

Secrets of Success

Joel Mokyr | Dec. 1, 1998 12:00 am

Conquests and Cultures: An International History, by Thomas Sowell, New York: Basic Books, 493 pages, \$35.00

Guns, Germs, and Steel: The Fates of Human Societies, by Jared Diamond, New York: Norton, 480 pages, \$27.50

Global economic history is "in" again. Along with the two books reviewed here, I could mention David Landes's *The Wealth and Poverty of Nations*, Richard Easterlin's *Growth Triumphant*, Robert McC. Adams's *Paths of Fire*, and Patrick Verley's *L'échelle du Monde*. More are on the way. All of these books are trying, in one way or another, to answer the question posed by Thomas Sowell: Why does 17 percent of the world produce four-fifths of its output? A more elegant way of raising the same issue is what Jared Diamond calls "Yali's question." Yali is a New Guinea notable who one day asks Diamond why white people have so much "cargo"--Western manufactured goods desired by New Guineans --while New Guinea produces no cargo of interest to Westerners.

Everyone understands that these questions can never be answered in a definitive way, comparable to proving Fermat's Last Theorem. The distribution of prosperity is hopelessly "overdetermined": There are far too many answers that all seem to be right. Culture, geography, institutions, war, religion, and even historical accidents all seem to have played a role. But *what* role, and which factors are most important, remain matters of controversy.

Thomas Sowell's *Conquests and Cultures* is the third volume of a trilogy, preceded by *Race and Culture* and *Migrations and Cultures*. Sowell, a noted economist and social commentator at Stanford's Hoover Institution, raises the interesting issue of what happens when two culturally and economically different societies clash militarily and one of them "conquers" the other. Using this general framework, he analyzes four historical cases in which conquest played a major role: England, Africa, the Slavic people, and the Western Hemisphere Indians. These chapters show that conquests do not have much in common, yielding a somewhat confused picture. In Africa, conquest led to slavery for a large proportion of the population; in the Western Hemisphere, to the physical destruction of much of the indigenous population; in Eastern Europe, where conquerors and conquered changed positions over time, to an unstable and variable clash of cultures.

Conquests come in many forms, from the long-term occupations of the Romans in the Mediterranean to the short-lived mega-empires of Tamerlane. Some of them led to a forced or voluntary assimilation of the conquered to the language and customs of the victors, but in other

cases the reverse occurred (for example, the Roman conquest of Greece or the Mongol conquests of China). Sowell points out that being conquered often led to a long-term increase in living standards and economic performance, and in some cases when the occupiers withdrew (as the Romans did from Britain in the fifth century) the occupied countries sank into poverty and barbarism. In Sowell's view, exploitation and theft do not go nearly as far in explaining economic differences as culturally caused differences in productivity.

The key concept in Sowell's view of history is "cultural capital," which is transferred and diffused among societies. The concept is nowhere defined with any precision, and at times it seems to be interchangeable with "human capital," though Sowell uses that term rather loosely as well, often more in the sense of *mentalité* and social institutions than in the sense employed by economists (an economically useful formal education). Yet his overall view of history is quite clear: People are born with very similar innate abilities, but their economic achievements differ enormously due to differences in "cultural capital," which determines not only such matters as technological sophistication but also "attitudes" such as diligence, honesty, and ambition. For Sowell, the most important form of cultural capital is freedom, which is Britain's gift to the world. Free markets and the aggressive pursuit of economic success within them are the central answers to Yali's question.

The question of why and how these ideas caught on or did not occupies the bulk of *Conquests and Cultures*. Some of the themes announced at the start, especially the effects of "conquest," are lost in the shuffle, and when the reader puts the book down, its basic message remains fuzzy. What is clear is that, much like David Landes, Sowell believes that Western culture and values hold the key to economic progress. His knowledge of economic history, unfortunately, cannot hold a candle to Landes's, and because of his very cursory discussion of the key elements in this story, the book will probably only preach to the converted and irritate the skeptics.

This is not to say that *Conquests and Cultures* has no valuable messages. Sowell points out that statements about general characteristics of a large group (ethnic, racial, religious) are not necessarily inadmissible if these groups share a culture or an environment that might affect their traits. Essentialism (the notion that groups share certain inherent traits), fervently denounced by politically correct scholars, is not the same as racism. Sowell also points to the dynamic role played in economic history by population movements and minorities, perhaps not a novel insight but worth stressing. At times immigrants and minorities enriched the local inhabitants with their culture and knowledge; in other cases they were the winners.

Sowell surely will annoy some pious liberals by noting that the lighter the skin color of American blacks, the higher their scores on tests of intelligence "and other social qualities." This, he proclaims, is not a subjective perception or a stereotype but a fact. The explanation is that the lighter-skinned group had "earlier and better access to higher levels of European culture." Without, of course, endorsing oppression and slavery, Sowell argues that the more Africans (in either hemisphere) had contact with European culture, the better off they were economically.

Even more courageously, Sowell admonishes us to examine seriously racist theories that correlate genetics with achievement. While these theories are incorrect, he says, something useful can be learned from the conversation with racists, and blanket dismissals are uncalled for. For instance, biological differences between races may exist even if they are not caused by genes: Norwegians are taller than the Japanese (and Americans are fatter than anyone else), but this is primarily due to environmental and nutritional differences, not genetics.

As a work of scholarship, unfortunately, Sowell's book is broad rather than deep. Although the book contains an amazingly large number of notes (1,626, to be exact), they point mostly to textbooks, atlases, works of reference, and well-known (usually dated) syntheses. Of course, nobody can be an expert on the huge literature of any of the four cases that Sowell analyzes, let alone all four. All the same, the net result is that many of his chapters read like potted histories, distilled from the secondary literature.

At least for the small subset of Sowell's material on which I can claim some expertise, the research behind this book does not inspire confidence. The small section on the British Industrial Revolution seems to have evaded every important book written on the subject in the past two decades. Sowell's pitiful survey of Ireland, seemingly a superb case through which his theories about the effects of conquest on the diffusion of cultural capital could be tested, contains the howler that the dire poverty of the Irish in the early 19th century is indicated by a life expectancy of 19 years.

The actual number is probably twice as high (see Cormac Ó Gráda's *Ireland Before and After the Famine*, 1993, page 18). And unbeknownst to Sowell, modern research has discovered that the Irish were taller than their English contemporaries, indicating that measures of "poverty" and "backwardness" are ambiguous. In a brief section supposed to explain how "religion played important roles in the secular development of the world," Sowell somehow fails to mention either Max Weber or Lynn White. My point is not to nitpick on one or two errors so much as to point out that in books such as this one no reader knows the "topic" as a whole; if a reviewer finds glaring errors and poor coverage in an area in which he has some expertise, his confidence in the rest of the story is inevitably reduced.

Jared Diamond's book, *Guns, Germs, and Steel*, shares with Sowell's the premise that all nations and ethnic groups possess the potential for economic success, even if that potential is not realized to the same degree everywhere. Otherwise, the two books are quite different. Diamond is a professor of physiology at UCLA's medical school whose range marks him as one of the true Renaissance scholars of our time. He is also a highly original thinker whose scholarship in many areas is sound and reliable. This book, honored recently with a Pulitzer Prize, is mandatory reading for anyone who purports to engage big questions in the area of long-term global history.

Diamond, to put it bluntly, is a geographical determinist. The shape and location of continents, original flora and fauna, microbes, water, climate, topography--all are truly exogenous to history.

The rest is endogenous. Geography, of course, has a terrible reputation in historical explanation. Landes, in his *Wealth and Poverty*, starts off by recounting how geography departments were closed around the country without a tear; he notes that "no other discipline has been so depreciated and disparaged." Simple-minded explanations that submit that "Britain had an Industrial Revolution because it had coal" have long been abandoned.

Yet before we dismiss Diamond's book as another simplistic tale, we have to face the fact that he knows his stuff inside out, to the point where any thought of using the adjective *crude* (traditionally preceding *determinist*) evaporates as we turn the pages. Diamond fires off a barrage of facts and observations based on half a dozen disciplines, from archeology to botany to linguistics. He argues that the world's population bifurcated for geographical reasons. Once the different paths were established, "Eurasia" diverged from Africa and America more and more through positive feedback effects, in which geography fed into technology and technology fed into power structures and culture, which fed back into technology and growth, until we got a world of Western economic hegemony.

Diamond emphasizes that human wealth and success depend on interaction with the environment. Economic history, in his view, is a game against nature, not primarily a social process. Production, especially in agriculture, depends on the geographical hand we have been dealt. Yet Diamond, unlike most geographers, focuses not on soil fertility and minerals but on the ability of humans to domesticate plants and animals. Unlike Sowell, he says all societies and cultures initially had similar abilities to manipulate nature, but their raw materials were different.

To exploit large animals for food, energy, or other uses, you need domesticable wild animals, something that did not exist in pre-Columbian America (where the arrival of *Homo sapiens* 13,000 years ago apparently led to their extinction). Such animals have to satisfy certain conditions: They must be able to breed in captivity, they must be safe around children, and so on. Diamond lists five major species of large, domesticable animal species--cows, goats, sheep, pigs, and horses--and nine minor ones, including reindeer, yaks, and llamas. Of these 14, only one was native to South America (llamas and their close cousins, alpacas) and none to North America.

Diamond argues persuasively that the hippos and giraffes of Africa, the jaguars of the Amazon, and the kangaroos of Australia were not domesticable. He says the domesticated llamas, alpacas, turkeys, and dogs of America could not pull it off either. North America's other large herbivorous mammals all turned out to be nondomesticable. Eurasia, on the other hand, was lucky enough to have the wild animals from which our cows, sheep, horses, and chickens could be bred. This gave the Europeans huge advantages not only in the development of technology (mixed farming and wheeled transport, for example) but also in resistance to infection, providing them with immunity against diseases caused by proximity to domestic animals. When Europeans traveled to other continents, the infectious diseases they carried overwhelmed the natives.

Eurasia was also lucky to have a much larger stock of plants that lent themselves to domestication. Eurasian plants were more nutritious, easier to cultivate, and more resistant to disease. Botanical wealth, says Diamond, determined agriculture, and agriculture determined everything else. Eurasia won because its supply of wild plants, which provided the gene pool for domesticated crops, was larger, richer, and better. If you think this explanation is simplistic, read the chapters on "How to Make an Almond" and "Apples and Indians."

Diamond realizes, of course, that the Americas contained a considerable number of highly nutritious crops, many of which were transplanted successfully to Eurasia after 1500. Yet he maintains that because of diverse climates and the narrow connection between North and South America, such crops did not proliferate as readily as in Eurasia. Doubts begin to emerge here: Corn and potatoes are hardy plants that grow in a wide variety of conditions, and Diamond never quite nails down the reason for their failure to spread earlier and more widely in pre-Columbian times.

Perhaps, as Diamond seems to believe, they would have, had there been more time. Had Columbus arrived a millennium or two later, North America might have been a very different society. Surprisingly, Diamond says little about the potential of the lowly potato, which merits only cursory mentions in his book even though it radically transformed the societies in which it was adopted. Such doubts notwithstanding, this is a serious, informed, and well-thought-out argument. If in the end we are not wholly convinced, thinking of how to refute Diamond will make us wiser.

How much of the performance of non-Europeans was constrained by their environment, and how much was their own making? In Diamond's view, the answers are "all" and "none." But this is by no means clear. For example, Diamond says one of the disadvantages encountered by the indigenous people of what is now the eastern United States was a lack of wild plants that could be turned into crops. Yet he concedes that some native species might have done nicely. He describes sumpweed, with 32 percent protein, as "a nutritionist's ultimate dream." He explains that the flower did not make it to the rank of corn, potatoes, and rye because it causes hayfever, smells bad, and can cause skin irritation. Are we sure that these vices *could* not have been bred out of sumpweed, just because they *were* not? All domesticated plants originally had undesirable characteristics, but through deliberate and lucky selection mechanisms they eventually got over them. Wheat, rye, and maize, which feed much of the world's population, all had humble beginnings.

To be fair, Diamond's argument is not entirely *ex post*. He points out that our ability to improve plants depended largely on whether the code for certain characteristics was carried by more than one gene. People could select for a particular trait as long as it was caused by one or very few genes; if it was controlled by many genes, breeding specimens that displayed the trait would be unlikely to fix it in the population. Diamond offers a few examples, but he does not persuade me that this problem was especially pronounced in the societies he identifies as geographically challenged.

There is a similar weakness in Diamond's view of technology. In a chapter cleverly named "Necessity's Mother," he notes the many links between geographical constraints and technical options. Why would a society produce wheels if it had no horses or oxen to pull them? Wheelbarrows and rickshaws might have been an option, but maybe draft animals came first. Not all questions can be answered this way: Some indigenous populations in America might have built seaworthy ships, or managed to develop a technology we cannot imagine today. If they did not, is this because they tried and failed, or because they never tried?

Diamond offers two reasons to believe that links between geography and technological progress may be significant. One is that geography constrains mobility of knowledge. Assume, somewhat implausibly, that the idea of a wheelbarrow occurred to just one person in history, but that it spread to people seeing their neighbors use one. If this happened in Central Asia, it may well have reached China, France, and Yemen within a few centuries, but before 1500 it would never have gotten to America or Australia. And Diamond notes that agricultural technology diffuses more easily from east to west than from north to south, since changing longitude has a stronger effect on climate and seasonality than changing latitude--giving Eurasia an advantage over America and Africa.

Diamond also resurrects the late Julian Simon's argument that technological success often depends on population density and the ability of a society to produce a surplus beyond subsistence, so that there are resources available for tinkering and experimenting. Maximum population density was largely a function of the environment's ability to feed people. Writing, for instance, required large and dense settlements with complex hierarchical institutions, much different from hunting and gathering tribes.

The notion that much of economic history is a game against nature, in which people form certain views about its regularities and use these to manipulate their environment and improve their material conditions, is a powerful one. Diamond's insight is that nature differs from place to place and that certain environments are easier to manipulate than others.

The economic historian must add two qualifications to this. First, environments can be manipulated or abandoned. While Diamond describes in detail prehistoric population movements (which he deduces from linguistic evidence), he does not realize that he tells the story of regions, not necessarily of people living there, who always had the option of moving to a more generous and flexible area. Second, it could be argued that much technology emerges precisely because the environment is not generous and requires hard work and ingenuity. It is here that Sowell's "cultural capital" comes in, directing us to another important set of variables. The difference between the two approaches is that in Diamond's account culture itself is determined by location: Geography truly is destiny.

How can we be sure? We cannot. When all is said and done, the overdetermined nature of the issue remains: There are many explanations for the observed gaps in income and economic success, and

they all make sense; they all are consistent with the evidence. Our models of history, however, are still unable to rank them by importance or assign weights to them. Is culture really determined by geography, as Diamond thinks, or is technological success above all a rebellion against the dictates of the environment? If everything in global history is interrelated with everything else, who can blame our students for being bewildered? After all, Fermat's Last Theorem took three centuries to prove, and this problem is a lot harder.

*Joel Mokyr (j-mokyr@nwu.edu), a professor of economics and history at Northwestern University, is the author of *The Lever of Riches* (Oxford University Press).*