

BOOKS

History on an environmental scale

Of porpoises and plantations

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When communities self-destruct

JARED DIAMOND likes his subjects big. His best-known book, "Guns, Germs and Steel", was in some editions subtitled "A short history of everybody for the last 13,000 years". This was no conventional history; rather, the author tried to explain the environmental factors behind the rise of various human civilisations. It was a terrific read and full of surprising subplots, such as why some animals can be domesticated and others cannot, and why agriculture spread to some societies but not others.

Now Mr Diamond, a professor of geography at the University of California, attempts to tackle the opposite question, that is, why some societies collapse. Again, he focuses on long-term environmental factors rather than on short-term political ones. Since Mr Diamond is a restless traveller, a ravenous researcher and a sparky writer, the result is gripping.

Among the collapses, he describes the civilisation of Easter Island three centuries ago, whose fall, he argues convincingly, was caused largely by deforestation. Transporting and erecting those extraordinary stone statues required a lot of wood. The early Easter Islanders also used wood to cook their food, cremate their dead and build large canoes. As the population grew, they cut down the big trees.

The ecosystem was wrecked. The soil was rendered infertile, and, with no big logs left with which to build seaworthy craft, the islanders had no means of escape. They could not even paddle far enough out to catch porpoises, which had been a chief source of protein. They ate their land birds to extinction and then they starved. Wars erupted, in which the victors ate the vanquished. A popular insult at the time, apparently, was: "The flesh of your mother sticks between my teeth."

The circumstances of a dry, windblown and isolated Pacific island are unusual, yet Mr Diamond finds other examples of poor environmental stewardship that led to calamity, or at least contributed to it. In Rwanda, where the conventional (and certainly correct) account of the genocide of 1994 is that extremist politicians goaded Hutus to kill Tutsis, Mr Diamond notes that mass killing occurred even in an area where there lived only a single Tutsi.

That lone Tutsi was killed, but so too were 5% of the Hutus in this area of 2,000 inhabitants, by other Hutus. Why? Part of the explanation must lie with Rwanda's overpopulation. Although the country is less densely peopled than, say, Belgium, it has more mouths to be fed by subsistence farming without modern tools.

The homogeneous Hutu area that Mr Diamond describes was especially cramped. All farmland was occupied, and practically everyone was hungry. Uneducated young men could not leave home, set up their own farms, marry and settle down, because space was lacking. Between 1988 and 1993 the proportion of young men living at home with their parents rose from 71% to 100%. That is, not one man in his 20s was self-supporting. To put it mildly, this created tensions. Conflicts between neighbours were common. When the genocide began and normal rules were put on hold, many of these listless young men murdered their richer neighbours, in the hope of seizing their land or cows.

One of the appealing things about this book is that Mr Diamond does not overstate his case for dramatic effect. He does not argue, as some have done, that overpopulation leads inevitably to genocide. He stresses the culpability of the Rwandan politicians who, to crush a Tutsi-led insurrection, imported tens of thousands of machetes and orchestrated the mass murder of Tutsis. He understands that they could have chosen to tackle their problems in a less evil manner. His point is merely that when people are starving because they do not have enough land, it is surely easier to persuade them to kill their neighbours.

Another appealing aspect is that although Mr Diamond is patently alarmed about the state of the world, he believes that things will come right in the end. This "cautious optimism", as he calls it (though too cautious for this reviewer), is informed by a wide-ranging study of societies that have figured out how to manage their environments sustainably.

His account of how deforestation was reversed in 17th-century Japan, for example, is a heartening case. Because the country was politically stable, the shoguns were able to plan for the long term. They imposed sensible regulations as to who could fell how many trees and how much they should pay for the privilege. They encouraged commercial replanting. And they also enforced something like property rights over farmland and fisheries, thus avoiding a tragedy of the commons.

Errors are probably inevitable in a book of this scope, though some of them jar. It is absurd, for example, to claim that, today, 80% of the world's population live "near or below the starvation level". The real figure is less than 15%, unless you take a very loose definition of the word "near". The author's attempt to rebut the idea that greenery costs money is similarly hampered by lousy statistics. Overall, however, the book fulfils its huge ambition, and Mr Diamond is the only man who could have written it.