http://www.historycooperative.org/journals/ht/34.2/mcneill.html
From ***The History Teacher*** **Vol. 34, Issue 2.**
Viewed February 14, 2012 6:54 EST

Presented online in association with **the History Cooperative. http://www.historycooperative.org**

The World According to Jared Diamond

J.R. McNeill
Georgetown University

IN ITS SHORT CAREER, Jared Diamond's *Guns, Germs, and Steel*[1] has enjoyed remarkable success for a book not much concerned with diets, cats, or how to get rich quick. It has appeared on best-seller lists and as a selection for several book clubs, won a Pulitzer Prize, and accompanied President Clinton on his 1999 vacation on Martha's Vineyard. Not bad for an amateur historian. But what clinches the standing of the book for me is that for three straight years it has been voted the most popular reading assignment by my freshmen and international relations graduate students alike. Not bad for any 427-page book. Here I will argue that the success is well-deserved for the first nineteen chapters--excepting a few passages--but that the twentieth chapter carries the argument beyond the breaking point, and excepting a few paragraphs, is not an intellectual success. 1

The argument of the book is that the distribution of wealth and power among societies around the world has been powerfully shaped by biogeographic factors and that environmental endowment has sharply favored some societies, indeed some continents, over others. This has made it highly probable (if never fully certain) that these lucky ones would in time prevail over the unlucky. Those parts of the world fortunate enough to have a large suite of potentially domesticable plants and animals, and located so as to favor the migration and diffusion of domesticated plants and animals, enjoyed great advantages. They developed farming, metallurgy, writing, states, and a few other useful things earlier than did other societies. They also had earlier exposure to "crowd diseases," and thereby earned a wider portfolio of immunities to lethal infections earlier. These, the proximate causes of success in history, are in shorthand the "guns, germs, and steel" of the title. But behind them lay the ultimate causes of success: a favorable environmental endowment. Success, I note in passing, seems to be defined in terms of survival and spatial spread, a more-or-less darwinian view of how societies relate to one another 2

Diamond's book is very distinctive in several respects. First, it takes on the very big picture, treating the human experience as a whole. Professional historians are very averse to doing this themselves, trained as they are to consult documents and tease out their meanings. Even the growing cadre of world historians only rarely produces a bold soul willing to venture onto ground where his or her expertise is inevitably paper thin. It is a striking fact that most of the big picture histories have been written by people not trained as historians. Diamond's background is in physiology and evolutionary biology. 3

Another distinction is that Diamond's book argues for the possibility of a genuinely scientific history. Historians are divided as to whether their craft ought to be classified as an art or a social science. Diamond thinks history can be a science in roughly the same way that evolutionary biology or astronomy are sciences. Experiments are impossible in all these fields (as opposed to physics or chemistry), but so- 4

called natural experiments are possible. In these one can compare developments in similar historical cases that are made different by the presence or absence of a potentially key variable. Methodologies developed in paleontology, ecology, and epidemiology, he says, can help historians make their inquiries more scientific. Diamond believes he has done this by comparing the long-term destinies of the continents.

5 Diamond's methods apply best to long-term and large-scale inquiry. As he puts it, he can predict with a high degree of accuracy that of the next 1,000 babies born at University of California–Los Angeles Medical Center, between 480 and 520 will be boys. But he could not predict with any confidence that his own two children would be boys. Similarly, he says, one could safely predict the outcome of competition between Europeans and Native Americans in North America, but one could not have confidently predicted the outcome of the 1960 presidential election. Hence, Diamond seems to say, his methods work best on the largest scale, where he has chosen to apply them in this book. By Diamond's logic of scientific history, then, one can see why the most powerful societies in world history all had roots in Eurasia, but it is harder to explain why, for example, the most powerful in 1850 was Great Britain.

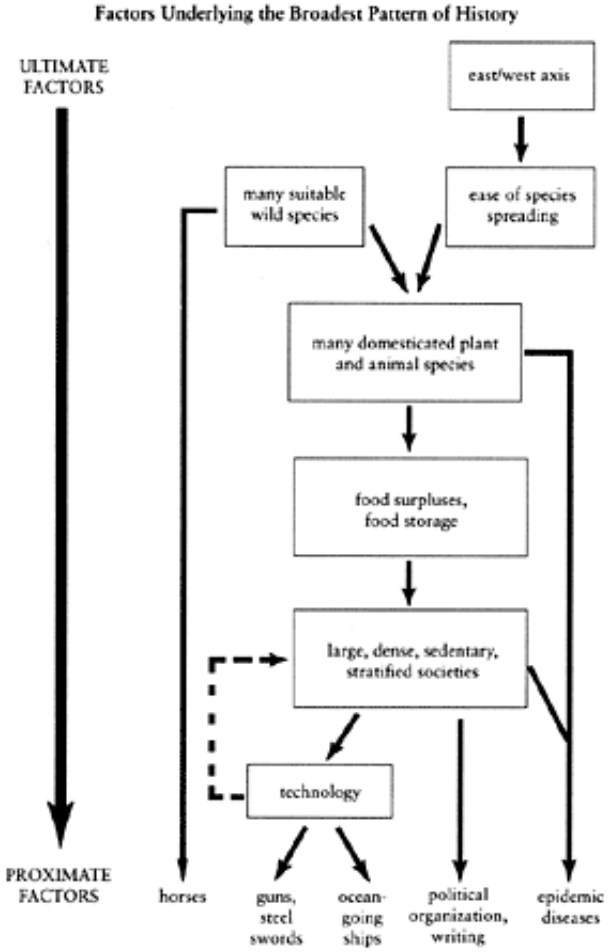
6 This argument has more to be said for it than this crude summary might suggest. It is, in my view, persuasive as an answer to why Eurasian societies dominated those of Austronesia and the Americas after the requisite intercontinental contacts were forged. Eurasians had the guns, germs and steel and others did not. The argument works for sub-Saharan Africa, although less well I think. The book is even more persuasive on the systematic edge that food-producers, wherever they are found, enjoyed (and enjoy) over food-collectors. It is very persuasive on the usefulness of looking at the very big picture, at broad comparisons, and ultimate causes. It is very persuasive on the possibilities of history as a science, and on the value of stepping outside the usual disciplinary boundaries and into the realm of the natural sciences. And it is provocative because it melds Austronesia and Polynesia into world history and indeed takes New Guinea as its starting point and in some cases as its frame of reference. This is, I expect, unique among world histories.

7 Please remember these words of praise, because I will now proceed to criticize the book although I accept much of its major argument and admire the book greatly. Some of the criticisms that follow, I should say, have as their ultimate cause student comments or papers.

8 Look at the chart that appears on p.87, showing the ultimate causes and proximate causes of the broadest patterns in history, which is Diamond's way of saying the competitive success of some societies at the expense of others. What ultimately counts, it seems, is the availability of potentially domesticable species and a geography conducive to the easy spread of useful species. As it happened, Eurasia enjoyed an edge in both departments. It had far more in the way of domesticable species than any other continent, and its predominantly East-West axis made for easier and faster diffusion of species.[2] These are interesting thoughts, new to historians, and they go a long way towards explaining the formidability of some Eurasian societies vis-a-vis those elsewhere.

9

But the fact that Eurasia spawned the world's most formidable societies does not pose a truly vexing question.[3] Eurasia accounted for some eighty percent of humankind over the past 3,000 years, and probably well before that. Even if formidability were randomly distributed (which I do not suggest it was), one would expect to find it more often in Eurasian societies than elsewhere. Indeed because greater population ordinarily means greater interaction, more intense intersocietal competition, and the faster and more thorough acquisition of a broader array of disease immunities, the probability would be even higher than eighty percent that Eurasia should at any given moment have produced history's most formidable societies. The deck was stacked even without Diamond's biogeographical factors. So Diamond has proposed some excellent new answers to a less-than-perplexing question.



At left: From page 87, *Guns, Germs, and Steel: The Fates of Human Societies* by Jared Diamond (New York, London: W.W. Norton & Company, 1999).

A more vexing question, and one more familiar to historians, is why Europe? Why, among Eurasian societies, was it those of western Europe that in the past 500 years (or only the past 200 according to some recent scholarship[4]) emerged to dominate the rest of the planet? Diamond devotes a good chunk of his final chapter to this question, leaving biogeography and domesticability behind, but retaining his focus on geography. He argues that Europe's topography led to political fragmentation, encouraging sharp competition among states, and eliminating the possibility that a single ruler could prevent some innovation or discovery from taking hold. China, on the other hand, was predisposed towards unity by its relatively homogeneous geography, by its lack of difficult mountains, by its "connectedness" to use Diamond's term. He uses the argument that Columbus in 1492 successfully found a backer despite several rejections, whereas Admiral Cheng Ho's oceanic voyaging ceased in 1433 by imperial command; 10

this is to show how Chinese unity stunted Chinese development whereas European fragmentation let a hundred flowers bloom. The Fertile Crescent, Diamond says, committed ecological suicide and therefore had no chance to emerge as the world's dominant region. (India does not get to the starting line in this chapter.) That Europe's advantage lay in its geography and environment is not a new idea: E.L. Jones in 1981 made that argument in great detail, and others did it--if less thoughtfully--before him.[5]

11 Even if Diamond has his geography right, it is not a sufficient explanation. Indeed it is logically impossible to explain a temporary phenomenon, such as the dominance of Europe in certain centuries (or of China in earlier ones) by reference to more or less permanent conditions, such as the topography of Europe and China. Europe may or may not have a geography that encourages greater fragmentation than does China's (and I think this is open to question if one leaves out the Grand Canal, a man-made link). But conceding that for the moment, political fragmentation is not necessarily an advantage, indeed in some circumstances, such as the presence of a powerful and aggressive neighbor, it is a weakness. The West African forest zone has been politically fragmented for as far back as we can tell, yet this has not helped its societies in relation to those of the savanna to the north, or, after 1450, to those of Europe. India has been politically fragmented for most of its long recorded history, and has been repeatedly invaded and conquered by outsiders. Its fragmentation did not generate highly efficient states and technologically precocious societies bent on expansion and conquest. (The Mughal Empire, while bent on conquest, was not technologically precocious, and only occasionally highly efficient; it was also Central Asian in origin, not Indian.) Indeed Europe itself was politically fragmented in the 7th, 8th and 9th centuries yet showed none of the formidability it acquired a millennium later. So, using Diamond's methods of comparison across time and space, I conclude that geographical fragmentation even if genuinely more characteristic of Europe than elsewhere, is far from sufficient explanation for the question "Why Europe." I will not attempt to answer the question here,[6] but will claim that one needs to look for clusters of conditions and circumstances, some of which may be permanent features but others of which necessarily must not be, in order to explain temporary phenomena such as the emergence of Europe. These conditions and circumstances form synergistic combinations that, for a time, allow one society or one region to become more formidable than others. This sounds complex, as it must.

12 In sum, then, I believe Diamond has pushed the argument too far in trying to answer "Why Europe" with an answer so rooted in geographical comparison. What is sufficient for the question, "Why Eurasia" does not suffice for the more demanding question "Why Europe." Eurasia's dominance is essentially a permanent phenomenon, if one allows, as Diamond does, heirs and descendants of Eurasian societies to count, and so it is plausible to explain it by reference to geographical endowment.

13 In the final chapter Diamond acknowledges that his analysis invites the charge of geographical determinism. He does not refute the charge, but says that the fears associated with it are unfounded, that human creativity and individuality do matter, that our futures are not programmed by biogeography, but, merely, that environmental conditions provided better starting points for some societies than for others. This disclaimer undersells the book's power, because the argument is that some environments were much, much better than others, and it was well-nigh impossible that New Guineans should have become world conquerors. Indeed I think Diamond's book is geographical determinism, the best entry in that category I have ever seen.

14 But I think Diamond's argument is overdone, even considering the disclaimers in the final chapter. I have already argued that Europe's emergence in modern centuries cannot be put down to geography. Consider Egypt. It did not commit ecological suicide, but maintained the world's largest-scale sustainable society based on a very durable ecological system. This system lasted from Pharaonic times until the completion of the Aswan High Dam (1971). Great interannual variability existed in the flood waters and silt subsidy brought by the Nile, but over the long haul, Egypt's environment was virtually the same. Yet Egypt's fortunes fluctuated wildly. It experienced long periods of power and regional dominance, and

other periods of weakness and domination by others. Perhaps Egypt, as prominent as it is, amounts to too small a canvas in Diamond's analysis, too small a sample size from which to draw conclusions. But if so, this merely points to the limits of Diamond's scientific method as well as the limits of geographical determinism.

15 Diamond's argument exceeds its limits on another point as well, that of the "tilting axes." Throughout the book Diamond argues that the East-West axis of Eurasia provided an advantage in the dispersal of useful, mainly domesticated, plants and animals. The chart on p. 87 identifies this as the most ultimate of ultimate factors. With respect to the lengths of days and the importance thereof for flowering plants, the argument makes fine sense. Maize's spread northward from Mexico was, Diamond persuasively argues, slowed by the necessity of genetic adaptation to different day lengths at different latitudes. Maize could spread much more easily East-West than it could North-South. But with respect to animals the argument must be made in more general climatic and ecological terms, and here it gets weaker. Eurasia's East-West axis could not have been much help in the spread of cattle or goats. Its extreme variety of climatic conditions, its high mountains, deserts, and tropical forests posed a considerable challenge for the spread of most animals (and I should think, plants). From the Gulf Stream-induced equability of western Europe, to the continental climate extremes of Kazakhstan, to the monsoon rhythms of Korea, temperature and moisture regimes show tremendous variation. A given line of latitude within Eurasia might embrace conditions as diverse as those of Shanghai, Lhasa, Delhi, Basra, and Marrakesh, all of which are very close to thirty degrees north (North Africa counts for most of Diamond's purposes as part of Eurasia [p.161]). Beyond this, since North Africa counts as part of Eurasia, then Africa deserves an East-West axis like Eurasia's, because it is much farther from Dakar to Cape Gardafui than it is from the Cape of Good Hope to the Sahara. And Australia, which does not get an axis on the map, extends further East-West than North-South. In Australia, I should think rainfall isohyets would correspond better to the migration history of plants and animals than do lines of latitude and longitude. All this, I think, casts some doubt on the explanatory power of the axis argument.

16 Indeed, the successful spread of crops and livestock (not to mention the writing, wheels and other inventions that Diamond mentions in this argument) is surely determined in large part by factors other than geography, and the role of geography is much more complex than the axes suggest. The role of other geographical factors I alluded to in reference to Eurasia. But the spread of useful species was usually a conscious act (weeds were different). They could not, of course, flourish where ecological conditions did not permit, but where they went when was largely a human affair, determined by trade links, migration routes, and happenstance. Coffee, an Ethiopian native, eventually made its greatest impact in southern Brazil, not at Ethiopian latitudes within Africa. Cattle domestication spread from its point of origin (in southwest Asia) to South Africa and Sweden, flourishing in between in circumstances as diverse as Sudan's and Switzerland's. Along the East-West axis of Eurasia, cattle became important in Europe, fundamental in India, yet inconsequential in China. This is not because Chinese environmental conditions were inhospitable to cattle, but because Chinese social and economic conditions were. The diffusion of cattle as of AD 1000 was along a North-South axis more than an East-West one, partly because cattle can cope with both heat and cold, but also because cattle-raising fit in with the ideological, cultural, social, and economic systems of some societies better than others, regardless of geography.

17 For these reasons I think Diamond has oversold geography as an explanation for history. I find the best part of his geographic determinism to be the biogeographic part. The business about the distribution of potentially domesticable species was new to me, and I think to historians generally, and I accept the importance of these facts. The differential ease of plant and animal diffusion as determined by continental axes strikes me as less persuasive. But that, on Diamond's scale, may be only a quibble. However the spread of useful species was governed, who had them and got them first was indeed important.

18 There are other quibbles I might pursue but will only list in the interest of brevity. First, Diamond's organization of the world into competing continents seems at times conceptually dubious.[7] Whatever

social units might genuinely compete--kin groups, states, firms in the modern world--continents do not. Diamond uses the continents as units of analysis in broad historical comparison and does not imagine that they were actually consciously competing with one another. Nonetheless, this arrangement needs a more explicit justification and ought not to stand unexamined. Second, Diamond assumes that all societies seek wealth and power, much as evolutionary biologists tell us individuals of enduring species seek to maximize their genetic footprint upon the future. No doubt societies do, but surely to varying degrees, which might matter even on large scales. Some societies sought to maximize their formidability, while others aimed for internal harmony or spiritual grace as well; and of course these commitments might vary within a given society over time. Thirdly, people help shape their environments, a fact Diamond recognizes in claiming the Fertile Crescent committed ecological suicide, and in suggesting that potential domesticates might have been killed off in the Americas and Australia if the "overkill hypothesis" of late Pleistocene extinctions is correct. But in general--perhaps my perspective as an environmental historian makes me oversensitive here--it seems to me that Diamond's geography and environment are too fixed whereas I prefer to see society and environment locked in co-evolutionary embrace.

19 These, I emphasize, are quibbles when viewed on the scale Diamond chooses. And I want to emphasize as well that Diamond is right to insist that this scale is a useful one for historians, an essential antidote, or more charitably, a counterpart, to the detailed, narrowly-bounded work that professional historians are trained to do in graduate school.

Conclusion

20 Finally, I wish to draw attention to an implication of Diamond's argument. Here I will not carp or criticize, but merely observe. Economists and policy wonks normally believe that prosperity lies ahead if one only gets the policies right. Modernization theorists used to think that with the right programs and policies, one could, over time measured in years or decades, recast a society and put it on the road to prosperity, stability and other good things. The World Bank lends billions in this faith. But Diamond says that "the hand of history's course as of 8,000 B.C. lies heavily on us" (p. 417). He notes that even in this modern age of microchips and telecoms, the most powerful and wealthiest societies are the heirs of Eurasian predecessors who pioneered domestication and reaped the benefits. Japan or the United States might flourish for a while, like Europe or China, but not, to repeat his examples, Paraguay or Zaire (now Congo). Some twenty percent of humanity, although created equal--Diamond is militantly anti-racist throughout--is thus permanently relegated to the minor leagues. The die was cast long ago, and most of Austronesia, Africa, and the Americas rolled snake eyes. Fatalistic, perhaps, but probably true for the foreseeable future.

21 While I have sung its praises only in passing and dwelt on its faults, I want to repeat that overall I admire the book for its scope, for its clarity, for its erudition across several disciplines, for the stimulus it provides, for its improbable success in making students of international relations believe that prehistory is worth their attention, and, not least, for its compelling illustration that human history is embedded in the larger web of life on earth.

Notes

[1] Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: W.W. Norton, 1997). This essay is

based on a presentation given at the annual meeting of the American Historical Association in Chicago (January, 2000). I thank my fellow panelists Patricia Galloway and Jared Diamond for the bracing discussion.

[2] For expample, of the world's 148 large herbivorous mammals, only 14 have been successfully domesticated. Thirteen of those 14 existed naturally in Eurasia (the llama did not). See pp.157-75.

[3] When I made this case at the American Historical Association meeting in January 2000, at a session devoted to Diamond's book, Prof. Diamond argued vigorously that I was wrong on this point, that this is a vexing question.

[4] Kenneth Pomeranz, *The Great Divergence: Europe, China and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000); Andre Gunder Frank, *ReOrient: The Global Economy in the Asian Age* (Berkeley: University of California Press, 1998).

[5] *The European Miracle* (Cambridge: Cambridge University Press, 1981).

[6] I would, if trying, insist on the importance of ideological factors in explaining China's tradition of unity (since the 3rd century BC) and Europe's disunity. With the gradual adoption of Confucian ideals, Chinese elites regarded unity as normal and desirable, an outlook that Europeans lacked. The efforts of Charlemagne, Napoleon and Hitler ran against the grain, not with it. The example of Rome, never a pan-European empire in the first place, spoke only to some Europeans, and by the fifteenth century many of those came to see the competing Greek city-states rather than the Roman Empire as the legitimate model for international society.

[7] See M. Lewis and K. Wigen, *The Myth of Continents* (Berkeley: University of California Press, 1997).



Figure 10.1: Major axes of the continents. From page 177, *Guns, Germs, and Steel: The Fates of Human Societies* by Jared Diamond (New York, London: W.W. Norton & Company, 1999).

©2001 Society for History Education

Content in the History Cooperative database is intended for personal, noncommercial use only. You may not reproduce, publish, distribute, transmit, participate in the transfer or sale of, modify, create derivative works from,

display, or in any way exploit the History Cooperative database in whole or in part without the written permission of the copyright holder.