
Reviewed by Brian Fagan, University of California, Santa Barbara.

Archaeology is in the process of discovering new roles in a world concerned with fostering a sustainable future and increased human resilience in the face of both gradual and sudden change. The essays in *Surviving Sudden Environmental Change* are studies that formed part of a conference on the subject, “Global Long Term Human Ecodynamics,” under the auspices of the Humboldt Field Research Institute at Eagle Hill, Maine, in 2009. Human societies and their environments are remarkably diverse; both change constantly. Editors Payson Sheets and Jago Cooper point out that human societies of all kinds learn to adjust successfully to both long- and short-term climatic change. However, they also emphasize that some changes are of such magnitude that societies are profoundly affected by them, undergoing dramatic transformations or even vanishing altogether. They refer, of course, to epochal disasters such as major earthquakes, droughts, volcanic eruptions, and so on, which have often been used to explain major changes in people and their societies, such as, for example, the Biblical story of Noah and the great flood. Major disasters affect about 200 million people a year today, so it is a mistake to think of such phenomena as isolated eruptions. People, their distribution across the landscape, how they feed themselves and are governed, and the oral histories surrounding earlier disasters and the assessment of risk, are but a few of the factors that come into play when examining the history of major natural events. The eight studies in this volume are all well-documented cases, organized in such a way that the reader can compare the actions and reactions of different societies over a broad range of environments. The earlier chapters focus on the impacts of geological hazards such as earthquakes and volcanic eruptions. Later studies are concerned with climatic hazards of extreme weather events and with climatic variability.

The first case study, by Ben Fitzhugh, describes the hunter-gatherers of the Kuril Islands of the northwestern Pacific, who lived in a very challenging environment of limited resources and frequent volcanic disruptions. He shows that the islanders were highly resilient to local disasters, which had relatively little impact on their lives. Complex economic, political, and social factors, as well as environmental and geographical realities, shaped their lives, which depended on networks of contacts with a much wider world. Their vulnerability lay more in their relationships with external societies that wished to control the rich fur resources of the islands. Payson Sheets deciphers the complex responses to volcanic eruptions in Central America. He also shows that decentralized, egalitarian societies reacted quickly and effectively to disaster. Complex, ranked societies were another matter; Sheets wisely raises the critical relationship between disasters and religious belief. A really massive disaster could well decapitate an entire religion and replace it with new beliefs. He also draws attention to the unfettered population explosion of the past millennium, the loss of traditional environmental knowledge, and the irresponsibility of central authorities. From Central America, we travel to Iceland, one of the most volcanically active regions on earth. Here it appears that volcanic eruptions were not the greatest hazard for Icelanders. Rather, it was plagues, climate change, and sociopolitical constraints that caused more casualties in the long run. Icelanders settled away from volcanic areas and coped with volcanic hazards by adjustments in social systems and by means of durable Norse settlement strategies. Interestingly, there is no study of the impact of Icelandic eruptions on ancient Europe, on, for example, medieval agriculture; witness in later centuries the notorious “Year without a Summer,” 1816, which saw, among other things, the birth of Frankenstein.

From volcanic activity, the essays turn to sudden environmental change. Jago Cooper shows how 5,000 years of accumulated indigenous knowledge vanished during the Colonial period in the Caribbean. He uses
both archaeology and ethnohistorical sources to argue that the constantly changing dynamics of humans, climate, and environmental relations can only be studied within a long-term understanding of local situations, something that is archaeology’s strength. Dan Sandweiss and Jeffrey Quilter examine the disaster-prone Peruvian coast with its earthquakes and El Niños. They show how growing population densities and increasing social complexity through ancient times enhanced risks from natural disasters. Complexity was never lost, but there were major oscillations over the millennia caused in part by natural phenomena, in sharp contrast to the demographic collapse after the Spanish entrada of the 1530s, caused by human factors such as disease, economic and social disruption, and warfare. Emily McClung de Tapia describes recent research at Teotihuacán that chronicles a complex history of landscape development closely associated with human activity around the city. She argues that the landscape was resilient enough to withstand the effects of human impact during the Classic period, when the city developed and prospered. The fragile limit between sustainable productivity and catastrophe was a threshold that was passed as a result of numerous factors, among them changes in land use resulting from Spanish agricultural techniques and population reduction, also from severe damage to the ecosystem. Tate Paulette takes us to the other side of the world, to Bronze Age Mesopotamia, where risk management allowed for drought, disease, flooding, and river channel shifts in the context of a volatile and highly competitive economic, political, and social environment. He argues that we should pay close attention to the effects and effectiveness of different institutional forms, such as centralized governments or ones that espoused a greater role for private entrepreneurs and their agents. Dominance, resilience, and social inequality: Paulette raises important questions of relevance to our world of increasing chasms between the haves and have-nots. Finally, a galaxy of Southwestern archaeologists address issues of long-term vulnerability and resilience in the Southwestern United States and Mexico. The authors focus on long-term relationships between ecosystems and social systems in both the pre-hispanic and proto-historic periods. To discuss key concepts: diversifying maize-based subsistence, the role of the irrigation infrastructure relative to vulnerability to climatic conditions, and the trap of undue rigidity in social and ecological systems that enhances vulnerability. They stress the importance of research into long-term processes and the great diversity of costs, benefits, and vulnerabilities. Archaeology, they argue, has much to contribute to studies of resilience over long periods of time.

Tim Kohler and Charles Redman contribute valuable assessments, the former examining the history of social evolutionary models in archaeology and, briefly, in biology. Kohler points out that more hierarchical societies vary greatly in their institutions and in their capacity and willingness to respond to suffering caused by natural disasters. Like other contributors, he stresses the critical role played by population growth, humanity’s greatest trap, for it quickly absorbs technological advances and efforts at social construction, while constantly demanding more. Redman’s summary discusses the rigidity of social institutions. He argues for four domains of adaptive strategies—locational flexibility and adaptability, ecosystem management, built environment and other technologies, and increasing social complexity. Redman also points out that most human decision-making is for the short term, for immediate advantage, whereas a longer-term perspective often shows that such decisions produced additional threats over decades or centuries. Furthermore, for success in the long term, one has to achieve positive results within a shorter time frame. One major variable: the need for sudden change in deeply held traditional values in the face of a disaster, something that is endemic in today’s rapidly changing and globalizing world. Like the other contributors, Redman believes that archaeology offers perspectives on the long-term past that may provide insights into the challenges we face today and improve our responses to them.

Cooper and Sheets have assembled a valuable set of case studies that revolve around environmental change in a very wide sense. All of them highlight the valuable insights that archaeology, with its long-term perspective, can bring to the environmental table. The authors develop fresh theoretical insights and marshal new (and sometimes familiar) data that will provide a sound foundation for future inquiry. One only regrets the lacunae—for example, a lack of any coverage of South and Southeast Asia and monsoon failures, now increasingly well documented at Angkor Wat and elsewhere. Even a very preliminary statement would have added much to the book, as would coverage of new research from China and Mongolia, which is likely to change our perceptions of the East Asian past and of human resilience to drought. And why is there no coverage of Africa, where there are rich climatic records, an abundance of invaluable ethnographic and ethnohistorical evidence, and archaeological insights of potentially international significance? The conference and the editors missed an opportunity with these omissions, perhaps because of funding issues, given that the study of adaptation and resilience is a global problem.

Each case study ends with a short abstract that, according to the back cover blurb, summarizes the important implications of the research for “today’s management practices and provid[es] recommendations for policy makers.” These summaries are really too short to have any serious impact on a wider audience. We also
learn from the Foreword that "all participants were deeply committed to using their expertise to make concrete and practical contributions to improving the lives of present and future residents of their areas" (p. ix). This is admirable, but an edited volume like this is firmly aimed at academic and more specialized audiences, while the broader community of paleoclimatologists and policymakers, to say nothing of the general public, have little or no understanding of what archaeology can contribute to the climatic and environmental challenges of today and the future. If ever there was a case for aggressive public outreach, not by science journalists, but by archaeologists, this is it. One can only hope that the editors, or the University Press of Colorado, will initiate efforts through a publication of much broader appeal to make archaeology and archaeologists a valuable part of ongoing debates about human resilience in the face of disaster. The current volume, admirable as it is in its intent, will not do the job. In the meantime, this set of case studies is a good starting point for academics, students, and colleagues in other sciences. And the promise for future research is enormous.


Reviewed by John Bintliff, Edinburgh University/Leiden University.

This is a curate’s egg of a book (good in parts!). It is intended, admirably, to reorient the archaeological discipline by exposing its recent development through autobiographical interviews with 21 leading figures. But released only as a hardback by the notoriously overpriced Routledge publishers at $220, it will be bought by no individual and few libraries. A book I published last year came out in cloth and paperback at the same time, and while less than 50 of the former have been sold, more than 1,000 of the latter were purchased (at a third of the price), which ought to send a clear message to archaeology publishers!

At 432 pages it is also far too long and should have been cut by half. I suspect a confusion arose between archiving the biographies of archaeologists and making a book with a clear methodological direction, but I personally did not need lengthy digressions on caving (Watson), illegal antiquities (Renfrew), the history of the feminist movement (Watson again), debates between philosophers (Wylie), and garbage research (Rathje).

The attempted synthesis by the editors, which concludes the volume, is long and confusing, although within it, is also true of the interviews, one can find a common set of ideas that one might realistically see as the developing core of a mature method and theory for contemporary archaeology. Credit here must go to the intelligent questioning, notably by Mike Shanks, which eschews partisanship regarding approaches and intellectual affiliations in favor of letting the interviewees speak and reflect on their own careers.

Quite to my surprise, the tiresome battlegrounds of processualist-postprocessualist, academic-CRM, science-hermeneutic skirmishing are fading into the background, with an admission that more holistic approaches incorporating ideas and methods from all these strands of archaeology are logical and desirable. Here several interviewees stressed the need to study the history of archaeology and the sources and relevance of ideas past and present in the discipline, while critiquing the adoption of new “isms” that are often older ideas repackaged.

Also remarkable is the general acceptance of a form of evidential empiricism as the ultimate gold standard of doing good archaeology of whatever theoretical orientation. Appropriately, the first interviewee was Lewis Binford, who repeated his unbending commitment to teach students how to evaluate data and competing interpretations. On a personal note, this reviewer was frustrated to see that reference by the editors to his recent co-edited volume The Death of Archaeological Theory (2011, Oxbow) glossed it as advocating theory as the essence of the discipline (how come with that title?), whereas I expressly identified testing ideas against data as the bottom line.

Less resolved is the issue of public involvement. A range of attitudes was displayed, from diplomatic engagement with local communities to allow professional archaeological work to more extreme multivocality whereby archaeologists are criticized as authoritarian neocolonialists who have no right to challenge folk memory or myth, and should at least promote political agendas to advance local causes. Praetzelis and Praetzelis spoke for the majority, however, in emphasizing the obvious point that prolonged education in a well-established practical discipline gives professional archaeologists, indigenous or otherwise, the right to control fieldwork where it is permitted. On the other hand, the best way to involve the community is through involvement with the project in practical, educational, and entertainment initiatives, a process of learning together. Finally, all local societies have knowledge that can be incorporated into interpretation. Hodder’s views were problematic on these issues, as too often I found contradictions between his moral rhetoric and his actual practices. His mentions of the Mother Goddess visitors as evidence for inclusiveness at Çatalhöyük sit uneasily with the fact that they are kept at arm’s length from the research, and their ideas do not form any part of Ian’s