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GODS AND DARWINISTS

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A review of

DARWINISM AND THE DIVINE: EVOLUTIONARY THOUGHT AND NATURAL THEOLOGY.

The 2009 Hulsean Lectures, University of Cambridge.

By Alister E. McGrath. Hoboken (New Jersey): Wiley-Blackwell. \$89.95 (hardcover); \$34.95 (paper). xv + 298 p.; ill.; index. ISBN: 978-1-4443-3343-5 (hc); 978-1-4443-3344-2 (pb). 2011.

DARWIN'S PIOUS IDEA: WHY THE ULTRA-DARWINISTS AND CREATIONISTS BOTH GET IT WRONG.

By Conor Cunningham. Grand Rapids (Michigan): William B. Eerdmans Publishing Company. \$34.99. xx + 543 p.; ill.; index. ISBN: 978-0-8028-4838-3. 2010.

One of the frustrations accompanying any attempt to explore the relationship between Christian theology and evolutionary thought is that the debate is often deeply polarized, betraying a fundamental disinclination to engage in critical reflection and serious listening (McGrath 2011:217).

We live in an age fraught with polarization, and one of the worst manifestations of this is the relationship of religion to science. For biologists, the evolution-versus-creation debate has been a perennial irritant, from the first discussions of Darwin's *On the Origin of Species*. More recently, this debate intensified with fundamentalist creationists and proponents of "Intelligent Design" politicizing the

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curriculum of American high school science teaching. A counterattack has now been launched in the form of the “New Atheism” of Richard Dawkins (2006), Daniel Dennett (2006), Sam Harris (2004), and Christopher Hitchens (2007). And part of the New Atheism has been a “Universal Darwinism,” a virtually metaphysical program offering new views of ontology, epistemology, ethics, and cultural processes.

Plunging into these heavy waters are two theological books, *Darwin's Pious Idea* by Conor Cunningham and *Darwinism and the Divine* by Alister E. McGrath, each of which fully engages the issues at hand. These volumes will be discussed here first with respect to their own merits, and second with respect to their role on the larger battlefields of contention.

With respect to substance, Cunningham and McGrath are in remarkably good alignment. Both point out the dubiousness of a positivist or materialist metaphysics for science, separately scoring similar points against Universal Darwinism. They are not shy about pulling the ontological pants of materialism down to its ankles: if there is only matter, how can there be a scientific observer? Furthermore, matter is not what it used to be. Instead of the solidity of the Newtonian matter of Darwin's day, modern physics supplies the mysteries of the Copenhagen interpretation of quantum mechanics, in which experimental measurement is supposed to influence physical events. “Why should we continue to hold on to an erroneous version of physics, one that precludes consciousness, when orthodox quantum theory depends on the existence and efficacy of the mind?” (Cunningham 2010:330). And “measurement does not merely ‘reveal’ the measured property, but brings it into being” (McGrath 2011:37). In this scientific milieu, the straightforward materialism of a Dawkins seems like quaint Victoriana.

Cunningham supplies an unremitting attack on the scientific and philosophical views of Dawkins and his ilk in the course of his first four chapters. The level of scientific sophistication on display is remarkable for a theologian; his reading and his ruminations have been extensive, more than sufficient to provide a devastating critique of the narrative stories and metaphors of Dawkins not just with respect to religion, but also with respect to evolutionary

biology itself. However, in fairness to both Dawkins and the field of evolutionary biology, going after his views on the machinery of evolutionary genetics is somewhat like attacking an American politician's understanding of political economy. Richard Dawkins is no Richard C. Lewontin, just as Ronald Reagan was not F. A. Hayek. Indeed, when *The Selfish Gene* (Dawkins 1976) was first published, it was regarded as mere entertainment by the British evolutionary biologists I knew at the time. Nonetheless, Cunningham's demolition of Dawkins has its cautionary value for hubristic biologists who might hope to expatiate in front of the general public.

But I think that the chief merit of both of these books lies in their parallel analyses of natural theology, specifically the significance of scientific knowledge for resolving theological issues. McGrath's analysis begins with an historical presentation of the currents in British culture that culminated in William Paley's (1802) summative *Natural Theology*, appropriately enough given that the work was both a touchstone for Darwin's rhetorical strategy in his *Origin* and one of Darwin's implicit targets for criticism. Cunningham's take on natural theology is relatively less historical and more polemical, but his gist is similar. Both authors contend that: (i) the version of natural theology offered by Paley and fundamentalist theologians was based on special creation of biological species with beneficial adaptations, allowing little or no room for evolutionary change; (ii) Darwin's theory of evolution by natural selection provides a scientific explanation for adaptation that is superior to the explanations of either Paley or contemporary Christian fundamentalism; but (iii) alternative natural theologies, such as those that can be derived from the patristic writings of Augustine of Hippo and Irenaeus, can readily accommodate evolutionary biology.

It might surprise some evolutionists to learn that the Catholic theological tradition is not based on the simple certitudes of Christian fundamentalism. Indeed, the intellectual edifice of Augustine, for example, allows for an all-powerful God that makes things make themselves. In other words, Catholic theology allows the possibility of continuing or developing cre-

ation by means of an evolutionary process. This may reflect the origins of early Christian theology during the late Roman Empire, when the theologically challenging philosophical and protoscientific works of Greek and other classical scholars were still widely available. The theological sophistication of the patristic tradition is fully recovered by both Cunningham and McGrath, in marked contrast to the fulminations of American fundamentalists.

McGrath supplies a useful historical analysis that explains *why* Anglican theology developed a reliance on the kind of arguments put forward by Paley and his predecessors in England and other Protestant countries leading up to 1800. Effectively, British society during the 18th century was recovering from the turbulent era of religious conflict initiated by Henry VIII in the 16th century and suppressed after England's Glorious Revolution of 1688. Natural theology provided a somewhat healing balm for British theologians between 1688 and 1802, in that it was less dependent on revelatory spiritual experiences. McGrath also shows how theologians themselves began to abandon Paley's argument from design in the half-century after *Natural Theology*. However, there are other questions concerning the relationship between evolutionary biology and the Christian religion that are not addressed in either volume, particularly why countries such as the United States now have stridently antievolution creationist movements. Is this strong antagonism caused by the acceptance of Paley's special-creation approach to biological mechanisms by some Christians, an acceptance that then makes it impossible for them to accept the patristic tradition? Or could it be because the competition between Protestant churches for members has led these churches to favor a literal reading of Genesis? However, neither author makes the claim that they are providing a comprehensive historical analysis of the relationship between Darwinism and the Christian religion.

In any case, these books certainly put to rest the *necessity* of conflict between some evolutionists and many Christians. But neither author is an unqualified adherent of Gould's nonoverlapping magisteria (NOMA) doctrine (e.g., Gould 1999), in which science and religion are supposed to ignore each other's concerns. Both regard patristic theology as an indispens-

able foundation for our experience, knowledge, and understanding of the world. These are not diffident deists. "God, then, is the ultimate enabler of the process of healing and renewal that enables us to see things as they really are ... by sustained, detailed, extended reflection on the Christian narrative" (McGrath 2011:286). "Without God we are stuck in a dilemma of ultimate proportions" (Cunningham 2010:420), in which we cannot cogently practice science due to a lack of normative, ontological, and epistemological foundations. Do not be mistaken: these two authors are Christian theologians, not agnostics skirting queasily around issues of the existence of God. For them, the Christian God exists. Yet they evidently do not reject modern evolutionary biology. It is religious and scientific fundamentalisms which are their targets:

Dawkins will point to, say, an apparent imperfection in the biological world; the absence of 'perfection' leads him to conclude that 'God' is absent. So also with advocates of Intelligent Design, who point to a current gap in science, or the inadequacy of a mechanism to give a full account of the biological world, and conclude that a designer exists. ... Against all this, science must be understood to be an open and endless discipline, never extracting (or forcing) philosophical conclusions (Cunningham 2010:279–280).

A remark or two about style might be useful for the wary biologist. McGrath gives a considered, thoughtful, and measured presentation of the issues, with a tendency to understatement. Cunningham provides a complete contrast. His words are frequently intense, referring to creationism as "a lapse into intellectual barbarism, a complete desertion of the Christian tradition" (p. 378), pillorying "philosophical naturalists who destroy all that is natural" (p. 375), and saying that "ultra-Darwinism and eliminative materialism, etc., are despisers, for their logic belies a hatred of matter, indeed hating nature to the point of its abolition, as they propagate a homunculus fundamentalism" (p. 371). This aspect of Cunningham's style serves to keep one awake while wading through his lengthy and detailed exposi-

tions, such as a four-page paragraph that starts on page 325 and includes more than twenty quotations, one 15 lines long. But atheists, fundamentalists, and those who are less devoted to Catholic orthodoxy than Cunningham might be offended by his peppery prose.

At this point in the debate, a reasonable conclusion would be that “non-ultra” Darwinists and “nonfundamentalist” Christians can live together, as Joan Roughgarden’s (2006) *Evolution and Christian Faith* or Francisco Ayala’s (2007) *Darwin’s Gift to Science and Religion* both illustrate from the Darwinist side, complementing the books by Cunningham and McGrath from the theological side. This might seem like a vindication of Gould’s (1999) NOMA position, but I think that it is at least reasonable to suggest that the relationship between theism and evolutionary biology is not entirely settled. There are a number of issues that could be raised with respect to this unsettled relationship, but I will focus on two involving the ethics and the scientific explanation of worship, prayer, and other forms of spiritual practice.

First, there is the ethical necessity of worshipping a Creator. Consider three scenarios of creation. 1. A physicist creates a new universe in her laboratory, as in Gregory Benford’s 1998 science fiction novel, *Cosm*. Some planets in that universe then evolve life, and eventually an intelligent life form. 2. A biomedical engineer produces a new human by assembling some designer chromosomes in two pronuclei, fusing them in an ovum that is primed for development, the resultant embryo then being implanted into an appropriate incubator uterus and brought to term. The baby grows up with a fully functional intellect, however different its biology is in other respects. 3. A future Craig Venter designs and builds an entirely synthetic microbe with which to initiate life on another planet, or perhaps a moon of Jupiter, and that microbe initiates a process of evolution on that planet that eventually results in an intelligent species. In all three cases, there is a creator, and sooner or later an intelligent being is produced. Why should the intelligent life form worship its ultimate creator, ethically speaking? I raise this deontological

question, but do not have an answer for it. It seems reasonable to suggest that something more than mere creation is required to motivate worship. Although their books do not directly engage this question as I have posed it here, both Cunningham and McGrath evidently feel that it is the redemptive power of Christian faith that warrants worship and other religious practices. This may in turn account for their lack of enthusiasm for Paley’s sort of natural theology, which focuses on biological arguments for the existence of a creator.

Second, there is the scientific explanation of the universality of spiritual experience among human societies, and its ostensible absence in all other animal species. Both Cunningham and McGrath agree that religion is a human universal. It is atheism that is the cultural oddity. McGrath’s Chapter 9 supplies a brief discussion of the question of religion as an outcome of either cultural or biological evolution. There he describes the Dawkins (2006) and Dennett (2007) mimetic theory of religion as a product of “toxic memes.” As an evolutionist, I find it more plausible to think of atheism as a culturally transmitted meme, rather than religious or spiritual experience, given the ubiquity of spirituality and the historically limited distribution of hardcore atheism. However, like McGrath and many others, I am no fan of meme theory. So, for the sake of discussion, let us suppose that religion is in some sense biologically natural to the human species. McGrath usefully points out that the evolution of a universal capacity for spiritual experience does not generally invalidate religion, as a similar critique could be made of the validity of arithmetic or mathematics, which is likewise a biologically universal human capacity. But the question remains, how can evolutionists explain this odd fact of the biological evolution of spirituality in just one species?

McGrath reviews two presently common hypotheses for the biological evolution of religious practices. First, there is the hypothesis that religion is an adaptation that fosters group cohesion, possibly resulting from group selection, as argued in David Sloan Wilson’s (2002) *Darwin’s Cathedral*. Those

evolutionary biologists who are less inclined to rely on group selection as a strong selection mechanism, at least in species that show as little genetic group cohesion as humans do, will not find this argument entirely satisfactory, particularly as an evolutionary explanation for such a ubiquitous and well-developed pattern of human behavior. But many *are* fond of such group selection narratives for human evolution, and they should find this line of thinking quite congenial. Another problem with this explanatory hypothesis is that it is an example of the type of modular mental machinery favored by evolutionary psychology, where such well-defined modularity hypotheses for the human brain are highly controversial among those who study human evolution.

Second, religion could be a “spandrel” by-product of natural selection for other modular bits of cognitive machinery. A recently popular version of this hypothesis discussed by McGrath (p. 266) is Justin Barrett’s (2004) hypothesis that humans have evolved an “Agency Detection Device,” or ADD, with religion a manifestation of the erroneous working of a “Hyperactive ADD,” or HADD. There are several problems with this hypothesis. Again, it presumes that biologically evolved, highly specific, modular brain machinery underlies human behavior. Another is that other mammals should often be selected for such ADDs, so they should exhibit simpler orthologous versions of religious behavior, but are not known to do so. Finally, if specific, biologically evolved, human HADDs lead to erroneous conclusions, such as the biological sacrifices common among religious practices, why is HADD-generated behavior not strongly selected against, leaving just well-focused ADDs?

Jay Phelan and I (Rose 1998; Rose and Phelan 2009) have proposed an alternative theory for the biological evolution of the type of spiritual experiences that could pre-

dictably lead to religious behavior. This is a theory that can explain why human societies universally, but also uniquely relative to other animal species, exhibit such behavior. Our proposal is that the evolution of open-ended, creative but functional, human behavior necessitated the evolution of an executive-level suite of general brain functions that serve to unconsciously regulate and to strategically orchestrate our open-ended behavior to Darwinian ends. Such unconscious orchestration would be somewhat analogous to the well-characterized neurobiological phenomenon of blindsight, with the abrogation of such unconscious orchestration in cases of prefrontal lesions a key falsifiable corollary of our hypothesis (Rose and Moore 1993). Religious behavior would then naturally result from the conscious experience of each human leading a subjective life that is fundamentally underpinned, guided, and imbued with meaning by a powerful subjective Other.

How ever we scientifically explain the biological evolution of ubiquitous human spiritual experience, it again should be emphasized that such scientific explanation is in no sense a deontological warrant for either the criticism or the acceptance of a religious faith, anymore than explaining the biological evolution of the capacity for science would be warrant for rejecting or accepting a particular scientific hypothesis. The NOMA idea that science and religion are mutually irrelevant to each other seems a stretch, given evolutionary biology’s ample refutation of Paley’s natural theology based on special creation of a static biological realm. But there is no reason why some forms of religion and science cannot coexist, even in the brain of a single person.

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