns.

Communicating with readers depends most basically on developing a global narrative through a terminology and a style that can reach readers in many social situations. Such a narrative must convey the functioning and malfunction of social systems, and must enable readers to visualize historical processes at levels ranging from the individual to the global. In addition, authors of world history need to find ways to convey key elements of the models and theory they have adopted in conducting their analysis. Readers need to be presented with some device for assessing the validity of world-historical interpretations.

The number of readers of world history has only recently become large. Since national history has been the dominant genre of historical writing, readers have commonly applied the conventions and practices of reading national history to the works in world history that they read. This can lead to confusion or outright

misunderstanding of world-historical texts, such as treating world history simply as the accumulation of national histories. In addition, for general audiences, historical writing focuses heavily on biographies, military history, and history of families and communities. Here again, the well-established practices of reading in those fields do not necessarily facilitate the reading of world history.

Readers most commonly encounter world history as presented in the narrative form. As world-historical readership has expanded, it has tended to evaluate writings in comparison to the established national historiography. World history has expanded through critique of the canons of writing national history; this scrutiny should lead to critical discussion of the rhetorical devices by which nations and their distinctive experiences are invoked. Thus, national history is not uncommonly seen through the experience of the nation's metropolis. With some adjustment, the same metropolis might serve equally well as a representation of the world. Similarly, such competing narratives might address empires in contrast to nations and religion at the global level. Classroom experience confirms that readers of history generally, including world history, like to be able to read multiple authorial views in order to clarify their own interpretation of the past.

As of the early twenty-first century, it is probably the case that most readers of world history are students reading textbooks at undergraduate and secondary school levels. While they have been surveyed by various authors and publishers, these students have not been in a position to formulate actively their responses as readers. While this is not the place to develop a full analysis of readers' reception of world history, one may note that existing theory, developed for literary studies, can be applied to assessing readers' reception of world-historical writing, including the issues of apprehension, consumption, appreciation, and appropriation.<sup>10</sup>

## CONCLUSION

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This review of the epistemology of world history has ranged across numerous issues, with the intention of setting the specifics of world-historical knowledge in broader context. This concluding section, in contrast, selects from the full discussion the epistemological issues that appear distinctive to the study of world history.

In conceptualizing world history, an emphasis on the multiple dimensions of the world itself serves to clarify both the immense extent of the field and ways to select workable topics for study. The dimensions of topic, space, time, and the varying scales of experience and analysis along each of those dimensions define the scope of the world; this scope is then linked to the multiple dimensions in our apprehension of the world. A second key conceptual emphasis is attention to multiple perspectives, including both attention to the multiple perspectives of people in the past and attention to the multiple perspectives in apprehension of the past by investigators and readers today. Thirdly, the notion of systems has shown itself to be valuable in conceptualizing

the world. While there is much work to be done before notions of systems can be made sufficiently supple to be employed regularly by historians, the benefits of systems-thinking in identifying connections, hierarchies, and the interplay of sub-systems provide important contributions to rendering coherent the analysis of the global past.

In the analysis of world history, there is an advantage to distinguishing between the complex task of setting the frame for study of historical problems and conducting the analysis proper within that framework. The framework, in turn, includes three distinctive aspects: the boundary conditions of the external framework, an internal framework centering on the identification of historical systems and sub-systems, and a disciplinary framework providing the tools for study.

Attention to connections in the past remains the single most important tool in world-historical methodology. Breaking the habit of looking at events and situations on their own—learning to look over every hill in search of parallels and connections—is the first big step in world-historical study, and its application leads the investigator to address several other important analytical issues. Attention to connections helps to document the social systems and sub-systems of the past. Cross-disciplinary analysis, already a central aspect of world-historical study, is likely to grow in importance. In the many disciplines of academic analysis, we find that new knowledge, with a temporal dimension, is being developed rapidly. This knowledge is spilling into the historical arena, and historians have a particular opportunity to synthesize and connect this information. In any instance of world-historical analysis, investigators should pay explicit attention to modeling the processes under study. The model need not be elaborate, but it must be consciously chosen, applied to the historical data, updated based on experience, and articulated to the reader. More generally, world historians will benefit from a continuing discourse about their methods and a continuing reevaluation of both the general principles of gaining historical knowledge and the specific needs of study of world-historical issues.

In representing the world-historical past to audiences, authors need to develop specific forms and conventions that can convey effectively the patterns of global change. Despite the complexity of modeling, disciplines, method, historical evidence, and narrative, there is a need to find ways to write on several levels. Interpretations must be presented to audiences ranging from students in the classroom to general audiences to academic specialists; ultimately these interpretations must reach people in communities varying widely by language, nation, and cultural tradition. For all of these subgroups within the global audience, interpretations of world history should be informative and entertaining, should elicit discussion and debate, and should provide the audience with ways to assess their validity and relevance.

Finally, scholars must acknowledge and come to terms with the recursive dimension of world-historical epistemology. Positivistic thinking—separating issues and situations for independent analysis—is useful as a tactic in study of world history but is insufficient to convey the overall character of the field. Thus, no historical analysis begins from the beginning. That is, an analyst of history has always participated in prior discussions about history. He or she, having read the historical literature, has



become acquainted with methods and interpretations and has been induced to employ the philosophical outlook prevailing in that literature—or to contest it as a reader and develop another outlook. Interpretations become evidence in future interpretations. Similarly, evidence and apprehension interfere with each other; apprehension and modeling each involve selection and abstraction; theory governs the ontology of evidence but ontology limits and shapes theory; early events shape and limit later events but the later events color the evidence and interpretation of earlier events. The challenge of world history is to trace temporal patterns of order and disorder through clouds of interactions in evidence and apprehension, reality and interpretation, analysis and representation.

## NOTES

1. These six dimensions were earlier articulated in Patrick Manning, 'Concepts and Institutions for World History: The Next Ten Years,' in *World History: Global and Local Interactions*, ed. Patrick Manning (Princeton: Markus Wiener, 2005), 236–42.
2. The general category of ontology includes, as specific types, taxonomy and typology. A taxonomy is an ontology in which the elements are assumed to be related through evolution, as with geological and biological taxa. A typology allocates evidence to categories based on similarities without assuming evolutionary links. The creation of a successful typology, by identifying similarities and differences among the instances being classified, can impart a great deal of knowledge. But the typology and accompanying classification of evidence does not by itself establish the relationships among the categories nor among the instances classified. Some of the evidence under classification can be identified as variables or factors. A factor is a typological category such as 'ethnic identity' that is asserted to have a coherent category yet which can vary both in quality and quantity. A variable is a typological category such as 'price of bread,' which is assumed to have an identified and consistent quality, but for which the quantity may vary. Variables are, therefore, defined and used in quantitative analyses, while factors are used in analyses that are qualitative and perhaps also quantitative.
3. William H. McNeill has argued that the historical sciences—notably geology, astronomy, and biology—moved steadily closer to history in their philosophy and method during the twentieth century. McNeill, 'Passing Strange: The Convergence of Evolutionary Science with Scientific History,' *History and Theory* 40, 1 (2001), 1–15.
4. The term 'perspective' is often generalized to account for both location and lens. Patrick Manning, *Navigating World History: Historians Create a Global Past* (New York: Palgrave Macmillan, 2003); Manning, 'Concepts and Institutions.'
5. John E. Wills, Jr., 'Putnam, Dennett, and Others; Philosophical Resources for the World Historian,' *Journal of World History* 20, 4 (2009), 491–522.
6. I am grateful to Eric Vanhaute for his articulation of the importance of systems in world-historical analysis.
7. Historians can be creators of theory as well as users of theory. Historians, since they typically deal with a wide range of phenomena, encounter numerous theoretical domains.

One approach to this complexity has been for historians simply to accept and appropriate the results from various disciplines and incorporate them into historical studies, without detailed review of the analysis. Another approach is for historians to learn details of the various theories applied to the materials they study, and to add to the depth of analysis. Still further, in some situations it is relevant for historians to construct theory. That is, while specialists in the disciplines are best placed to theorize within their disciplinary limits, historians can be specialists in linking various disciplines to each other, connecting not only the different types of evidence but also the accompanying theories.

8. Manning, *Navigating World History: Historians Create a Global Past* (New York: Palgrave Macmillan, 2003).
9. Diego Olstein, 'Monographic and Macro Histories: Confronting Paradigms,' in Patrick Manning, ed., *Global Practice in World History: Advances Worldwide* (Princeton: Markus Wiener, 2006), 23–38.
10. For a founding work in literary reception theory, see Hans Robert Jauss, *Toward an Aesthetic of Reception*, trans. Timothy Bahti (Minneapolis: University of Minnesota Press, 1982).

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