BOOKS: HISTORY OF SCIENCE

Battlefield Sociobiology

Alison Jolly

"It is somewhat ironical that [E. O.] Wilson, smack in the middle of the crossfire of controversy, should have worried about *introducing* [the mythopoeic requirement of the mind] into science. What he wished to bring into science—emotion and belief—were already there." These are the final words of Ullica Segerstråle's splendid book on the controversies over sociobiology—a book 20 years in the making, and well worth the waiting. Segerstråle, a sociologist of science at the Illinois Institute of Technology, gives us both a blow-by-blow account of the sociobiology feud and a multilevel analysis of its components and historical setting.

Defenders of the Truth
The Battle for Science in the Sociobiology Debate and Beyond
by Ullica Segerstråle
Oxford University Press, New York, 2000. 503 pp. $35, £18.99. ISBN 0-19-850505-1.

Segerstråle explains the science itself. She dwells especially on the different meanings of the "gene." Wilson's opponent Richard Lewontin viewed genes as identifiable alleles, at known loci, with effects that could be traced to known or knowable gene products. For Wilson, however, genes were hypothesized entities that quantitatively affected behavioral traits. The author also examines the controversies over levels of selection and the shifting meanings and fortunes of "group selection." Her account reveals intellectual differences between British and American participants on both sides of the battle lines. She analyzes the creative insights of the late William Hamilton, and of Robert Trivers and George Williams, and why Richard Dawkins refused for years to accept the label "sociobiology" for his own, precise "selfish gene" formulation. Through it all, John Maynard Smith recurrently appears as magisterial umpire.

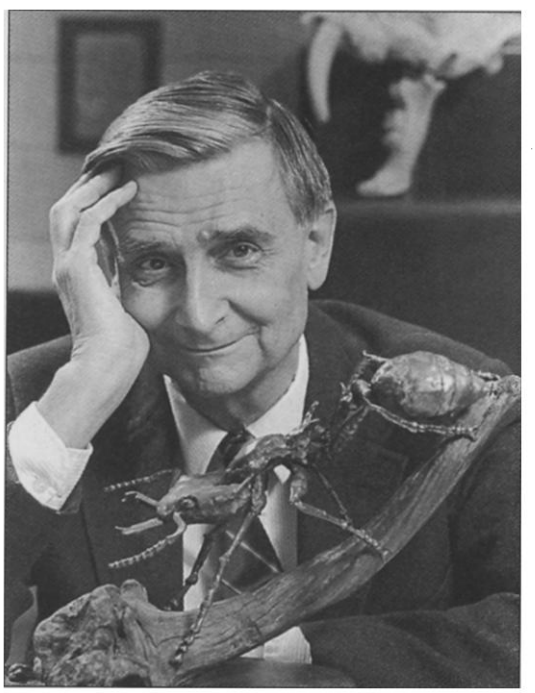
At the same time, Segerstråle lays bare the political, moral, and personal elements that blend inextricably with the making of science. She does so without taking cheap shots at the individuals involved. Indeed—except for two paragraphs by Wilson on Lewontin's speaking style, which the author apparently couldn't resist—there is almost no description of the protagonists as people. Instead, the scientists wrestle with each other as pure, though emotional, intellects. Segerstråle respects them as thinkers who mean what they say and who explain themselves in their own lucid terms.

This book is essential reading for students and scientists, rather than the public at large. There is a fine riff in the preface where Segerstråle compares the plot to grand opera: protagonists sing at full voice from separate balconies, while their crowds of respective supporters fling up gold coins of moral capital from below and the chorus "hesitantly tries to make co-evolution rhyme with revolution." Mainly, though, her approach is more like the *Iliad*: She provides details with an apposite quote each time one hero's cutting review strikes another's bloody helm, and the details accumulate into an epic whole.

In the larger historical context, Segerstråle positions the sociobiology feud as a middle stage. Earlier came the protest over intelligence quotient (IQ). Lewontin and Stephen Jay Gould led the outraged refutations of Arthur Jensen's claim that IQ has a genetic component that differs between races, a theory that they saw as bad science in support of odious politics. Lewontin and the Sociobiology Study Group then took on Wilson's sociobiology, which they charged with being an even wider-scale and more pernicious attempt to justify genetic determinism. Still later, different people took the stage in the "science wars," but a major part of their ammunition comes from the feud within science over sociobiology. And with his book *Consilience*, Wilson entered that arena as well, claiming that the arts and the social sciences can and should be founded on evolved human nature. For Wilson, this is the myth that triumphs because it is true—a vision of human knowledge as seamless architecture, built on the bedrock of evolutionary understanding.

Segerståle's own preferences are clear. She embarked on a doctoral thesis on sociobiology in the 1970s as the controversy began. She started out with a social scientist's mindset against Wilson, but she switched to the sociobiologists' side while attending meetings and reading papers in the heat of the fray. Any reader of her account will probably have criticisms. To my mind, she underplays the lasting contributions of Gould and Niles Eldredge's punctuated equilibrium and the San Marco spandrels—or pendentives, if you prefer—by framing them so wholly within the sociobiology controversy. I also wish that she had included a chapter on feminists for and against sociobiology, as a group with its own emotional stake in the outcome. Mainly, though, she seems fair; whatever one's own views, all the material is here.

Twenty-five years after the publication of *Sociobiology*, Segerstråle concludes that the sociobiological approach has won. It has spawned societies, journals, and an ever-expanding program of research. It has outgrown the critics' charges of "genetic determinism." Ironically, the public now see geneticists like Lewontin and, of course, Wilson's old nemesis James Watson, as the ones identifying—or altering—genes that determine people's fate. But even though Segerstråle reaches an eventual conclusion, her real fascination is to trace how this group of extraordinary minds, each a "defender of the truth" devoted to some version of scientific understanding, could wage such bitter war.



After the wars. Wilson's dust jacket portrait from the 25th-anniversary edition of *Sociobiology* (Harvard Univ. Press, Cambridge, MA, 2000).

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