Selfish gene book pdf

1976 book by Richard Dawkins For other uses, see Selfish Gene (Disambigation). Selfish Gene Original Cover, with details from the picture Expectant Valley zoologist Desmond MorrisAuthorRichard DawkinsCountryUnited KingdomLanguageEnglishSubjectEvolutionary BiologyPublisherOxford University PressPublication Date1976Second edition in 1989Third edition in 20 2016Media typePrintPages224ISBN0-19-857519-XOCLC2681149After advanced phenotype Selfish Gene 1976 book about evolution biologist Richard Dawkins, in which the author is based on the basic theory of adaptation and natural selection of George K. Williams (1966). Dawkins uses the term selfish gene as a way of expressing a genetically-focused view of evolution (as opposed to views focused on the body and group), popularizing ideas developed in the 1960s by W. D. Hamilton and others. From the genetically-centric view it follows that the more two individuals are genetically related, the more sense (at the level of genes) it makes them behave selflessly with each other. The line is expected to evolve to maximize its inclusive suitability - the number of copies of its genes transmitted around the world (rather than by a specific person). As a result, the population will strive for an evolutionarily stable strategy. The book also introduces the term meme for a unit of human cultural evolution similar to the genome, suggesting that such selfish replication can also model human culture, in another sense. Memetics has been the subject of much research since the book's publication. In raising awareness of Hamilton's ideas, and making his own valuable contribution to this field, the book has also spurred research into human inclusive fitness. In the foreword to the 30th anniversary of the book's publication, Dawkins said that he easily sees that the title of the book may give an insufficient impression of its contents, and in retrospect thinks that he should have taken the advice of Tom Mashler and called the book Immortal Gene. In July 2017, a survey marking the 30th anniversary of the Royal Society's Science Book Award listed The Selfish Gene as the most influential scientific book of all time. Von Dawkins is based on George C. Williams' book Adaptation and Natural Selection (1966), which argued that altruism is not based on group benefit per se, but is the result of a selection that occurs at the level of a gene mediated by a phenotype, and any choice at the group level occurs only in rare circumstances. This approach was developed in the 1960s by W. D. Hamilton and others who opposed group selection and selection, aimed directly at the benefit of the individual body: isn't the behavior in favor of itself, but whether it is in favor of Gene G ... With altruism, this will happen only if the injured person is a relative of the altruist, so has an increased chance of transferring the gene. - W. D. Hamilton, Evolution of Altruistic Behavior, page 354-355 Extended discussion of Dawkins's views and his book The Selfish Gene provided by Wilkins and Hull. Dawkins' book content begins with a discussion of altruism demonstrated by people, pointing out that it would argue that this is due to the selfishness of genes, and the attacking choice of the group as an explanation. He believes the origin of life with the arrival of molecules capable of reproducing themselves. From there, he looks at the role of DNA in evolution, and its organization in chromosomes and genes that he believes behave selfishly. He describes organisms as clearly intrusive but fundamentally simple survival machines that use negative feedback to achieve control. This extends, he argues, to the brain's ability to mimic the world with subjective consciousness, and to signal between species. He then introduces the idea of an evolutionarily stable strategy, and uses it to explain why alternative competitive strategies such as bullying and retaliation exist. This allows him to consider what selfishness in the gene may actually mean by describing W.J. Hamilton's argument for choosing relatives that genes for behavior that improves the chances of survival of close relatives can spread in the population because these relatives carry the same genes. Dawkins sees childbearing and parenting as an evolutionary strategy. He attacks the idea of group selection for the benefit of the species proposed by W.K. Wynne-Edwards, arguing instead that every parent necessarily behaves selfishly. The question is whether parents should invest in their offspring equally or should favor some of them, and explains that what is best for the survival of parents' genes is not always best for individual children. Similarly, Dawkins argues, there are conflicts of interest between men and women, but he notes that R.A. Fisher has shown that the optimal sex ratio is 50:50. He explains that this is true even as a last resort, like harem-storage elephant seal, where 4% of men receive 88% copulation. In this case, the strategy of having a woman's offspring is safe, as she will have a puppy, but the strategy of having a mouse can bring a big return (dozens of puppies), even though many men live out of their lives as bachelors. The theory of honest signaling of Amootz zahawi explains that styling is a selfish act, he argues, increasing the Springbok's chances of being rescued from a predator, indicating how difficult the chase will be. Dawkins discusses why many species live in achieving mutual benefit through mechanisms such as Hamilton's selfish herd everyone behaves selfishly, but the result is the behavior of the herd. Altruism can also develop, as in social insects such as ants and bees, where workers waive the right to breed in favor of the sister, the queen; in their case, an unusual (gapodiploid) sex-defining system may have helped to achieve this, since the females in the nest are extremely closely related. The final chapter of the first edition presented the idea of a meme, a culturally transmitted face such as a hummable melody, similar to genetic transmission. Dawkins describes God as an old idea that has probably originated many times, and which has enough psychological appeal to survive effectively in a meme pool. Two more chapters were added in the second edition (1989). The themes of Selfish genes When describing genes as selfish, Dawkins unequivocally states that he does not intend to imply that they are driven by any motive or will, but simply that their effects can be metaphorically and pedagogically described as if they were. His assertion is that the genes that are passed on to those whose evolutionary effects serve their own implicit interest (to continue anthropomorphism) in replication are not necessarily those of the body. In later works, Dawkins reduces evolutionary selfishness to the creation of a widespread extended phenotype. For some, the metaphor of selfishness is quite clear, while for others it is confusing, misleading, or simply foolish to attribute mental qualities to something sythous. For example, Andrew Brown wrote, Selfish when it is applied to genes, does not mean selfish at all. This means, on the contrary, an extremely important quality for which there is no good word in English: the quality of copying the Darwin selection process. It's a tricky sip. There must be a better, shorter word, but selfish isn't it. Donald Simons also considers it impractical to use anthropomorphism in conveying scientific meaning in general, and especially in this case. He writes in The Evolution of Human Sexuality (1979): Thus, the rhetoric of the Selfish Gene accurately changes the real situation: through metaphorical genes, genes are endowed with properties that only sentient beings, such as selfishness, can possess, while sentient beings are deprived of these properties and are called machines... Anthropomorphism of genes... hides the deepest secret in the science of life: the origin and nature of the mind. Dawkins offers the idea of a replicator: Finally, it's time to return to the problem we started, to the tension between the individual organism and the genome as competing candidates for a central role in natural selection... One way to sort this whole issue is to use the terms replicator and vehicle. Fundamental Natural selection, the basic things that survive or do not survive, which form lines of identical copies with rare random mutations, are called replicators. DNA molecules are replicators. They generally, for reasons that we will come to, gang together in large utility survival machines or vehicles. - Richard Dawkins, Selfish Gene, page 253 (Anniversary Edition) The original replicator (Dawkins' Replicator) was the original molecule that first managed to reproduce itself and thus gained an advantage over other molecules in the original soup. As the replication of molecules became increasingly complex, Dawkins' postulates became genes within organisms, with each organism's body serving the goal of a survival machine for its genes. Dawkins writes that gene combinations that help the body survive and reproduce also tend to improve the gene's own chances of replication, and as a result, successful genes often benefit the body. An example of this is a gene that protects the body from disease. It helps spread the gene and also helps the body. Genes vs. organisms There are other times when implicit interests of the vehicle and replicator are in conflict, such as genes for certain male spiders instinctive mating behavior that increase the body's inclusive fitness, allowing it to multiply but shorten its life, putting it at risk of being eaten by cannibalistic women. Another example is the presence of segregation distorts genes that harm their host, but are nevertheless distributed at his expense. Similarly, the preservation of unwanted DNA, in which Dawkins believed at the time, does not do any good to its owner, can be explained on the grounds that it is not subject to selection. These unselected but transmitted variations of DNA connect a person genetically with his parents, but do not provide any benefit to survival. These examples may suggest that there is a power struggle between genes and their interacting genes. In fact, it is claimed that there is not much struggle because genes usually win without a fight. However, it is argued that if an organism becomes intelligent enough to understand its own interests, unlike its genes, there may be a true conflict. An example of such a conflict would be a person using birth control to prevent fertilization, thereby preventing the replication of his or her genes. But this action cannot be a conflict of the body's own interests with his or her genes, as a person using birth control can also increase the chances of survival of their genes by limiting the size of the family to match available resources, thus avoiding extinction, as predicted within the framework of the population growth models. Altruism Dawkins says his goal is in The selfish gene is to study the biology of selfishness and altruism. He does this by upholding the assertion that gene selfishness tends to lead to selfishness in individual behavior. However, as we shall see, there are special circumstances in which the gene can achieve its own selfish goals in the best way possible by promoting a limited form of altruism at the animal level. The choice of genes provides one explanation for the selection of relatives and eusociality, when organisms act altruistically, against their individual interests (in the sense of health, safety or personal reproduction), namely the argument that by helping related organisms multiply, the gene succeeds in helping copies of itself (or sequences with the same phenotypic effect) in other bodies for replication. It is claimed that these selfish actions of genes lead to selfless actions of organisms. The requirement for this statement, supported by Dawkins in Chapter 10: You scratch your back, I will ride your examples from nature, is the need to explain how genes reach the recognition of relatives, or have managed to organize reciprocity and coevolution. While Dawkins (and biologists in general) recognize that these phenomena lead to more copies of the gene, the evidence is inconclusive whether this success is chosen for a group or an individual level. In fact, Dawkins suggested that it is at the level of the extended phenotype: We agree that genes are replicators, organisms and groups are not. We agree that the debate about choosing a group should be debated about groups like vehicles, and we could easily agree to differences in response... I came up with a car not to praise him, but to bury him .... Darwinism can work on replicators whose phenotypic effects (interactors) are too diffuse, too tiered, too rambling to deserve a vehicle award... Extended phenotypes may include inanimate artifacts such as beaver dams... But the car is not something fundamental ... Ask, is there a vehicle in this situation, and if so, why? - Richard Dawkins, Bury Vehicle Although Dawkins agrees that groups can help survival, they rank as a vehicle for survival only if the group's activity is replicated in descendants recorded in the gene, the gene is the only true replicator. An improvement in the survival lottery for the group should improve that for the gene for enough replication to occur. Dawkins argues qualitatively that the lottery for the gene is based on a very long and wide record of events, and the group benefits are usually too specific, too brief, and too random to change the lottery gene. Now we see that the body and the group of organisms are the true rivals for the role of means in history but none of them is even a candidate for at Role. Disputes between individual choice and group selection - this is a real controversy between alternative vehicles ... As it happens, the result, in my opinion, is a decisive victory for the individual organism. The group is too wish-wish-washy person. -Richard Dawkins, Selfish Gene, page 254-255 Until the 1960s, it was common for altruism to be explained in terms of choosing a group where benefits to the body or even the population had to explain the popularity of the genes responsible for the tendency to behave. Modern versions of multi-level selection claim to have overcome the initial objections, namely that at that time no known form of group selection led to an evolutionarily stable strategy. Some still argue that it will take only one person with a tendency to more selfish behavior to undermine a population otherwise filled only with the genome of altruism towards the non-indigenous. The Selfish Gene technique was hugely popular when first published, causing a quiet and almost immediate revolution in biology and it continues to be widely read. It has sold more than a million copies and has been translated into more than 25 languages. Proponents argue that the central point that gene replication is the object of selection, usefully completes and expands the explanation of evolution given by Charles Darwin before the basic mechanisms of genetics were understood. According to the ethicist Alan Grafen, the adoption of adaptation theories is hindered by the lack of mathematical unifying theory and the belief that everything only in words should be suspicious. According to Graphen, these difficulties, along with the initial conflict with the population genetics models at the time of its introduction, explain why the significant scientific contribution it makes in biology is seriously underestimated, and why it is considered primarily as a work of exposure. According to comparative psychologist Nicky Hayes, Dawkins presented a version of sociobiology that relied heavily on metaphors taken from animal behavior and extrapolated them... One of the drawbacks of the sociological approach is that it seeks only to look for corroborating examples from among the huge variety of animal behavior. Dawkins did not deviate from this tradition. More generally, critics argue that the selfish gene makes it easier to link genes to the body. (For example, see Thompson. Yuzuru Tanaka of the University of Hokkaido has written a book, Meme Media and Meme Market Architecture, while psychologist Susan Blackmore has written a meme machine with Dawkins's foreword. Information scientist Osamu Sakura has published a book in Japanese and several articles in English on the subject. Nippon Animation has released an educational television program called Many Meme Journeys. In 1976, the ecologist Arthur Kane, one of Dawkins' mentors at Oxford in the 1960s, called it a young man's book (which, as Dawkins points out, was a deliberate quote from New College commentator, Oxford philosopher A.J. Iyer, Language, Truth and Logic (1936). Dawkins noted that he was flattered by the comparison, but knew that Ayer had given up most of his first book, and he could hardly miss Cain's pointed conclusion that he should, in full time, do the same. This moment was also made by the philosopher Mary Midgley: The same thing happened to A.J. Iyer, she says, but he spent the rest of his career taking away what he wrote in language, truth and logic. It didn't come to know Dawkins, she says. He keeps saying the same thing. However, according to Wilkins and Hull, Dawkins' thinking evolved, though perhaps without defusing this criticism: In Dawkins's early writings, replicators and vehicles played different but complementary and equally important roles in selection, but as Dawkins honed his view on the evolutionary process, the vehicles became less and less fundamental... In later writings Dawkins goes even further and argues that phenotypic traits that really matter in choice, and that they can be considered regardless of their organized vehicles.... So it's no surprise when Dawkins proclaims that he coined the term vehicle not to praise him, but to bury it. As common as organisms are, no matter how decisive the causal roles they play in selection, reference to them can and should be excluded from any imperceptible selection characteristic in the evolutionary process. Dawkins is far from a genetic determinant, but he is certainly a genetic dreninist. - John S Wilkins, David Hull, Dawkins on replicators and vehicles, Stanford Encyclopedia of Philosophy Units Selection As for Unit Selection: One internally consistent logical picture is that the unit is a replication gene,... And the body is a type of ... persons on whom the choice is directly affected. Dawkins suggested this question without distinction between the replication unit and the selection unit he made elsewhere: The main unit of selection, and therefore vested interests, is neither a species nor a group, nor even a strictly individual. It's a gene, a unit of genesis. However, it continues in a later chapter: On any reasonable view of Darwin's question, choice does not work on the genes itself. ... differences between genes arise only in their influence. Technical Phenotype is used for bodily manifestation of the gene, the effect that the gene has on the body ... Natural selection favors some genes, not because of the nature of the genes themselves, but because of their effects - their phenotypic effects... But now we will see that the phenotypic effects of the gene should be treated as all the effects it has on the world. ... The phenotypic effects of the gene are the tools by which it leverages itself into the next generation. All I'm going to add is that the tools can go beyond the individual body wall... Examples that spring to mind are artifacts like beaver dams, bird nests, and caddies of homes. - Richard Dawkins, Selfish Gene, Chapter 13, page 234, 235, 238 Dawkins later phrasing in his book Advanced Phenotype (1982), where the selection process is carried out involving all possible phenotypic gene effects. Steven J. Gould believes That Dawkins' position is trying to do this in both directions: Dawkins claims to prefer genes and finds a deeper understanding in this formulation. But it does allow you or I to probably prefer organisms, and it really doesn't matter. - Stephen J. Gould, Structure of Evolutionary Theory, p. 640-641 The view on the selfish gene is that a choice based on groups and populations is rarely compared to the choice of individuals. While naive versions of group selection have been disproved, more complex formulations make accurate predictions in some cases, while the selection is at higher levels. Both sides agree that very favorable genes can thrive and multiply if they arise, and both sides agree that group living can be an advantage for team members. Conflict arises in part because of the definition of concepts: Cultural evolutionary theory, however, suffered from an over-emphasis on people's experiences and behavior by recognizing a complex group organization... Many important behaviours related to the success and function of human society are determined only at the group level. In Social Conquest of the Earth (2012), entomologist E. O. Wilson argues that while a selfish-gene approach was adopted until 2010, when Martin Novak, Corina Tarnit and I demonstrated that the inclusive fitness theory, often called the theory of family choice, was mathematically and biologically incorrect. Chapter 18, Social Conquest of the Earth, describes the shortcomings of family choice and outlines the choice of a group that Wilson believes is a more realistic model of social evolution. He criticizes earlier approaches to social evolution, saying: ... unreasonable belief in the central role of kinship in social evolution led to the abolition of the usual order in which Research research A proven best way in evolutionary biology, as in most sciences, is to identify the problem arising from empirical research and then choose or develop the theory that is needed to solve it. Almost all studies in inclusive fitness theory have been the opposite: to assume the key roles of kinship and

the selection of relatives, and then to seek evidence to test this hypothesis. According to Wilson: People should have a tribe ... Experiments conducted over the years by social psychologists have shown how quickly and decisively people are divided into groups and then discriminated against in favor of who they belong to. (p. 57, 59) According to Wilson: Different parts of the brain evolved by choosing a group to create a group. (p. 61) Some authors believe that aspects of this debate between Dawkins and his critics about the level of selection are chatter: The particularly disappointing aspects of these constantly updated debates are that, although they seemed to be caused by competing theories about how evolution works, in fact they are often associated only with competing metaphors for the same evolutionary logic, and debates on these aspects. so empirically empty. , Selection levels in evolution, p.4 Other authors say that Dawkins failed to make some critical differences, particularly the difference between choosing a group for group advantage and group selection transferring individual benefits. The choice of words Much objections to the Selfish Gene stems from his inability to always be clear about choice and replication. Dawkins says the gene is a fundamental selection unit and then points out that selection does not directly affect the gene, but vehicles or advanced phenotypes. Stephen J. Gould made an exception, calling the gene a selection unit because the selection only operated on phenotypes. Summing up the divergence in the views of Dawkins and Gould, Sterelny says, Gould thinks that gene differences do not cause evolutionary changes in populations, they register these changes. -Kim Cerelney: Dawkins vs. Gould, p. 83 The word cause here is somewhat tricky: is there a change in lottery rules (e.g., inheriting a defective gene responsible for disorder) the cause of the difference in outcomes that may or may not occur? This certainly changes the likelihood of events, but the concating of contingencies decides what is actually going on. Dawkins believes that the use of the cause as a statistical weighting is acceptable in general use. Like Gould, Gabrielle Dover, who criticises Selfish Gene, says: It is illegal to give strength to genes, as Dawkins would, to control the selection results... There are no interaction genes per se: rather, each unique set of inherited genes contributes contribute to one unique phenotype... true determinants of selection. - Gabriel Dover: Dover: Mr Darwin, page 56 however, compared to the Dokins' discussion of the same moment, it would seem both Gould and Dover's comments are more critical of his careless use than the difference in views. Hull proposed a resolution based on the difference between replicators and interacting. The term replicator includes genes as the most fundamental replicators, but perhaps other agents and interacting involves organisms, but perhaps other agents, as well as Dawkins' vehicles. The difference is this: a replicator: an entity that transmits its structure largely intact in successive replications. Interacting: An entity that interacts as a whole with its environment in such a way that this interaction causes replication to be differential. Choice: The process in which differential extinction or the proliferation of interacting causes differential perpetuation of the replicators that produced them. Hull suggests that, despite some similarities, Dawkins takes a too narrow view of these terms, generating some objections to his views. According to Godfrey-Smith, this more thorough vocabulary has clarified misunderstandings in the debate selection units. The accepted arguments Behavioral genetics entertains the opinion: that genes are dynamic contributions to behavioral organization and are sensitive to feedback systems from internal and external environments. Technically, behavior is not inherited; only DNA molecules are inherited. From now on, behavioral education has been a problem of constant interaction between genetic potential and environmental formation (D.D.). Thiessen, Mechanism of Specific Approaches in Behavior Genetics, p. 91 This point of view from 1970 is still espoused today, and conflicts with Dawkins' view of the gene as a form of information that passes through the bodies and affects them, but is not affected by them on its way through. philosophical/biological field of enactivism emphasizes the interaction of a living agent with the environment and the relationship of the probing environment to the cognition and cognition. The activation of the gene depends on the cellular environment. An extended discussion of the contrasts between enactivism and dawkins opinion, and with their support for Dennett, is provided by Thompson. Philosopher Evan Thompson has a multi-doctoral objection to the idea of a selfish gene. Thompson doesn't talk about Reducing Dokin's life to genes and information: Life is just bytes and bytes and bytes of digital information - Richard Dawkins: The River of Eden: Darwinian View of Life, p. 19 On the banks of the Oxford Canal... it's a big willow tree and it's pumping down the seeds into the air... Rain instructions there; It's rain programs; It's rain tree growing, fluff spread algorithms. That is metaphor, it's a simple truth - Richard Dawkins: The Blind Watchmaker, page 111 Thompson argues that the gene can't work on its own, since it requires an environment such as a cell, and life is the creative result of highly structured contingencies. Thompson quotes Sarkar: There is no clear technical concept of information in molecular biology. It is nothing more than a metaphor that masquerades as a theoretical concept and ... leads to a misleading picture of the nature of possible explanations in molecular biology. - Sahotra Sarkar Biological Information: A skeptical look at some central dogma of molecular biology, page 187 Thompson follows with a detailed study of the concept of DNA as a view-up-table and the role of the cell in orchestrating DNA-to-RNA transcription, indicating that by anyone's account DNA is hardly the whole story. Thompson further suggests that the cellular relationship environment has much to do with reproduction and inheritance, and the emphasis on the gene as a form of information that passes through the bodies and affects them, but does not affect them in its path through is tantamount to adopting a form of material-informational dualism that has no explanatory value and no scientific basis. (Thomson, p. 187) Acceptance of vision, however, is that the information is the result of the agent's sensing and experimentation with the environment agent provided the agent's ability to probe and process the results of the sensing, and DNA is just one of the mechanisms the agent brings to bear on its activities. Moral Arguments Another critique of the book is its attitude to morality, and in particular altruism, as existing only as a form of selfishness: It is important to understand that the above definitions of altruism and selfishness are behavioral, not subjective. I don't care about the psychology of motives here... My definition concerns only whether the effect of the act is to reduce or raise the survival prospects of the alleged altruist and the survival prospects of the intended beneficiary. - Richard Dawkins, Selfish Gene, page 12 We can even discuss ways of cultivating and nurturing pure, selfless altruism, something that has no place in nature, something that has never existed before in the entire history of the world. , Selfish Gene, page 179 Philosopher Mary Midgley suggested this position is an option of explaining Hobbs altruism as enlightened selfishness, and that Dawkins goes even further to suggest that our genetic programming can be overcome by what constitutes an extreme version of free will. Part of Mary Midgley's concern is that Richard Dawkins's account of the Selfish Gene serves as a moral and ideological justification for selfishness that must be accepted by modern human societies as simple. nature, providing a pretext for behavior with bad consequences for the future of human society. Dawkins' main final theme, that humanity is finally gaining power over selfish replicators by virtue of its intellect, is also criticized by primatologist Frans de Waal, who calls it an example of the theory of veneer (the idea that morality is not fundamental, but is laid over a cruel foundation). Dawkins claims that he simply describes how things are in evolution, and makes no moral arguments. On BBC-2 TV, Dawkins pointed to evidence of the Tit-for-Tat strategy (shown as successful in game theory) as the most common, simple and profitable choice. More generally, it was objected that the Selfish Gene discussed philosophical and moral issues that went beyond biological arguments, based on anthropomorphism and sloppy analogies. The publication The Selfish Gene was first published by Oxford University Press in 1976 in eleven chapters with a foreword by the author and a foreword by Robert Trivers. The second edition was published in 1989. This edition added two additional chapters and significant notes to the previous chapters, reflecting new findings and thoughts. He also added the author's second foreword, but trivers' original foreword was removed. The book does not contain illustrations. The book has been translated into at least 23 languages, including Arabic, Thai and Turkish. In 2006, the 30th anniversary edition was published with a foreword by Trivers and a new introduction by the author. It was accompanied by a holiday called Richard Dawkins: How a Scientist Changed the Way We Think (2006). In March 2006, a special event entitled The Selfish Gene: Thirty Years Later was held at the London School of Economics. In March 2011, Audible Inc published an audiobook narrated by Richard Dawkins and Lallo Ward. In 2016, Oxford University Press published a 40th anniversary edition with a new epilogue in which Dawkins describes the continued relevance of the gene's view of evolution and states that it, along with the analysis of the confluence, highlights the deep past, the ways of which I had no hint when I first wrote The Selfish Gene.... 978-0-19-857519-1 Hardback 1978 Selfish Gene. (ISBN is not specified) Hardback 1978 Selfish Gene (1st Ed. Reprint) 978-0-19-520000-3 Paperback 1989 Selfish Gene (2nd ad.) 978-0-19-286092-7 Paperback2006 Selfish Gene: 30th Anniversary Edition (3rd edition. 978-0-19-929114-4 Hardback 978-0-19-929115-5 1 Paperback 2011 Selfish Gene (MP3 CD) 978-1-49-151450-4 Audiobook 20 16 Selfish Gene: 40th Anniversary Edition (4th Anniversary Edition) 978-0-19-878860-7 Paperback 2016 'Advanced' Selfish Gene (4th ED.) 978-0-19-878878-2 Hardback Awards and Recognition In April 2016, The Selfish Gene was included in The Guardian's list of the 100 best non-fiction books by The Guardian by Robert McCrorum. In July 2017, the book was included in the list of the most influential scientific books of all time in the survey to celebrate the 30th anniversary of the Royal Society Prize in Science Books, ahead of Charles Darwin's On the Origin of Species and The Principles of Mathematics by Isaac Newton. 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