

*The Robot's Rebellion: Finding Meaning in the Age of Darwin*

Keith E Stanovich

Chicago 2004

ISBN 0-226-77089-3

358pp

Our genes got us here. We are the vehicles that carry our genes to each successive generation. Then, somewhere in the millennia of evolution, we humans invented culture — or, rather, culture found us. Indeed, the cultural ideas we have are memes, and memes reproduce rather like genes, but much faster. I tell you some ideas, and the memes replicate directly into your brain. It is not so much that we choose our memes, but that we live in a meme pool of successful ideas that are passed on from carrier to carrier.

Who is to say what ‘successful’ is? Notoriously, genes are selfish, and so are memes. Indeed, memes are worse than genes: they do not even require us to live to the age of sexual reproduction, so a meme for martyrdom can work whereas a gene for sterility would fizzle out.

If, as seems the case, we are merely vehicles for selfish genes and memes, then why not use science (itself a meme) to help us validate and filter out better memes?

Keith Stanovich’s *The Robot’s Rebellion* takes us on a breathless tour of genes, memes and cognitive science, and ends up in terrorism, market politics and Christmas delusions. In short, genes have given us the physical structure for our brains, and this lets us down: we are not really as rational as we might like to think.

Stanovich introduces a new word, dysrationalia, rather like dyslexia, to talk about our cognitive limitations. Now we know we have dysrationalia, surely we can do better? Hence the robot’s rebellion. We are robots; let us rebel against our raw genetic and memetic heritage!

Stanovich suggests that evolution has got us so far, but now society demands a higher quality of rationality. It might once have made sense to thump somebody who made you cross, but now it is illegal. Tax forms demand a huge level of abstract thought. When we go to our doctor, we want them to recommend the best treatment, despite the difficulties of reliable reasoning with statistical evidence and emotional distractions with human feelings. How often are we exploited by salesmen against our better judgement? And what about the dysrationalia that leads to terrorism?

While this book covers a huge theatre, familiar to cognitive scientists and economists, its wide scope and frequent topic changes are distracting. It worries that there will be an “intellectual proletariat” who do not understand modern — post-Darwin — science. Yet the style of writing makes the book inaccessible to non-scientists, the proletariat. It often reads like an academic paper rather than a popular science book: if you don’t know what a 2x2 covariation detection task is, or if phrases like “dominance hierarchy of your conspecifics” are mysteries, you will be forced to read some of the thousand odd references.

We are told that humans violate key principles of rationality. If you are shown two jars of sweets, one with nine white and one red, and one with 92 white and 8 red, which jar are you more likely to randomly get a red sweet from? Many people choose the larger numbers, even though they will then succeed only 8% rather than 10% of the time. More intelligent people choose better on such tests — but this is a circular argument, as intelligence tests are designed to measure this sort of performance, rather than ecological performance. Outside the laboratory, having eight ways to win is more useful than having only one way to win. Moreover, choosing the 8% jar *infinitely* improves your chances of getting more than one red sweet. It isn't as irrational a choice as it is made out to be.

More to the point, *The Robot's Rebellion* positions itself as taking a stand on consciousness, the soul, free will and other major issues. The style of argument is contentious.

When Stanovich argues that religion is wrong his argument schemas work as well if one substituted, say, enjoyment of music or mathematics, so they are contentious. His style of argument around this topic might as well be that if terrorists use chemical explosives then science is wrong. A whole book on dysrationalia should have forewarned him of the difference between logic and rhetoric. Indeed would not such arguments undermine his whole mission of escaping evolutionary determinism through self-awareness?

His claim that evolution means there is no deep meaning to life is like saying that because paintings reflect light, they have no meaning beyond photons. He thus ignores the doctrine of multiple representations. Why does my shirt look red? The answer has little to do with light or dyes, but more to do with what my wife knows about me. Physics is a vacuous level of explanation to explore what colour means to me.

Likewise, over-emphasis on genes and memes for a book aiming for Utopia narrows the level of explanation and inevitably misses the bigger picture — even to the extent that Stanovich wants to deny there *is* a bigger picture. On the other hand, he appears to like Oxfam and fair trade, and while I am very sympathetic to these values, I don't see their immediate connection to the rebellion, particularly as the rebellion is personal rather than social.

Still, I like the provocation. We humans have pressing problems of unmanageable social complexity and global irrationality, and we do need to do better. But if we “must” learn to stop being robotic vehicles for genes and memes, as Stanovich asseverates, I'd like more coherent arguments. Personally, rather than rebel against our nature and push out into uncharted territory, I put more hope in the predictable grand challenge of adapting social structures (and computers in particular, even as cognitive enhancements) to better fit human needs — to compensate for the dysrationalia this book so well describes.

Reviewed by Prof Harold Thimbleby, Director of the UCL Interaction Centre, UCLIC. <http://www.ucl.ac.uk/harold>