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Review Article

Modernity Evolving? Problems and Prospects of a Darwinian Theory of Culture

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Books Reviewed

The Secret of Our Success: How Culture is Driving Human Evolution, Domesticating Our Species and Making Us Smarter. By Joseph Henrich. Princeton, NJ: Princeton University Press. 2016. 464 pp. €31.95 (hardback).

The Evolution of Everything: How Small Changes Transform Our World. By Matt Ridley. London: Harper Collins Publishers. 2015. €14.99 (paperback).

From Bacteria to Bach and Back: the Evolution of Minds. By Daniel Dennett. New York: W. W. Norton & Company. 2017. €29.99 (hardback).

In recent decades, an increasing number of scientists have proclaimed a Darwinian turn in the social sciences and the humanities. In 1996 Daniel Dennett famously spoke of 'Darwin's dangerous idea' as a 'universal acid', so corrosive that it will eat through any barrier it encounters, leaving a revolutionized world-view in its wake.[1] Since then, Darwinian approaches have been growing quickly indeed. While

attention initially focused on the biologically reductionist programme of sociobiology and evolutionary psychology, it has re-focused on the non-reductionist idea of Darwinian selection in cultural evolution. But does this new Darwinism seem to live up to its promise of revolutionizing our world view? And what does it have in store for historians of modernity, if anything at all? The three books reviewed here provide us with a helpful overview of some recent developments in the field of cultural evolution. Even if they may include some contentious points for historians, they certainly offer a lively and stimulating read.

In *The Secret of Our Success*, Harvard professor in human evolutionary biology Joseph Henrich elaborates upon one of the key claims of cultural evolution: we humans tend to overestimate the power of our intelligence in the formation of cultural adaptations. Instead, Henrich argues, it is often a process of Darwinian cultural selection that creates adaptations outside of people's awareness. As a result of the cumulative preservation of 'lucky errors', comparable to genetic mutations in biological evolution, culture becomes 'smarter than we are'.[2] A similar point is made in *The Evolution of Everything*, by biologist and popular science writer Matt Ridley, who also explicitly states how this bears upon history: 'The way that history is taught can therefore mislead, because it places too much emphasis on design, direction, and planning, and far too little on evolution'.[3]

Ridley is somewhat unfair in his comments about history teaching, because many historians almost revel in their descriptions of how undirected, unintended and chaotic history can be. Still, the suggestion that culture can adapt beyond our intentions and recognition is an interesting one. Many schools of historical and social scientific thought, such as functionalism, structuralism or laissez-faire economics, already assumed that cultural phenomena can have functional traits beyond people's awareness. However, they all failed to deliver a convincing explanation for how this is possible. Darwinian theory potentially provides us with precisely this explanation, as endless cycles of selection in cultural evolution can accumulate variants that were only *accidentally* adapted to their environment, thus giving shape to unintended and unrecognized cultural adaptations. What gives Henrich's and Ridley's books additional strength is that they provide us with a plethora of examples.

Henrich mostly refers to the kind of case studies that were traditionally studied by anthropologists. For instance, during his own field work

in Fiji he came across a taboo on the consumption of eels during pregnancies. From a current scientific perspective, this taboo seems to make a lot of sense, because eels contain ingredients that might be toxic for foetuses. However, when Henrich asked the Fijians themselves about its function, they simply referred to 'custom' and did not seem to be doing it for health reasons in any way. Henrich thus claims that the underlying adaptiveness of the taboo is not likely to be a product of humans' intentions, but, rather, a result of cultural evolution. His further examples include traditions such as initiation rites, communal rituals that stimulate social cohesion.

Henrich proposes a scenario of 'cultural group selection'. This assumes that cultural groups are engaged in a process of continuing competition for biological and cultural reproduction, and some cultural variants make groups more successful than others. Together with the reproductive success of these groups, the cultural variants that made them successful in the first place, such as food taboos or common rituals, also tend to survive. The involved actors neither need to intend nor recognize this outcome as such, and according to Henrich this lack of genuine understanding is to some extent even necessary. If people would recognize the underlying causal model, the practices would lose at least some of their effectiveness.

Ridley uses examples that are often more relevant for historians of modernity, such as recent developments in economic, technological and educational history. Ridley states that these developments provide ample evidence for the evolution of functional complexity that was not designed by any human being, but emerged unplanned. He particularly revalues Adam Smith's idea of 'the invisible hand' and argues that the real identity of this 'hand' is a Darwinian evolutionary process that continually accumulates things that work, and throws away what does not work. But, as Ridley laments in his rather Manichean story, these benevolent processes are continually disturbed by what he calls 'creationism' – the widespread illusion that central planning can do things better. 'Letting good evolve, while doing bad, has been the dominant theme of history'.[4] One of Ridley's intellectual heroes is the nineteenth-century modernization theorist Herbert Spencer, and along similar lines Ridley defends laissez-faire policies and a progress-oriented view on history.

Ridley's Darwinian perspective is promising in many respects, and may indeed help us to explain things such as the economic failure of

communist systems and the relative success of capitalist ones. However, his argument looks overly ideological and seems to be taking things too far. It has a ring of unfalsifiability, because all apparent failures of free-market policies, such as the 2008 credit crisis, are explained away as a consequence of policies that were not yet liberal enough. And his case studies do not always look convincing. An ultimate example of wrong-headed policies that Ridley repeatedly refers to is late nineteenth and early twentieth-century Germany. In Ridley's view, German authorities made the mistake to think that central planning and hefty public funding would improve the nation's achievements in science and education. In contrast, Britain and the United States decided to let science and education evolve more freely, which, supposedly, led to equal or even better results. This is a strange argument, because it was precisely during this period that Germany became the world's leading nation in science and education, and by 1933 it had won more Nobel prizes than the US and Britain combined.[5]

There is also a problem on a more theoretical level with Ridley's argument. He presents evolution as good, and central planning as bad. But if everything is evolution, as his title and also much of his book seem to suggest, then what about central planning itself? Why is it continually selected and preserved in the cultural evolutionary process? Ridley cannot have it both ways. One either has to put the ubiquity of the evolutionary framework into perspective, or one has to admit that evolutionary processes, very often, do not lead to the results that one might hope for.

What Henrich's and Ridley's books have in common is that they both tend to evaluate the hidden evolutionary processes in a rather optimistic manner. Henrich's argument resembles Durkheimian functionalism, where almost all social customs are interpreted as pillars of social cohesion, and Ridley's story is similar to nineteenth-century economic liberalism. Historians and social scientists have criticized these schools of thought for their underestimation of power struggles, and their inadequacy to recognize how cultural phenomena can be constructed to serve one group within society at the expense of others. Ridley and Henrich offer important counter-weight to current postmodern perspectives that tend to explain almost all cultural phenomena as disguised forms of oppression, but the pendulum seems to be swinging a bit too far into the other direction.

Interestingly, it is Darwinian theory *itself* that can provide us with a picture that is more ambivalent and diverse. After all, biological evolution did not only lead to gentle adaptations, but also to exasperating arms races, nasty pathogens and ichneumon wasps that keep their captured caterpillars alive to eat from their living bodies (an example that particularly frightened Darwin). So why should we be so confident that hidden Darwinian processes in cultural evolution will have a strong tendency to work out well for us? In this respect, it is worthwhile to have a look at Daniel Dennett's latest book, *From Bacteria to Bach and Back.*

Dennett's oeuvre is of monumental scope, and in this book he further reflects on some of his key themes such as consciousness, free will and language. What makes it particularly relevant for cultural evolution is that he remains insistent on the idea of 'selfish memes', a brainchild of Richard Dawkins that Dennett has already been defending for decades. Like Henrich and Ridley, Dennett contends that cultural phenomena are full of Darwinian 'design without designer'. But, in addition, he delves deeper into the question of what these adaptations are actually functional for, and also explores more dire scenarios.

Dennett likes to draw the comparison between culture on the one hand and bacteria and viruses one the other. The latter survive via their hosts, the organisms, and in most cases they are neutral or even beneficial to their hosts. However, this is not always the case, because some may use their organisms in parasitic ways; they spread while making their hosts sick, or even kill them. Dennett argues that culture can evolve in a similar fashion. Items of culture, defined as 'memes', spread via humans and, like bacteria and viruses, they are normally neutral or beneficial. Some, however, may spread 'selfishly' in pathogenic ways, while harming the interests of the people who transmit them.

The idea of 'selfish memes' is widely rejected by proponents and opponents of cultural evolution alike. This is partly due to the fact the term 'meme' is somewhat ill-chosen, as it has a connotation of discreteness of cultural items. However, the idea that cultural phenomena can be adapted to ensure their own self-reproduction is an exciting one and deserves more serious consideration. If we accept the idea that culture can adapt beyond our knowledge, it is not a far stretch to presume that some of those adaptations might be particularly adapted to further their own propagation. Dennett and Dawkins have proposed various

examples, such as the Christian idea of heaven and hell, or forms of nationalism, which stimulate people to dedicate their lives to spreading their ideas, even at the price of death. This perspective offers a novel and interesting avenue for future historical research. Instead of looking at the spread of ideas from the perspective of the interests of their human hosts, we can look at it from the reproductive perspective of the ideas *themselves*.

As mentioned previously, these books contain much that historians of modernity will find hard to digest. History is often presented in broad strokes, and much of the terminology will sound alien to them. In order to make cultural evolution applicable for historical research, it would need to become more fine-grained in its outlook. However, there is nothing in Darwinian theory itself that will prevent the field of cultural evolution from moving into that direction. After all, the evolution of living nature is in many ways a haphazard, contingent and messy process, just like history. Darwinian evolution offers the prospect of finding a middle ground between heavy modernity with determinist laws governing the universe, and the chaotic diversity of postmodernist perspectives. In sum, cultural evolution offers multiple lines of research that may inspire valuable new perspectives on the history of modernity.

About the Author

Steije Hofhuis is a PhD student in Cultural History at Utrecht University. He earned a degree in History at the University of Amsterdam, and worked for a few years as a junior lecturer at the Institute for Interdisciplinary Studies of the same university. His research now focuses on the theory of Darwinian cultural evolution, and he examines early modern European witch beliefs and persecutions as a case study.

Notes

1 Daniel Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (New York, 1995) 63.

2 Joseph Henrich, *The Secret of Our Success: How Culture is Driving Human Evolution, Domesticating Our Species and Making Us Smarter* (Princeton, 2016) 99.
3 Matt Ridley, *The Evolution of Everything: How Small Changes Transform Our World* (London, 2015) 3.
4 Ridley, 318.
5 Peter Watson, *The German Genius: Europe's Third Renaissance, the Second Scientific Revolution and the Twentieth Century* (London, 2010).