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## The Rounding of the Earth: Ecology and Global History

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### **Introduction: Some Prerequisites for a New Subfield**

Several books that I read a number of years ago had stuck in my mind as belonging to a special category but one for which I knew of no name. Recently, I have come to believe that the reason I did not know the name for this category was that it did not yet exist. But the right label has now been hit upon, and it is *global history*.

The first books I noted as belonging to this hitherto unnamed category were C. D. Darlington's *The Evolution of Man and Society*, Hans Zinsser's *Rats, Lice and History*, and William McNeill's *Plagues and Peoples*. If there was a common theme that linked these, it was the interweaving (if not, as in Sigmund Freud's dictum, the identity) of biology with human destiny.

More recently, a cluster of books has appeared, still coming from the special perspective that can now be recognized as the earmark of global history but ringing in changes on a different theme, that of human ecology or the interaction between humans and the environment. Examples in this area are *Out of the Earth: Civilization and the Life of the Soil* by Daniel J. Hillel, *Changing the Face of the Earth: Culture, Environment, History* by I. G. Simmons, *Seed to Civilization: The Story of Food* by Charles B. Heiser, Jr., and *Biohistory: The Interplay Between Human Society and the Biosphere Past and Present* by S. Boyden.

The common theme of these latter examples is the interaction of humanity and earth; the four authors are united in believing that our relation with the earth—the soil—is a reflection and a warning regarding the even larger issue of humanity's relation to our home planet, earth. I will discuss how this subject might fit under the name *global ecological history*, but first, it is necessary to put into its proper context the idea that is being sug-

gested here: that there are recognizably different sorts of history and that it is legitimate for new ones to arise from time to time.

When one thinks of the different sorts of history that have been written recently—feminist history, for example, or the new social history (sometimes called history from below)—there seem to be four prerequisites for their legitimate appearance as history:

1. The subject matter must actually exist or have existed.
2. It must be consciously recognized as a subject unto itself.
3. It must be regarded as a fit subject for history.
4. There must be a perception that this subject is not adequately treated in the sorts of history that are already being written.

The writing of feminist history, for example, began with a combination of all these factors. Regarding requisite 1, females had always existed as approximately half of the human species. What had not existed in any widespread form was requisite—a defined recognition of feminist issues as such. Those could, however, be discovered with hindsight; history could be reframed in their terms as requisite 2 came into being with a modern definition of feminist issues. Requisite 3 was fulfilled only as a result of gradual (and, even at the present time, only partial) success in winning the bitter battle over requisite 4. This last issue was the real crux of the matter: to persuade a sufficient number of historians and readers and students of history that the subject matter—females and feminist issues—was not being adequately represented in standard historical treatments.

In the case of the new social history, again the subject matter—most generally, “the common people”—had always existed and had been known to exist. Here, there may have been more awareness of the subject *as* a subject, at least in the minds of politicians who had to sway these people; of social commentators (such as Aristotle and Niccolò Machiavelli) who perceived their role in the fabric of society; and of many religious leaders, clergy, and activists who, over the centuries, devoted themselves to bringing the common people to one form of salvation or another. The sticking point with the new social history appears to have been requisite 3. Unlike the situation with feminist history, once the case had been made that the common people were a fit subject for history, there was not much effort to argue against requisite 4, which would claim that the common people were not being adequately treated in standard approaches.

In the light of these other new sorts of history and parallel to the prerequisites for their emergence, some questions arise with respect to the

new category of global history, of which I claim to have described some examples:

1. What is its subject matter?
2. What is the basis for a conscious awareness of it?
3. Why is it a fit subject for history?
4. Is it reasonable to claim that the subject matter of global history is not adequately treated in the sorts of history that are already being written?

In the following sections, these questions will be taken up one by one. In answering the second question, I will come to the ecological writings wherein a major contemporary movement toward global history may be found.

### **What Is the Subject Matter of Global History?**

Most broadly, global history is the story—or perhaps more realistically, a collection of stories—about the human race as a whole. The global historian presents stories with which all humans are invited to identify, rather than stories aimed to arouse the group consciousness of some.<sup>1</sup>

By the definition just given, feminist history would not be global history: It seeks to stir the group consciousness of one part of humanity, not the whole. Traditional history has also been intended to arouse group consciousness but on a geographical basis; it is disqualified as global history on both gender and geographical grounds.<sup>2</sup> Another interesting comparison to something that is *not* global history would be the history of the Jews. That is clearly not limited geographically, but equally clearly, it is not a story with which everyone is invited to identify: Indeed, the “insider—outsider” qualities of this story are part of its intrinsic character.

These three examples suggest some of what global history is *not*. It is not geographically localized; it is not gender specific; it is not the history of a particular ethnic or religious group. These could well be among the *themes* of global history but only when they emerge as part of some larger issue that is defined in the first instance as global. For example, the story of the Jews might play an important part in a history that looked at human migration from a global perspective. Similarly, feminist historians would have contributions to make to a global history of changing patterns of nurturance in the twentieth century. And the geographical boundaries of states and other groupings could, in themselves, be a topic for a global historical exploration of, for instance, the changing role of the state since 1648.

One aspect of the two recent movements in historiography that have been cited here will help shed additional light on what global history *is*. Feminist history and the new social history both proceed from a particular point of view, a particular *perspective*; in doing so, they illuminate the perspectives that had been left out of the standard histories in existence before their consciousness-raising introduction. Feminist history, with its perspective of the female half of the species, makes us aware that old standard histories had been written very largely from a male point of view. The new social history, with its common-people perspective, makes us aware that the old histories had been written mostly from an elite point of view or, one might say, from the viewpoint of the people in power.

For global history (by analogy with the phrase *sub specie aeternitatis*, meaning "with the perspective of the whole of time"), we may propose the phrase *sub specie speciis*, meaning "with the perspective of the whole species."<sup>3</sup> But what does it mean to take the perspective of the human race as a whole? Again, it is easiest to understand this newly proposed historical point of view by contrasting it with the dominant viewpoint that it challenges. The outstanding contrast is to the nationalist or local point of view that has been the predominant historical perspective not only since the rise of the nation-state in the sixteenth century but even back to the time of Plutarch or Julius Caesar. Most histories have had good guys and bad guys. If history as written until the last two decades has revolved around a single, outstanding topic, it has been wars, and their outcomes, which have been characterized as "victory" or "defeat," depending upon whether the nation or similar grouping whose point was represented in the history won or lost.

Those are very sweeping statements, only true if looked at from the most general kind of perspective—the kind of perspective, in fact, that is afforded by global history. I will now defer further consideration of what else we can expect to have imposed upon the adherents of this sort of history by its perspective. Instead, I will take up the second question posed earlier, regarding the appropriateness of establishing this proposed new kind of history.

### **What Is the Basis for a Conscious Awareness of Global History?**

This question may be rephrased in this way: "What historical changes have created the global consciousness that is necessary to global history?" Among the answers to this question, one would include trade; technologies that, for example, permit rapid travel; the sharing of cultural and religious elements; and a system of values or ethics that defines the sphere of what matters to an individual as encompassing the whole human race

or perhaps the whole biosphere (which, by definition, includes the whole human race).

Such an ethical system may arise in a variety of ways and has, indeed, done so in various times and places. At present, it is taking on a new form and a new strength in response to one additional source of global consciousness. This historical change is a process by which the human impact upon the environment has been continually and ever more rapidly extended—a process, I will argue, whose cumulative effects are such that, in the twentieth century, they differ not only in degree but also in kind from human experience before the nineteenth century.

To grasp the enormity of this change, try to imagine yourself as a member of a small community in a land perceived as having limitless scope. Here, individuals or bands or societies of human beings are insignificant in the vastness of the world that swallows them. Now compare that image with the reality that has emerged within the present century. It is not just that our technologies of transportation have altered our perceptions of distance, allowing us to fly across any ocean in a few hours. More to the point, we have invaded and altered all parts of this world; we have proven the limits of the earth by filling it up.

Ten or twelve thousand years ago, our species survived almost wholly on food collected from the “natural” state of the world, as yet unaffected by agriculture (though some speculate that human predation had already significantly affected the composition of species on most of the continents). Today, of a total terrestrial surface area of  $147 \times 10^6$  square kilometers,  $18 \times 10^6$  square kilometers (or a little more than one-eighth of the dry land of the earth) is under direct human use for habitation, cultivation, or other production (Simmons 1989, p. 14). A much larger fraction, as I will show, is indirectly employed to human ends. Human activities have eradicated two-thirds of the earth’s forest cover. We have tunneled through the Alps (followed by migrating birds that found the new passage within days of its opening); we have created the Arctic haze and the ozone holes; and we are probably increasing the temperature of the whole system—the ecosystem of the earth—on which we are dependent.

Perhaps the most dramatic statement of this new reality has been made by the economist Herman Daly, in his description of what he called the “full world hypothesis.” In a paper whose title is particularly appropriate to our subject—“From Empty World Economics to Full World Economics: Recognizing an Historical Turning Point in Economic Development”—Daly began with a calculation made by Peter Vitousek et al. (1986, pp. 368-373):

“If we take the percent appropriation by human beings of the net product of land-based photosynthesis as an index of how full the world is of

humans and their furniture, then we can say that it is 40% full because we use, directly and indirectly, about 40% of the net primary product of land-based photosynthesis (Daly 1991, p. 18).

Daly noted that the calculation of the doubling time for the human use of resources should be based not only on the growth of the human population but also on population times per capita resource use. On this basis, the doubling time for the rate at which humanity is taking over the earth is thirty-five years. Looking backward, Daly calculated that in an average human lifetime of seventy years, we have doubled our filling of the earth twice, increasing from approximately 10% full in the 1920s to 40% full now. The rapidity of this shift is one of the reasons why people are only just beginning to understand its implications. Daly warned that

100% human preemption of net photosynthetic product . . . would seem to be ecologically quite unlikely and socially undesirable (only the most recalcitrant species would remain wild—all others would be managed for human benefit). In other words, effective fullness occurs at less than 100% human preemption of net photosynthetic product, and there is much evidence that long run human carrying capacity is reached at less than the existing 40% . . . Although 40% is less than half it makes sense to think of it as indicating relative fullness because it is only one doubling time away from 80%, a figure which represents excessive fullness (Daly 1991, p. 18).

The further implications that Daly drew from this include: (1) the need to shift from a mindset that sees man-made capital as always able to substitute for natural resources ("natural capital") to a recognition of the degree to which the two are complementary ("what good is a saw mill without a forest? a refinery without petroleum deposits? a fishing boat without populations of fish?" [Daly 1991, p. 19]), and (2) the necessity of recognizing that "the productivity of manmade capital is more and more limited by the decreasing supply of complementary natural capital" (Daly 1991, p. 19). The latter includes both the productive and the absorptive capabilities of the natural world.

A number of policy conclusions arise from this chain of logic. One example is a cluster of observations about investment, e.g., that "investment must shift from manmade capital accumulation towards natural capital preservation and restoration" (Daly 1991, p. 22). Also, because it is critical to cease artificially inflating returns on investment by ignoring the drawdown of complementary natural capital that has underpinned the apparently high returns of the past, it will be necessary to shift to an expectation of lower overall returns in the future.

The broader conclusions drawn by Daly were these:

Perhaps the clearest policy implication of the full-world thesis is that the level of per capita resource use of the rich countries cannot be generalized to the poor, given the current world population. Present total resource use levels are already unsustainable, and multiplying them by a factor of 5 to 10 as envisaged in the Brundtland report, albeit with considerable qualification, is ecologically impossible. As a policy of growth becomes less possible the importance of redistribution and population control as measures to combat poverty increase correspondingly (Daly 1991, p. 23.).

All this is very dramatic and of critical import. However, our material effect on the earth, as just described, is not the starting point for global consciousness. This consciousness, a psychological issue, begins, I believe, with our sense of the spatial relationship we have with our habitat. Ten thousand years ago, our species was a drop in the bucket, a little frog in a big pond; today, it is the species that has explored all of the territory, made some kind of a mark on every part and aspect of the biosphere, and eliminated every frontier. Our identity as the filler of the world, the rounder of the globe, may be said to have started with explorers such as the Portuguese in the fifteenth century; or perhaps even earlier with the Polynesian rafters (if, in fact, the latter were also motivated by the perception that, if they sailed far enough, they could go around the earth and come back where they started).

A modern expression of what it means to live on an earth that has been rounded and closed up was given by a beloved writer of children's books, Dr. Seuss. In *The Big Brag*, the boasting of a rabbit that could hear for miles and of a bear that could pick up odors from a great distance was topped by a little worm that bore through the air with his farseeing eyes and finally reported:

I looked 'cross the ocean, 'way out to Japan.  
 For I can see farther than anyone can . . .  
 I looked across Egypt; then took a quick glance  
 Across the two countries of Holland and France.  
 Then I looked across England and, also, Brazil.  
 But I didn't stop there. I looked much further still.  
 And I kept right on looking and looking until  
*I'd looked 'round the world and right back to this hill!*  
*And I saw on this hill, since my eyesight's so keen,*  
*The two biggest fools that have ever been seen!* (Seuss, 1986.)

We may find a similar scenario in a different kind of source:

Imagine that in a space-ship we can rove among the stars and find points where our remote sensing technology can pick up the light reflected from

earth about 2 million years ago and then zoom in, capturing images of the land surface every century or so until the very recent past. These images could be made into maps of the cover of the land surfaces and the conditions of shallow waters. . . . For example, in c. 8000 BC there is little land devoted to food production, rather than food collection, by humans; now there are 1472 million ha of cropland. In AD 1800 the area under urban use held 2.5 per cent of humans and now it houses 42 per cent. This book is about the history of such changes, and its basis is the gathering of empirical facts about the changes of the sort that our space-derived images would provide, were they not imaginary. But a unique feature of *Homo sapiens* is that observed facts also have meaning so we must provide a framework in which this information can escape from its status as mere isolated words or numbers and become a pattern. This pattern may be a clue to the kind of underlying regularities in nature and human activity that we call theory; equally it may lead to a set of tools for discussing the future, the more so since we may to a large extent choose the type of future we want (Simmons 1989, p. 1.).

It is perhaps not natural for humankind to start thinking about that whole of our environment until we have filled up the whole and been forced to turn back upon ourselves. In general, though, we know the boundaries between fact and fantasy; we know exactly how far we can go on the earth's surface before we come back to our starting point; and we know that nowhere on earth is there an ecosystem completely free of the effects of our own species.

These conditions make it almost impossible to avoid thinking globally. The whole globe swims into view as a single system when we have pushed the last frontier to the edge of the next town. It *demand*s to be thought of as a single system when we can leave it and look back at it in space, to see Spaceship Earth from the outside. Systems analysis, as a discipline, confirms our global consciousness. We have a list of categories of systems, and we know just what kind this one is. We live in a quasi-closed system; that is, it is closed with the following exceptions:

- There is a quantifiable daily income of solar energy (the most important part, from our point of view, being that fraction transformed by plants into usable or "available" energy. (According to Daly and Vitousek, humanity is now appropriating 40 percent of that fraction on the land masses of earth.)
- There is a quantifiable daily loss of energy in the form of (mostly "unavailable") heat escaping from the atmosphere.
- A negligibly small amount of matter enters the system in the form of meteorites and other cosmic debris captured by Earth's gravity.



- A (thus far) negligibly small amount of matter is sent off the earth by humans in the process of exploring other parts of the universe.
- There are forces (most obviously, gravity) that operate across space and whose influence upon our planet also reduce the degree of “closedness” of our system.
- Those are all the exceptions. For the rest, we know, by and large, what we have; this is what we must make do with for the rest of our existence on earth.

This is the situation in which we find ourselves. It is not new (except for the small exception to closedness, whereby humans send material off this planet), but it is newly perceived and felt. The relatively recent knowledge and understanding of what it means to live in a quasi-closed system is well expressed in the book by Simmons:

Living tissue . . . comprises a number of chemical elements which combine with carbon to constitute organic matter. Of these, only oxygen and hydrogen are normally freely available in large quantities, and the others circulate between reservoirs (“pools”) on varying scales. The pools usually include a non-living stage so the circulation of these elements is called a biogeochemical cycle. . . . The quantities and fluxes involved in many biogeochemical cycles are known at the world scale, and much research has elucidated the fine details for individual ecosystems. But we will note that the flow of such mineral nutrients (the overall term for these elements) is genuinely cyclic, unlike energy, even though the time-scale is geological rather than anthropocentric in some parts of a biogeochemical cycle (Simmons 1989, p. 13).

It is, I contend, this new consciousness, more than anything else, that makes us ready to consider that global history might be something real and interesting and of relevance to other contemporary issues of pressing importance.

The Brundtland Report, *Our Common Future* (1987),<sup>4</sup> has projected this same global consciousness forward, to force us to inquire about the future: *Are the patterns of development of the Western, industrialized nations sustainable into the foreseeable future? Can these same patterns safely and sustainably be followed by the rest of the world?*

It is becoming widely accepted that the answer to the second of these questions is “no.” We hear that there are not enough trees to allow every citizen of the world to read the *Sunday New York Times*; not enough dumping space on earth’s land or in the oceans to allow everyone to generate as much garbage as the average U.S. citizen does; and not enough tolerance in the ozone layer for the Third World to imitate the

industrialized world's intensity of automobile use. If this is so, what implications can be drawn when we start thinking about the sustainability of modern patterns of development?

One of the implications is that *the pattern of change and development of any single country does not occur in a vacuum but must be understood as part of a global pattern of resource use*. Everything that has happened up to this very moment in time is history, and all of that (now unchangeable) history has its implications. The most obvious natural resources of our global environment—air, water, ocean habitats, genetic reservoirs—exist, at this moment, under levels of stress that are the result of past history. These stress levels are felt by different peoples in different ways. And incremental additions will be felt increasingly, in skin cancers, forests killed by acid rain, collapsed fish populations, and so forth.

Looked at historically, each nation's past development or nondevelopment fits into this overall picture and is a part of the explanation for where we are now: Each nation has had a certain impact upon the tolerance or the availability of certain resources. Looked at futuristically or with the eye of a planner, every additional movement in each nation's development will be a step—forward or backward or to the side—in the dance between the total global population of humans, on the one hand, and the carrying capacity of the earth, on the other.

It is particularly interesting, when thinking in this way, to consider patterns of agricultural development. Here, recognition of broadly *unsustainable* patterns has started in the most recently developing areas (as they adopt a scattering of farming techniques ranging from high to low tech) and is only gradually spreading to the leaders of the technological revolution in agriculture. Thus, it is well known that many changes in African farming techniques are headed for disaster; it is quite apparent that Indonesian farmers have been overstressing their soil and water resources; there are warnings on the sustainability of the advanced techniques that have been used for several decades in India; and unrest has been sparked among a small group of "low-input farming" advocates in Hungary. What about the United States? Would advice be likely to flow from this country to, say, Argentina, suggesting that its best path into the future may *not* follow the tracks laid down in the past in North America? (See Goodwin 1991.)

There are ethical and political issues involved here, as well as economic and technological ones. It is an untenable position for the world's largest resource user to tell other nations, "Now that we've gotten the lion's share, you should go easy on the rest for the sake of global humanity." The past is history, but it strongly shapes the future, including how various nations feel about the options they face. And how they feel about the options will, in turn, influence how they choose to act. Global history

is concerned, among other things, with the events that constrict or enlarge the options that are open to mankind as a whole.

This is the context for an inevitable interdependence between the answers to the two questions posed above: "Are the patterns of development of the Western, industrialized nations sustainable into the foreseeable future?" and "Can these same patterns safely and sustainably be followed by the rest of the world?" It turns out that they cannot be answered separately. In asking how a country like Argentina should develop its agriculture, another question is implicitly raised: How should the United States (and, by extension, Canada, Australia, and New Zealand) *have* developed agriculturally? In charting an optimal course for the less developed countries, important issues are raised on whether it might be desirable for the more developed countries to veer in their course.

The four works of global ecological history that I cited near the beginning of this chapter share some characteristics with the foregoing discussion. Their concern with the past, with history, is closely—even agonizingly—linked to a concern for the trajectory into the future that may be inferred from that history.

### **Why Are These Global Subjects a Fit Topic for History?**

Probing the idea of history as a prelude to the future, we might inquire whether the books that are written from this motivation can be best understood as works of history or whether they should be placed in some other category. The following quotations, from the four works of global ecological history mentioned earlier, give the feel of the kind of work being discussed here:

Traditionally, most agrarian societies have had annual birth and death rates in balance at about 40 per thousand. In the last forty years, however, death rates have dropped in many developing countries to below 15 per thousand, while birth rates have remained close to traditional levels. The imbalance is most notable in Africa, where population growth rates in some countries are over 3 percent per annum. They were almost this high in Asia two decades ago, but most Asian countries are now undergoing a slow decline of birth rates that eventually will bring births and deaths into balance (Hillel 1991, p. 262).

Between 1850 and 1960—the great period of voluntary European migration—60 million people left the continent to settle in far-away lands. This figure represents about a fifth of the population of Europe at the beginning of this period.

Largely as a consequence of these developments, the Caucasian population of the world increased 5.4 times between the years 1750 and 1930, while in the same period the Asian population increased 2.3 times and the African population less than 2 times (Boyden 1992, p. 113).

Most of the important domesticated animals came from the Near East, a few from southeast Asia. After they were domesticated, use of these animals spread around the world. The ancient Egyptians kept a large number of animals, but with the exception of the cat, none became truly domesticated. A few animals were domesticated in the New World, but with the exception of the turkey they did not become widely used outside of their homeland. Columbus brought cattle and sheep with him on his second voyage and these Old World animals soon became widespread in the Americas (Heiser 1991, p. 34).<sup>5</sup>

Energy use per head in an industrial world can usefully be compared with past times. Hunter-gatherers can only tap solar energy and nearly all of this comes in the form of food and fire. Their energy throughput as food is perhaps 2000 kcal per head per day. . . . Even without access to fossil fuels, agriculturalists nevertheless use draught animals, construct irrigation channels, use wind and water power and may produce surpluses: They can be responsible for throughputs of 10-20,000 kcal per head per day. . . . Members of today's full industrialized societies are at the level of 120,000 kcal per head per day (Simmons 1989, p. 212).

Perhaps the first reaction to the passages just quoted will be, Is this really history? That is a valid question: One reason to have quoted at such length was to raise it for discussion. These passages do not sound like the kind of history we are used to. By way of comparison, it is worthwhile to offer some companion examples of a more familiar type of history. Here are three fairly typical passages:

[In the 1396 Crusade of Nicopolis] knights assembled with great pomp at Buda and proceeded along the Danube of Nicopolis, pillaging and slaying. On Sept. 25 they met the Turks about four miles south of Nicopolis. The knights ignored all advice and pressed forward; after an initial success they were completely overwhelmed and many captured. Forces were about 20,000 on each side (*An Encyclopedia of World History* 1948, p. 326).

The Chalukya ruler, Jayasimha Siddharaja, a patron of letters, although himself a Saiva, organized disputations on philosophy and religion, and favored a Jain monk, Hemachandra, who converted and dominated Kumrapala. As a good Jain, he decreed respect for life (*ahimsa*), prohibited alcohol, dice, and animal fights, and rescinded a law for confiscation of property of widows without sons. He also built (c. 1169) a new edifice about

the Saiva temple of Somanatha, which had been reconstructed by Bhimadeva I (1022-1062) after destruction by the Moslems (*An Encyclopedia of World History* 1948, p. 332).

William the Conqueror, whose cause was favored by the Pope, was soon submitted to by the English, who wanted leaders, and had been of late much accustomed to usurpation and conquest. Edwin and Morcar, the earls of Mercia and Northumbria, declared for him: and even Stigand, the patriotic archbishop of Canterbury, found it advisable to go with Edgar Atheling to meet William and offer him the crown (Carroll 1977, pp. 32-33).<sup>6</sup>

There is a level of detail here that is part of the fascination of such histories. Individuals are named: Jayasimha Siddharaja; the good Jain, Hemachandra; William the Conqueror; and Stigand, the patriotic archbishop of Canterbury. The numbers given are generally on a comprehensible scale: We can imagine 20,000 Christian knights arrayed against as many Turks. If the old standard histories were written from the point of view of the people in power (as I claimed earlier), still we are invited to see power from the inside and thus to identify with the story. We are shown how power can be used to protect widows and rebuild temples, how it can influence popes and patriots.

In global history, if the books cited in this chapter are any guide, the doings of individuals and groups like those named here will no longer claim center stage. A few counterexamples that come to mind are the exceptions that prove the rule. In *The Evolution of Man and Society*, there was a vivid encounter with Nesta, the daughter of Rhus ap Tewdwr and the "patroness of all Norman hybridization," who, according to C. D. Darlington (1969, p. 442), made a unique contribution to the genetic pool of the British Isles by producing nearly twenty children from at least half a dozen different fathers.<sup>7</sup> In the three quotations from ecological histories, the only individual mentioned was Christopher Columbus. As I see it, global history, by and large, will not be about individuals.<sup>8</sup>

In place of the details of the old standard histories, which portray local incidents and individual actors, global history will depend upon generalizations about the effects of (or on) human beings in groups or as a species. Unlike histories that gain their coherence from a geographic, gender, or ethnic definition, global history will depend upon *themes*. The theme of the book by Hillel, for example, is the human/soil interaction. The story line follows the recurring, expectable results of agriculture, where cycles of success are followed by collapse due to silt and salt buildup. Some of the details of the stories of global ecological history are geographically localized, as in Hillel's descriptions of the fall of Greece and Rome (each related to declining soil fertility) or in Heiser's brief

review of the locus for animal domestications. Often, however, the details are given in the form of global statistics, like Hillel's figures on the demographic transition, on the loss of forest cover, and on the amounts of water withdrawn by humans from the natural hydrological cycle.

Themes, generalizations, statistics—do these make up history? One of the four books on ecological subjects has the word in its title: Simmons's *Changing the Face of the Earth: Culture, Environment, History*. The quotation from that book given earlier could equally well appear in a work on energy economics or energy policy. Moreover, the major headings of the book are "Primitive Man and His Surroundings"; "Advanced Hunters"; "Agriculture and Its Impact"; "Industrialists"; and "The Nuclear Age" (a relatively short section). A large part of the "historical" material, in fact, comes from prehistory. One point illustrated by this is that, if one is looking for a story that will be relevant to all people, the further back in time one goes (at least within the life span of our species), the easier it is to find it. This is because after a certain number of generations (eight is the number I have heard), virtually any civilization contains individuals who were one's own genetic ancestors. Thus, global history, in addition to taking in a broad geographical sweep, may often encompass a longer than usual sweep of time, as well.

This observation raises the question of identity again. In eschewing geography as the source for identification, does global history offer genes instead? What does it, in fact, offer that is not to be found in other, existing kinds of history? This brings me to the last of the four original questions.

### **Is It Reasonable to Claim That the Subject Matter of Global History Is Not Adequately Treated in the Sorts of History That Are Already Being Written?**

To answer this, I will assume that global history has been accepted and ask the inverse of the question just posed: Will global history—along with the two other new sorts of history that have been discussed here (new social history and feminist history)—completely replace the old? Consider first the new types that already exist. I would guess that there will always be some interest in the histories of power offered by the elitist, old standard histories. The new social history will not replace these, but while coexisting with them, it may become the more popular type.

It seems harder to justify histories that explicitly give only a male point of view. If that statement is accepted, then its corollary may also be accepted: It is hard to justify histories that explicitly give only a female point of view. This leads to the conclusion that, if or when it is truly successful, feminist history will be so well incorporated into a new standard history that, as a separate strain, it will be virtually eliminated—

except as a watchdog function that will probably be needed to keep that history from reverting to the view point of one sex *or* the other.

I am suggesting that some form of the standard history will probably continue as a complement to the new social history. Furthermore, both will likely adapt under the pressure of the feminist challenge by changing quite radically, to incorporate the half of humanity that had earlier been excluded from full representation. Do either of these projected forms (a gender-equal elite history or a gender-equal history of "the people") include all that is proposed in global history? The answer seems to be no because of the nationalist or local point of view that characterizes most existing history books.

### Conclusions: Global History for the Future

This is not to suggest that global history will answer to all needs, just as new social history does not. There will always be interest in the particular—the local and the national. At the same time, global history has a niche of its own: It is relevant when we truly want to see the human race *sub specie speciei*, as though we are looking at the whole earth and its inhabitants from another spaceship—for example, in studies of the human impact on the global environment. Perhaps the most difficult issue—which I will raise here, but not attempt to resolve—is how global history will cope with the fact that the more human beings recognize their global identity, the more they simultaneously cherish their specific local identities. In the real world, globalism and localism are mutually reinforcing trends (though not without tension). The institutional and intellectual niche for global history will somehow have to take account of this reality.

We are most apt to seek a global point of view when we want to think about the future. The four ecologically oriented books cited in this chapter are very evidently related to the kinds of policy required to preserve reasonable options for future human beings. They suggest the types of behavior changes and policy shifts that will be necessary to make our patterns of development sustainable. In contrast to the old standard histories, which identified good guys and bad guys in terms of groups at war against one another, the bad guy in the ecological histories is the human race in its present mode of destroying the world on which it depends. To be a good guy, according to a species survival criteria, one must learn to establish a sustainable balance.

The way we write history influences the way we think about policy and vice versa. In the title to his article quoted earlier in this chapter, Daly cited "an historical turning point in economic development." His sense that history had come to a new place in the human/environment relationship impelled him to point out several new policy directions. These, in

turn, suggest new ways of looking at the history of growth and distribution: Surely, history must be written differently if we come to regard as a disaster, rather than a triumph, the scale of our population growth and the speed and manner of our appropriation of earth's resources. The sense of what the most important subjects are will also shift with new policy positions. For example, there appears to be reason for a heightened interest in a history of investment that would look, over time and space, at what investment means and who will reap what benefits from it.

Though less obviously, the three books cited at the beginning of this chapter, which linked human destiny with biology, also had messages for policy and for the future. For instance, valuable lessons can be drawn for our understanding of AIDS from Zinsser and, even more, from McNeill. Perhaps the deepest lesson in all of these books, however, is a rather general one regarding the place of a single individual (e.g., the individual reader). Whether in looking at the long sweep of genetic evolution—with the coadaptation of humans, the microorganisms they carry, and the animals they hunt, domesticate, or unintentionally harbor—or in looking at the changes we have wrought, from the time we first learned to use fire and metal, upon the planet earth, we see ourselves as just one member of a long progression. In perceiving our relative unimportance, it may be hoped that we will also come to value a way of life that preserves something larger and longer lasting with which we can identify. Perhaps that is the human race, past and present; perhaps it is that even more abstract concept, the biosphere.

Is this not what history has always been about, at least in part? Have not the sensitive readers of Pliny or Edward Gibbon or Macaulay come away humbled by their exposure to vast panoramas, in which their own time is but an instant? If this is so, it is an argument for including global studies, as described in this chapter, within a tradition that would call them history—even though their use of themes, generalizations, and statistics has a different feeling from the local and individual particulars we are more used to seeing in history books.

### Notes

A number of friends and colleagues have responded in useful ways to this chapter; the following is but a partial list of those to whom I am indebted. Mary Midgley has not only discussed the chapter with me, but has written out her comments at several stages. Miriam Campanella and Boris Mironov also kindly supplied me with written comments. Sudhir Kakar especially drew my attention to the centrality of the concept of identity throughout the chapter. Ralph Buultjens and Bruce Mazlish have also made especially helpful suggestions.



1. As Mary Midgley rightly noted, "There can't be a single, comprehensive global story: all stories are partial" (personal communication, August 1991). Sudhir Kakar probed the concepts in the preceding paragraph with some penetrating questions: What psychology of identification is assumed here? Is it on an individual or a group basis that humans are invited to identify with the stories of global history? Is it possible, as implied here, to identify with a group as large as our species? My own assumption is that the answer to the last question is yes. But I recognize that if this definition is to be used in work that is more specifically applied than this chapter, questions such as those posed by Kakar will require more informed reflection than I am able to give.

2. Feminists, claiming that traditional history largely left out happenings of concern to women, see that genre as defined both geographically and by gender. It is worth noting, however, that traditional history was not overtly *intended* to consolidate a male consciousness. To the extent that it excluded women, it did so because the writers (men) did not notice them; many women, presented with no alternative, accepted these stories as their own and did their best to identify with them. I remember studying Greek history in fifth grade with an uneasy awareness that it was hard to identify with those people. I also recall an uncomfortable, unexpressed feeling that to insist upon knowing more about the women of the time would simply result in humiliation (by identification), caused by confronting the inferiority of their position.

3. Mary Midgley made an impassioned objection to this, citing the inadequacy of the concept:

I have to say, *this simply is not half global enough*. It is not possible to stop at the species boundary. Nobody, not even people who would willingly ditch all the whales and the elephants and the albatrosses and the battery chickens and the arthritic, cross-eyed transgenic pigs, can now consider our species in isolation from the others. Its fate simply is not separate in the way that people used to believe. What is happening in the rainforests and the Sahel and Polynesia and the Antarctic and Lake Baikal is happening to everything and everybody. It will increasingly happen to them everywhere (personal communication, August 1991).

Here, again, we have the issue of identity: Whose stories are my story? Moreover, can we feel that something matters or act as if it matters if we do not identify with it?

Competing with identification as bases for action are self-interest and aesthetics, as well as other motives that can be subsumed under the term *morality*.

4. The principal author of this report, Jim MacNeill, is, coincidentally, a cousin of William McNeill, who was mentioned earlier. Although their last names are spelled differently, they share the same grandparents and a similar global outlook.

5. Heiser (1991, p. 34) defined a domesticated animal as "one that breeds under human control," adding that "if we accept this definition, it follows that human beings are not a fully domesticated species, for they have not yet succeeded in controlling their own breeding."

6. Devotees of *Alice in Wonderland* will recognize this as the passage offered by

the Mouse to the shivering creatures that came out of the pool of tears; he described it as “the driest thing I know.” (I have always wondered why the Mouse considered this so especially dry; perhaps the reason is that so much of the passage is in the passive tense.)

7. One may question Darlington’s accuracy; if it does not stand up to such questioning, then we cannot cite his book as representing “good” global history. All the same, that does not take it out of the global history category.

8. Several of those who are especially interested in global history—including Bruce Mazlish—have taken strong exception to this statement.

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