

## Richard Dawkins

It rapidly became clear to me that the most imaginative way of looking at evolution, and the most inspiring way of teaching it, was to say that it's all about the genes. It's the genes that, for their own good, are manipulating the bodies they ride about in. The individual organism is a survival machine for its genes.

Richard Dawkins is considered by his peers to be the ultimate ultra-Darwinist. He is also a gifted writer, who is known for his popularization of Darwinian ideas as well as for original thinking on evolutionary theory. He has invented telling metaphors that illuminate the Darwinian debate: His book *The Selfish Gene* argues that genes-molecules of DNA-are the fundamental units of natural selection, the "replicators." Organisms, including ourselves, are "vehicles," the packaging for "replicators." The success or failure of replicators is based on their ability to build successful vehicles. There is a complementarity in the relationship: vehicles propagate their replicators, not themselves; replicators make vehicles. In *The Extended Phenotype*, he goes beyond the body to the family, the social group, the architecture, the environment that animals create, and sees these as part of the phenotype-the embodiment of the genes. He also takes a Darwinian view of culture, exemplified in his invention of the "meme," the unit of cultural inheritance; memes are essentially ideas, and they, too, are operated on by natural selection.

RICHARD DAWKINS is an evolutionary biologist and the Charles Simonyi Professor For The Understanding Of Science at Oxford University; Fellow of New College; author of *The Selfish Gene* (1976), 2d ed. 1989), *The Extended Phenotype* (1982), *The Blind Watchmaker* (1986), *River out of Eden* (1995) (ScienceMasters Series), *Climbing Mount Improbable* (1996), and *Unweaving the Rainbow* (1998).

In his role as the Charles Simonyi Professor For The Understanding Of Science at Oxford University, Dawkins regularly talks to the public regarding his views on the wonders of science. On November 12th, 1996, he delivered the Richard Dimbleby Lecture on BBC1 Television in England, entitled "Science, Delusion and the Appetite for Wonder." (See below).

### Further Reading:

"Science, Delusion, and the Appetite for Wonder: A Talk by Richard Dawkins on Edge

"A Survival Machine" in *The Third Culture*

The World of Richard Dawkins

The Unofficial Richard Dawkins Website with links to articles, papers and reviews (by John Catalano)

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"Some people object to Dawkins as being what I now call a greedy reductionist--that is, they think he's vastly oversimplifying, trying to get the job done with too few levels of explanation. Even though some version of that objection may be true, it's not a big deal. The algorithmic approach as Dawkins presents it is deliberately oversimple. But Dawkins leaves plenty of room for making it even more complex. He puts in plenty of warnings that he's giving you an oversimple version of it. The "greedy reductionist" complaint is a tempest in a teapot. Dawkins is not wrong--he's just been too optimistic sometimes."

Daniel C. Dennett

"Notions like Selfish Genes, memes, and extended phenotypes are powerful and exciting. They make me think differently. Unfortunately, I spend a lot of time arguing against people who have overinterpreted these ideas. They're too easily misunderstood as explaining more than they do. So you see, this Dawkins is a dangerous guy. Like Marx. Or Darwin."

W. Daniel Hillis