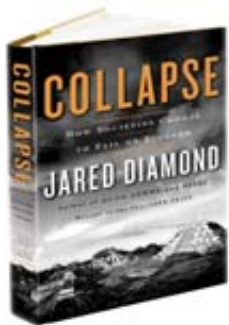


## How Are the Mighty Fallen?

THE RISE AND FALL OF MONTANA, MAYA AND OTHER SOCIETIES BY ROBERT S. DESOWITZ



**COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED**  
By Jared Diamond  
Viking, 2005  
(\$29.95)

According to scripture, “How are the mighty fallen in the midst of battle” (II Samuel 1:25). To war, Jared Diamond in his new book, *Collapse: How Societies Choose to Fail or Succeed*, adds self-inflicted environmental degradation, climate change, disastrous trading relations, and unwise responses to societal problems. In his earlier, Pulitzer Prize-winning *Guns, Germs and Steel*, Diamond, a professor of geography at the University of California at Los Angeles, celebrated the rise of communities and nations despite microbial and self-imposed adversities.

*Collapse* is the downside of those dynamics, the societies that didn't make it, barely made it, or are destined, as Diamond sees it, for the fall. In this exhaustively researched new book, he presents carefully detailed case histories of failed societies— islands in warmish waters (Easter, Pitcairn, Haiti), an island in coolish waters (Greenland), a continental semidesert (the Anasazi of the Southwest U.S.), a continental tropical forest (the Maya of Mexico).

Diamond begins with the failed state of Montana. Montana? Well, a Pulitzer Prize-winning tenured professor can take the liberty of giving priority to his

passions. So Diamond the ardent fly-fisherman, defender of ecological pristineness, sympathetic friend of the farming “locals” has come to the sad conclusion that Montana is going to the dogs. Once one of the richest states of the union, it now ranks among the poorest, having squandered its nonrenewable mineral resources and savagely overlogged its forests. Maybe worst of all, some cad put pike into the trout waters.

Although Montana is not about to fall off the map, leaving us with 49 states, the elements responsible for its decline are also responsible for societies that *have* fallen by the wayside. Diamond's central proposition is that wherever these globally disparate societies failed the chief cause had been anthropogenic ecological devastation, especially deforestation, imposed on ecosystems of limited resources. Those other western Americans, the Anasazi, settled in the New Mexico area about A.D. 600. There they built spectacular cliff housing, worked their marginal agricultural land, and chopped down all the trees without any plans for reforestation. Starving to the desperate point of cannibalism, wracked by internecine warfare, they met their end some 600 years later.

To the south, the Maya mostly had it all: technological knowledge to build architecturally wonderful cities, writing, and crops of corn. What they did not have were large domestic animals, or the foresight to replant after they clear-cut forests, or the political sense to refrain from inter-city warfare. Mayan soldiers and city dwellers were, as Diamond puts

it, “parasites on farmers,” who could no longer produce surplus food on their now barren, treeless land. The Maya began to go into decline about A.D. 1000 and said goodbye to the world about 1675, mopped up by the Spanish.

Diamond argues that the isolated island societies suffered a similar fate to the Anasazi and Maya for similar reasons. Pitcairn Island, Easter Island and Greenland all collapsed after the settlers had exhausted the fragile food and timber resources. Deforestation was particularly critical; after the larger trees were harvested, nothing was left to make the seagoing canoes needed for voyaging to other sources of food and material and for recruiting new people, especially wives, into their dwindling, interbreeding populations.

In these historical accounts of fallen societies, untrammled population growth did not play a significant role. Not until the section on modern societies with modern troubles does Diamond invoke Malthus, offering Rwanda as the



**PATTERN OF CATASTROPHE** in the collapse of past civilizations included deforestation and other environmental degradation.

JOEL W. ROGERS Corbis

prime Malthusian model of too many people with too little land. He makes an unconventional interpretation of the savage Rwandan conflict. It was not a mutually genocidal affair propelled by ancient hatreds. At the village level the Hutu and Tutsi had lived together amicably—until geometric population growth far exceeded the arithmetic increase in land and improved agricultural technology, fulfilling the thesis of Malthus's 1798 *Essay on the Principle of Population*. The brutal killing was, according to Diamond, primarily over your neighbor's land, not his tribal affiliation.

As the book's subtitle suggests, there are societies that have come to success by right thought and action. The Japanese, for example, saw the light and preserved and replanted their forests (although they have not renounced their national wood esthetic; the trees now come from

the forests of vulnerable states such as Papua New Guinea). The Dominican Republic preserved its forests and prospered. Its neighbor Haiti ravished both land and forests. And look what happened to them.

I wrote these last words while flying home from a National Academy of Sciences meeting called to reconsider bringing back that contentious, effective and dirt-cheap chemical, DDT. Now the choice will have to be made between the ultraconservationists' prohibition of DDT and the equally ardent arguments of a new coterie of American scientists who are demanding the return of DDT to try to halt the carnage of the malaria parasite, which kills two million to three million children and pregnant women every year. Sorry, Professor Diamond, even in our time of enlightened science, societies don't always have an easy,

clear choice to survive, let alone succeed.

*Collapse* is a big book, 500-plus pages. It may well become a seminal work, although its plea for societal survival through ecological conservation is rather like preaching to the choir. It is not a page-turner, especially for slow readers of short attention span (like this reviewer). Some of Diamond's "case studies" may be overkilled by overdetail. The last section, on practical lessons, seems disconnected from the central *Collapse* story and almost constitutes a separate book. But, having discharged the reviewer's obligation to be critical, my recommendation would definitely be to read the book. It will challenge and make you think—long after you have turned that last 500th-plus page. SA

*Robert S. Desowitz is emeritus professor of tropical medicine at the*

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University of Hawaii. He is author of five books on ecological and political issues relating to infectious diseases, the most recent being *Federal Bodysnatchers and the New Guinea Virus* (W. W. Norton, 2003).

## THE EDITORS RECOMMEND

### BOOKS ON EINSTEIN

A shelfful of books greets the centennial of Albert Einstein's "miracle year," which witnessed the theory of special relativity and four other seminal papers. Here is a sampling of the books our staff enjoyed.



#### EINSTEIN'S COSMOS: HOW ALBERT EINSTEIN'S VISION TRANSFORMED OUR UNDERSTANDING OF SPACE AND TIME

By Michio Kaku. W. W. Norton, 2004 (\$22.95)

Thanks to Kaku's insight (he is a theoretical physicist) and his flair for explaining dense scientific concepts (he is a best-selling author), this brief book weaves Einstein's life and work into a seamless, hard-to-put-down narrative. The organizing metaphor is how Einstein thought in terms of simple physical pictures—speeding trains, falling elevators, moving clocks. Excellent for the neophyte or readers who want to refresh their knowledge about Einstein without being talked down to or bored.

#### EINSTEIN'S CLOCKS, POINCARÉ'S MAPS: EMPIRES OF TIME

By Peter Galison. W. W. Norton, 2004 (\$14.95, paperbound)

Two scientists closed in on one groundbreaking theory. Poincaré posited something so close to Einstein's theory of relativity that it is surprising in retrospect he did not take the final step. The story is told in this new (paperbound) edition of a book that appeared in 2003. Described then as "absolutely brilliant," "a stroke of genius," "fresh, idiosyncratic," and "meticulously detailed ... perhaps the most sophisticated history of science ever attempted in a popular science

book," it is all of the above, but it is not for the intellectually faint of heart.

#### THE INVISIBLE CENTURY: EINSTEIN, FREUD, AND THE SEARCH FOR HIDDEN UNIVERSES

By Richard Panek. Viking, 2004 (\$24.95)

A less likely pairing emerges in this book—Einstein and Sigmund Freud. Although they met just once and didn't know what to make of each other's work, Einstein and Freud became the foremost proponents of research

on the frontier of the invisible, the search for the next level of scientific data—evidence we can't see.

#### EINSTEIN DEFIANT: GENIUS VERSUS GENIUS IN THE QUANTUM REVOLUTION

By Edmund Blair Bolles. Joseph Henry Press, 2004 (\$27.95)

Bolles intertwines a rich combination of scientific explanation and literary drama, painting a picture of Einstein's persona, the Euro-



## REVIEWS

pean mind-set, and the soap opera of quantum physics. The focus is on Einstein's battle for causality, the idea that every event has a cause and can thus be predicted.

### ALBERT EINSTEIN'S VISION: REMARKABLE DISCOVERIES THAT SHAPED MODERN SCIENCE

By Barry Parker. Prometheus Books, 2004 [\$28]

Parker follows Einstein's train of thought into the 20th century, examining the developments that resulted from his works. The book provides readers with enough information to recognize current buzzwords but not necessarily to understand them.

### EINSTEIN A TO Z

By Karen C. Fox and Aries Keck. John Wiley, 2004 [\$17.95]

Every Einstein book talks about relativity, but not many tell you about the mortician

who ran away with his brain. From absent-mindedness to Zionism, Fox and Keck offer sharp, bite-size pieces of Einstein-related people, concepts and quirks in a fun book ideal for trivia lovers and the science-wary.

### THE EINSTEIN ALMANAC

By Alice Calaprice. Johns Hopkins University Press, 2004 [\$24.95]

In a complete, concise guide, the author (who was in-house editor of the Princeton University Press series *The Collected Papers of Albert Einstein*) sets brief descriptions of 300 of Einstein's publications into the context of concurrent events in his personal life, the world in general, and the realm of physical science.

### THE EXPANDED QUOTABLE EINSTEIN

Collected and edited by Alice Calaprice. Princeton University Press, 2000 [\$19.95]

In her expanded edition, Calaprice has added

a surprising number of new quotes to her quirky biography for the impatient reader. Most quotes are ordinary statements that convey a sense of Einstein's character rather than his mind-boggling intelligence.

### THE COMPLETE IDIOT'S GUIDE TO UNDERSTANDING EINSTEIN

By Gary F. Moring. Second edition. Alpha Books (Penguin), 2004 [\$18.95]

While the complete idiot may think that Einstein = relativity, Moring goes back as far as the ancient Greeks to set a solid stage for Einstein's myriad accomplishments in fields ranging from physics to philosophy. The book's explanations are complete enough to both satisfy the reader and pacify the scientist, and the cheeky writing style is amusing without being annoying.

The books reviewed are available for purchase through [www.sciam.com](http://www.sciam.com)

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