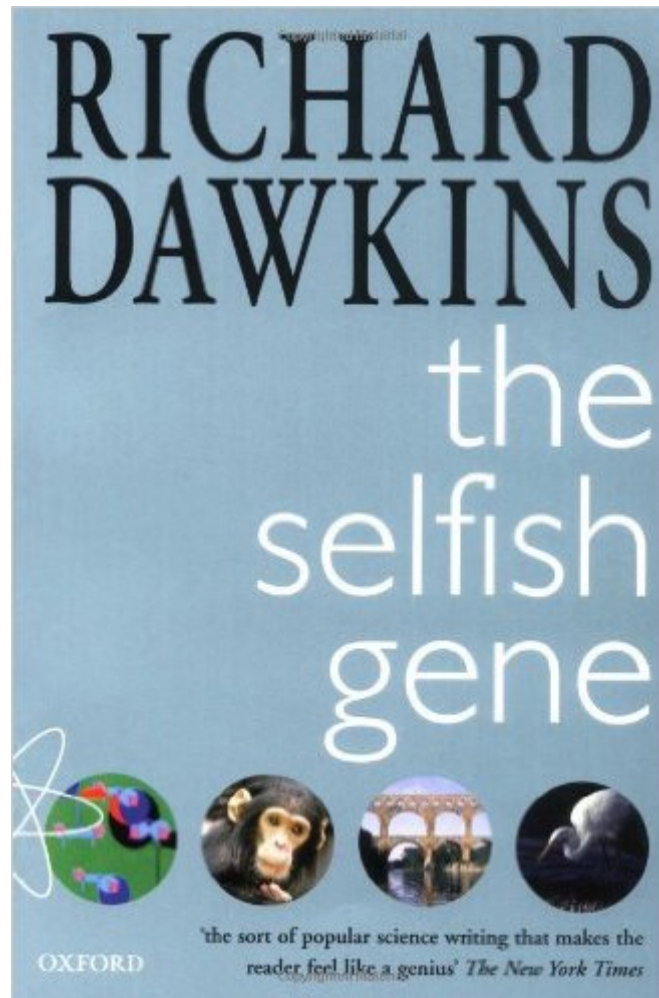# The Selfish Gene (Popular Science)

Synopsis

Richard Dawkins' brilliant reformulation of the theory of natural selection has the rare distinction of having provoked as much excitement and interest outside the scientific community as within it. His theories have helped change the whole nature of the study of social biology, and have forced thousands of readers to rethink their beliefs about life. In his internationally bestselling, now classic volume, The Selfish Gene, Dawkins explains how the selfish gene can also be a subtle gene. The world of the selfish gene revolves around savage competition, ruthless exploitation, and deceit, and yet, Dawkins argues, acts of apparent altruism do exist in nature. Bees, for example, will commit suicide when they sting to protect the hive, and birds will risk their lives to warn the flock of an approaching hawk. This revised edition of Dawkins' fascinating book contains two new chapters. One, entitled "Nice Guys Finish First," demonstrates how cooperation can evolve even in a basically selfish world. The other new chapter, entitled "The Long Reach of the Gene," which reflects the arguments presented in Dawkins' The Extended Phenotype, clarifies the startling view that genes may reach outside the bodies in which they dwell and manipulate other individuals and even the world at large. Containing a wealth of remarkable new insights into the biological world, the second edition once again drives home the fact that truth is stranger than fiction.

Book Information

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Customer Reviews

More than a quarter-century after its first publication, Richard Dawkins's "The Selfish Gene" remains

a classic of popular science writing. This edition includes two new chapters as well as extensive endnotes that do much to perfect the original text and correct the few mistakes that were found in it. "The Selfish Gene" is explicitly directed at the layman, and absolutely no knowledge of biology is assumed. While this presents a danger of boring readers (such as myself) who are already familiar with DNA and meiosis, the colorful metaphors Dawkins uses throughout the book do much to keep the reading engrossing and entertaining.After a lengthy exploration of basic biology, covering topics such as DNA and the origin of life, Dawkins introduces the gene-centered view of evolution that has long been textbook orthodoxy. Dawkins uses the remainder of the book to look at various types of animal behavior in an effort to convey some general conclusions and tools to help the reader understand evolution and natural selection. Much of his effort is devoted to explaining behavior in terms of the 'selfish gene' - especially social behavior that has long been held to have evolved 'for the good of the species.' Dawkins shows that how fundamental axiom of natural selection (that the genes best at surviving and reproducing will eventually spread through the gene pool) leads directly to the selfish gene and the behavior exhibited by nearly all animals (humans being the prime exception).Many of Dawkins's metaphors have caused raised eyebrows - one outstanding example is his characterization of living things as "lumbering robots" built to protect the genes that hide in them - but the metaphors are always (eventually) brought under control. The title is one such metaphor that has often been misunderstood by superficial analysis. The 'selfish gene' is simply a gene that does not aid others at its own expense. Such genes would be better able to reproduce and spread through the gene pool than those that did sacrifice themselves for others, and therefore completely dominate the gene pools of all species as a result of billions of years of evolutionary pressure.I cannot hope to adequately summarize Dawkins's arguments in a mere review, so I sincerely urge you to read "The Selfish Gene" for yourself. I should warn that conservatives would probably not enjoy the book nearly as much as I did. Dawkins is an open secular humanist with socialist leanings, and is not worried about offending the delicate sensibilities of creationists and fundamentalists. This book should only be read by those willing to 'accept' the validity of natural selection and evolution; others would only waste their time. I would direct readers seeking a more scientific discussion of these issues to G. C. Williams's "Adaptation and Natural Selection." All others will most likely enjoy "The Selfish Gene" a great deal and finish the book with a new appreciation for and understanding of evolution and biology.

I read The Selfish Gene (2nd edition, 1989) because it is one of the twenty books Charlie Munger recommends in the second edition of Poor Charlie's Almanack (which I have recently read and

recommend very strongly indeed).I'm going to quote Dawkins from the preface to the original edition as he provides an excellent summary of the central message of the book and its effect upon him (and me):"We are survival machines - robot vehicles blindly programmed to preserve the selfish molecules known as genes. This is a truth which still fills me with astonishment. Though I have known it for years, I never seem to get fully used to it."Using one of the many excellent analogies utilised throughout his book, Dawkins explains that we are like a chess computer program that has been programmed by its creator to play in its absence. The programmer (genes) takes no part in the game (life) but instead provides the tools for its vehicle (animal, plant etc.) to play the game on its behalf.I am glad that Dawkins says that he never gets fully used to this idea. I find it very difficult to replace the idea of my primacy in my body with the idea above. It requires a sort of `flip' in one's perception - but it is so different to what our senses tell us that it flips back without a conscious effort (or so I find, anyway). But how many of us have not regularly had to do battle with themselves to do what they know they should do rather than what they feel an urge to do? Dawkins' ideas provide an excellent framework in which to help understand these problems, which I suspect is a major part of the reason why Munger recommended this book.For example, Munger believes that what he calls `reward and punishment superresponse tendency' is the most powerful of the psychological biases that affect humans (and other animals). Dawkins provides a very convincing explanation of why this should be the case: because it is a method that the programmer (genes) can use to provide rules that its vehicle (us) can use to learn to cope with its environment better in the absence of the programmer. It is thus much more efficient than providing an endless number of detailed rules and copes with the problem of an environment that may be different to that `expected' by the genes. Even so, these rules do not always help us today - for example it helps to explain why rich societies have a problem with obesity: our genes did not expect us to have access to such plenty that the rule to reward us for putting sweet things into our mouths would cause problems.Our selfish, almost immortal genes do not care about us - their short-term, throwaway vehicles. We should also expect to find that we have been programmed with selfish behaviour in our creators' image. However, he makes two very important caveats, which mean that overall I think the book has a rather hopeful message:1. We are likely to have a statistical propensity towards selfishness, but that does not mean that individually we are doomed to that behaviour. We have a choice.2. In my favourite chapter, `Nice guys finish first' (one of the two chapters added for the 2nd edition) Dawkins uses the Prisoner's Dilemma gambling game to show that if certain conditions are met (which often are in nature), paradoxically, the best outcome is for selfish individuals to cooperate. And that the `good' character traits of niceness, forgivingness and non-enviousness can therefore be the most

successful.I believe that unless we wish to rely on luck throughout our lives we need to embrace reality as closely as possible, which is what a first-rate book like Dawkins' helps us to do.

Without going into the content of the book, which I find very good, the Kindle edition was poorly produced. It is littered with typos of the sort that look like it was simply run through OCR software and then the publisher called it a day. These are things like "1" being replaced with "i", ugly pixelated graphics for mathematical notation (even very simple stuff like "Ã Â "), or commas being placed after rather than before the spaces separating clauses. Additionally, the endnotes aren't proper hyperlinks, and so navigating to them requires repeatedly setting and clearing bookmarks alternatively at your current point in the text and the section where the endnotes are.It's a shame that a book of such excellent writing quality received such poor production treatment for this new format.

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