RUSE'S *DARWIN AND DESIGN*: DOES IT GO FAR ENOUGH?

by Michael Cavanaugh

Abstract. Michael Ruse's forthcoming book gives an enjoyable history of teleology in biology, philosophy, and theology. It argues that concepts of cause, final cause, purpose, teleology, function, design, adaptation, contrivance, progress, ends, and value have all been telescoped by most writers in those three disciplines but that these concepts (and especially the concept of design) are nonetheless valid, provided only that we recognize their metaphorical nature. I agree with this basic argument, and Ruse's critiques and historical summaries of these concepts are both useful and delightful. However, I also explore one major and three minor reservations. The minor reservations are that Ruse overdoes the allegation of telescoping, does not adequately explore ways to express teleology more accurately, and erroneously denies the existence of biology-based theologians who make the same point he is making. The major reservation is that, despite all the groundwork he lays, Ruse comes to a conclusion other than the one clearly suggested by his first fourteen chapters. If he followed the evolutionary story just a bit further, to include the evolution of the human brain, he would be in a position to articulate a theologically sophisticated understanding of teleology and avoid an ending that is uncharacteristically tame.

Keywords: anthropic principle; design; ends; final cause; intelligent design; Gordon Kaufman; metaphorical accuracy; progress; Michael Ruse; teleology; teleonomy.

Michael Ruse's new book gives a great overview of one important philosophical issue, namely, teleology, showing how major figures in both biology and theology/philosophy dealt with teleology and contributed to our

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present attitudes toward it. Ruse is really good at explaining the history of science and the often-unstated philosophy that underpins it, and all who are interested in the science-religion interface will particularly profit from his telling of the story of teleology. To use a common but useful metaphor, I felt as though I was listening to a superbly well-informed sports commentator dissecting the entire history of a particular issue within a sport and preparing me for his argument as to where that issue stands now and where it should go from here. In more sophisticated terms, it was as if *teleology* was being used as a heuristic or hat rack on which to hang a survey of the history of the science-religion interaction.

That was fun, but what really made the book for me was not this history. It was rather Ruse's take on contemporary figures who sometimes frustrate me, especially theologians and biologists speaking as theologians. I give high praise for the way Ruse deals with Michael Behe and William Dembski (the leaders of the current reincarnation of intelligent-design theory), Wolfhart Pannenberg, Pope John Paul II, Langdon Gilkey, and even Stephen Jay Gould. I also like his take on a couple of noncontemporary but still fairly recent theologians, Karl Barth and Pierre Teilhard de Chardin. Once one accepts Ruse's conclusion that design is a valid metaphor (and I was completely persuaded by his argument that this approach is the correct one), then many of the claims made by these people either fall by the wayside or else are easily modified into something that makes more sense.

I also like Ruse's criticism of most physics-based theologies, because I happen to agree with him. Believing in a God carved out of the nuances of the earliest moments of the Big Bang, resulting in the so-called anthropic principle, just does not work for me. His comments on John Polkinghorne and Paul Davies also fall on open ears with me. Any believable theological concept has to find a home in living interactions and engage the challenges posed by evolutionary biology.

One additional virtue of the book should be mentioned, because it is largely why it is such a delightful read. I really like the way Ruse sets up a problem, answers it, shows what is wrong with the answer, reveals a new and better answer, shows what is wrong with *it*, and so on until he reaches a satisfactory conclusion. For this and the other reasons already given, you will benefit greatly from reading both the history and the analysis he presents, even if you disagree with his conclusions. You may even find yourself buying copies for one or two friends who are intrigued by the Behe/Dembski furor and need to understand the issues in more depth.

I turn now to three minor areas of discomfort and one major one. First, for about half the book I worried that Ruse was going too far in telescoping all the various terms related to his subject—terms like cause, final cause, purpose, teleology, function, design, adaptation, contrivance, progress, ends, and value.[1] I worried that he was pushing the point too far by claiming

that virtually every thinker, whether scientist or theologian, was using final-cause language, until I finally realized that his point is precisely that these terms do get used somewhat interchangeably. Ruse could help the average reader a lot by giving a short and early description of the difference between what might be called *proximate cause* and *ultimate cause,* or little-t teleology and Big-T teleology. He does make distinctions (briefly) between an internal teleology and an external teleology (chaps. 1 and 6), which seem to be getting at the same thing, though he criticizes Mayr's urging of teleonomy (chap. 9), which I consider a valiant if somewhat problematic effort to make the same distinction. In any case, I think it would help to make this distinction more clearly, even if Ruse's point is precisely that the relevant concepts frequently get unduly fused or con-fused.

My second minor complaint is one I doubt that Ruse can do much about at this stage of intellectual history, but I think it is worth thinking about for the future. As I said, I am completely persuaded of his major point that design is a metaphor in biology, pure and simple. Likewise I suspect that one could argue (indeed some grammarians do) that using *he* or *man* or other chauvinistic language is metaphorical, and that it would be very awkward to say "he or she" or "his or hers" or alternate "he" and "she." But the metaphorical nature of the old constructions wasn't enough to save them, and we had to learn to speak and write more accurately regardless of how awkward it felt at first. So I wonder if we might be entering a time when we need to figure out how to (awkwardly at first) abandon the design metaphor and head off argument-from-design proponents, so that they have less excuse for their confusion. In other words, there is nothing wrong with metaphor per se, except where it causes hurt or confusion. As a kind of thought experiment, I took a couple of Ruse's examples, that of butterfly mimicry and that of anchovy predator-escape behavior, to see whether I could write about them without using the design metaphor. It was awkward, and I won't bore you with the construction here except in a note,[2] but my point is to insist that it was possible, and once our ears got used to it I think we could do it. But perhaps that is all for another time, and it would represent great progress (if you'll pardon the term) if we could simply nail down the idea that design language is metaphorical in biology, just as Ruse says.[3]

My third minor complaint is that Ruse claims that there are *no* biology-based theologians who have embraced arguments like his. In chapter 15 of the manuscript I worked from he says, "There is today a lively and growing band of workers at the science/religion interface, moving thought forward in new and exciting ways. Unfortunately, those coming from the side of science are grounded almost exclusively in the physical sciences. There is little awareness or understanding of achievements of modern Darwinian evolutionary biology." I think this is not only false but does a

disservice both to his own argument, making it seem lonely and unsupported, and to the current level of sophistication of at least some theologians. There is no mention of Gordon Kaufman, Philip Hefner, or Loyal Rue, for example. Granted, it would perhaps require another chapter if Ruse were to give his full commentary on these people, and Kaufman and Hefner, at least, might be subject to the same criticisms in Ruse's hands that he makes against earlier theologians; for example, Kaufman's idea that we are on a good trajectory sounds more teleological than either Ruse or I might be comfortable with. However, I think all three of these theologians (and others—Willem Drees, for another example, or Karl Peters, or Jerome Stone) say things that are very compatible with Ruse's argument, and he ought to acknowledge them as allies.[4]

Now for my major reservation. I want Ruse to keep the book exactly as it is, save for the minor issues just discussed, all the way up to the last part of the penultimate chapter 15, and then I want him to change the ending. He could do this without changing any of the foreshadowing or ground laying he did from chapter 1 through most of chapter 15.

The reason is that Ruse, after demolishing a lot of nonsense and burnishing the dross off otherwise sensible biological and theological proposals, including a good though brief critique of Gould's "separate but equal Magisteria," ends with (in my opinion) a quite sudden version of the same thing. Yes, he says, there might be no proof of God in biology, but neither is there anything that disproves God. Believers can go on having whatever faith they choose, especially if they come to their conclusions on the basis of an appreciation of beauty.

I think he can do better than that. I think that if Ruse would follow his evolutionary story just a little further, and include the evolution of the human brain, he would see a different kind of purpose and meaning than the metaphorical kind he properly identifies as residing in more basic biology. Granted, he will *not* be able to claim, on the basis of all he has said before, that this human purpose is in any sense absolute or ultimate or final, and certainly not that it is divinely designed; and of course he would have to admit, indeed certify, that it is fraught with evil. He would have to describe it as teleology with a small *t*, as proximate teleology that presumably will not survive our species, as a contingent and context-laden set of purposes and values. That should set him up for a truly modern affirmation of religion, which reaffirms many of the historic social aspects of religion (though by no means all of them), without requiring a reaffirmation of the cosmological conclusions of traditional religion or of religion's tendency to embrace Teleology with a capital *T*. To my mind that would be a much stronger conclusion than the rather tame conclusion he comes to, and a more accurate one as well, in the sense of being informed by science, especially by Darwinian evolutionary psychology, and also by sophisticated theology. Such an ending would recognize the evolution of values, includ-

ing especially human values (à la George Pugh's fine book *The Biological Origin of Human Values* [1977]), and it would tie back to Plato's insight (which Ruse cites with approval in chapter 1) that the real key to teleology is value.

I look forward to the widespread acceptance of this book once it is published and to the ongoing dialogue in which it participates.

Notes

1. Some examples of this telescoping (most of which, it must be acknowledged, Ruse employs quite consciously, to show that some other writer is doing the telescoping) are: (1) teleology and final cause (chap. 3); adaptation and final cause (chap. 3, in discussing Kant); teleology and ultimate purpose (chap. 3, in the discussion of Cuvier); final cause with end, purpose, and design (chap. 4, quoting Whewell); design, adaptation, function, and purpose (chap. 6, discussing Darwin); design, contrivance, and adaptation (chap. 6); teleology with final cause, design, and function (chap. 7); progressivism and teleology (chap. 8); design and intentionality and functioning (chap. 8, in discussing Ford); end-directed adaptation (chap. 9, discussing Fisher); adaptation and the "design-like" nature of organisms (chap. 11, discussing Williams); and function and teleology (chap. 12).

2. I would rewrite the mimicry paragraph cited in chapter 8 like this: "An animal that had mutations that made it inedible or dangerous survived, provided it also had mutations that gave it stark or recognizable colors; similar animals also survived that had mutations that made them look like the animals that were inedible or dangerous." I would write the anchovy predator-escape paragraph in chapter 13 like this: "The anchovy does the following actions. . . . It does them because mutations in the past allowed its ancestors to escape predators and thereby to beget our subject with its innate escape behaviors intact." Finally, in chapter 15, I would use words like "makeup or organization" or "operational parameters" instead of "purpose" or "function."

3. Incidentally, I fully understand the argument that *all* language is metaphorical, and in that sense we will not of course be able to remove metaphor from this discussion or any other. But my *he/she* example is meant to claim that some metaphors are more directly and accurately related to their objects than others are, and thus my claim should be understood to mean that we can talk about the dynamics of biological evolution without the broad-stroke metaphor of design, substituting more direct and accurate metaphors such as those the savvy reader will discover in my note 2 examples.

4. If I had to choose which theologian Ruse should mention as being very compatible with his argument, it would be Gordon Kaufman, recently retired Edward Mallinckrodt Jr. Professor of Divinity at Harvard Divinity School. In particular his book *In Face of Mystery* (1993) goes a long way toward updating his earlier classic, *The Theological Imagination* (1981), by overtly placing his concepts on evolutionary piers. I would also commend Jerome Stone's *The Minimalist Vision of Transcendence* (1992) or my own modest effort, *Biotheology: A New Synthesis of Science and Religion* (1996), both of which overtly attempt to establish the very grounding Ruse calls for.

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