



Book Review

Evolution and the Capacity for Commitment edited by Randolph M. Nesse.
New York: Russell Sage Foundation, 2001.

Reviewed by William D. Casebeer

Nature is red in tooth and claw. The type of creature produced by evolution is the powerful loner, who knows when to cheat and can do it well: he is a kind of Nietzschean *übermensch* who breaks the conventions of sociability and morality with one powerful swipe of his well-oiled and bloodied fighting appendage. Or so the poet Alfred Lord Tennyson would have you believe.¹ To which I say: poppycock. With regards to paving the way for the popular reception of Darwinian evolution (or the lack thereof!), this characterization of the types of organisms produced by the struggle for survival has done far more harm than good. Randolph Nesse, the editor of the Russell Sage Foundation's volume "Evolution and the Capacity for Commitment," has assembled a wonderful collection of essays that explores the explanatory successes and limits of the red-in-tooth-and-claw worldview. Nature's evolutionary processes have produced creatures, such as (but not only) human beings, capable of committing themselves to the nurture of social norms, moral dictates, and group welfare, even when such commitment is harmful to any individual's interests narrowly construed. Our capacity to commit ourselves to these things is at the very heart of our social life. Explaining how such a capacity could have arisen, and how

it is rooted in basic evolved psychological processes, is the task of this seminal volume. Diverse and multi-disciplinary, it's sure to become a well-cited classic in sociobiological circles and deserves a wider readership.

Nesse contributes very useful opening and closing chapters. His definition of a commitment is "an act or signal that gives up options in order to influence someone's behavior by changing incentives or expectations." Nesse identifies four types of commitment: (1) intrinsically self-enforcing ("burning your bridges behind you"), (2) enforced by incentives controlled by others (such as a contractual obligation), (3) enforced by a concern for reputation ("you have offended my honor, sir"), and (4) enforced by emotional states (such as feelings of guilt or obligation). Any single commitment may be enforced by several of these incentives. The challenge for evolutionary theorists is to explain plausibly how these categories of incentives and their enforcements could have arisen.

The book is broken into four sections. Following a foreword by Herbert Gintis, in section one, "Core Ideas From Economics," Thomas Schelling (who, famously, used game theory to provide the first rigorous discussion of the role that commitment might play in international relations, particularly in deterrence the-

ory), Robert Frank and Jack Hirshleifer discuss the role and limits of traditional rational actor theory in explaining commitment's existence. Frank's piece is particularly interesting, as it recapitulates some of the core notions from his well-written book *Passions Within Reason*.² Section two is called "Commitment in Animals." In it, Eldridge Adams, Lee Alan Dugatkin, and Joan Silk explore other-than-human animal analogues to and examples of commitment. Adams' essay in particular is very intriguing, as it discusses how secured commitments and reputational commitments may have evolved via an exploration of animal signaling. Section three, "Commitment in Humans," contains essays by Dov Cohen and Joseph Vandellos, Peter Richerson and Robert Boyd, and Michael Ruse. Richerson and Boyd's essay is especially intriguing; they argue that the origin of subjective commitment is to be found in a tribal mentality that is unique to humans. Contemporary forms of social organization have co-opted these tribal mechanisms, leading to subjective feelings of commitment to far larger social units than the tribe (e.g., your nation-state, firm, etc.). Finally, in section four, "Commitment in Human Social Groups," Nesse, Oliver Goodenough, and William Irons discuss human commitment *in situ*, particularly in the legal field, in the clinic, and in religious groups. Nesse's concluding essay is especially useful, as it synthesizes the various approaches of the authors and points to future research programs.

This is a distinguished group of scholars, many of whom have accomplished foundational work in the field. Their essays are accessible to an interdisciplinary audience, and the issues they raise are profound. Collectively, by my lights, these scholars highlight several issues in the evolution of commitment that we would all do well to think more deeply about and that are linked to bigger-picture issues in the study of human behavior. At the highest level:

1. We need a revised conception of rationality. Rational actor theory as such has lit-

tle room for the emotions that are often involved in anchoring commitment, especially of Nesse's third and fourth kinds (although see Hirshleifer's excellent chapter "Game-Theoretic Interpretations of Commitment" for an attempt to conjoin the emotions to a game-theoretic apparatus). The judgment and decision-making literature in the last forty years has basically been one long criticism of the predictive utility of rational actor theory. In part, this is because rational actor theory is as much a *normative theory* as it is a *descriptive theory*. While game theoretic assumptions have done well descriptively and are admittedly one of the few games in town (count me "in" as an admirer), even the most ardent adherent to rational actor assumptions recognizes that not all human behavior is predicted by it. We need a "big tent" for rationality, one that has a place for traditional rational actor theory but that also shows how the traditional assumptions link up to yet broader concerns about *proper functioning in an environment* (this is where Darwinian psychological rubber actually meets the adaptive road). Theories of bounded rationality, ecological rationality, and the study of heuristics and biases are a step in the right direction, but a grand synthesis is still needed. We need a comprehensive theory of rationality that has a place for traditional rational actor assumptions but that also identifies systematically when and why those assumptions fail, both prescriptively and descriptively.

2. We need a richer understanding of human psychology, one informed by the proximate mechanisms that mediate commitment. In other words, we shouldn't expect our higher-level theories to remain untouched by research into the neurobiology of commitment. While no one field has hegemony with regards to human behavior, it would be foolish to assume that theories at one level of analysis (e.g., brain structure and function) will not affect and inform fruitfully theories at another level (e.g., psychology as such). In other words, as we search for a conception of rationality that dis-

solves some of the puzzles about how commitment could have evolved, we should (and will have to) pay attention to the neurobiology of commitment, moral reasoning, and social interaction.³

In sum, this is an excellent volume. Anyone interested in learning exactly why Tennyson's conception of the nature of evolution is short-sighted, and in exploring in more detail the cutting edge interface between the social sciences and evolutionary theory, should read it. The evolution of commitment will no doubt remain one of the most vibrant research areas in evolutionary psychology, and for good reason, as it tells us how some of our most treasured human capacities came to be.

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cognitive philosophy, and the relationship between these two fields and the naturalization of ethics. His book *Natural Ethical Facts: Evolution, Connectionism, and Moral Cognition* is forthcoming from The MIT Press.

Notes

1. See his poem "In Memoriam" (1850), which predates *The Origin of Species* by nine years.
2. Robert H. Frank (1988). *Passions Within Reason: The Strategic Role of the Emotions*. W. W. Norton: New York.
3. For a useful reference here, see the freshly published and wonderfully conceived *Foundations in Social Neuroscience* volume, edited by John Cacioppo et al (MIT Press, 2002). See also William Casebeer and Patricia Churchland, "The Neural Mechanisms of Moral Cognition: A Multi-Aspect Approach to Moral Judgment and Decision-making," (*Biology and Philosophy*, 2003), as well as Casebeer (forthcoming) *Natural Ethical Facts: Evolution, Connectionism, and Moral Cognition* (MIT Press).