

Michael Ruse's View of Faith and Science

with David Wisdo, "Michael Ruse on Science and Faith: Seeking Mutual Understanding" and Michael Ruse, "Making Room for Faith in an Age of Science: A Response to David Wisdo"

MAKING ROOM FOR FAITH IN AN AGE OF SCIENCE: A RESPONSE TO DAVID WISDO

by Michael Ruse

Abstract. I respond to the criticisms of David Wisdo of my position on the relationship between science and religion. I argue that although he gives a full and fair account of my position, he fails to grasp fully my use of the metaphorical basis of modern science in my argument that, because of its mechanistic commitment, there are some questions that science not only does not answer but that science does not even attempt to answer. Hence, my position stands and plays a crucial role in our understanding of the science–religion relationship.

Keywords: mechanism; metaphor; unanswered questions

BACKGROUND

After an intense Christian childhood, brought up by loving parents who were members of the Religious Society of Friends (Quakers), including years of my adolescence at a Quaker boarding school, in my early twenties I lost my faith. It would be natural to link this with the fact that I had just started on the road to a lifetime as a professional philosopher, but I do not really think this is so. Quakerism, with its emphasis on puzzling things out for oneself, if anything prepared me for philosophy. It was just simply that I no longer had faith. My God did not exist and my prayers—I confess by and large petitionary prayers rather than prayers of thanks—were simply to empty space. I describe myself as an agnostic or skeptic, but truly I am pretty atheistic about the major claims of Christianity. I must say that in many respects I am happier as a nonbeliever. Having had one headmaster in this lifetime, I have no desire for another in the next.

Yet, I think I must have kept up an interest in religion. My own nonbelief did not translate into contempt for those who continued to

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believe. As a topic, religious claims—frankly, Christian religious claims—have been a lifelong interest. I used to teach the philosophy of religion in my early years as a professor. But it was not until I was in my thirties, in the 1970s, that I really became interested in the science-religion relationship. I was then writing a history of the coming of evolution in the mid-nineteenth century—*The Darwinian Revolution: Science Red in Tooth and Claw* (1979)—and you simply cannot do that (nor would I have wanted to do that) without discussing the relationship. One thing that I learned back then, and I am sure it influences my thinking now, is that the relationship was far from one-sided, with good science beating out bad religion. There is much more to the story and even though it is certainly true that science did move on in a way that religion often did not, religion had a positive role to play in the revolution—one that persists to this day. (For a start, natural theology led to a fascination with the design-like nature of the living world, something that much occupies twenty-first century evolutionary biologists.)

What really spurred and developed my interest, however, was the rise of the modern Creationist movement, something dating from 1961 and the publication of *Genesis Flood* (1961) by bible scholar John C. Whitcomb and hydraulic engineer Henry M. Morris. By the late 1970s, Creationism (or “Creation Science” as it liked to be called) was really moving along, with highly publicized debates between its leaders (usually Morris and his associate Duane T. Gish) and willing (and usually outmatched in the department of rhetoric and debate) evolutionists. I found that my background as a historian and philosopher of science preadapted (as an evolutionist might say) me for this sort of thing, and eventually this all led to the witness stand in Little Rock, Arkansas, where along with such luminaries as the late Langdon Gilkey (noted Protestant theologian), the late Stephen Jay Gould (paleontologist and popular science writer), and the very much living Francisco J. Ayala (geneticist and recent Templeton Prize winner) I appeared for the American Civil Liberties Union in its successful attack on the constitutionality of a new law that mandated the “equal balance” teaching of Creationism alongside evolutionary biology in the publicly financed schools of the state.

I cannot pretend that I thought all that deeply about the issues, at least not at a philosophical level. For me, it was less an intellectual experience and more a moral crusade against something I regarded (and still so regard) as an insult to all of the learning I hold dear—an insult to nonbeliever and believer alike. Perhaps more to the latter, because he or she thinks we are made in the image of God and that entails a moral obligation to use our powers of sense and reason in a mature fashion and not simply to hide our heads, ostrich-like, in the arid sands of the early chapters of Genesis taken literally. I toed the official line at the trial, namely that science and religion properly understood talk of different things and hence cannot conflict—neo-orthodoxy as it is known (Gilkey [1959] was the authority here) or

what Ian Barbour (1990) calls “independence.” My job at the trial was to show that evolutionary thinking is scientific and that Creationism (even relabeled Creation Science) is not, it is religious. I put together a collection of essays on the topic, *But Is it Science? The Philosophical Question in the Creation-Evolution Debate* (1988a), and left things at that.

Actually, I did not quite leave things like that. One thing that I realized, thanks to engaging with the biblical literalists, was that I needed a philosophy of my own, that is to say a secular world view that started with my scientific commitments, in my case my Darwinian commitments. Wittgenstein argued that Darwinism has no special relevance for philosophy—What can I know? What should I do?—but that position (for all that it was very influential for many years) just seemed to me to be wildly counterintuitive. Surely it had to matter that I am the product of a long, slow process of natural selection rather than the creation of a good God on the Sixth Day? So, for the next few years I worked on articulating just such a philosophy, one that starts with the fact that our brains were shaped adaptively by natural selection for the purposes of survival and reproduction, and that this governs what we can know and what we think we should do. Like the professional that I am, I am always deeply suspicious of new philosophies and mine certainly was not, except inasmuch as I tried to get to it through Darwinian evolutionary theory—which was new and could not have been done by the people like David Hume whose philosophy I admire greatly and in whose steps I aspire to follow. Epistemologically, I ended up with a kind of coherence theory—a version of what Hilary Putnam (1981) has called “internal realism”—and ethically with a form of moral nonrealism—what John Mackie (1977) called “ethical skepticism” (skepticism about foundations not about morals). I published this as *Taking Darwin Seriously: A Naturalistic Approach to Philosophy* (1986). Recently I published a book of readings, *Philosophy after Darwin: Classic and Contemporary Readings* (2009), which in a way I see as supporting my book, giving many of the original sources that led me to where I arrived.

One thing I realized is that biology cannot do all of the heavy lifting. In both epistemology and ethics, there has to be a significant cultural component. This insight meshed with a major new project I took up in the mid 1980s, a study of the notion of progress—things getting better—as it plays out in evolutionary biology—from blobs to humans. Working on this topic took me deep into the role of metaphor in scientific thinking, and led to three books in which I expounded my results and explored the implications. These were *Monad to Man: The Concept of Progress in Evolutionary Biology* (1996); *Mystery of Mysteries: Is Evolution a Social Construction* (1999); and *Darwin and Design: Does Evolution have a Purpose?* (2003). Suffice it to say that I saw how biology, as it were, provides the skeleton of our thinking and culture puts flesh on the bones. So, for instance, in dealing with my fellows I may follow certain formal rules

of reciprocation and believe in these rules because those of my would-be ancestors who held this belief survived and reproduced and those that did not, did not. But culture makes these rules come alive, as I follow the norms particular to my culture rather than those of others.

RECONCILING SCIENCE AND RELIGION

Which brings me back to science and religion. About ten years ago, with my major historical project coming to an end, putting my head again above the parapet I realized that, even if I had gone away for a while, the controversies had not. Scientific Creationism may have faded—although the stupendous success of the Creationist Museum just south of Cincinnati shows that it did not fade that much—but now there was a new kid on the block, Intelligent Design Theory, claiming that one must appeal to a creative force to explain many “irreducibly complex” biological phenomena. People were writing some very powerful critiques of this movement and its ideas, but it became increasingly apparent that more was needed. In particular, we really needed some serious philosophical work on the science-religion relationship and how it works and why.

Many of us in the business were still accepting some version of the independence theory, but uncritically. This was shown dramatically by Stephen Jay Gould’s *Rocks of Ages* (1999), which argued that science and religion are nonoverlapping “Magisteria,” but which then took away from religion the right to make any ontological claims about the existence of God and His creative power and so forth. Part of the problem here was that many if not most people writing on science and religion—I exclude the full-time historians who were a different (and much better) matter—simply did not have the needed training in philosophy and theology. Part of the problem was that many writing on science and religion were not entirely sure that they wanted to accept modern science full bloodedly. They were not Creationists, but they had yearning about meaning (or rather “Meaning”) and like notions that seemed precluded by modern science, especially Darwinism.

I am neither modest nor very nice. I love it where you have a field that needs ploughing, and so I got first intrigued and then involved in a major way. I have spent the past ten years working on the relationship between science and religion, an effort that has led to the writing of four books: *Can a Darwinian be a Christian? The Relationship between Religion and Science* (2001); *The Evolution-Creation Struggle* (2005); *Evolution and Religion: A Dialogue* (2008); and most recently *Science and Spirituality: Making Room for Faith in the Age of Science* (2010). I should say that I continue to believe essentially in a form of neo-orthodoxy, independence in Barbour’s terms. With qualifications to be noted below, I do believe that science and religion are different areas of inquiry and commitment and that they are (and should be) separate. But now (as you will see below) I think I can offer

reasons for this stance. I am not just saying it because the ACLU's clever lawyers warned that, in the American South, the last thing one should be seen doing is criticizing religion as such. Go for independence even though you yourself do not believe a word of it.

In this context, however, I was not as much of an opportunistic hypocrite as I might have been. One thing that surprises people—to be candid it surprises me—is that although a nonbeliever I have great sympathy for middle-of-the-road Christians. Not just for folk who have little belief but who go to church for social or other reasons—they like the music for instance—but for those who really believe in God and who subscribe in a strong way to the Apostles' Creed. In part, I am sure my attitude is a function of having been raised a Quaker. It is difficult to hate Christianity after this experience. In part, I am sure my attitude is a function of the embrace I have experienced from genuine Christians in the years since the Arkansas trial. IRAS (and many weeks in the summer on Star Island) played a big role in this, and the subtitle of my new book (and the title of this piece) is intended to reflect this. I do not think being a Christian is necessarily stupid or immoral or cowardly. I feel free to criticize Christians, but equally I give them the right to criticize me.

Through no doing of my own, I think the importance of my project has grown during the decade. The forces of evangelical literalism have multiplied rather than diminished. And has been shown, particularly by the historian Ronald Numbers (2006), the ideas have spread throughout the world, and now counterparts can be found in other major religions, including Judaism and Islam. Also we have had the rise of the so-called New Atheists, hating religion and the religious with a passion. Expectedly, I have drawn the scorn both of the religious extremists—see for example the treatment of me by the journalist Ben Stein in the movie *Expelled*—and of the atheists—they contemptuously refer to people like me as “accommodationists” or (more hurtfully) as “appeasers.” A middle way showing that one can accept science—real science, not science gelded to make it less threatening—and genuine religion is needed desperately. One may not convince the fanatics at the ends, but there needs to be a large place where people can perhaps disagree on ideas but nevertheless continue to respect opponents. This is not just a theoretical matter, but as I and others have repeatedly shown and insisted, we need a balanced middle to influence opinion on religion-related questions such as abortion and gay rights and much more, even foreign policy and our attitudes to places where religiously based conflicts are riding high.

WISDO'S CRITIQUE

I think therefore that articulating a well-taken position on the science-religion relationship is a social and moral issue. It is also one that is

incredibly interesting, particularly since (I do not think) it has been done properly before. Neither of these reasons is, obviously, grounds for slipshod work or for deceit for the sake of the results. A position must be able to stand its own ground and respond to criticism. Which is just as well in my case, because “Michael Ruse on Science and Faith: Seeking Mutual Understanding” by David Wisdo basically takes me apart and argues that my whole project falls to the ground in inadequacy and paradox. The position I have articulated just does not work. Wisdo does not sketch what he thinks might be an adequate position, but it certainly is not mine.

But does his critique succeed? That is another matter and the subject of my response here. First though let me say how incredibly flattering it is to have someone go over one’s work so carefully, obviously reading it with sympathetic interest, even if the final aim is to demolish. Wisdo has looked at all of my pertinent writings and gives a careful and fair exposition. He does not try to catch me out making me say what I really do not mean—a favorite Creationist trick I am afraid—but rather expounds for the reader just what it is that I am arguing and claiming. I appreciate the attention and the respect shown for what I am trying to do.

I will not spend much time trying to spell out my thinking, both because I have done it at length myself and because Wisdo has done it more briefly also. As far as the general analysis is concerned—the analysis intended to apply to the whole of science and not just some particular part such as Darwinism—my key claim is that science is inherently metaphorical and that since the Scientific Revolution in the sixteenth and seventeenth centuries the root metaphor has been that of a machine, the mechanist approach. The world is approached and understood as if it were a human-made machine. All else follows from this. I argue (following people like Thomas Kuhn) that through metaphors one can move forward with understanding, for they help one to frame important questions. However, metaphors work by putting on blinkers—certain questions get ruled out as inadmissible or unimportant. In the case of the world as a machine, I highlight a number of questions that science does not even attempt to answer. These include: Why is there something rather than nothing? What is the foundation of morality? What is sentience? What is the meaning of it all? I do not think one necessarily has to give a positive answer to these questions. One can be a skeptic like me. I just do not know. (In the case of ethics, I would say that there is no foundation to morality.) But I do think it legitimate for the religious person to offer answers. This does not mean that one cannot critique such answers, but the critique cannot be based on science. It also means that the religious person cannot offer scientific answers but must offer religious answers. I have no trouble with that. Indeed that is the point of my argument.

There is quite a bit more fleshing out the discussion, but if necessary it can come out in the course of the discussion. Let us turn now to

Wisdo's objections to my position. He writes: "Ruse's latest argument for the independence of science and religion generates a number of problems that render it unsatisfactory for both the scientist and believer." Wisdo offers four major criticisms of my position, and I will take them in turn.

GOD OF THE GAPS

"First, despite [Ruse's] own objections to the kind of 'God of the gaps' arguments used by defenders of Intelligent Design, his own strategy for identifying those questions that are beyond the limits of science seems to raise the 'God of the gaps' problem in a new form." I take it that the "God of the gaps" objection to someone's position runs something like this. "There are lots of things about this world of ours, the natural world, that we cannot explain. Certain spontaneous cures of disease, for example. It is tempting therefore to invoke God at such points and to say that He intervened miraculously. The trouble with such a position is that not giving up in looking for a natural explanation often yields dividends. It turns out that we ourselves can bridge the gap. Hence, it is always the better policy to assume that a gap can be filled, if only the right information were there or we were brighter or whatever. There is no reason to think there was a genuine gap and that only God's direct intervention can get us over the hump." Wisdo's objection is that for all that I do not like the "God of the gaps" argument, I am caught by it myself.

What are the grounds for this conclusion? Wisdo notes properly that I think that there are areas or questions where science offers no explanations, and that it is here that religion may properly step in. (I do not think that religion has to step in—you can be a skeptic like me—but rather that it can.) In *Science and Spirituality*, in line with my comments above, I list the primordial question (why is there something rather than nothing?), ethics (what are the foundations of morality?), the mind (specifically the nature of sentience), and ultimate purposes (what is the point of it all?). Wisdo also notes properly that I am unwilling (perhaps even unable) to offer a proof that the areas I highlight are uniquely the questions unanswered by science. Hence, he concludes that at some point in the future we might find that one or more of my areas are answered by science. In which case, it turns out that now I am saying something cannot be done by science, in much the same way that a supporter of Intelligent Design Theory (the paradigmatic example of a "God of the gaps" position) says that some biological phenomenon cannot be explained naturalistically and hence must be the product of an Intervening Designer. Ruse "seems to be forced to choose the 'God of the gaps' in a new form: if what the Christian today assumes to be beyond the scope of science might turn out to be mainline science tomorrow, then today's article of faith might become the conclusion of tomorrow's 'God of the gaps' argument." Wisdo adds that

I might want to escape this conclusion by arguing that Christian beliefs are not real explanations. He does not think that this ploy works, but let me assure you and him that I do want to claim that Christian beliefs are real explanations. They are just not scientific explanations. (This is a point where I differ strongly from the late Stephen Jay Gould in his *Rocks of Ages*. He wants religion reduced to sentiments and feelings about morality. I want religion to be able to make ontological claims and to be able to offer explanations. Obviously, writing now as a nonbeliever, I do not think it follows that one must necessarily accept these explanations.)

What do I say in response to this criticism? First, it seems to me that Wisdo rather misses the elephant in the room of my discussion. The central part of my argument (that Wisdo certainly picks up) is that science is metaphorical, specifically today's science is based on the machine metaphor, and hence (what Wisdo ignores) there are certain questions that science simply cannot answer. Questions that science does not even set out to answer. The issue now is what are these questions, and I think that still (although Wisdo does not acknowledge it) I have the momentum going my way, because the answer is going to lie in the nature of machines and what they do and speak to. I did not pick my four areas (the primordial question and so forth) out of thin air. They came from our understanding of machines. The fact is that machines do not tell you where the ingredients came from. They do not speak to morality. They cannot think. And, in the modern use of the machine metaphor—God is a “retired engineer,” to quote (as I did) one of the leading historians of the Scientific Revolution (Dijksterhuis 1961)—ultimate purposes are ruled out. The machine metaphor focuses on the workings of the machine not its purpose.

So, I would say that I do have an answer to the “God of the gaps” charge. I am arguing that these are areas that science does not and cannot answer, and this is very different from areas that science does not but might well answer. Yet, and I think Wisdo has a point here, I cannot now stop the argument. On the one hand, I am reluctant to give a definitive list of areas that science cannot explain—what about free will, for example. On the other hand, I accept that some areas might well have switched from inexplicable to explained—the nature of life, for example. This does seem to lay me open to the “god of the gaps” charge, because I am agreeing that what was at one point outside the science-explanation fold might someday come within. So what do I say now?

Well first that my fuzziness (my term, not Wisdo's), if such it be, does not deny that there are still some areas not touched by science. That is the whole point of the machine metaphor. Second, I would say that the areas I have highlighted have independent arguments suggesting that they will never be taken over by science. This is a crucial part of my argument, and what separates me from a “God of the gaps” position, like that embraced by

the Catholic Church when it invokes miracles to make saints. It may well be that someone recovered after praying to Mother Teresa or John Henry Newman, and it may well be that doctors have no explanation; but I want a reason why there can in principle be no explanation or I worry that, down the road, advanced medical understanding will show the recovery as natural as my getting over a headache by taking two aspirin. (Note that Intelligent Design Theorists do offer what they take to be an independent argument, namely that some organic phenomena such as the bacterial flagellum are “irreducibly complex,” and hence cannot be explained naturally [Behe 1996]. My counter is that under examination irreducible complexity falls apart and hence we are back at “God of the gaps.”)

“Why is there something rather than nothing?” I argue (along with all serious theologians, most especially Aquinas) that this calls for an answer in terms of necessary being, “aseity” in the lingo of theology. This just simply is not something in the realm of science, for the empirical always deals with the contingently existing. The moon exists, but there is no contradiction in its not existing. The same is true of ethics. Hume was right. You cannot legitimately go from claims about matters of fact to claims about matters of obligation, from “is” to “ought.” Third, the question of sentience. I do not think science even touches it and more and more I am inclined to go with people like Brian McGinn (2000) who argue that science simply cannot and will not touch it. Our way of thinking, in space and time, cannot get around what consciousness really is. There is lots of good science about how the physical affects the mental, but why mental is another matter. And as I have suggested above, I would argue that science does not even start to speak to ultimate purposes. More than this, if one started to get into ultimate purposes, I suspect you would again get into issues about necessary being, something beyond the domain of science. In other words, I think there are good philosophical arguments why these areas are not and cannot be explained by science.

SCIENTIFIC DISAGREEMENTS?

Yet, in acknowledging the limits of science, Wisdo is right to point out that I do not just talk about the clear-cut cases like the original creator, but also about what one might call some iffy cases. I agree that once we thought that life lay beyond the possible understanding of science, but most of us today think that molecular biology does a pretty good job of explanation. I myself think that free will is now within the realm of science although I acknowledge that others would deny this. I even agree that consciousness may be a problematic case, given the range of views on the subject. So what about these iffy cases? Wisdo rather seizes on them and uses them to work backwards against all that I claim. “Second, what Ruse offers as evidence for the limits of science is better construed as evidence for deep disagreements

among scientists and as such does not support his claims about the limits of science.” Now I certainly agree that there are (or have been) major differences in the three areas I have just mentioned, and indeed I am open to the possibility that there are differences about other areas too. But notice that these are not in fact scientific differences—although science is certainly pertinent—but philosophical differences. Take sentience. Daniel Dennett (1992) and Paul Churchland (1995) and his wife Patricia (1997) on the one side and David Chalmers (1996) and Colin McGinn (2000) on the other side (about whether mind can be reduced to brain) can and probably do agree on the science of brain studies. They differ on the philosophical juice to be extracted about the nature of mind and its relationship to the physical brain. The same is true of free will and the other areas. This is a nontrivial point. The argument is not about what science has or has not done, but about what science in principle could do.

So I do agree that there are real philosophical differences with good people on opposite sides. But ultimately I would argue that this is the nature of the beast. I am offering a philosophical argument about the limits of science. I recognize that not everyone will accept my arguments. I cannot help this, but neither will I collapse and agree that my enterprise is hopeless. I think I am right. I think they are wrong. What I would say is that I have sufficient modesty to recognize that sometimes even the most convincing arguments—think of the teleological argument at the time of Paley—later are found to be flawed. (This is not a dig at Wisdo. It is rather a dig at my fellow philosophers.) The fuzziness of my position stems from my experience that philosophical solutions do move on and change. In the case here, I am sure a highly pertinent fact is the changing source of the machine metaphor itself. Think of how machines have developed from the time four hundred years ago, when the metaphor was first brought into science, to the present day—from clocks to computers. I cannot think this is irrelevant. For me, the free-will issue has been solved by the existence of machines such as Mars Rover or the chess-playing Big Blue that have the built-in ability to decide for themselves without input from their designers. (To be fair, I acknowledge my thinking was influenced by Dennett [1984] on this point.)

Not that, fuzzy or otherwise, I am really that modest. I think basically that I am right in the positions I take, which is all that a philosopher can hope for. The fact that not everyone agrees with my position is not in itself a cause for saying my position collapses. What you must do further is show that the critics are right, and that is another matter. Not just another matter, because for all I respect people like Dennett and the Churchlands, overall frankly I am a lot less than impressed by the opposition. Recently, for instance, the New Atheist Sam Harris (2010) has taken to arguing that one can breach the is/ought barrier and science can solve moral problems. I can only say that even if this is true, he has certainly not shown it. In fact,

he shows a ludicrous inadequacy when it comes to metaethics, the part of the subject that deals with foundations. The reasoning is on a par with Richard Dawkins's grasp of philosophy and theology in *The God Delusion* (2007). The Churchlands are much more serious thinkers and they need to be listened to when they claim that eventually brain science will explain consciousness. But listened to is not agreed with and until they come up with more than hopes for the future, we need not follow them.

SUBORDINATION?

Along with the suggestion (that I brushed off above) that I might separate science and religion by arguing that religion does not offer real explanations, Wisdo also suggests that we might separate science and religion by following Wittgenstein in suggesting that the two fields play different language games, in which case we would not need an argument like mine pointing to the limits of science. Perhaps so but the point is that my argument does depend on the limits of science; so, as far as I am concerned, that is that. However, then somewhat paradoxically, Wisdo switches gear in his attack on my position by suggesting that truly I do not think science sufficiently limited! Referring to science and religion, he writes: "Third, in aiming to establish their independence, Ruse subordinates religion to science. The problem is that this subordination of religion to science generates a tension between the two that Ruse leaves unresolved." Apparently I give undue license to the territorial ambitions of science, and leave religion open to rape and plunder, and subordination. I claim to be in favor of "independence"—the neo-orthodox (Barthian) position that sees science and religion as separate but equal—whereas truly I endorse science setting the terms and religion having to follow.

Why is this? This too stems apparently from what I have called my fuzziness. I leave open the possibility that areas that I think are outside the realm of science might someday be brought within. Wisdo is troubled by "Ruse's claim that the boundaries between science and religion must be constantly reassessed as well as his insistence that religious beliefs *are* subject to revision in light of the latest developments of contemporary science." He continues: "Ruse claims that although he is arguing for the independence of science and religion, this independence is qualified. By independence he does not mean 'separate but equal.' Indeed, as he suggests throughout his book and finally makes explicit on the final page, religion is *subordinate* to science."

In response, let me start with my promised more detailed account of where I stand on the science-religious boundary. Along with independence, in his rightly celebrated discussion, Ian Barbour introduced three other possible ways in which the science and religion relationship can be characterized: conflict, dialogue, and integration. Let me at once dismiss

the last-named, integration—meaning science and religion can be fused as one. Of course there have been integrationists, Teilhard de Chardin, Whitehead, and their followers like Barbour himself and the Catholic theologian John Haught. I simply do not think it works. Either you have to push the science too far or you have to push the theology too far. On the one side, Teilhard de Chardin (1955)—for whom I have much admiration (I do not accept Nobelist Peter Medawar’s [1961] savage criticisms)—simply got the science wrong. He argued that there is an evolutionary progression up from the blob up to the human and then possibly on to the Omega Point, the Christhead. Unfortunately, Darwinism shows that evolution is just not progressive in this way. On the other side, arrogant though it is to say it, I think that people like Haught (2000)—another for whom I have admiration (and at a personal level real affection)—simply get the theology wrong. He is a Whiteheadian, invoking the notion of kenosis (God deliberately emptying Himself of His powers), arguing that the Creator works alongside humans in the process of development. Wisdo notes (what I have agreed above) that I am all for the Nicene Creed. I am a very conservative nonbeliever. My nonexistent god is all-powerful and all-loving and I just do not buy into process philosophical claims that God is one of the chaps, trying along with the rest of us to get evolution (and the world generally) to desired ends. Whatever he may be, the God of Christianity is not a social worker: “No, no. I can’t tell you what to do. All I can do is help you to tell yourself what you should do.” So for these sorts of reasons, I say that the attempts at integration that I have seen are altogether too wishy-washy, both scientifically and theologically.

Conflict or warfare is another matter. Obviously there is a conflict between some of the claims made in the name of religion and basic claims made by modern science. If Darwinian evolutionary theory is true, then Young Earth Creationism must be false. The point I make in *Science and Spirituality* and elsewhere—one strongly denied by the New Atheists for whom everything is conflict—is that this is no real worry for the kind of reconciliation project in which I am engaged. The areas of religion conflicting with science are not traditional in any meaningful sense. As I show in *The Evolution-Creation Struggle* for instance, Creationism is an idiosyncratic form of American Protestantism dating from the first half of the nineteenth century. More interestingly—at least, I think it more interesting—I see a place for dialogue between science and religion. As science develops, there may be implications for claims made in the name of religion. I note this particularly in the case of ethics. If you adopt a natural law theory—and, as Wisdo rightly notes, I think this the best bet for the Christian—then you are putting your emphasis on the notion of natural. God has created what is natural and it is your obligation to do or to obey what is natural. The question is: What is “natural”? A couple of hundred years ago, it might have been acceptable to claim that homosexuality is

unnatural. Today, in the light of modern science, such a claim seems to me to be highly dubious. (I have argued this at length when wearing yet another of my hats, that of philosopher of human evolution. See my *Homosexuality: A Philosophical Inquiry* (1988b) and my *The Philosophy Human Evolution* (2011)).

Does this spell “subordination” rather than “dialogue”? I do not see that it does. I am very sympathetic to John Henry Newman’s views expressed in his great book *An Essay on the Development of Christian Doctrine* (1845), written just as he was making the move from Canterbury to Rome. There he argues that the basic dogmas of the faith are known from the beginning, and remain unchanged, but that through the generations we come to understand them in the light of new discoveries and thus more and more fully. This is precisely my position. We see that moral acts are natural. This view remains unchanged. What does change, what does become understood in the light of new discoveries and thus more and more fully, is what we should mean by “natural” in a particular case. (Although as yet I have no documentary evidence to back my hunch, I suspect that Newman’s thinking was influenced by the developmental thinking of the English anatomist Richard Owen. He argued that there is a basic archetype for a group of organisms such as the vertebrates, and that this appears or is important in some sense at the beginning of the group. Then it gets modified in various ways down through the ages. This thinking was being articulated in the early years of the 1840s and we know that Newman always had a keen appreciation of science.)

Does not this still mean that religion is subordinate to science? After all, as the science changes, then the religion must play catch up. This is true, but “subordination” is not the right word. I point out at the end of *Science and Spirituality* (2010) that for the Christian we are made in the image of God, and as noted earlier in this discussion this means—at least, this is what it meant for St Augustine—we have the powers of reason and sensation. We are expected to use these powers and as and if they reveal new truths about the physical world in which we live, so be it. This is not antireligious, but religious in the best sense of the word. If you like, it does entail development, a growth to maturity. Original religious truths must be reunderstood in the light of these new findings and theories. This is not subordination, but dialogue. The Christian should embrace science as part of God’s work. “The heavens declare the glory of God; and the firmament sheweth his handywork” (Psalm 19, 1).

What about my fuzziness? Does this not undercut what I am saying? Wisdo suggests that it does. Perhaps in the future we shall find that science takes over the essential tenets of faith in any reasonable understanding of them. Creation by God will be dropped and the same goes for eternal salvation. There is no divine beginning, there is no divine end, and the same goes for everything in between. In response, let me point out that basically

I dealt with these worries above. If my arguments about metaphors are well taken, there is always going to be some place not touched by science. And I have given reasons why I think the areas I mentioned are going to be a part of this place. I just do not see the origin of everything or the ultimate purpose of everything ever being something that will be absorbed by science. Science just does not deal with those sorts of questions. And with respect to issues where there are disputes, such as mind, I do not think that the disagreements are scientific. They are philosophical and if resolution is ever achieved it will be philosophical—although of course science might be pertinent to the resolution. My fuzziness, as I have explained, comes from the fact that experience as a professional philosopher leads me to say “never say never.” Who would have thought that the argument from design would collapse in 1859, but it did.

In any case—and here Wisdo is pushing me to think further than I have gone before—I am not sure that all of the beyond-science areas are quite the same with respect to religion. (Not that there is any reason why they should be.) Take the issue of life, which seems to have moved from the category of insoluble to the category of solved. Life is important to the Christian—“And the LORD God formed man [of] the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul” (Genesis 2, 7)—but I am not sure that it makes an awful lot of difference whether that life is a spirit force, as the vitalists supposed, or simply the workings of molecules bound by natural law, as a mechanist supposes. The same seems to be true of mind. If the reductionists are right and mind is simply molecules in motion, then does it really make a lot of difference to the Christian? Of course, if we say that God is living and God is thinking—and we do say this—then we are saying that His life force and His sentience are not as ours, since he is not physico-chemical. But surely we knew this already. Perhaps it makes us more distant from God if His mind and our minds are not the same kind of nonreductive emergents, but I am not sure that it denies basic elements of Christian faith. By the same kind of argument, we are more distant from God by being the end products of four billion years of evolution, rather than something that God literally breathed life into, but I am not sure that this denies basic elements of Christian faith. (Actually, I am quite sure it does not.)

MYSTERY

We come to the fourth and final objection to my thinking. “Finally, his [Ruse’s] support of traditional theology as a mode of religious understanding might cause concern for those who believe that certain kinds of theological reflection are at odds with scientific thinking. The worry is that the habit of accepting certain kinds of theological strategies,

such as the appeal to mystery, might lead to habits of thinking antithetical to genuine scientific inquiry.”

In fact, Wisdo starts his critique by showing certain sympathy for my thinking, noting that I have a go at a bunch of theological problems. I certainly do my best on behalf of the Christian! Wisdo does not make anything of it, but one might sense a certain condescension here—the nonbeliever moves in to show the believer how to think. This is probably true, but really as a philosopher I find the issues quite fascinating. There is the joy of a good argument, and if it upsets the New Atheists through using their ideas to my ends, then so much the better. I am really quite proud of some of my solutions. When I first got into this game, I used to think that the problem of evil was going to be the biggest problem to solve. At a personal level, I am still inclined to say that it is a show stopper, but I think that the Christian need fear nothing in science making the problem worse. Moral evil can be explained by free will, and although (as shown above) I believe that free will is now a matter of science, I do not at all deny its existence. For natural evil I give a Leibnizian solution, relying on Richard Dawkins’s (1983) claim that the only natural way to get adaptation is through natural selection, painful though it may sometimes be. God’s omnipotence does not extend to doing the logically impossible.

I do think that the nonprogressive, nondirected nature of Darwinian evolution poses a big problem for the Christian. But the appearance of humans cannot be a matter of chance. God had to be sure that they would appear. I find the Christians’ attempts to fix this problem entirely inadequate. Simon Conway-Morris (2003) argues that ecological niches channel evolution in an upwards progressive fashion, but for once I find myself sympathetic to Marxist evolutionist Richard Lewontin (2000) who argues that niches do not exist waiting to be found and occupied but are rather fashioned by organisms in the struggle to survive. Robert John Russell (2008) puts in the direction at the quantum level, “God of the gaps” by another name (or no name at all) in my opinion. I argue that a theological problem demands a theological solution and that God being all-powerful could simply go on creating universes until humans did appear. That we have appeared shows that there was at least some probability that we would appear. And God, being outside time, did not care how long this might take. “But, beloved, be not ignorant of this one thing, that one day is with the Lord as a thousand years, and a thousand years as one day” (2 Peter 3, 8). (Note that I am not arguing for multiverses on scientific grounds. I am appealing simply to God’s omnipotence.)

However, finally, I run out of steam. In the name of St. Paul and I Corinthians 13, I invoke mystery. There will always be some things that we simply cannot answer. At least, not this side of the rainbow bridge. An ending that Wisdo does not much care for. Wisdo worries that the appeal to mystery confirms that “theological reflection often appears to

be an attempt to preserve one's beliefs at all costs." He then goes on to refer to the Pragmatist C. S. Peirce that perhaps the aims of science and the aims of religion are fundamentally different—open inquiry against defend-the-belief-in-the-face-of-all-challenges—and this leads Wisdo to a rather gloomy conclusion that perhaps the science-religion reconciliation project is doomed to fail. At least, "although there is no logical contradiction or inconsistency here" between the aims of science and those of religion, "there does seem to be to be a pragmatic tension for the conduct of life and inquiry that needs to be resolved." And Wisdo offers no such resolution.

In response, note first (what Wisdo notes) that I insist that faith cannot have total license. God's omnipotence does not mean doing the logically impossible or the theologically offensive. I oppose faith claims where they go against reason, as we understand it—and obviously, where they go against reason backed by empirical findings. I am not having universal floods and I am not having square circles. Recently, some Calvinists have been arguing that the problem of evil can be solved by appeal to God's aesthetic sense (Schneider 2010). He, for whatever reason, finds it more pleasing to have pain and suffering than otherwise. I find this philosophically objectionable because I do not think God's sense of beauty or whatever negates the pain of earthquakes or floods. Theologically, I just do not buy into the argument that God's sovereignty trumps everything—He can do whatever He pleases and (to adapt the old joke about Englishmen) if God does something then it is right by definition because He is God. It is for reasons like this that I find Daniel Dennett's (1995) arguments—that doing theology is like playing tennis without a net—trivial. Invoking mystery is not welcoming contradiction.

Note second (what Wisdo does not note) that I do not pull mystery out of a hat, as it were. It is an important part of my argument that we humans are the products of natural selection, designed to get out of the jungles and up on our hind legs. That we know as much as we do is the real mystery, not that we do not know everything. As a Darwinian, I expect our knowledge abilities to run out of steam—as it seems to me that they do when it comes to things such as quantum mechanics. (Quantum mechanics is a terrific theory, but note that when it comes to contradiction-threatening questions—"Is the electron really a wave or really a particle?"—Heisenberg's Uncertainty Principle swings into action to bar such questions, thus avoiding contradictions. Better ignorance than conflict.) So mystery for me is not something *ad hoc*, brought in to avoid a problem. For me, it is built in to my Darwinian epistemology.

CONCLUSION

I realize that it is possible that others will argue in ways different from me. Let them do so. That is their right. It is not my job to offer solutions

that every serious Christian would accept. For instance, I am pretty harsh on the subject of natural theology, so while that may make me friends among the Barthians I expect enemies among the Thomists. But I do not want to end on a sour note. I very much welcome David Wisdo's critique. As I said, it is very flattering to have someone who has read one's work with such care and understanding. It certainly helps me to clarify points of my thinking. And I am sure we join together in agreeing that the science-religion relationship is something that cries out for serious philosophical and theological discussion. If between us we can move the dialogue forward, that is a good day's work.

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