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Charles Darwin Review Article

Was Hitler a Darwinian? Disputed Questions in the History of Evolutionary Theory

Robert J. Richards

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Darwin Deleted: Imagining a World Without Darwin

Peter J. Bowler

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Two distinguished historians of biology make their return to the lists courtesy of the University of Chicago Press. Robert J. Richards' *Was a Hitler a Darwinian?* collects together some of the author's more recent papers; while Peter J. Bowler's *Darwin Deleted* is an exercise in counterfactual history that tries to image the path that the theory of evolution would have taken had Darwin not existed.

Most scholars writing about Hitler and Nazism have usually stated that Hitler subscribed to some sort of social Darwinism, without examining the concept in too much depth. Richards concludes that the image needs revising, for a number of reasons. Firstly, there was little scientific rigour about many of Hitler's ideas, and his 'gauzy mystical attitude about Deutschtum and the German race was hardly materialistic; moreover, leading Nazi biologists rejected Darwin and Haeckel precisely because the theories of these two scientists were, it was thought, materialistic, while *volkisch* biology was not' (p. 198). It was also the case that anti-Semitism was deeply rooted in German society, a fact which was independent of Darwin's theories. Although Darwin believed in a hierarchy of the human races, he never wrote anything anti-Semitic.

Most of Hitler's racial ideas came from the works of Arthur Gobineau and Houston Stewart Chamberlain. Gobineau rejected Darwin's theory when he heard of it; while Chamberlain compared it to phlogiston theory. Hitler never mentions Darwin in *Mein Kampf*; the best we can say from Hitler's speeches and writings is that he thought race formed a hierarchy - which is an observation that 'any slave-holding Christian in the American South' could have made (p. 223). Many of the analogies that authors on Nazi Germany tend to focus on Hitler's use of the term 'struggle' - yet Hitler used it so often and in so many contexts as to render it almost meaningless. There is a difference between words and ideas - and the ideas Hitler uses are not Darwin's. At most Hitler might be described as a social-Darwinist - a concept that owes more to Herbert Spencer than Darwin himself.

Elsewhere, if there is a thread that connects the majority of the essays in *Was Hitler a Darwinian?*, it is the idea that Darwin's theory has a moral backbone to it - that evolution is not an ethically neutral process, and that nature in fact has a 'moral spine' (p. 8). While Darwin might have come to abandon his belief in God, and thus a role for God in natural selection, he never abandoned 'the ascription to natural selection itself of those properties of discrimination, power, and moral concern previously conferred on it by divine agency' (p. 32). Richards contends that

Darwin's theory came to portray nature as 'an intelligent and moral selector', and although many contemporary scholars have described Darwinian nature as mechanistic and amoral in its ruthlessness, 'Darwin's language and metaphorical mode of thought gave his theory a meaning resistant to any mechanistic interpretation and unyielding to his later, more cautious reflections' (p. 42).

Debates have been going on for a while over whether Darwin eliminated teleology from biology.(1) In 'Darwin's theory of natural selection and its moral purpose' Richards argues that Darwin himself embedded 'his theory of natural selection in a decidedly progressive and teleological moral framework' (p. 24). In fact, there were two conceptions of teleology in Darwin's work and notebooks. Most scholars argue that Darwin rejected the idea that nature unfolded according to a plan: yet he was content to use phrases like 'designed laws'. Furthermore, having a moral conception of nature as he did must inevitably lead to 'to the most exalted object we were capable of conceiving, namely, the production of the highest animals, human beings with their moral instincts' (p. 43). The second conception of teleology is an Aristotelian one; starting from the endpoint and working backwards in order to trace the antecedent steps that made evolution possible.

One of the mainsprings of Darwin's moral view of nature was German Romanticism. Prior to his voyage on *The Beagle*, Darwin had read and been influenced by Alexander von Humbolt's *Personal Narrative*; 'like many of the Romantics, he [Darwin] also discovered the moral core of nature and continually reckoned with it as he constructed his general theory of evolution' (p. 111). When Darwin was formulating the character of natural selection in the 1840s, he employed the metaphor of likening operations of natural selection to that of 'an all-powerful being, one that acted rationally and with forethought, designing adaptations not simply of beauty, but of aesthetic beauty as well' (p. 127) This is somewhat reminiscent of Spinoza's *Deus sive natura*.

Perhaps the most interesting essay is 'The relation of Spencer's evolutionary theory to Darwin's', which asks among other things, why Spencer's reputation has not fared too well at the hands of historians when compared to Darwin. Both men relied on the same devices to explain human evolution - yet to be called a neo-Darwinian carries none of the negative connotations that being called a neo-Spenserian would. Why is this? Part of it has to be the personal character of the two men: Darwin tends to be portrayed as a good-natured sage, while the received image of Spencer tends to be of a 'bald, dyspeptic bachelor' (p. 116). Another factor is the way they presented their views of nature. Darwin was undoubtedly a very good and vivid writer, who tended to portray nature as a 'dynamic, creative force that instilled value' (p. 128). Spencer, by contrast, tended to present a 'cold darker view of the destructive power of nature', emphasising the elimination of the weak in a fairly dull, leaden prose style (p. 128). Richards concludes by stating that Spencer probably deserves to be rescued from the lower echelons of intellectual history.

Of the remaining pieces, two essays on Ernst Haeckel are offshoots of Richards' 2008 biography of Haeckel, while the other looks at the influence on Darwin of August Schleicher's thesis on the linguistic creation of man. It perhaps wouldn't be unkind to describe this collection as a bit of a hodge-podge; the equivalent of a compilation album that bands put out to collect together b-sides, remixes and other miscellaneous releases. All the pieces in here have appeared elsewhere, except for the title essay, which the cynical might argue was written in order to give a catch-penny title for this collection. Maybe I am being overly harsh here; Richards is a good writer, and in and of themselves the essays here all have merit. But as collection, they come across as somewhat of a random selection (no pun intended), save the fact they all hang around the work of Darwin in some way.

Given that Peter Bowler has probably forgotten more about Darwin than most will ever know, it is somewhat appropriate that his latest book sets out to do exactly that - to provide a sketch of how biology would have developed had Darwin not existed. In many ways the book can be seen as a sequel to Bowler's earlier book *The Non-Darwinian Revolution*.⁽²⁾ In that book he set out to write 'an alternative history of evolutionism ... In theory it ought to be possible to write a history of the field in which Darwin is not the central figure'.⁽³⁾ Here he attempts to write just such a history.

The counterfactual argument Bowler presents in *Darwin Deleted* runs as follows: if Darwin had have perished on the Beagle voyage, then the idea of natural selection - the great sticking point for many with regards to the theory of evolution - would have perished with him. Non-Darwinian alternatives, such as Lamarckianism, would have gradually gained ascendancy during the course of the 1860s and 1870s. Only towards the end of the century, when 'interest began to focus upon the topic of heredity (largely as a result of social concerns) would the fragility of non-Darwinian ideas have been exposed, paving the way for the selection theories to emerge at last (p. 21). To the objection that Lamarckianism could not have become the basis for an effective evolutionary theory, Bowler argues that modern evolutionary biology has revived many of the areas of study associated with non-evolutionary theories.

Many have argued that even if Darwin had not existed, something like a theory of evolution was inevitable, a line of thought that Bowler calls the 'in the air' thesis: that enough pieces of the evolutionary puzzle were available at the time that someone else could have - and would have - put them together. In essence, Darwin was the equivalent of an athlete who wins a race - doing the same things as the other runners, only slightly better (p. 30). If this was the case, however, then Darwin's complaint in his *Autobiography* that he found it difficult to get most of his readers to understand his theory makes little sense. The components of Darwinian evolution may all have been in what we would now term the public domain: 'but to see how they could all be fitted together and to explore the wider implications of the resulting conceptual package required someone able to synthesize ideas and information from a variety

of different sources and to think outside the box about their implications' (pp. 54-5).

Alfred Russell Wallace is often credited as the co-discoverer of evolution, a claim which is all too often taken at face value.(4) Bowler makes the case though, that had Wallace not read Darwin's work and continued on his own trajectory; most likely his work would have focused upon group selection at the expense of the individual process. Ergo, the 'harsher implications of Darwinian theory would have been masked to some extent, although the effects of the struggle for eliminating the less fit varieties and species would still have been apparent' (pp. 63-4) As a religious man Wallace was keen to play down the crueller aspects of Darwinism, insisting that animals did not feel pain as humans did, and that we should not project human experiences onto the animal kingdom. As for the other key players in Darwin's era, it is likely that T. H. Huxley would have only turned to evolutionism in 1866 upon his reading of Haeckel's *Generelle Morphologie*. Instead of pursuing the idea of variation and selection, the general thrust of evolution in a non-Darwinian world would have been attempts to reconstruct the history of life on earth from anatomical, embryological and fossil evidence (p. 123). It is slightly more difficult to postulate what Ernst Haeckel would have done in a non-Darwinian world, as there is some debate over to what extent he was a true Darwinian. For Bowler, Haeckel had a commitment to progress that went way beyond Darwin's limited conception of the term (p. 131). This suggests that had Darwin not published *The Origin*, Haeckel's thought would still have broadly developed along the same lines.

One of the problems with counterfactual history is that the more one moves beyond the point of divergence, the more difficult it becomes to predict what would have occurred with any accuracy. But this is somewhat negated in the case of taking Darwin out of 19th-century biology, on the grounds that natural selection was not particularly popular to begin with. Indeed, by the turn of the 20th century Darwinism was in serious trouble: 'if the selection theory ended up in such a parlous state in our own world, it should be possible to imagine how the alternatives would flourish in a world without Darwin' (p. 137). Given the flood of fossil discoveries that occurred after 1870, it is highly likely that this would have inspired some form of evolutionary movement. And it would have been a movement that took it for granted that life was essentially progressive.

So when would the idea of natural selection arise? Two obstacles would have to be overcome in order for it to flourish: first, the idea of evolution as the unfolding of built-in trends would have to have been replaced by an approach based on dispersal and local adaptation. Second, doubts would also have to emerge about the Lamarckian thesis of inheritance via acquired characteristics (p. 169). As in real life, both of these would have occurred around the turn of the 20th century. The rise of Mendel's laws occurred on the basis of his 're-discoverers' reading their own ideas on hereditary into his work - 'Mendel was no Mendelian' - and therefore 'it

seems reasonable to suppose that the new studies around 1900 would have generated the laws sooner or later without his influence' (p. 190). Interestingly, Bowler argues that in some respects, it may have been better for the progress of biology if Darwin had not existed: he was ahead of his time - perhaps *too* far ahead. Darwin 'jumped the gun' - that is to say, he combined 'the necessary ingredients several decades before general developments in biology made this combination obvious to everyone else'. (p. 97) Without Darwin, the transition to evolutionism would have been a lot less traumatic; natural selection would not have appeared as a bombshell, but would have emerged as 'a continuous series of mini-revolutions rather than one big one' (p. 200). Instead, by coming up with the idea of natural selection, Darwin introduced a concept that most of his contemporaries couldn't cope with. Perhaps 'great revolutions are not always the best way of achieving major breakthroughs, especially if they require the scientific community to grapple with too many radical ideas at once' (p. 203).

The merits of counter-factual history will always divide historians, with some arguing that it is a useful academic exercise, while others dismiss it as a mere parlour-game that should be confined to the staff-room. But when it comes to the history of science, counter-factual history is bound up with philosophical questions: some would state that to argue that science could have developed in different ways in effect casts doubt upon the success of the scientific method. But for Bowler, to suggest that evolution could have emerged in a world without Darwin 'does not challenge the objectivity of science, although it does invite us to think more carefully about scientific knowledge' (p. 4). Regardless of one's position on counter-factual history, Bowler has written another book on the history of evolution which will provide much food for thought for those interested in the topic.

Notes

1. For a summary of the main points see Ernst Mayr, 'The idea of teleology', *Journal of the History of Ideas*, 53 (1992), 117-35.
2. Peter J Bowler, *The Non-Darwinian Revolution* (Baltimore, MD, 1988).
3. Ibid, p. 19.
4. Ibid, pp. 42-3.