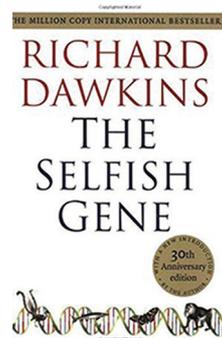


The Selfish Gene

This month we delved into a classic, first published more than 40 years ago in 1976¹. The phrase *The Selfish Gene* has itself become a meme, a term coined by Richard Dawkins in this, his first book. The application (and misapplication) of the phrase is prevalent today beyond anything Dawkins could have imagined. A common misconception is that because of our ‘selfish genes’, animal behaviour is determined purely by factors that contribute to our genes’ survival into the next generation. In fact, Dawkins is meticulous in explaining his actual meaning that genes behave ‘as if’ they were selfish. This does not mean that the organisms in which they reside are selfish themselves. Indeed, some of the most fascinating examples of animal behaviour he describes are those in which altruistic characteristics confer an evolutionary advantage, and thus spread through the gene pool.

Dawkins no doubt guessed that by anthropomorphising genes and ascribing characteristics like ‘selfishness’, suggesting volition and agency, he risked such misunderstandings. Thus, in almost every chapter, he carefully clarifies the limits of the metaphor, reiterating that a ‘survival machine’, once built, is free to behave as it will and ‘rebel’ against its genes should it so wish. In the introduction to this edition, he notes that at the time of publication he considered changing the title from *The Selfish Gene* to *The Immortal Gene*. We speculated that the book’s central ideas might have been less frequently misconstrued if this different metaphor had been used.

We were struck by how well the book has stood the test of time. Remarkably few elements jar with our current understanding of the genome and evolutionary biology. In this anniversary edition, Dawkins has added helpful endnotes exploring new developments, and reapplies his theory to our evolved knowledge with



Cover of *The Selfish Gene*

flair and rigour. The clarity with which he lays down his arguments is remarkable, including when picking apart (a small number of) his own ideas from the first edition. The ferocity and skill with which he deconstructs his critics in the endnotes is equally impressive.

Having said this, some group members found it difficult to put aside Dawkins’ more recent atheist crusade. His often disrespectful and belligerent approach, particularly within the more informal context of Twitter,² coloured the way many read the book, despite its being on a very different topic.

We discussed an area of genetics that is not covered in his book, but which has come to the fore in recent years—that of epigenetics. Critics of Dawkins’ Selfish Gene theory have pointed to the Lamarckian inheritance of acquired characteristics through epigenetic coding.³ So far, however, our understanding of epigenetic inheritance would not derail Dawkins’ ideas overall; although some acquired characteristics can be inherited through epigenetics, these changes do not appear to endure beyond a few generations, and are therefore unlikely to contribute to the evolution of species in the long run.

As always, towards the end of our discussion, we asked each other the *Practical Neurology* question: how has this book changed our clinical practice? There was a long silence before a couple of people valiantly made some tentative suggestions. In general, the answer seemed to be:

not really. If anything, we hoped that the impressive clarity of his explanations of genetics might rub off on us, and inspire us to counsel our patients better on the often thorny topic of inheritance. For the most part, however, *The Selfish Gene* has little focus on the genetics of disease, being primarily an exploration of evolutionary biology. One area where it perhaps has most relevance is microbial evolution and consequent antibiotic resistance. In this realm of medicine at least, the concept of the selfish gene sadly feels more apposite than ever.

Nevertheless, if a relative lack of clinical lessons is one of the only criticisms to be levelled at this book from our evening’s discussion, *The Selfish Gene* deserves to be recommended. It achieves that rare thing: intellectually exhilarating content presented in clear, simple prose, which is a pleasure to read. Dawkins has more to him than brutish absolutism and the coining of the word ‘meme’. It would be a shame if those things were ever to eclipse this, his most important legacy.

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