

Review of *The Selfish Genius: How Richard Dawkins Rewrote Darwin's Legacy* by Fern Elsdon-Baker

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What is it about evolution that pits science against religion? In *The Selfish Genius: How Richard Dawkins Rewrote Darwin's Legacy* the British philosopher of science Fern Elsdon-Baker argues that a combination of distorted science and unwarranted claims about religion published over the past 30 years by the Oxford evolutionary biologist Richard Dawkins has contributed significantly to the notoriety of evolution. This harsh judgement would not surprise Dawkins, who has never had much patience for philosophy of science; but does it do justice to the man who personifies to the public the gene's eye perspective on evolution since his publication of *The Selfish Gene* in 1976?

The Selfish Genius is divided in two parts covering the biological and the philosophical aspects of Dawkin's non-academic work. As Elsdon-Baker explains in the biological part, evolution by natural selection is such a simple idea that Huxley, a friend of Darwin's, felt stupid to not have thought of it himself. I was surprised to read that there were indeed thinkers before Darwin who proposed natural selection as a mechanism for evolution; most famously the Scottish farmer Patrick Matthew (1790–1874), who published the principle of natural selection in 1831, the year in which Darwin set out on his five-year cruise around the world. What separates Darwin from his precursors is the extraordinary amount of carefully laid-out evidence he accumulated painstakingly and published 1859 in *The Origin of Species*. This immediately inspired lively philosophical and scientific debates. Elsdon-Baker emphasizes that quickly the positive responses far outweighed the negative ones. Perhaps the most significant scientific challenge she mentions came from the English physicist Thomson (1824–1907, later Lord Kelvin), who calculated in 1866 that the earth was much younger than envisaged by Darwin and his supporters. Darwin was unimpressed by this, which indicates that a certain amount of stubbornness might be necessary to keep a young theory alive.

Darwin's legacy was rewritten in the late 19th century by the German biologist Weismann (1834–1914) who proposed the distinction between an immortal germ line unaffected by insults to the soma, which is central to Dawkin's but absent from Darwin's writings. This neo-Darwinian reinterpretation foreshadowed some of the debates between Dawkins and other biologists, most notably the American palaeontologist Stephen Jay Gould (1941–2002). The highly publicized disagreement between these two biologists concludes the biological part of *The Selfish Genius*. In a nutshell, Dawkins has followed the tradition of Weismann and emphasized the

necessity and sufficiency of selection of individual genes to account for the myriad forms of life we see around us. In contrast, Gould was closer to Darwin's original view that selection can also act at higher levels of organization, including species.

The philosophical part of *The Selfish Genius* criticizes the tone and content of Dawkins' extra-scientific statements. For example, Dawkins refers to believers as "faith-heads" and thinks aloud on his web site "that they are likely to be swayed by a display of naked contempt". To counter Dawkins' claim in his 2006 book *The God Delusion* that the existence of God is a scientific question, Elsdon-Baker cites the Austrian philosopher Popper (1902–1994), who emphasized that scientific theories must be falsifiable, and it is hard to think of an experiment that would falsify the hypothesis that God exists. Ironically, in the biological section of *The Selfish Genius*, Elsdon-Baker has already demonstrated that science does not always proceed by falsification: Thomson's discovery that the earth was young falsified Darwin's theory of evolution. Except that the naturalist never accepted the physicist's calculations, which in the early 20th century, that is long after Darwin's death in 1882, did turn out to be mistaken after all.

The insufficiency of falsification as a mechanism of scientific research was already noted in the early 1960s by another philosopher mentioned by Elsdon-Baker, Thomas Kuhn. He clarified that falsification only works in times of "normal science". Revolutionary science, on the other hand, leads to the adoption of a whole new world view (paradigm), which is difficult to compare to the one just abandoned thereby making falsification impossible. Unfortunately, Elsdon-Baker not only fails to explain the evolution of the philosophy of science from Popper to Kuhn and beyond, she also never even considers the possibility that *The Selfish Gene* marks one of the few genuine paradigm shifts in Biology.

Leaving philosophy aside, the most important omission in *The Selfish Genius* is an exploration of the puzzling discontinuity between Dawkins' writings on evolution and those on religion. The former are lucid and enjoyable for a lay and professional readership alike. For a recent sample I recommend his delightful survey of all of creation in *The Ancestor's Tale*. Dawkins' views on religion, however, are strangely myopic. For example, in the television program *Root of all Evil* Dawkins said in 2006: "To understand the likes of Osama Bin Laden you have to realize that the religious terrorism they inspire is the logical outcome of deeply held faith." It should worry a reasonable man like Dawkins that his equation of deep faith with terrorism is exactly how jihadists explain their actions. Why should anyone take the fundamentalists' self-interpretation at face value?

Dawkins can be and has been criticized both on scientific as well as philosophical grounds. However, *The Selfish Genius* is too inconsistently argued to even dent the gene's eye view of evolution. Having said that, the book does give a quick overview of why among all the sciences it is evolutionary biology that continues to attract a disproportionate amount of public attention.

Details

The Selfish Genius: How Richard Dawkins Rewrote Darwin's Legacy

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