Edward O. Wilson, *The Social Conquest of Earth* (New York: Liveright Publishing/W. W. Norton and Company, 2012), 352 pages. ISBN 978–0871404138. Hardcover $27.95.

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With recent advances and technological breakthroughs in the life sciences, most notably the social brain sciences and behavioral genetics, human nature has once again found itself hotly discussed in both academic and policymaking circles. Take for example the growing number of articles on biology and politics published in major academic journals[1,2,3,4] or discussion on the neuroscience of conflict occurring within the Department of Defense.[5] In many ways, the Decade of the Brain of the 1990s has given way to a new behavioral revolution, one that is truly multidisciplinary in the pursuit of the necessary unity of knowledge required for consilience. We can see this in the explosive proliferation of "neuro" disciplines such as neuroeconomics, neurophilosophy, and, of course, neuropolitics as well as in the exciting reemergence of evolutionary theory in the fields of political science and international relations.

This renaissance associated with the new behavioral revolution is not solely concerned with the neural substrates and biological mechanisms of human nature. It is also related to what these advances can tell us about the human condition in an increasingly crowded world. For instance, was Samuel Huntington right? Will there be an inevitable clash of civilizations as different ethnic groups with deep historical tensions compete over shared resources, or is cooperation between human societies the norm and conflict the exception? With either scenario, how will the changing international landscape shape the future of political order and security, be it the rise and decline of world superpowers, the agitation or soothing of economic systems, or the transformation or stasis of tumultuous geographic regions?

doi: 10.2990/32_1_106

One place to start the search for answers is Edward O. Wilson's new book, *The Social Conquest of Earth*. While Wilson does not provide or intend to provide specific answers to these questions, he offers an impressively detailed and thought provoking account of who we are, where we come from, and where we may be going as a species. As he states early in the prologue, "There is no grail more elusive or precious in the life of the mind than the key to understanding the human condition" (p. 1). Wilson has spent a good part of his academic career in pursuit of this grail, and this book can be seen as a culmination of a lifetime of work in the fields of entomology and evolutionary biology.

To understand the human condition, Wilson begins his narrative with an investigation into "the two paths of conquest": the evolutionary histories of insects and humans, which share the important condition of eusociality. According to Wilson, "eusociality" can be understood as groups of individuals "containing multiple generations and prone to perform[ing] altruistic acts as part of their division of labor" (p. 16). While humans possess more complex brains, language, and culture, our eusociality makes us "technically comparable" to ants, termites, and similar social insects. What accompanies our eusocial nature, according to Wilson, is empathy supported by a highly intelligent and intensely social brain. However, as Wilson points out, this cooperative dimension of our nature can easily come into conflict with our adaptively shaped need to compete aggressively for reproductive resources. In other words, we are "selfish at one time, selfless at another, the two impulses often conflict" (p. 17). More strikingly, Wilson reminds us that despite our shared eusocial behavior with insects, the common evolutionary pathways fundamentally differed such that eusociality in insects occurred through individual selection in the queen lines (generation after generation), while "prehumans evolved to eusociality by the interplay of selection at the level of individual selection and at the level of the group" (p. 20).

It is this latter point—the argument for multi-level selection—that will likely draw the most attention. Indeed, individual selection continues to be the model agreed upon by most evolutionary biologists and proponents of inclusive fitness. Nonetheless, Wilson covers a vast amount of material in great detail to support his argument for how multi-level selection shapes the eusocial dimension of human nature. For

example, he provides an insightful account of "where we came from" and "what we are," tracing the evolutionary pathway through which *Homo sapiens* descended and how human behavioral traits like eusociality, creativity, culture, and religion, but also war, evolved as by-products of evolution. Following his discussion on prehumans' "sprint to civilization," Wilson turns to an equally detailed account of social insects (chapters 12 through 19). It is on this topic that Wilson's unparalleled work in the field of entomology provides us with the "invention" of eusociality and its implications for understanding the origins of human nature.

Wilson ends the book with a look towards the future based on a reflection of the past. In the final chapter, "The New Enlightenment," Wilson disputes the inclusive fitness theory that has dominated and shaped discussions on evolution and human nature and suggests that we should instead embrace the multi-level selection model since it provides us with a more accurate understanding of the "driving force of where we have been and where we are going." Indeed, as Wilson points out, we are tribalist by nature and feel "the pull of conscience, of heroism against cowardice, of truth against deception, of commitment against withdrawal" (p. 290).

While Wilson proffers an interesting and timely discussion of eusociality and multi-level selection, his critique of the theory of inclusive fitness leaves much to be desired. At the end of his detailed account of human and social insect evolutionary pathways, in which the majority of the book is dedicated, his call for the abandonment of inclusive fitness and the adoption of multi-level selection would greatly benefit from a deeper, more comprehensive discussion since it leaves many questions unanswered. For example, the human behavioral traits that Wilson attributes to eusociality (i.e., costly cooperation with out-group members) can be explained by Robert Trivers' classic work on reciprocal altruism,[6] or be seen as an example of an evolutionary maladaptation, in which our capacity for cooperation evolved within small group interactions with related family members.[7] Both these perspectives offer a great deal of theoretical rigor in support of inclusive fitness and against group selection theories like strong reciprocity.

Nonetheless, *The Social Conquest of Earth* is thought provoking and an important contribution to the study of evolutionary theory and biopolitics in two central ways. First, it provides a consilient approach to the debate on human nature and its political implications. Such discussions will become increasingly important and insightful as advances in neuroscience and behavioral genetics provide a new and potentially paradigm shifting understanding of human nature and what it means for the possibilities of intergroup cooperation and conflict. Second, Wilson's acknowledgement of eusociality deserves much attention and further inquiry as we find ourselves, once again, interested in human political behavior and multidisciplinary research. Although the concept of eusociality does not appear to be a suitable replacement to the theory of inclusive fitness, such alternative models should be thoroughly explored to promote a deeper understanding of the complexities of the human condition.

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https://doi.org/10.2990/32_1_106 Published online by Cambridge University Press