

Global History

Historiographical Feasibility and Environmental Reality

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The history I should like to see written is one which probably cannot be written adequately yet: that of the world since the Second World War, and more particularly, during the third quarter of the twentieth century.

—Eric Hobsbawm, “The Missing History”

Introduction

Global history is the unwritten history of the twentieth century, and we have to find out how it can be written. Yet this term global history is not only intriguing but also quite arrogant. It is intriguing because it captures an important part of what is going on in the world around us, and it is arrogant because it sounds so bombastic and seems to violate the guideline that small is beautiful and that first-rate historical work should be narrowly focused and based on original research.¹ The source of this ambivalent response to global history is not the emergence of global realities as produced by countless historical actors but rather an inflated concept of global history as produced by some historians and social scientists. Everybody recognizes the turn toward globalization in contemporary history, and we are ready to assume that global history works on the level of reality. However, on the level of historiography, we are not so sure and are inclined to be skeptical, if not worried. Neither the successful institutional implementation nor the “correct” conceptual construction of global history are matters that one can take for granted.

This chapter builds upon a research-oriented construction of global history. It identifies the set of global realities that could and should become the focus for vigorous research, and it takes a first cut at what is currently the most prominent global reality, the global environment. Of course, that is much too limited an approach for a full treatment of global history, but comprehensiveness is not my aim here. I want to explore the professional feasibility of writing global history, and I will be satisfied if I can make that point.

The first section distinguishes between World and Global History. I shall be arguing that Global History should not be identified with traditional World History. However, the terminology is in flux, and a clear-cut understanding of the conceptual differences between the approaches of World and Global History is warranted. Global History is not a twentieth-century supplement to World History but rather a new and distinctly different approach to the study of global processes in contemporary history. This does not mean that all work cataloged under the heading of World History is of little value. In fact, newer studies in World History are often valuable contributions to the prehistory of global studies (especially the work of Philip Curtin, Alfred Crosby, and Michael Adas). The growing literature about global issues in fields such as sociology, economics, and international relations is already playing a significant part in enhancing our understanding of current history.

[Oct. 2001: *The preceding paragraph has been revised to conform to the way I have come to distinguish between World and Global History. By using lowercase and uppercase letters I try to call attention to the difference between raw and refined history (history and historiography): lowercase letters (global history/world history) point to the raw historical material; capital letters (Global History/World History) indicate what global and world historians do when they process that material. I have revised the remainder of the document accordingly.*]

To begin with, Global History does not attempt to give a total account of us, our world, or times past, present, and future. Traditional World History, particularly in its totalizing form, tried to cover the whole world, the whole human past, and the whole of humanity. But these are no longer plausible conceptions due to the growth in knowledge and an increasing complexity. I object to grand syntheses of world history and endorse the writing of comparatively humble pieces of work. Studies in Global History are likely to deal with “big structures, large processes and huge comparisons,”² but acceptable contributions must be of limited — that is, less than total — scope, and they have to be research oriented.

My own experience tells me that global history is a great teaching field; yet I hold that Global History must prove its viability by becoming a productive research field first and foremost. World History tried to launch itself via teaching³ and a few outstanding contributions like William McNeill’s *Rise of the West* (1963), but it never managed to overcome the doubts of the research historian who thought: If one does not read all the languages of the world — and who does? — and if one has not searched all the archives of the world — and who has? — how can one tell the story of world history professionally? Of course, total knowledge is an impossible standard, and even the most local historian would not want to subscribe to it.

There is nothing wrong with bold generalizations and high levels of abstraction. But it defeats the purpose of advancing historical knowledge if the specialists appreciate the stories in the globalist’s account that they do not know much about and fault his or her scholarship in the fields of their particular expertise. Concerning devastating qualifications of this kind, my prescription emphasizes researchability and a drastic reduction in holistic weight. To overcome the skeptical attitude in the historical profession, which I happen to share, I propose to construct Global History as a cross-cultural, multinational, interdisciplinary, but nevertheless completely ordinary research tool for historians and social scientists.

The second section of this chapter lists the realities of our new global history world and claims that Global History investigates the emergence and present character of self-conscious, multiple local activities with immediate worldwide range, consequence and/or significance. Global historians study subjects interacting on a global plane — that is, human actors who are aware of and responsible for the evolution, interplay, and cross-fertilization of a global civilization with a global technoscience in a global environment. After these preliminary theoretical clarifications, I finally proceed to sketch the paradigmatic ecological reality of global history, namely, our continuous unveiling, changing, monitoring, and interpreting of the face of the earth.

I. Historiographical Feasibility

The urge to understand it all is a universal condition. But the wish to understand it all by *seeing* it all in one sweeping glance has certainly become very strong in the tradition of Western “man.”⁴ Lucian’s Icaromenippus improved on Daedalus and Icarus and securely attached the right wing of an eagle and the left wing of a vulture to his shoulders, and flew up to the moon. He peered down from on high and saw

the traders, the soldiers, the farmers, the litigants, the women, the animals and, in a word, all the life that the good green earth supports... Whenever I looked at the country of the Getae I saw them fighting; whenever I

transferred my gaze to the Scythians, they could be seen roving about on their wagons: and when I turned my eyes aside slightly, I beheld the Egyptians working the land. The Phoenicians were on trading-ventures, the Cilicians were engaged in piracy, the Spartans were whipping themselves and the Athenians were attending court. As all these things were going on at the same time, you can imagine what a hodge-podge it looked (Lucian, 1988: 289 and 297).

The satirist from Samosata on the Euphrates who settled in Athens in the second century A.D. and Leften Stavrianos, the world historian from Vancouver who settled in Chicago in the twentieth century, both wanted to see it all and all at once. Lucian adopted a lunar point of view to mock the “comical little creatures” on earth. Stavrianos, however, called for a more serious view from the moon in 1964.⁵ He proposed to adopt a lunar perspective in order to gain “a higher, unifying vision of the whole human past” (Allardyce, 1990: 40). With Lucian, we can laugh about human vanity, but with Stavrianos, or, better, with the concept of a “unifying vision of the whole human past,” we must struggle. It was meant well, but I believe that it was and is impossible, and, as far as I am concerned, neither desirable nor acceptable as a goal.

In what follows, I will try to explain this opinion. The goal of creating a unifying vision of the whole human past strikes me as very *alteuropäisch* (old-European); it tries to compute the sum total of everything, which creates an epistemological dinosaur. *Le grand récit a perdu sa crédibilité* (“The grand narrative has lost its credibility”), declared Jean-François Lyotard in *La Condition Postmoderne* (1979: 63; 1984: 37). I would like to emphasize that for the scheme of Global History. What must be resisted is the temptation to create a new grand narrative for our time, which lurks in deep ecology,⁶ new wave holism,⁷ the “comprehensive self-organization paradigm,”⁸ and other currents of thought.

The word for “too global” is *globaloney*, used in 1951 by the *Chicago Tribune* to ridicule the idea of using World History as a means to advance world peace (Allardyce, 1990: 28). I think one should try to avoid this epithet. Therefore, I would like to endorse the writing of *petits récits* (little narratives) in an interdisciplinary, cross-cultural, and multinational research field, which would be thematically organized much like women’s studies or science studies and might, in turn, be called global studies.

World History has been called Universal History and, occasionally, Ecumenical History—historians are notorious for their terminological generosity. All these terms are functionally equivalent despite their semantic nuances and different conceptual histories. The idea that World History has to “unite the whole human past and be total, global, and universal in time and space” (Allardyce, 1990: 67) captures in a nutshell, unfortunately with approval, what I mean by traditional World History.

World History and Global History are often used interchangeably. This can be seen best in the editorial statement in the first issue of the *Journal of World History*, which began publication in spring 1990. The editorial ran under the title “A New Forum For Global History.”⁹ The term *global history*, however, is not new. As early as 1962, Stavrianos coauthored a successful high school World History textbook under the classic prefeminist title *A Global History of Man* (Stavrianos et al., 1967). As Gilbert Allardyce wrote, “Stavrianos’s ideas connected him with those advocating the ‘global approach’ to international education, and the work of his Global History Project at Northwestern University largely coincided with the rise and decline of the globalism idea in American learning between 1957 and 1975” (1990: 43). According to Allardyce, “The term global history was simply a modish, space age name for world history” (ibid.).

A new and more promising, i.e., less total, version of World History was implied in the editorial foreword to a series of “Essays on Global and Comparative History,” published by the American Historical Association since 1987. Michael Adas, the editor of these pamphlets for college and secondary school teachers, remarked in his prefatorial note:

Though the current interest in global history reflects a continuing fascination with the broad patterns of human development across cultures that were the focus for earlier works on world history, the “new” global or world history differs in fundamental ways from its predecessors. Writers of the new global history are less concerned with comprehensiveness or with providing a total chronology of human events. Their works tend to be thematically focused on recurring processes like war and colonization or on cross-cultural patterns like the spread of disease, technology, and trading networks.¹⁰

I find two interesting points in this quote: The easy interchangeability of World and Global History, on the one hand, and the support for a non-traditional World History, on the other.¹¹ Yet it is hard to appreciate fully the achievement that this inconspicuous arrival of a new World History constitutes without a fair deconstruction of the traditional approach to world history. If we want to promote a new Global History that is modest and small as well as epistemologically up to date, we must first discuss the lingering legacies cum fallacies of grand (old) World History.

The bequest of traditional World History that is most troubling is the anachronistic desire for totality. Old World History revolves around a false trinity of (1) the whole playground of historical action, (2) the whole span of historical time, and (3) the whole of humanity as the subject of history. How could anyone ever expect to cover this much? The answer must be historical or clinical. At least some sort of megalomania inspired the young Arnold Toynbee, who wrote in 1911, “As for Ambition with a great screaming A, I have got it pretty strong... I want to be a great gigantic historian... and become a vast historical Gelehrte” (McNeill, 1989a: 31). However let us try the historical answer.

First, the whole playground of historical action started out conceptually large but comparatively small in square miles. The “whole world” of World History was nonglobal most of the time. The Greek historian Polybius, for instance, who became a voice of his masters after he was brought to Rome as a political hostage, wrote *Ecumenical History*. Awed by what he had witnessed during his lifetime in the second century B.C., Polybius presented the violent transformation of a multipolar political arena into the *Orbis Romanus* as world history. He could do that because the circle of Roman power enclosed a whole world. The civilizational horizon of this world was local, however, and did not reach too far beyond the Mediterranean rim.

The egoistical Greek word for the “inhabited lands” of the known world — *oikumenê* — was used in the bilingual Greco-Roman period to distinguish between civilized and non-civilized parts. Toynbee adopted it later for the whole “habitat of mankind,” noting that “the true extent of the Oikumenê is much larger than the area of the ‘civilized’ world known to the Greeks and Romans, but ... this comprehensive Oikumenê is nevertheless much smaller than the biosphere” (1976: 28). McNeill, in his presidential address to the American Historical Association (1985), spoke of the need for World History to develop an “ecumenical history, with plenty of room for human diversity in all its complexity.” He went beyond Toynbee and pointed out that any one person is a full member not only of the human race but also of the “wider DNA community of life on planet Earth” (McNeill, 1986b: 7). World History after McNeill is completely ecumenical and ecological or ‘ecumenological’ and covers the whole planet, with all its living beings in each and every niche of the globe, micro- and macroparasites as well as human beings (McNeill, 1980; McNeill, 1989b). That much input, however, is a mixed blessing. It changes the original equation between one particular world and “the” world and makes the task of writing world history very complicated if not impossible.

The ancient totality of World History was based on civilizational arrogance and geographical ignorance. It allowed the more or less undisturbed side-by-sidedness of numerous self-centered worlds, theoretically with a homegrown world historian for each one of them. All these Polybiuses could write local world history, but none of them could write global world history. Toynbee and McNeill tried to correct this. But they preserved the old concept of totality and tried to make world history coextensive

with global history. They paid tribute to the advancement of knowledge in history, geography, ecology, medicine, and molecular biology. But the World History that worked was not global, and the Global History that might work will have to sacrifice totality. The fields of historical action have not only grown rather numerous with the unveiling of the face of the earth, they have become ever more complex due to other advances of knowledge. The world's geometry has become fractal; totality is a nonentity. We experience worlds within worlds within worlds — far too many for any grand narrative.

Second, the whole span of historical time accumulates with the increasing production of historical literature. “It has been calculated,” wrote F. R. Ankersmit in a recent article on historiography and postmodernism, “that at this moment there are more historians occupied with the past than the total number of historians from Herodotus up until 1960.”¹² And well over 90 percent of these historians, I could add without much computing, are specialists. They may be classified as African, American, or Asian historians, for example, but the actual research work they do is much more narrowly focused. Professional expertise is limited in terms of historical approach, area, and period. Research historians understand what it means to know a field — it means to feel bold enough to identify the flaws and review the merits of new work in that field.

If it is our “great and solemn duty” to “construct the best possible portrait of the whole human adventure on earth,” as McNeill affirmed with authority in his defense of *World History* (1982: 86), then I am afraid we cannot but fail. Modern historiography constantly deconstructs by sheer cumulative effect any one portrait of the whole human past, even the best. Individual historians may not want to be iconoclasts, but their contributions add to the maze of history and are bound to offset other contributions; they function like the poor Christian sinner who is born to sin. We are no longer in the privileged position of Bishop Jacques-Bénigne Bossuet, who could proceed with blessed simplicity through a straightforward and lucid past. A Bossuet could tell his readers — the dauphin and his father, the Sun King — that history deals “only with the deeds that concern princes,” that rulers can learn from history “without any risk” (Bossuet 1976: 3), and that *World History* spares the royal mind the confusion which arises from “scrupulous attention to minutiae” (109).

This kind of universal history is to the history of every country and of every people what a world map is to particular maps. In a particular map you see all the details of a kingdom or a province as such. But a general map teaches you to place these parts of the world in their context; you see what Paris or the Ile-de-France is in the kingdom, what the kingdom is in Europe, and what Europe is in the world. In the same manner, particular histories show the sequence of events that have occurred in a nation in all their detail. But in order to understand everything, we must know what connection that history might have with others; and that can be done by a condensation in which we can perceive, as in one glance, the entire sequence of time. Such a condensation, Monseigneur, will afford you a grand view (4).

World historians have continued this explanation about the understanding of the whole ever since Bossuet with additional good words about the appropriate historical perspective, the parts and the whole,¹³ the forest and the trees.¹⁴ Bossuet, however, was in a much better a position than we are to cover “the entire sequence of time.” He started with Adam and quickly moved through the epochs of Noah, Abraham, Moses; continued with the fall of Troy, Solomon, Romulus, Cyrus, Scipio, and arrived in due time at the “last age of the world.” The *last age* began with the birth of Jesus Christ in the year 1 A.D. and encompassed the epochs of Constantine, Charlemagne, and Louis XIV. The bishop's history of the world emerged not from secular darkness but from the Lord's almighty linguistic workshop. “The first epoch begins with a grand spectacle: God creating heaven and earth through his word and making man in his image (1 A.M., 4004 B.C.). This is where Moses, the first historian, the most sublime philosopher, and the wisest of legislators, begins” (9).

It is important to notice that this grand narrative commenced with the first “year of the world,” year 1 *anno mundi* or 4004 B.C. Bossuet’s *Discours sur l’histoire universelle* (1681) covered exactly 5,685 years (4,004 plus 1,681). For millenarian thinking, this was rather close to the end of the world. Indeed, the world was expected to last 6 world days (until ca. 1996); thereafter, on the seventh day, the kingdom of God would be erected.¹⁵ The great Isaac Newton, who spent much of his time in the 1670s correlating biblical prophecies with historical data, was not the only one who tried to calculate the date for the end of the world (Westfall, 1983: 319ff.). Bossuet and his contemporaries thought that historical events were “already established and immutable and not the result of research and analysis by the historian.”¹⁶ The future, though hidden, was certain until the Enlightenment, not a multiplicity of possible futures but one written down in the book of destiny, preexistent and inflexible.

The concept of time has changed since the late seventeenth century and not in favor of traditional World History. The “famous Bossuet” was removed from the Royal Library in Paris in *L’An 2440* (1771), Louis-Sébastien Mercier’s futurist utopia. Mercier was among the first to cross the timeline drawn at the year 2000.¹⁷ Many have followed him, and we are close now. Indeed, the tremendous growth of modern historical scholarship has turned “the” past into a plurality of worlds. Only semantic inertia allows us to speak of the past as if it could be grasped in one piece. The past has, in effect, become a welter of pasts, approached from different ideological perspectives, and analyzed with the interpretive tools and gauges of over two dozen historiographical schools. All these pasts carry their own temporal horizons with futures past, presents past, and pasts past. And research historians are bound to complicate the already overcomplex picture by reconstructing these pasts within pasts.¹⁸

Third, the whole of humanity is a noble idea as long as it is understood as a regulative principle, i.e., as a safeguard against exclusive particularism. The whole of humanity is put to good use if, like Micah, we believe that everybody shall have the right to sit in peace “under his vine and under his fig tree” (Micah 4:4-5). But we enter treacherous ground when we begin to speak about the whole of humanity as if it were an existing entity. The whole of humanity is a project, not a reality. As a project, it serves to criticize human affairs in which, for instance, only men are allowed to sit under vines and fig trees. The project version of humanity keeps one’s eye on the fact that we are operating with a telos and not an achievement. If, however, the utopian and critical function of the idea of the whole of humanity is replaced by a hypostatization of what we like to think about ourselves and all other human beings at the time, then we leave the open realm of critical historiography and enter the darker domains of “mythistory.”

[Oct. 2001: *It could be argued that the whole of humanity is becoming a reality in the Global Age, in fact, I believe that this momentous change is occurring now. Now, we must investigate and describe the circumstances that led from religious and philosophical fictions to a complex reality. But that does not mean that historians should serve as eulogists or guides of humanity.*]

McNeill has taken the risk of redefining History as “mythistory” and the historian as a “truth-seeking mythographer.”¹⁹ Serious myth-history is, in McNeill’s view, “a useful instrument for piloting human groups in their encounters with one another and with the natural environment” (1986b: 10). The idea of humanity as a whole is certainly a prime candidate for modern myth-history. But we must ask, Which humanity? Do we refer to the one that is said to be a whole or the one that is but a promise? I read McNeill as coming close to saying that humanity was always out there in the world as a whole.

Humanity entire possesses a commonality which historians may hope to understand just as firmly as they can comprehend what unites any lesser group. Instead of enhancing conflicts, as parochial historiography inevitably does, an intelligible world history might be expected to diminish the lethality of group encounters by cultivating a sense of individual identification with the triumphs and tribulations of humanity as a whole (1986b: 7).

Oswald Spengler rejected the whole idea of humanity as an empty category for World History.²⁰ McNeill, by contrast, regards the ideal supergroup of humanity as the moral gravity center of world history. He more than follows the lead of his teacher Carl Becker toward an affirmation of socially honorable ideologies; he speaks in favor of “collective self-flattery,” i.e., a “flattering historiography,” requesting “an appropriately idealized version of the past.” He understands World History as an effort to “allow a group of human beings to come closer to living up to its noblest ideals.”²¹ Thus, McNeill puts the world historian in a very responsible position for the “right” course of history.

Living up to the universalistic ideal of humanity as a whole, however, has already meant many things: Catholic theology, Christian mission, Enlightenment philosophy, Marxian revolution, European imperialism, and so on. It is not an easy task to speak for the whole with legitimacy, especially when the whole is not a live subject but a compliant macroconcept of metahistory. Spengler ranted against the “West European scheme of history, in which the great Cultures are made to follow orbits round us” and rightly ridiculed it as the “*Ptolemaic system of history*” (1965: 13). Yet his own “Copernican discovery” of the morphological laws of world history could not identify more than eight world cultures, and that short list contained only two cultures of which he knew something: the Greco-Roman and West European (Faustian) ones. Stavrianos’ World History “of man” was designed to speak for the whole of humanity but left half of it out.

Our situation might be different if the first decades of the “atomic age” had led to one all-encompassing world state or a new, truly unifying world order. Toynbee,²² Jaspers (1953), and many other great thinkers about the big picture in the 1950s believed that they were experiencing an end of history and predicted some kind of world unity “either by force in a despotic world-empire or through mutual agreement in a world order based on the rule of law” (Jaspers, 1953: 24). None of this has come true, but all of it can be a topic in the origins of global history. Today, the whole of humanity is no less a fiction than it was yesterday. Humankind is neither uniform nor united. To be sure, the universalistic concept of one humanity can still be helpful, but only if it is applied to the abundant misery of human history in a deconstructive way, that is, as a radical critique à la Marx of all circumstances “in which man is humiliated, enslaved, abandoned and despised.”

II. Environmental Reality

The list of global realities is as profuse as it is confusing. It jumps from global economy and global ecology to global politics and global pollution, from global tourism and global terrorism to global communication and global diseases, from global warming and global social movements to global science and global technologies. No doubt, the preferred adjective of the current Zeitgeist is “global.” It crops up in everything, even in history. Leaving nothing out, the global perspective lives up to its name and generates more noise than information. We are inundated by global issues and swim around in global waters — but what is it exactly that we are swimming in and talking about?

I assume that our planet is the point of reference when we speak about global realities. The entire physical globe serves as the standard or benchmark by which the production of global realities is measured. Everything below this mark is nonglobal. We can say that global realities are produced by multiple local activities with worldwide range, consequence, and/or significance. Accordingly, the term *globalization* can be understood to indicate the spreading and interpenetration of multiple local activities with worldwide range, consequence, and/or significance.

For example, Mitsubishi Corporation, which has “13,629 employees working in 232 offices around the world, who send in more than 30,000 pieces of information every day,”²³ is engaged in numerous

local activities of the defined kind; it coproduces the global economy and contributes to the globalization of trade. Electronic scholars who have instant access to libraries and databases all over the world fit our definition as well. They can add their terminals to terminals everywhere via their local electronic networks and join electronic discussion groups (e-mail lists) in their fields of interest.²⁴ They take part in an activity that coproduces the emerging global culture of ubiquitous information, babble, and discourse.

To order our heterogeneous list of global realities, we start again with the planet itself. Global warming and pollution are realities that pertain to the whole earth. They globalize myriads of local activities that impinge on our natural habitat. It seems appropriate to collect them in a folder named *global environment*. Global communication, modern science, and high technologies, however, belong to another group. They globalize advanced Baconian activities and create an artificial environment populated with the realities of a virtual or second nature. I propose to place them in a category termed *global technoscience*. Global economy, politics, terrorism, tourism, and so on, form a third cluster of realities. They globalize an expanding variety of socioeconomic, sociopolitical, and sociocultural activities²⁵ that constitute critical elements of what might be called the first *global civilization*. So, for the time being, we venture to say that cascades of local activities with worldwide range, consequence, and/or significance produce a cluster of socially linked realities: a global environment, a global technoscience, and a global civilization.

As a hypothesis, we might suggest that global history will have to reconstruct the emergence and present character of these activities and study their evolution, interplay, and cross-fertilization. This, however, is not a task for one worker but for scores of social scientists cum historians, research teams, and institutes. I continue, therefore, with a discussion of the global environment, our most obvious global reality to date.

Tender loving care for the global environment has become the currency of political rhetoric in the late twentieth century. “If we don’t address the issue of global ecology, we won’t have to worry about the other issues,” declared the president of Mexico, Carlos Salinas de Gortari, in a full-page advertisement in the *New York Times* recently. He announced that the Mexican government would host the United Nations World Environment Day on June 5, 1990, and that “a minimum of five million trees [would] be planted throughout Mexico” on that very day, “as many as possible planted by children.”²⁶

The rapid diffusion of environmental concerns in the last twenty years — real or apparent, inspired by political interests in one way or another, and articulated by schoolchildren and world leaders alike — is truly remarkable. The new environmentalism²⁷ has succeeded in making the health of the global environment a local political issue in many places, including the countries of the former Soviet Union (Hall, 1990). More and more people have come to understand that we have one physical environment only — that our environment is global and that it can be ruined. This knowledge was produced and is sustained by four multiple local activities with worldwide range, namely, (1) the unveiling, (2) the changing, (3) the monitoring, and (4) the interpretation of the face of the earth.

First, the unveiling of the face of the earth by human exploration revealed the physical particularities and gestalt of planet earth. Geographical discovery began long ago, but quite a bit of the unveiling occurred rather recently. The empirical rounding of the earth’s imagined corners took all the 4,000 years from King Sargon of Akkad (ca. 2340 B.C.), who ruled over the four corners of a relatively small and flat world, to Louis XIV (1643-1715), who reigned over a much larger and rounder world — yet under a Catholic sun that was still circling around Aristotle.

Until lately, the world oscillated between spherical and flat, was walled in by forbidding oceans, and was severely limited by supposedly uninhabitable, fiery or icy hinterlands. Most ancient and medieval navigation was coastal. However, the horizons widened after Henry the Navigator (1394-1460), and “by

the year 1600 the surface of the known earth was doubled” (Sarton, 1957: 5). George Sarton, the polyhistor of science, noted how recent the unveiling of the face of the earth, in fact, was:

One of the most remarkable achievements of the beginning of the twentieth century was the tectonic synthesis of the Austrian geologist, Edward Suess (1831-1914), in *Das Antlitz der Erde*. This was an elaborate survey of the “face of the earth,” the whole earth, a description of all the irregularities of its crust, the mountains, the seas and lakes, the valleys, the river beds and deltas — an attempt to explain the deformations and foldings which led to the earth’s present appearance... It is hard to realize that in the middle of the fifteenth century, at the time when the Renaissance is supposed to begin, man’s knowledge of the “face of the earth” was still restricted to a very small portion of it, and even in that portion was very superficial. One of the great tasks to be accomplished was the discovery of the earth (1957: 4f.).

This discovery was completed, I would add, when Johannes Kepler’s “dream” came true in the late 1960s and human eyes looked up from the moon to see the earth in the sky.²⁸ “Earthrise” — the sublime Copernican spectacle of the earth rising above the rim of the moon — was seen first from lunar orbit by the crew of Apollo 8 in December 1968 and then, in July 1969, by the astronauts of Apollo 11 from a dusty base in the lunar Sea of Tranquility.²⁹ Neil Armstrong’s “giant leap for mankind” — the famous line and actual footprint — made good sense. To gain an overall view of the face of the earth, one had to leap away from it. The observer had to distance himself considerably from the global environment in order to appreciate it fully. We now possess an accurate, as well as highly symbolical, image of our home in space. This image does not represent one country or nation: It is an image of Spaceship Earth, of the “cloud-whorled blue planet,” of the “emerald globe in a black sea.”

The poetic language underscores the fact that people want to express that they have changed their minds.³⁰ The age-old struggle of society against nature has lost its relevance and legitimacy (Moscovici, 1976). People today tend to be more interested in maintaining and improving the well-being of their environment than in fighting nature. Society has become more of a challenge than nature. The unveiling of the face of the earth finally captured and dramatized our global interdependency with nature and with all fellow travelers on this planet.³¹

Second, the changing of the face of the earth by modern civilization revealed the ecological vulnerability of the planet. The negative environmental impact of *Homo sapiens* reached an unprecedented magnitude in the second half of the twentieth century and triggered an equally unprecedented burst of novel knowledge about the global mosaic of ecological systems.³² The enormous appetite of the industrial way of life for natural resources, combined with a significant increase of environmental degradation turned George Perkins Marsh’s warning that the earth might become “an unfit home for its noblest inhabitant”³³ into a close call a hundred years later. The widespread fears of deadly fallout and pollution were most effectively articulated in Rachel Carson’s “fable,” *Silent Spring*, in 1962.

The roadsides, once so attractive, were now lined with browned and withered vegetation as though swept by fire. These, too, were silent, deserted by all living things. Even the streams were now lifeless. In the gutters under the eaves and between the shingles of the roofs, a white granular powder still showed a few patches; some weeks before it had fallen like snow upon the roofs and the lawns, the fields and streams. No witchcraft, no enemy action had silenced the rebirth of new life in this stricken world. The people had done it themselves.³⁴

However, local environmental change with global consequences is not new. The determined use of fire or the agricultural and industrial revolutions were multiple local discoveries and inventions with vast consequences for the global environment. The difference between the mastering of fire or the domestication of plants and animals and, for instance, the development, introduction, and distribution of personal computers is not in range or importance but in diffusion-time. The spread of the Neolithic

Revolution across the world took millennia. The Industrial Revolution is still reaching out. Yet the spread of innovations in our time is not only superfast but also inevitably self-conscious and reflexive.³⁵

The epoch of global history was introduced by contaminated clouds, drifting with the winds and discharging radioactive ash, hailstones, and rain for days, weeks, and months. Fallout from atmospheric nuclear testing in the first rounds of the escalating nuclear arms race affected the entire earth and not just the United States, the USSR, Britain, or France. It changed the world instantly and — as far as the environment is concerned — for centuries and millennia to come. The graphite core of a nuclear power station has a half-life of 5,700 years (Simmons, 1990: 351, figure 6.2). Sure ways of ultimate disposal for high-level wastes are not known. But the existence of such waste *is* known, and that makes all the difference between global and preglobal history.

The development of radar in World War II, for example, was a military secret, to be sure, but for the people involved, it was clear from the very beginning that this was an extremely momentous innovation. No retrospective reconstruction by historians of science was needed to establish the importance of radio detecting and ranging (radar). In fact, the Radiation Laboratory at MIT had its own historian of science writing the history of radar as it was being made.³⁶ As noted before, global history is the history of self-conscious local activities with immediate worldwide range, consequence, and/or significance.

The epoch of global history privileges synchronicity, that is, lateral relations in the present, as much as modernity privileged diachronic progress from the past into the future. The debate about global warming, however, reminds us that there are still time lags between related events, but either they can be anticipated and discussed long before or they tend to become shorter with the advances of technoscientific progress. Immediacy within global history means conscious local activities and expected worldwide results of local activities are linked within the strategic horizon of the present.

Third, the monitoring of the changing face of the earth with scientific instruments, remote sensing by satellites, computer models, and other means of modern science and technology continuously reveals and projects current and approximate future states of the global environment. Worldwide and systematic monitoring of our global environment is a fairly new activity that leads to the production of potentially relevant information.

“Taking The Earth’s Pulse,” to use Daniel Botkin’s phrase (1990: 171), records two sorts of change. There is evidence of both anthropogenic changes (deforestation due to economic activities, for instance) and natural variability (for instance, in the energy output of the sun). If natural and cultural types of change interact, both are linked in one data set. This complicates the tasks of identification and interpretation. The rising concentration of carbon dioxide (CO₂) in the atmosphere is such a mixed case. As Figure 1 shows, measurements of carbon dioxide, steadily taken since 1958 on the peak of Mauna Loa, Hawaii, revealed two patterns:

An annual oscillation, with a decline in summer followed by an increase in winter, a periodic pattern as regular as the vibrations of a plucked guitar string; and, imposed on this rising and falling, a steady annual increase like a rising tone. The summer decline is the result of photosynthesis on the land in the Northern Hemisphere [which removes carbon dioxide from the air] ... The increase during the winter is the result of respiration without photosynthesis... Life on the land in its totality touches the slopes of Mauna Loa invisibly, its effects brushed against the black rocks by the winds. Our civilization is part of this invisible touch, reaching the slopes as the continual increase in the concentration of carbon dioxide in the atmosphere, which is a result of the burning of fossil fuels and the clearing of land — the destruction of forests and soils and the conversion of their stored organic carbon to carbon dioxide (Botkin, 1990: 172 and 174).

Each word about global history — a breath of carbon dioxide — is faithfully recorded on Mauna Loa as a local contribution to “the totality of the inhalations and exhalations of all the organisms in the Northern Hemisphere” (172). The same global care is inevitably taken with regard to the burning of fossil fuels in the engines of our cars. However, the increase of the annual CO₂ concentration from 315.98 parts per million (ppm) in 1959 to 352.91 in 1989 may be “excessive” or just “high”; the recent warming may be “momentous” or “within the limits of natural variability” — climatologists are divided, historians do not know yet, and global historians are not expected to find out.

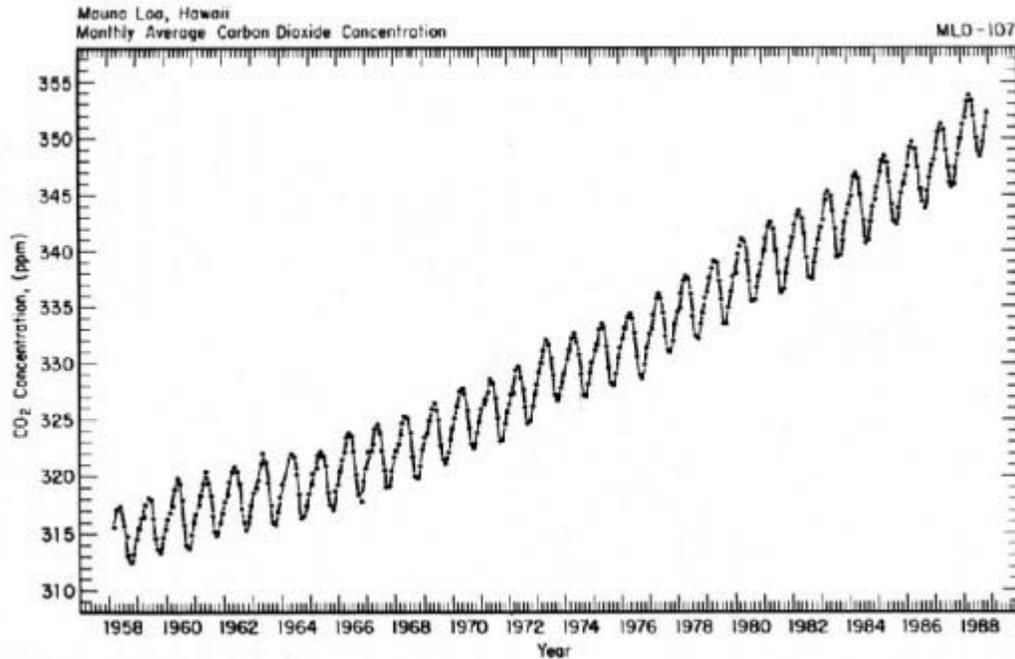


Figure 1 The rising concentration of carbon dioxide. Source: Botkin (1990: 173).

[Oct. 2001: Now, very few scientists doubt that human action is warming the earth, but there is still much uncertainty about the effects of global warming. The tropospheric concentration of carbon dioxide has risen to 369.40 ppm in 2000.³⁷ C. D. Keeling and T. P. Whorf from the Carbon Dioxide Research Group at the Scripps Institution of Oceanography have summarized the carbon dioxide record from Mauna Loa (1958-2000) at <http://cdiac.esd.ornl.gov/trends/co2/sio-mlo.htm>.]

Climatologists must distinguish between signal and noise; they must respond to the scientific challenge with “improved climate monitoring and reporting.”³⁸ The challenge for global historians lies in the very nature of this response. They bracket the climatologists’ problem and study the professional request for more and better global monitoring and reporting. They find themselves situated in a thoroughly reflexive context, registering the activities of global recorders and observing the problems of global observers. They respond to this challenge by adopting the role of global “reflexivity minders.”

Global historians keep track of the efforts and struggles to monitor, model, and manage global realities. They report about human behavior in the social and cultural climate of a global civilization that requires permanent investigation of itself and its environments. They write history in a time when people feel compelled to control the forces of global change, if not evolution, and to choose their own future history with as much foresight and understanding as possible.

Fourth, the interpretation of scientific data about the changing face of the earth reveals the mischievous structure of ecological communication in the absence of hard or uncontroversial facts. The environmental discourse exhibits deep and persistent controversies not only about ecological problems and solutions but also about facts; not only among lay people but also — and most notably — among information-rich scientific experts. We would need an expert system to settle disagreements among experts, which, in turn, we could never agree upon, and so forth, leading to an infinite regress. We must conclude that the environmental issue is politicohistorical all the way down to the construction of the facts.

We know that we lack crucial pieces of information (like the geographical distribution of organisms or the number of global species) and that we do not have all the relevant data (1.4 million species have been identified worldwide, but current estimates of South American species alone range from 5 to 50 million, for instance). However, we have and prefer to have public debates about the rate of extinction and loss of species and the best measures to avoid mass extinctions in the next century (Stevens, 1991). But then, we must also face the problem that normative interpretations of even the most reliable environmental “facts” are unavoidable. The debates about our ecological options will not be decided by neutral data but by a synergy of facts, arguments, and power.

This may come as a disappointment to epistemological purists who want environmental politics to follow the facts and not the politics. They fear the social contamination of scientific objectivity and defend the old philosophical apartheid of is and ought, facts and norms. But the “ill-structured” and “messy” epistemological situation created by conflicting views about the state of the global environment is now, by default, the human context of our natural environment. Ecological communication is about alternative strategies for the human development of nature and, thus, it is political. Scientists, social movements, subsystems of society (the economy, polity, judiciary), and international organizations conduct an ecopolitical discourse that accomplishes the normative construction of environmental facts and policies. The making of environmental history is, therefore, not just a scientific or technical issue but also a germane research topic for political scientists, sociologists, historians, and anthropologists.

If we look around, we will see that “untuneable problems are by no means rare.”³⁹ They are especially “wicked” with regard to decision-making under global constraints, observed Miriam Campanella, when problems can no longer be solved “within the boundary of a single unity of command, decisional, institutional or systemic.”

Classical rationality states that global problems require global solutions, and that global solutions require a ‘global mind.’ Nothing is further from the truth, and nothing is more false than the hypostasis of a global mind. If there is evidence that acid rain is a typical global problem beyond the action of a single state, the implementation of the global solution, when it is achieved implies the capacity to act locally by a plurality of microactors. The global solutions, then, are chosen by a plurality of agents, and implemented (or not implemented) by a plurality of actors (Campanella, 1990: 7).

In addition to the plurality of actors who shape global history, there is a plurality of problems, “each one focused by the shared credibility it enjoys in the eyes of those who subscribe to it, and each held separate from the rest by the mutual incredibility that is the global corollary of locally focused (that is, tribal) credibilities” (Thompson, 1984: 336). The commendable “de-tribalization” of “decisionmaking under contradictory certainties,” as Michael Thompson termed it, requires that we learn to deal with the legitimacy of conflicting certainties (multicertainties), the reality of the different worlds of micro- and macroactors on the global scene (multirealities), and the competition of alternative ways to answer pressing problems (multisolutions). These are conspicuous, nonconventional elements of the human condition in the late twentieth century and rich social resources of global history.

Conclusion

The history of the world since the Second World War forced a “genuinely global perspective upon us,” observed Eric Hobsbawm in 1989, adding, “‘world history’ is no longer the Western scholar’s polite concession to UNESCO, but the only history that can be written” (Hobsbawm, 1989). In this vein, I have tried to distinguish World History from Global History and to present some compelling arguments in favor of the latter — which is, I suppose, the history Hobsbawm meant when he referred to “world history” with apt rhetorical overstatement as the “only” and most relevant history today. I have also tried to spell out what it means to write global history “adequately.” The answer, I am afraid, has to address the paradox that Global History must be big enough to capture the planetary processes of our time and small enough to satisfy the requirements of normal academic research, beginning with doctoral dissertations. Traditional World History easily meets the first but hardly the second condition and is, perhaps, more a calling than a craft. However, the issue is not World History *or* Global History; rather, it is the distinction between the two and the understanding that Global History is a piecemeal history for global processes.

Notes

A first draft of this paper was discussed at the Bellagio Conference on Global History, convened by Bruce Mazlish and Ralph Buultjens, on July 8-12, 1991.

¹ For an eloquent celebration of academic narrowness, see Eric Monkkonen (1986).

² For a spirited and inspiring pleading for “historically grounded huge comparisons of big structures and large processes,” see Charles Tilly (1984)

³ Gilbert Allardyce (1990: 26). Allardyce quoted McNeill — “Try to teach world history and you will find that it can be done” — and reported that it is the policy of the World History Association (WHA), formed in 1982, to prove the possibility of World History by teaching it.

⁴ For a feminist interpretation of the visual logic of Western thought, see Evelyn Fox Keller and Christine Grontkowski (1983).

⁵ Cf. Leften Stavrianos (1964: 617): “What does this new [global] perspective mean...? It means the perspective of an observer perched on the moon rather than ensconced in London or Paris or Washington.”

⁶ For a critical review of deep ecology and related works, see Alan Wolfe (1991).

⁷ For a taste of this, see James Lovelock (1990). On p. xvi, he wrote, “Gaia theory forces a planetary perspective. It is the health of the planet that matters, not that of some individual species of organisms. This is where Gaia and the environmental movements, which are concerned first with the health of people, part company.”

⁸ The self-organization concept is indeed comprehensive; see the statement by Erich Jantsch (1981: v) that autopoiesis “encompasses all levels of reality, from the cosmic or physical through the biological, ecological, and sociobiological to the sociocultural.”

⁹ *Journal of World History* 1, no. 1 (Spring 1990), iii. The journal is published by the University of Hawaii Press.

¹⁰ Michael Adas, “Foreword,” in *The Columbian Voyages, the Columbian Exchange, and Their Historians*, by Alfred W. Crosby (Washington, D.C.: American Historical Association, 1987), v.

¹¹ For some of the books that could count as “new” World History, mainly comparative and cross-cultural studies, see Philip Curtin (1991).

¹² F. R. Ankersmit (1989: 138). The late Derek de Solla Price did a calculation of this kind in the 1960s for scientists, but who did it for historians? See his *Little Science, Big Science*, where he wrote, “we can say that 80 to 90 percent of all the scientists that have ever lived are alive now” (1963: 1).

¹³ Leften Stavrianos (1964: 618).

¹⁴ William McNeill (1982: 82f.).

¹⁵ G. J. Whitrow (1989: 81): “Millenarian belief arose from combining the idea expressed in Psalm 89:4 that ‘A day with the Lord is as a thousand years’ with the interpretation of the Sabbath, or seventh day, as a symbol of heavenly rest in accordance with Hebrews 4:4-9.” So, if 6 times 1,000 years are to be expected and 5,685 years of world history are gone by, 315 years are left. Adding these remaining 315 years to 1681, the publication date of Bossuet’s *Discourse*, the year 1996 is the predetermined end of human history.

¹⁶ Orest Ranum in his introduction to Bossuet (1976: xix).

¹⁷ Immanuel Kant was one of them; he wrote in *Allgemeine Naturgeschichte und Theorie des Himmels* (1755): “Die Schöpfung ist nicht das Werk von einem Augenblicke... Es werden Millionen, und ganze Gebürge von Millionen Jahrhunderten verfließen, binnen welchen immer neue Welten und Weltordnungen nach einander, in denen entfernten Weiten von dem Mittelpunkte der Natur, sich bilden, und zur Vollkommenheit gelangen werden” (A 113). (The creation is not the work of an instant... millions, and whole mountains of millions of centuries, will elapse in which new worlds and world orders will form and come to perfection one after another in the remote distances from the center of nature.)

¹⁸ Reinhart Koselleck (1979). Translation by Keith Tribe, *Futures Past: On the Semantics of Historical Time*. Cambridge: MIT Press, 1985.

¹⁹ McNeill (1986a). I must admit that I am deeply troubled by McNeill’s marriage of myth and history, not least because of my German background and my familiarity with the *Myth of the 20th Century* by Alfred Rosenberg. I know that McNeill advocates mythmaking for humanity and not for particularistic groups, but I also know that humanity is a lofty abstraction and that deadly competition among human groups is very real. Myth-history, I am afraid, is likely to serve the interests of real people more than the imagined community of the whole. This is not to say that the writing of history should only respect scholarly concerns — our trade serves all sorts of non-scholarly interests, to be sure. However, this is a question of the right proportions. “Mythistory” throws the doors wide open to all sorts of uncritical interests in history. This, I think, is dangerous.

²⁰ Cf. Oswald Spengler (1965: 17): “‘Mankind’... has no aim, no idea, no plan, any more than the family of butterflies or orchids. ‘Mankind’ is a zoological expression, or an empty word.”

²¹ McNeill (1986b: 6). For the strong influence that Becker’s much debated relativism (as expressed in “Everyman His Own Historian”) had on McNeill, see *Mythistory and Other Essays* (1986a: 162-65). However, there is an important difference between Becker and McNeill: Becker was content with myth-preservation as the function of History, whereas McNeill advocates mythmaking.

²² Pieter Geyl (1958: 185).

²³ *The Economist*, vol. 319, no. 7709 (June 1-7, 1991), 72.

²⁴ The local electronic mail system of the electronic scholar is most likely connected to the Internet, the global backbone network that dates back to a military network created in 1969. The Internet connects more than 10,000 networks, links over 130,000 computing sites (universities, research institutes, national archives, and so on) in over 40 countries, and is currently used by more than 10 million people. [*N.B. This was written in 1991.*]

²⁵ In a recent self-assessment of world-systems analysis, Immanuel Wallerstein strongly questioned the usefulness of the distinction between economic, political, and cultural arenas of social action. Opposing this customary distinction from a “undisciplinary” point of view, he asked scholars to look anew at the received tradition and work out the theoretical, methodological, and organizational implications of “a single arena with a single logic.” Though

I am not sure that Wallerstein's "mono-logic" is the answer, I, too, see a thorny and challenging problem here and would welcome a thorough epistemological discussion of this issue. See Wallerstein (1990).

²⁶ *New York Times*, May 30, 1990, A7.

²⁷ The history of environmentalism is already well known and documented. For its prehistory, see Clarence Glacken (1967), for the history of environmentalism in England between 1500 and 1800, see Keith Thomas (1983), for nature in Asia, see Baird Callicott, and Roger Ames, eds. (1989), and for American environmentalism in the last 200 years, see Roderick Frazier Nash, ed. (1990). A wealth of further reading can be found in Ian Gordon Simmons (1990).

²⁸ Kepler was probably the first to liken our planet to a spaceship (in the notes to his *Somnium*). Discussing the Galilean sunspots, he wondered, "Who could ever arrive at the idea that the spots on the sun are stationary, while that ship of ours, which is called the earth, carries us in so short an interval of time around the sun, revealing to our very selves the various parts of its surface and its spots in succession" (1967: 105, note 146).

²⁹ Walter McDougall (1985: 412) wrote that President Lyndon Johnson sent copies of "Earthrise" to "every head of state in the world, even Ho Chi Minh, while the luxuriant ecology movement gained an icon by grace of the very technology it denounced."

³⁰ It is instructive to see how incredibly funny the new language of ecology must have sounded in its earlier days. The *American Scientist*, for example, printed a letter to the editor in 1960 that poked fun at H. T. Odum's "New Ecosystem Ecodynamics — with its attendant ecomixes, ecoforces, ecofarces, ecofluxes, ecoconductivities, ecopotentials, ...and all that sort of ecojazz" (Patten, 1960).

³¹ The evolution of ever more distant and accurate views of the earth moved from Leonardo's first aerial sketches, Nadar's [the pseudonym of Félix Tournachon] aerial photography (1859), to Willis Lee's *The Face of the Earth as Seen from the Air* (1922), to the global "Landsat" pictures of the world.

³² The current knowledge about the human impact on the environment from the time of early man to the nuclear age has been masterfully reviewed by Ian Gordon Simmons (1990). The advancement of our ecological understanding can be studied by comparing Simmons's opus with George Perkins Marsh's (1965) pioneering and influential work of 1864.

³³ Marsh (1965: 43). On pages xxiii and xxv, we learn that Marsh wanted to title his book "Man the Disturber of Nature's Harmonies," but Charles Scribner, his original publisher, objected and asked, "Is it true?" Scribner thought of man as part of nature; Marsh believed in man as the perennial opponent of nature who has "to make himself her master." Environmentalists today would side with Scribner.

³⁴ Rachel Carson (1962: 3). Thomas Dunlap (1981) placed the battle over DDT and *Silent Spring* in historical perspective and scientific context.

³⁵ For an example of cultural self-reflexivity, see J. David Bolter (1984).

³⁶ Henry Guerlac (who later became an eminent scholar on Antoine-Laurent Lavoisier and eighteenth-century science) was recruited in 1943 "to prepare an official history of the Laboratory, intended to justify, should there be a congressional investigation, the large amount of money spent by the country's preeminent radar development operation"; see the foreword by Dale Corson in Henry Guerlac (1987: xv).

³⁷ The data from 1958 to the present are online at <http://cdiac.esd.ornl.gov/ftp/ndp001/maunaloa.co2>; for the preindustrial CO₂ record, which has been computed from air enclosed in ice, see <http://cdiac.esd.ornl.gov/ftp/trends/co2/siple2.013>, and for an up-to-date table with all greenhouse gases and their current concentrations, see http://cdiac.esd.ornl.gov/pns/current_ghg.html.

³⁸ In 1990, Fred Wood, a researcher from the Office of Technology Assessment at the United States Congress, outlined "a concept for improved climate monitoring and reporting that can be implemented rapidly at modest expense, and can be utilized by scientists and policy analysts until more complete monitoring systems become available" (42 f.).

³⁹ For an illuminating and witty analysis of three contradictory scenarios on energy policy put forward by the “energy tribes” (based on four years of participant observation at the International Institute for Applied Systems Analysis in Laxenburg, Austria), see Michael Thompson (1984).

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