and biological explanations of human behavior, can only be commended in its attempt to bridge not only the natural and the social sciences, but also different disciplines within the social sciences.

Unfortunately, previous work in this "gene-culture coevolution" or "cultural evolution" tradition, including Richerson and Boyd's seminal earlier work, has not received the attention it deserved, often due to its highly mathematical nature. This book is, however, an accessible and math-free overview of the field by two of its leading authorities. Numerous fascinating case studies are used to illustrate the central argument, which is presented as a series of simple chapter headings: Culture Is Essential; Culture Exists; Culture Evolves; Culture Is an Adaptation; Culture Is Maladaptive; Culture and Genes Coevolve; and (paraphrasing Dobzhansky) Nothing About Culture Makes Sense Except in the Light of Evolution. The authors draw from an impressively wide range of sources to support these claims, from the ethnographic and archeological records to economic and psychological experiments. Of particular interest are the detailed cultural explanations of the demographic transition and, using a model of cultural group selection, the phenomenon of widespread human altruism toward nonkin.

One minor criticism is the omission of recent work that applies phylogenetic analyses to anthropological and archeological data, which is somewhat surprising given the authors' commitment to the use of biological tools in the social sciences. The title of the book also seems a little one-sided given the interactive nature of their gene-culture coevolution perspective (although *Not By Either Genes or Culture Alone* is perhaps not quite as catchy).

In summary, this is an excellent and authoritative account of a much needed "third way" between the positions of certain anticultural evolutionary psychologists and certain antievolutionary social scientists. It is highly recommended not only for students new to the area, but also to scholars of either of the above persuasions who have previously been put off by the math.

Alex Mesoudi, *Psychology, University of St. Andrews, St. Andrews, Fife, United Kingdom*

The Biology of Civilisation: Understanding Human Culture as a Force in Nature.

By Stephen Boyden. Sydney (Australia): University of New South Wales Press; distributed by University of Washington Press, Seattle (Washington). $22.50 (paper). xv + 189 p; ill.; index. ISBN: 0-86840-766-6. 2004.

Biohistory is emerging as a new field that attempts to bridge the gap between the social and biological sciences. The goal of biohistory appears lofty: to synthesize our understanding of the human animal from both cultural and biological perspectives. This ambition is more than academic. The human race is approaching an era in which our use of the biosphere will far outstrip its regeneration, and understanding the biological and cultural underpinnings of human ecology could be instrumental in reversing this trend. However, a long-standing academic divide frustrates efforts at such a synthesis. One source of this rift is the divergent approaches used by social and biological researchers. Social scientists generally investigate the modern forces shaping human cultures, social practices, and mores. Although biologists can also focus on the effects of the current environment, all biology is connected by the common framework of evolutionary history. Can the study of biological evolution illuminate our understanding of human cultural evolution? The answer appears to be yes, but with caveats.

In *The Biology of Civilisation,* Stephen Boyden offers a practical and quite enjoyable field guide to the biohistory and potential future of the human race. The book is intended for a general audience, and while the writing is nontechnical and concise, the author's rather humble style belies a sweeping knowledge of past and present human culture. Boyden begins the volume with a brief description of both the biological and cultural ancestry of the human species. Throughout, his analysis is never divorced from basic biological and evolutionary tenets. In the first three chapters he defines culture and outlines its relevance for the human race. Although culture is not uniquely human, the author shows how cultural forces have shaped critical aspects of humanity and often with quite irrational results. It is specifically these illogical paths that form the two linked themes of the book. The first theme describes the discord between the modern human environment and the ancestral conditions in which most human traits were shaped. The second theme shows that cultural evolution occurs without mechanisms to ensure that traits are beneficial. Hence, harmful cultural features—termed "cultural maladaptations"—can spread and render serious costs to society. The second theme points out the main difference between the idiosyncratic process shaping cultural traits versus natural selection on biological traits: under natural selection, only more favorable features can spread. Boyden does not draw this contrast, perhaps because it is implicit; however, this difference remains the key limitation to a synthesized biohistorical approach.

The course of human cultural evolution appears rife with cultural maladaptations, and these unfortunate features of society become the centerpiece of the remaining eight chapters. Cultural maladaptations range from obsolete practices such as footbinding in China to modern features such as war, slavery, pollution, and unsustainable harvest of resources. Boyden, however, does more than illustrate the many destructive aspects of human societies, he offers methods of reform based on our biology. He begins by investigating the ancestral conditions that shaped us and identifies universal health needs of humans. He then extends this method and postulates the intangible human needs necessary for mental and emotional health. Although the intangible features that he describes—conviviality, emotional support networks, and opportunities for spontaneity and creative behavior to name a few—are difficult to quantify, he suggests a direct connection between such features in our ancestral environments and their necessity to sustain health in our current environments. The intangible human needs are an interesting tool and represent admirable goals for humanity, but no convincing evidence is presented that these needs were directly shaped by ancestral conditions.

In the end, Boyden presents a case for the future of humanity. He suggests a transition to a new phase in human history in which we abandon our most destructive cultural maladaptations and derive a new social course of ecological sustainability. Such change appears plausible, but Boyden admits that it is only possible if there is a shift in the priorities of the dominant cultures. The key message is that our new economies must be based on sustainability as opposed to unending financial growth. This book offers the human race a challenge to live up to our namesake. Can *Homo sapiens* take the wise path? Only the future will tell.

JOEL SACHS, *Integrative Biology, University of California, Berkeley, California*

COMPLEXITIES: BEYOND NATURE & NURTURE. *Based on a conference held in Cabo San Lucas, Mexico, 28 October–5 November 1999.*

Edited by Susan McKinnon and Sydel Silverman. Chicago (Illinois): University of Chicago Press. $50.00 (hardcover); $20.00 (paper). ix + 330 p; ill.; index. ISBN: 0-226-50023-3 (hc); 0-226-50024-1 (pb). 2005.

"The nature of man is intricate; the objects of society are of the greatest possible complexity," Edmund Burke remarked in his *Reflections on the Revolution in France and on the Proceedings in Certain Societies in London Relative to that Event* (1790. London: J. Dodsley). Nevertheless, the complexity of natural and social phenomena is frequently reduced to the simplicity of a few principles. Taking half a step beyond the dichotomy of nature and nurture, *Complexities* is a timely volume edited by two anthropologists, Susan McKinnon and Sydel Silverman, dedicated to the presentation of anthropological knowledge that challenges reductive explanations of human life.

The volume comprises 13 essays, as well as an introduction by the editors. Part I provides critical engagements with the presumptions of contemporary evolutionary psychology (essays on the human brain, language, and cognition are by Gibson; Foley; and Danziger). Part II is dedicated to the exploration of the limits of universal models for the explanation of the complexities of human experience (essays on male aggression, kinship, gender, and idealized womanhood are by MacKinnon and Fuentes; McKinnon; Orgel et al., and Meskell). Part III comprises chapters on the use of genetics as a principle of explanation (essays on health, Alzheimer's disease, and genetic medicine are by Leatherman and Goodman; Lock; and Taussig). The final part reveals reductionist explanations in political discourses (essays on war, language policies, and nationalism are by Moran; Gumperz and Cook-Gumperz; and Schiller).

Unquestionably, complexity constitutes an essential feature intrinsic to anthropology's endeavor of rendering visible the entangled social, cultural, and biological aspects of human life. The contributing authors of *Complexities* continue this important tradition of critical inquiry. However, the concept of complexity, although invoked by the editors as the main theme cutting across the various parts of the volume, remains rather vague as to the analytic purchase it brings to bear. There is, curiously enough, no entry for "complexity" in the index of the volume. If not an explicit conceptual clarification, the editors suggest a negative definition of the term: complexity stands in contrast to reductive theories and explanations that reduce natural and social phenomena to simple principles. Granted that things natural and social are intricate, how, then, can anthropologists convey a sense of complexity in their descriptions? Are linear narratives appropriate for the presentation of dynamic phenomena? Or are new narrative forms necessary for those objects of the greatest possible complexity?

CARLO CADUFF, *Laboratory for the Anthropology of the Contemporary, Berkeley, California*