Still discontent

A review of
Darwinism and Its Discontents
by Michael Ruse
Cambridge University Press,
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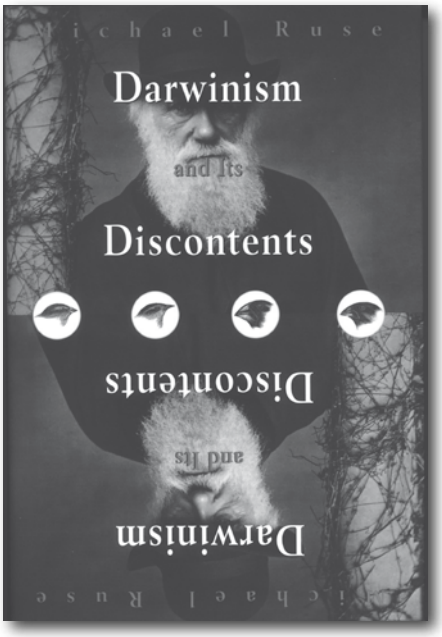

Lael Weinberger

The indefatigable Michael Ruse has been a leading apologist for Darwinism for decades. His latest offering, *Darwinism and Its Discontents*, is designed to provide a one-volume answer to major objections to Darwinism from critics of every stripe.

After briefly defending Darwin's personal importance as a truly original thinker,[1] Ruse is ready to deal with the science. He starts with a defence of the 'fact' of evolution. By this, Ruse means the most basic, popular understanding of 'evolution'—all of life descended from simpler organisms (common descent) by natural processes (naturalism).

The 'fact' of evolution

The proper cure for the doubters, Ruse believes, is to go to the evidence, and he proceeds into familiar terrain. Bacteria develop resistance to antibiotics. Thus, natural selection results in change. A group of apple maggot flies that parasitize hawthorn instead of apple trees are becoming genetically isolated from the rest of the population; thus, speciation can occur (pp. 32–33). To which we respond, who ever doubted this? What is at issue is whether the genetic changes ever go in the direction of producing more *information*—which is not the case in speciation or bacterial resistance to antibiotics.

There is more: homologous structures, homologous genes, vestigial organs (pp. 41–45), which all give rise to an inference to evolution, says Ruse. He brings in the 'path' of evolution at this point, assuring us that it is being filled out nicely by fossil finds and genetics, and confirms the 'fact' of evolution.

None of Ruse's evidence or argument is new. If he is going to present old evidence, we could reasonably expect that he would interact with at least some of the reams of creationist literature answering his arguments.[2] After all, this is supposed to be a book to answer the critics! But that is wishing for too much. As Ruse has been saying for years, he does not consider creation science to be 'science' at all.[3] So the extent of his interaction with young-earth creationist literature is to make a passing remark on the 'little book' by Duane Gish, *Evolution: The Fossils Say No*. This typifies Ruse's disregard for up-to-date creationist arguments: Gish's first edition (which Ruse cites) was indeed a little book. But that was 1973. Ruse has several editions' worth of catching up to do.

The 'cause' of evolution

Ruse moves from the question of *whether* evolution occurred, to *how* it occurred. The main protagonists here are those within the larger evolutionist tent (such as Stephen Jay Gould (1941–2005)) who accept as 'fact' common descent, but dissent from Darwinian orthodoxy on the mechanism. Ruse defends the sufficiency of natural selection as the fundamental mechanism of evolution, and gives an excellent summary of the genetics of natural selection.

What is fascinating is that much of what Ruse writes *has nothing to do with molecules-to-man evolution*. It seems that we can never say it enough: *creationists have never had a problem with natural selection*. So there is nothing troubling in the examples from observational science which Ruse presents, such as cross-breeding corn so as to triple its oil content (p. 114), or variation in beak sizes among the Galápagos finches (pp. 117–118). Ruse also mentions the debate over 'sympatric' speciation, whether speciation occurs without geographic separation of the population. But far from being an 'evolutionary' problem creationists avoid, this concept is interesting and relevant to models of post-Flood biogeography. The formation of new species is not a problem within the creationist model, since the stable unit is 'kinds', not species.[4] And the creationist zoologist Dr Arthur Jones studied lake cichlid speciation (including sympatric) for his Ph.D. thesis, and his presupposition of the biblical Creation/Flood/Dispersion model generated important research insights.[5]

Of course, Ruse does not remain in this non-controversial vein too long; for Darwinism requires natural selection to produce entirely new information. Ruse calls the arrival of this new information 'adaptation', and explains it this way: 'In the case of adaptation, one is dealing with … "organized complexity"' (the example given is the eye), so we must make an 'inference to the best explanation' to determine how this came about (p. 123). 'But what are the options? They have to be natural … or supernatural. … We have already opted for a naturalistic explanation.

What then are the options for a natural explanation? Selection or something else' (p. 124).

Lamarckism (inheritance of acquired characteristics) is out. Saltationary macromutations (*au* Goldschmidt and Gould) have no empirical support. Self-organizational properties of physics and chemistry are—at best—woefully insufficient for biological function. So, of course, Ruse is left with selection (pp. 124–125)!

Obviously, Ruse has ruled out the creationist alternative *by definition*, not by argument. So how does he know he actually has the best explanation? This is the 'rules of the game' problem: evolution by natural selection is accepted, not because the evidence shows that natural selection (or any other naturalistic processes) could actually create the eye, but because naturalistic processes are all that he is willing to consider.[6]

Ruse moves on to tell us how adaptation is recognized: 'optimality models' and 'reverse engineering'. The former is where a 'best-case scenario' is hypothesized, and adaptation is discovered and understood when we find the same (or similar) solution in nature. Or, we take a structure in nature (such as the gigantic nasal cavity in lambeosaurines) and then work backwards to find out what it was used for. What seems glaringly obvious is that each of these procedures sounds teleological (purpose-oriented). Teleology is controversial, because of its connotation of *design*. But many Darwinians are happy to use teleological terminology when talking of natural selection moulding a feature for usefulness; they merely say the structure has the *appearance* of purpose.[7] While granting a limited place for natural selection operating on information already present, creationists hold that when you get to the higher level of 'specified complexity', this *appearance* of design is best explained by *reality* of design, entailing a divine Designer.[8]

Ruse certainly does not want to bring in 'design',[9] so he quickly moves to the limits and deficiencies of natural selection (implying that things do not look too 'designed'). Evolution is not 'all powerful' (p. 139). Selection can at times be maladaptive (as in the case of sickle cell anemia, pp. 142–143; Ruse neglects to mention that one of the world's leading experts in this condition is a biblical creationist[10]). Genetic drift limits the power of selection (p. 151), as do basic physical constraints (elephants simply cannot be 'catlike' because of the size of bones needed for their body weight, p. 153). (Yet even 'maladaptive' situations, if they are really maladaptive at all,[11] fail to show problems with a design explanation; they merely show how we have genetically deteriorated, sometimes by natural selection, since creation.)

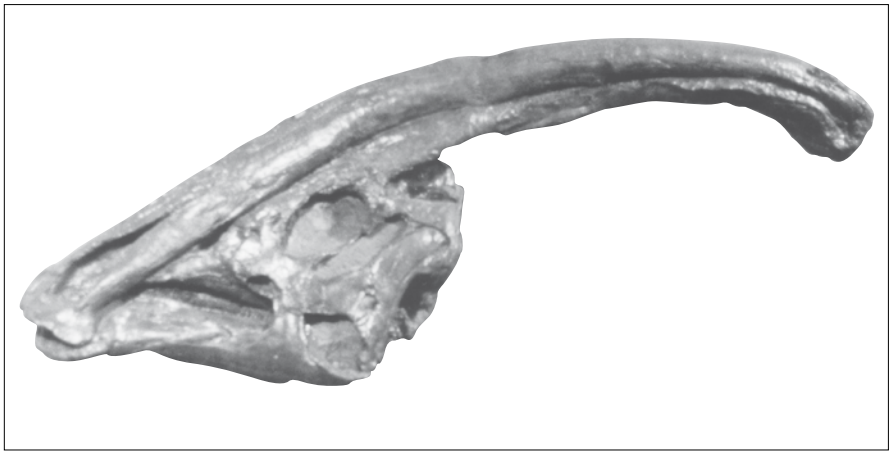

Photo by Warwick Armstrong

What use was there for the gigantic nasal cavity of the hadrosaurid *Parasaurolophus*? Questions like this enter the realm of teleology, which, as Ruse well knows, is a sore spot for evolutionists.

Selection has its limits, so how sound are other evolutionary mechanisms that have been proposed? Ruse says, not very, and creationists can find much to agree with as he points to the impossibility of punctuated equilibrium and the triviality of 'self-organization' as a causal mechanism.

As interesting as his chapters on selection are, what is perhaps more interesting is what was left out. Ruse does not meet the information challenge, raised repeatedly by scholars from the creationist and Intelligent Design (ID) camps.[12] And scant attention is directed at the field of evolutionary development ('evo-devo'), which has recently been arriving at conclusions about the insufficiency of traditional Darwinism that sound surprisingly like those of creationist and ID critics.[13]

Humans

Ruse does not believe that scientific arguments against evolution have ever really been important in convincing anyone: 'If Darwinian evolutionary theory did not extend its grasp to cover humans, no one would ever say anything nasty about it' (p. 166). (This indicates that Ruse has failed to grasp, not just the scientific, but also the theological objections to Darwinism.[14]) But Darwinism certainly has a lot to say about humans.

First, there are the purported hominids—Lucy, *Homo habilis*, *H. erectus*, and even the recently discovered 'hobbit woman' from Flores. There are many creationist critiques of this sequence,[15] but Ruse simply presents the fossils and their interpretations for our acceptance.

Next, there is the even thornier problem of origins of the human mind. The origin of language is a 'horrendous problem' (p. 175). Ruse optimistically believes that this problem will someday be solved as we learn more about how selection can operate on brain structure.[16] Perhaps an even worse problem is the evolution of consciousness. Ruse suggests hominids that had consciousness had a selective advantage in the ability to make choices and interact socially. This is not very convincing, since

consciousness is more than the ability to make decisions; it is the ability to wonder why we are able to make decisions. How this is going to confer a selective advantage is not plainly obvious to those of us with less faith than Dr. Ruse in the creative power of evolution.[17]

Given this confidence in evolution, it is not surprising that Ruse believes evolution is essential to understanding mankind in the modern world. One of his examples is human races. Creationists agree that *natural selection* (and possibly *sexual selection*) resulted in the variety of so-called 'races', but this is not the large scale evolution that Ruse is talking about when he refers to the evolution of humans from nonhumans. The creation account remains the best antidote to racism.[18]

Finally, what about reductionism: is our behaviour determined by our genome? Ruse tries to be balanced, holding that we are influenced by our genes, but at the same time also have free will, which enables us to act contrary to our evolutionary genetic heritage. He does not go the next step, and ask whether our decisions (free will) are themselves determined by our brain chemistry—the ultimate reduction.

Religious evolution

Evolution's implications seem to extend far beyond the confines of science. Critics have charged that evolution is 'at best a social construct', or 'at worst a secular-religious rival to Christianity' (p. 194). Ruse concedes, 'There is considerable truth in the charges' (p. 195). Evolution has been for many an appealing religion; its adherents have often focused on the evolutionary concept of 'progress', and Ruse surveys some of this history here.[19] However, Ruse is hypersensitive about giving the impression that evolution is entirely religious, so he distinguishes Darwin's legacy as twofold: both a real scientific theory and an ideological 'secular religion' (p. 207). He suggests that the ideology is a 'social construction' imposed upon the science (pp. 203, 207–210). So, Ruse urges, do not conflate the one with the other. If a false ideology is promoted on the basis of evolution, this does not prove that the whole 'scientific' scheme of evolution is false. True enough, but the flipside—which Ruse misses—is that the ideological and philosophical commitments of the evolutionists shape the science. The research programs, and the options the scientists consider, are influenced by their pretheoretical axioms or presuppositions. Ruse avoids this issue; he knows his Darwinian compatriots will already blame him for conceding too much (p. 210).[20]

Fakes and frauds?

Creationists and Intelligent Design (ID) advocates have been persistently complaining of distortions in textbooks, and Ruse is anxious to clear up this blight on evolution's reputation. First, Ruse gives a lecture on peer review and the ethics of scientists, hoping that critics will not be so quick to call everything a 'fraud'.[21] Then, he moves to discuss three of the best-known 'dishonest science' cases.

First, there are Haeckel's pictures of embryos. Ruse notes that Haeckel's pictures were inaccurate, but reassures us that persistent use of the pictures was due to a lack of research into the illustrations by the textbook authors, not deliberate fraud.

Next, Ruse turns to Piltdown man. Much of this discussion is rather unnecessary, I think, because critics of Darwinism do not use this as an argument against evolution per se. Rather, it is properly used as an example of uncritical acceptance of 'evidence' for the Darwinian paradigm, by those who should have known better. And in this judgement, Ruse seems to concur: 'it fit precisely what most people were after … and there are none so blind as those determined to see' (p. 227). (Illustration 2 next to above paragraph if possible)

Finally, there are the peppered moths, which were glued to the trees on which they were photographed. The experiments themselves may not necessarily have been fraudulent science; they were just more limited in scope (simply, do birds eat moths?) than most people know. And therein lies the problem: 'What is unfortunate, to the point of being fraudulent,

Photo from <Wikipedia.org>

The discovery of Piltdown Man in 1912, which developedinto one of the most embarrassing affairs in the history of science, was celebrated at the time (as in this 1915 painting). Ruse attempts to save face for Darwinism as he examines this famous fraud.

is using the pictures, particularly as pedagogic aids, without some qualification explaining the artificiality of the situation' (p. 233). Whether or not the original experiments were properly conducted is a matter still under some debate,[22] but we can at least agree on the status of the textbook image as highly irresponsible.[23]

Philosophy

Ruse wants to 'defend Darwinism from false (or misguided) friends as well as from real enemies—and worst of all, from the indifferent' (p. 237), and delves into what he regards as misguided philosophical use of evolution. He tosses aside traditional evolutionary ethics for committing the is-ought fallacy. Also out is a traditional form of evolutionary epistemology (theory of knowledge), which sees knowledge as growing in an evolutionary process.

In the place of these flawed systems, Ruse proposes others, which he believes will be on sounder philosophical ground, while finding their foundations in evolution. Thus we have 'Darwinian epistemology', knowledge grounded in its adaptive usefulness, and evolutionary ethics, where ethical conduct is an adaptation for surviving as social animals.

But what if evolutionary causes do not result in proper knowledge? Leading philosopher Alvin Plantinga has argued that if naturalistic evolution is true, we have no reason to trust our mental faculties to provide us with genuine knowledge.[24] Survival is the goal, and a functional brain will only come about (or stay around) if its benefits for survival outweigh the cost of maintaining it. This argument has long bothered Ruse, and in response, he contends that selection would favour minds that accurately represent reality. How does he know this? He must assume, *my brain does correspond to reality, so I understand selection enough to know it would favour a brain that corresponds to reality*. But this is inherently circular. It seems that there may be no legitimate way out of this quandary, except to hold either

a) I will act with what I seem to know, regardless that it may be all brain chemistry;[25] or
b) The naturalistic premise is false, and we have grounds (such as creation by a rational God) to believe our thoughts are generally trustworthy.

Conflict with Christianity?

The final issue on the minds of most concerned with Darwinism is whether, or to what extent, Darwinism is incompatible with religious belief. In his last chapter,[26] Ruse focuses on Christianity ('choosing this religion because it was that from which Darwinism emerged and against which it defined itself', p. 276). Ruse argues that you can be a Darwinian and a Christian, but notes that it does raise interesting problems.

Obviously, 'if your version of Christianity' takes Genesis as actual history, then 'you cannot be a Darwinian' (p. 277). So, the question moves to whether taking Genesis as history is required by a 'robust' Christianity and an accurate reading of Scripture. Ruse suggests that all we have to do is 'delve into the more profound meaning' of Genesis: 'God, humans, and their relationship. … About fallen nature and … redemption' (p. 277). But with this total disregard for exegesis, this boils down to feeling our way around for what remnants of Genesis we can salvage from naturalism. Once Genesis is read this way, what happens to the rest of Scripture?

Ruse does not force us to guess for long, for (predictably and consistently) he is troubled by all miracles. He calls for a total reinterpretation, including the resurrection of Christ:

> 'The real miracle was not some reversal of life-death processes, but that, on the third day, the disciples who were downcast … suddenly felt a great lift and that life was meaningful for them … Jesus had left a message and example that they wanted to promulgate. If some psychologist explains this in terms of mass hysteria … so be it. There will always be a natural explanation. This leaves the meaning of the event untouched' (p. 280).

Hardly: the resurrection is either a historical event[27] or Christianity is nothing,[28] and the only thing that is shocking is that Ruse the philosopher does not see this. Far from allaying the concerns of Christians, Ruse has confirmed them. From denying the historicity of Genesis, there is no logical stopping point to save the meaning of Christianity.

Hopefully at this point, few Christians are taking Ruse-as-theologian too seriously, as he rushes through a few last issues. He pronounces the 'design argument' dead, and fires a few familiar criticisms at ID (the vitality of which shows that the design argument is *not* dead). And he opines on the problem of evil: if God only does what is possible, then since evolution is the only way we could have gotten here, He had to use it even though there was some pain and suffering along the way. (The biblical doctrine that death was brought about by sin receives no discussion.[29])

On that triumphant note, he wraps up the book with a final note on the wonderful explanatory power we now have in Darwinism.

Conclusion

Legend has it that English wit and author of the first English dictionary, Dr Samuel Johnson (1709–1784), told an aspiring writer, 'Your manuscript is both good and original. But the part that is good is not original, and the part that is original is not good.' My main disappointment with *Darwinism and Its Discontents* (besides believing the thesis Ruse is defending is wrong) is that the original parts are not new, and the new parts are not original. What is new are a few scattered fossil finds that are not his insights, and all of Ruse's ideas are usually condensed from his other (more detailed) writings. He does not have much in the way of new interactions with Darwinism's critics. It is a nicely written work covering many topics, but the discontents that know the issues will remain discontent.

References

1. As opposed to those who point out that Darwin wasn't the first to point out natural selection—see Grigg, R., Darwin's illegitimate brainchild: if you thought Darwin's Origin was original, think again! *Creation* **26**(2):39–41, 2004; <www.creationontheweb.com/brainchild>.
2. For example, all of these issues are discussed in recent popular books by Sarfati, J.: *Refuting Evolution*, Master Books, Green Forest, AR, 1999, and *Refuting Evolution 2*, Master Books, Green Forest, AR, 2002.
3. This is the point he made when testifying for the plaintiff in the famous 1981 case, *McLean v. Arkansas*, 529 F. Supp. 1255, 1267 (1982). See also Ruse's recounting, Prologue and Pro Judice; in: Ruse, M. (Ed.), *But Is It Science? The Philosophical Question in the Creation-Evolution Controversy*, Prometheus, Buffalo, NY, pp. 13–35 and 356–362 (respectively), 1988. See also the criticism of Ruse by other anticreationist philosophers: Laudan, L., Science at the bar—causes for concern, and Quinn, P.L., The philosopher of science as expert witness; in: Ruse, M. (Ed.), *But Is It Science?* pp. 351–355 and 367–385 (respectively).
4. See Wieland, C., Variation, information and the created kind, *Journal of Creation* **5**(1):42–47, 1991; Sarfati, J., *Refuting Compromise*, Master Books, Green Forest, AR, pp. 230–234, 2004; Scherer, S., Basic types of life; in: Dembski, W. (Ed.), *Mere Creation: Science, Faith, and Intelligent Design*, InterVarsity Press, Downers Grove, IL, 1998.
5. Ashton, J. (Ed.), *In Six Days: Why 50 [Ph.D.] scientists choose to believe in creation,* Master Books, Green Forest, AR, 2001.
6. This issue was prominently raised by Phillip Johnson in several popular books: see *Darwin on Trial*, 2nd ed., InterVarsity, Downers Grove, IL, chapter 9, 1993, and *Reason in the Balance*, InterVarsity, Downers Grove, IL, 1995. Again, it is surprising that Ruse displays such total disregard of the critics.
7. See Bergman, J., Condemnation of terms such as 'purpose' and 'design,' *Creation Matters* **11**(4):1–4, 2006; Williams, A., Explaining design away: A review of *Darwin and Design* by Michael Ruse, *Journal of Creation* **18**(3):31–34, 2004; Allen, C., Teleological Notions in Biology, The Stanford Encyclopedia of Philosophy*, Summer 2004 Edition*, Zalta, E.N. (Ed.), <plato.stanford.edu/archives/sum2004/entries/teleology-biology/>, 20 November 2006.
8. Sarfati, *Refuting Evolution*, ref. 2, chapter 9.
9. See Williams, ref. 7.
10. Sarfati, J., Exposing evolution's icon: interview with Dr Felix Konotey-Ahulu, *Creation* **29**(1):16–9, 2006.
11. E.g. for refutation of the common sceptical canard that the eye is wired wrongly, see this article by an experienced ophthalmologist, Gurney, P., Is our 'inverted' retina really 'bad design'? *Journal of Creation* **13**(1):37–44, 1999; <www.creationontheweb.com/retina>.
12. This argument was notably made in the recent review article: Meyer, S., The origin of biological information and the higher taxonomic categories, *Proceedings of the Biological Society of Washington* **117**(2):213–239, 2004.
13. See for example Müller, G.B. and Newman, S.A., Origination of organismal form; in: Müller, G.B. and Newman, S.A. (Eds.), *Origination of Organismal Form*, MIT Press, Cambridge, MA, pp. 3–8, 2003. See also discussion in Meyer, ref. 12.
14. Were evolution limited to everything but humans, there would still be theological problems. See Sarfati, J., *Refuting Compromise*, Master Books, Green Forest, AR, 2004.
15. See generally Lubenow, M.L., *Bones of Contention*, Baker, Grand Rapids, MI, 1992. On the recent 'hobbit' find, see the detailed critique and reinterpretation of Line, P., The Hobbit: Precious fossil or poisoned chalice? 22 June 2006, <www.creationontheweb.com/content/view/4386/>, and Line, P., The mysterious hobbit, *Journal of Creation* **20**(3): 17–24, 2006. See also Wise, K., The Flores skeleton and human baraminology, Occasional Papers of the BSG **6**:1–13, 2005.
16. See Sarfati, *Refuting Evolution 2*, ref. 2, chapter 12
17. See the critiques of evolutionary theories of consciousness and mind: Thompson, B. and Harrub, B., Consciousness: the king of evolutionary problems, *CRSQ* **41**(2):113–130, 2004; Thompson, B. and Harrub, B., The origin of the brain and mind, *CRSQ* **41**(1):28–45, 2004; Thompson, B. and Harrub, B., Mind, materialism, and consciousness, *CRSQ* **41**(1):46–59, 2004.
18. Ham, K., Wieland, C., and Batten, D., *One Blood: The Biblical Answer to Racism*, Master Books, Green Forest, AR, 1999
19. This material was mostly condensed from Ruse's earlier book, *The Evolution-Creation Controversy*, Harvard University Press, Cambridge, MA, 2005; see review, Weinberger, L., Evolution as eschatology, *Journal of Creation* **20**(1):31–33, 2006.
20. Ruse suffered some bashing from fellow evolutionists when he commented on evolution-as-religion at the 1993 Annual Meeting of the American Association for the Advancement of Science. See Woodward, T., *Doubts About Darwin: A History of Intelligent Design*, Baker, Grand Rapids, MI, pp. 146–148, 2003. See also the transcript of his comments, <www.leaderu.com/orgs/arn/orpages/or151/mr93tran.htm>, 22 November 2006.
21. CMI has also cautioned against careless accusations of fraud: Sarfati, J., *Archaeopteryx (unlike Archaeoraptor)* is not a hoax, 24 March 2000, <www.creationontheweb.com/content/view/3653/>. Also see Sarfati, J., Moving forward: Arguments we think creationists shouldn't use*, Creation* **24**(2):20–24, 2002; cf. <www.creationontheweb.com/dontuse>.
22. Wieland, C., The moth files: an update on the peppered moth fiasco, *Creation* **25**(1):14–15, 2002, <www.creationontheweb.com/peppered>.
23. It should be noted that even at its very best, the peppered moth experiment was never troubling for creationists; it would simply be an example of normal natural selection. It is the way which such a study is used or abused to promote the entire molecules-to-man evolutionary scenario that is troubling.
24. Plantinga, A., *Warrant and Proper Function*, Oxford University Press, New York, ch. 12, 1993.
25. See Lemos, J., Theism, evolutionary epistemology, and two theories of truth, *Zygon* **37**(4):789–801, 2002.
26. The chapter is a condensed form of Ruse, M., *Can a Darwinian Be a Christian? The Relationship Between Science and Religion*, Cambridge University Press, Cambridge, MA, 2001. See review: Weinberger, L., Preaching to his own choir, *Journal of Creation* **19**(2):42–45, 2005.
27. Ruse does not interact with any of the arguments for the historicity of the resurrection. Significant arguments are covered in a recent debate: Craig, W.L. and Ehrman, B.D., Is there historical evidence for the resurrection of Jesus? transcript, College of the Holy Cross, Worcester, MA, 28 March 2006, <www.holycross.edu/departments/crec/website/resurrection-debate-transcript.pdf>. See also Craig, W.L., The bodily resurrection of Jesus, in R.T. France and D. Wenham, (Eds.), *Gospel Perspectives I*, JSOT Press, Sheffield, England, pp. 47–74, 1980, online at <www.leaderu.com/offices/billcraig/docs/bodily.html>.