

Book Review

Behind the evolution of social theory

A review of *Natural Selection and Social Theory: Selected Papers of Robert Trivers*. Oxford University Press, 2002.

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You can't help liking a book that includes a section titled "How to write a classic paper". And certainly no one is in a better position to provide such a guide than Robert Trivers, who single-handedly shaped current thought on topics in sociobiology and evolution ranging from sex ratios to parent-offspring conflict to reproductive strategies. In *Natural Selection and Social Theory*, Trivers, now at Rutgers University, provides a retrospective of 5 of his theory papers published between 1971 and 1976, an empirical paper on Jamaican lizards, and 4 later papers. Each reprinted publication is accompanied by an introduction and in most cases a postscript, and it is these additional essays that will make the book worthwhile to most readers. The introductions are personal, sometimes gossipy, and anyone looking for candid – perhaps too candid – views on the major players in the sociobiology controversy of the 1970s will find them here, with the requisite digs, for example, at Stephen Jay Gould and Richard Lewontin. Others, such as E. O. Wilson, Ernst Mayr (who appeared in a dream, where he helped Trivers with the problem of haplodiploidy and hymenopteran sex ratios), and W. D. Hamilton, receive more flattering treatments.

For those who already know the papers, the introductory essays provide sometimes surprising insights into the motivation behind the work. Reciprocal altruism and parental investment both became of interest to Trivers only after he decided against spending his career attacking other biologists, particularly the ecologists MacArthur and Levins. He was wounded to hear that Lewontin had disparaged him for being "an intellectual opportunist" at Harvard, and points out in his commentary, reasonably enough, that such a role makes eminent sense; most of us wish we had the chance, not to mention the intellect, to be such opportunists ourselves. On a more trivial but no less interesting note, apparently Dan Willard of the Trivers-Willard effect became involved in sex ratio research because, as a graduate student in mathematics at Harvard, he found it hard to meet

women; the primate behavior course for which Trivers was the teaching assistant, and which inspired the paper, sounded like just the solution.

The commentaries do more than provide interesting tidbits of academic celebrity gossip. They also set the papers in the context of the time they were written, something that will help current graduate students understand their significance. Those who have not read the papers previously will therefore also benefit from the presentation. Often students are simply told that certain papers are classic without justification; Trivers' comments help readers see why the work was so original, and I myself will certainly use the book in a graduate core course on behavioral ecology. The volume also helps draw attention to some of Trivers' lesser known works, such as the unaccountably ignored paper with Jon Seger on female choice for traits indicating fitness in daughters (Seger and Trivers 1986).

As for the directions on writing a classic paper, here they are (p. 13):

1. Pick an important topic.
2. Try to do a little sustained thinking on the topic, always keeping close to the task at hand.
3. Generalize outward from your chosen topic.
4. Write in the language of your discipline but, of course, try to do so simply and clearly.
5. If at all possible, reorganize existing evidence around your theory.

Those hoping this advice would get them on the fast lane to their own version of parent-offspring conflict theory or a new and groundbreaking take on reciprocal altruism may find themselves disappointed. Most of these instructions fall into the category of easier said than done, but as Trivers also notes, "it still seems remarkable to me how often people bypass what are more important subjects to work on less important ones" (p. 13). He also bemoans the lack of interest in his work from social scientists, and it is clear that the high hopes of sociobiologists for a widespread revolution in thinking about human nature have not materialized. This may not be surprising, given Trivers' dismissal of psychology as "not, in fact, a real discipline, but rather a competing set of hypotheses about what was important in human behavior" (p. 257). Scholars tend not to take kindly to an outsider telling them their entire field is without foundation.

The book is full of other gems large and small, such as the pet peeve of Trivers against using the word "kid" as a synonym for "child", claiming that "I thought it absurd (and psychologically revealing) that an entire society of people named their children after the young of another species that they neither kept, ate, nor had any special affection for" (p. 128)." It is not entirely clear to me what aspect of human psychology the word reveals, but so be it. Mainly, however, *Natural Selection and Social Theory* allows readers to appreciate the enormous contribution these papers have made to current thinking in the evolution of social

behavior. Those without the papers themselves will certainly want a copy of the book, and those whose reprints are well-thumbed will still gain a great deal from the additional material.

Reference:

Seeger, J. and Trivers, R. (1986). Asymmetry in the evolution of female mating preferences. *Nature*, 319:771-773.