

Book Review

Selfish Genes: Fit at Thirty

A Review of *Richard Dawkins: How a Scientist Changed the Way We Think*, Edited by Alan Grafen and Mark Ridley. Oxford University Press, 2006. 304 pp.

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Like most *Festschriften*, this celebration of 30 years of *The Selfish Gene* collects new essays and tributes that range from nugatory to substantial. But there is considerable agreement that Dawkins' 1976 first book really did change the way a range of individual thinkers as well as whole disciplines think. ("I am convinced that *The Selfish Gene* brought about a silent and almost immediate revolution in biology," writes Alan Grafen, p. 72) And the change is all to the good insofar as it served as one more exorcism of that damned ghost in the machine, a ghost that will never be *completely* laid to rest, largely because of the very nature of those selfish, unscrupulous, and thoroughly unprincipled genes.

From a bagatelle by Dawkins' former wife Marian Stamp to a meaty distillation by Ullica Segerstråle of her magnum opus, *Defenders of the Truth*, we find a large cast of eminents, including (in order of appearance) Cronin, Krebs, Dennett, Pinker, Daly and Wilson, Ruse, Shermer, Barash and more. The book starts out with an essay by Andrew F. Read on the fabulous kakapo bird in New Zealand: "Evolution has dealt kakapo an extraordinarily bad hand for life in the modern world. Until the last millennium, the only mammals in New Zealand were bats. Now, of course, there are humans, rats, cats, stoats, and dogs. Like so many of the endemic birds, kakapo were ill-prepared for mammalian hunters" (p. 4). Kakapo not only freeze when confronted, they exude a powerful smell and they swell up absurdly during mating season to attract females. Their genes just haven't kept pace with their environment. The kakapos, so to speak, are sitting ducks, now close to extinction.

In one of the weightier essays, "The Gene Meme," David Haig traces the evolution of the word "gene" from its founding in 1910 by the German plant breeder Wilhelm Johannsen (who was trying to distinguish between what we now call genotype vs. phenotype) through its multiple usages ever since. After which, Haig examines the ways in which memes are both similar to and different from genes. Scrutinizing his own writing in this very essay, Haig (p. 64) asks, "But am I fully autonomous in this process" or do ideas have a life of their own? His reply (p. 64): "Many ideas have competed for inclusion during the course of writing, but only some have made it into a final version that has nothing like the form and content that I intended when I first sat down to write. It is only in retrospect that I know what I have chosen to write. The final version contains the ideas that have *grabbed my attention*." But Haig stops too soon here, not inquiring who or what is the "I" that supposedly allows itself to be grabbed or what measurable entity is doing the grabbing. Is this merely a question of memetics or is it really a question of neuroscience?¹

In a collection in which there are few essays I would go so far as to describe as "powerful," Ullica Segerstråle's "An Eye on the Core: Dawkins and Sociobiology" wins first place. A concise, rhetorically skilled, and comprehensive history of the evolution of the concept

of sociobiology as it was taken up by E.O. Wilson and Dawkins and subsequently attacked from many sides, Segerstråle (p. 91) shows the ways in which Dawkins was really more sociobiological than Wilson and how he grew increasingly irritated with the political correctness that encouraged obtuse misreadings of his books. “Wilson’s book was called ‘the new synthesis,’ but for practicing sociobiologists, the ideas presented in Dawkins’ book became the synthesis-in-use. And the concept that helped delineate and solidify the new sociobiological paradigm was the gene’s eye view,” based upon inclusive fitness, Evolutionarily Stable Strategies, parental investment, and other major concepts from Hamilton, Williams, Trivers, et al.

It’s always a pleasure to read Daniel Dennett, here a consideration of *The Selfish Gene* as a philosophical essay. Though not from Dennett’s top-drawer, it starts out well, defending Dawkins’ writing as a hybrid rhetoric, enlightening to both science and philosophy, but then loses the tight focus of its early pages. Reading Dawkins’ first book once again after many years, Dennett finds it as penetrating and illuminating as ever, particularly taken as he is by the equivalencies between Dawkins’ “mentalistic behaviorism” and his own “intentional stance.” What both of these concepts boil down to is the view that intelligence is radically mindless, deriving not from macroscopic souls, spirits, and guardian angels with purposes, feelings, beliefs, but from microscopic materials of the body, gene matter and neuron matter that don’t have a clue to what they’re up to, however much their effects may seem intelligently “designed.” “Mind, meaning, and purpose are the fairly recent *effects* of the churning mechanistic mill of mindless Darwinian algorithms, not their *cause*. . . generated originally by bottom-up processes” (p. 104). Or in the familiar Dennettian lingo, these algorithms are cranes, not skyhooks.

The contribution by Steven Pinker a few pages later, “Deep Commonalities Between Life and Mind,” picks up on this subject but takes a rather different position, much softer on the use of mentalistic metaphors than either Dennett or Dawkins. “It would take a good philosopher to forge bulletproof characterizations of ‘intelligence,’ ‘goal,’ ‘want,’ ‘try,’ ‘know,’ ‘selfish,’ ‘think,’ and so on that would embrace minds, robots, living bodies, genes, and other intelligent systems.” (It would take an even better one to figure out how to reintroduce subjective experience into this picture when it comes to human and animal minds.) But the promise that such a characterization is possible—that we can sensibly apply mentalistic terms to biology without shudder quotes—is one of Dawkins’ legacies” (p. 138).

It should be added, however, that Dawkins himself extenuates the circumstances of his mentalistic usages, pointing out their usefulness while acknowledging their phantasmic character. And, of course, Dennett is really unhappy with anything that cannot be applied equally well to computers, for which no mentalistic or intentional stances make any sense. Still, Pinker’s thesis here is that although both “life” and “mind” are produced from the same all-purpose prime matter—with no transcendent vitalist or soul molecules—for the purposes of scientific/philosophical rhetoric “mentalistic” or “intentional” figures of speech are useful. So let genes be selfish, let humans strive.

Though Michael Ruse begins his essay on Dawkins and progress with the observation that, “Nowhere has Dawkins been more forthright than in his endorsement of the idea of evolutionary progress” (p. 145), Ruse’s survey of major views on evolutionary progress from Darwin through Julian Huxley and Stephen J. Gould leaves an indistinct impression about where Dawkins actually stands. And though Robert Aunger is not optimistic about the real-world function or existence of memes, he attributes a renewed interest in the evolution of culture to the final chapter of *The Selfish Gene*. Martin Daly and Margo Wilson report that Dawkins’ gene’s eye view provides “an appreciation that husbands, wives, and children have some basic

commonalities and conflicts of interests whose distal origins reside in the substantial but imperfect overlap of their prospects for genetic posterity” (p. 192). Randolph M. Nesse praises the power of metaphor in Dawkins’ “shameless anthropomorphizing” of selfish genes that nonetheless “created wide understanding about how natural selection works” (p. 203), while Kim Sterelny marvels over the mixture of intelligence and stupidity that enables human beings to behave in self-destructive ways that go against their genetic interests.

After several treatments of Dawkins’ atheism and unflagging critiques of religion followed by David Barash’s dependably literary *jeu d’esprit* about existentialism’s wrestle with life’s evolutionary meaninglessness, the book concludes with tributes to Dawkins as a nonpareil of writerly clarity and power.

ⁱ See Harold Fromm, “Muses, Spooks, Neurons and the Rhetoric of ‘Freedom,’” *New Literary History*, Spring 2005 (36: 147-59). Also at <http://hfromm.net/professional>

ⁱⁱ Given this book’s English Oxford U.P. provenance, I have taken the liberty of putting the commas *inside* the quotes, American style.