

**Melville Y. Stewart, ed.**  
*Science and Religion in Dialogue* (2 vols.).  
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This book comprises 70 chapters, written by a fairly impressive looking roster of scientists and philosophers (in near-equal measure, 15:12 respectively, with just one professional theologian) and originally presented over the course of a five year long project on *Science and Religion*. This project involved an annual conference, each held at a different Chinese university. Putting these volumes together must have been an onerous task—clearly a labour of love on the editor’s part.

On the whole, the contributions are of high calibre—though there are instances of *very* weak chapters, making this something of a curate’s egg, with sloppy arguments or claims entirely unsupported by any argument whatsoever, as well as very under-researched chapters. The various contributions are—with the possible exception of Philip Clayton’s—united by a common thread: science and religion need not be bitter enemies but can *at the very least* peacefully coexist. Editor Melville Stewart and many other contributors want to go much further than mere peaceful coexistence (summed up by Steven Jay Gould in his acronym NOMA = ‘non-overlapping magisteria’). For Stewart, the book’s primary task is to ‘explore the disciplines of science and religion in dialogue, not in an unfriendly, disconnected, perhaps even warlike confrontational mode, but in constructive, congruent, perhaps even complimentary affirmation’ (1). He believes that there are deep commonalities between science and religion involving the uses of ‘paradigms’, ‘models of explanation’, and even ‘methodologies’ and ‘criteria of rationality’ (2). This is clearly tending towards OMA rather than NOMA.

Atheists will find this very hard to swallow—I suspect the book is more directed at theists, in order to convince them that science ought not to be viewed as the enemy. I certainly see nothing like the notions of paradigm, revolution, and normal science within theology. Moreover, their methodologies and criteria of rationality seem to me to be completely at odds. This book does nothing to persuade me otherwise, and I doubt any other atheist would be persuaded. However, (at the risk of sounding condescending) as a ‘window’ affording a clear view into the reasons people (at least those with academic talents) believe in the existence of God, this book offers an ideal panoramic view of the contemporary landscape.

The establishment of coexistence (and beyond, if we go along with Stewart’s line) takes place over 26 parts, each written by a single author (usually comprising 3 distinct chapters) and tackling a different aspect of the debate, from biology, to paleontology, to physics and cosmology, to complexity theory. The editor’s lengthy introductions (37 pages for Volume 1; 75 pages for Volume 2) offer extremely good summaries of this complex wealth of material. A glossary of terms appears at the end of Volume 2.

Naturally, in a review of this size I could only hope to scratch the surface of the full contents, so I propose to focus in on a few themes from chapters that I found to be of particular interest/controversy while hopefully giving enough information about the book in its entirety.

Deborah Haarsma tests various theories about cosmological origins against the Genesis story. Haarsma concludes that the Genesis story is purely theological, rather than historical or scientific. But if that is the case, I don't see how the foundations of religious belief can withstand the strain. She also, too briefly and without due attention to the literature, discusses the apparent fine-tuning of many quantities, arguing that they support the view that the universe was designed for life.

Her husband, Loren Haarsma, begins by considering the comprehensibility of the universe and the role played by natural laws. He claims that natural laws are God's means of governing the world and argues that evolutionary explanations of phenomena do not conflict with the existence of a designer, since he is able to influence the world through such processes. But this seems to amount to an unnecessary expansion: if evolutionary explanations can explain on their own, then why further postulate a God? He does at least argue that religious beliefs can, in cases where they are irrational, be modified in the light of science (and *vice versa*, though I can think of no example where this might be so).

He goes on to argue that evolutionary explanations of morality and religious belief are possible, but not complete since there must be a further grounding in revelation that is able to give moral principles an 'objective truth content' (197), seemingly acting like a 'truthmaker' for moral judgments. Firstly, I do not see why this renders evolutionary explanations incomplete, but neither do I see how such explanations are non-objective. We could imagine explaining some mathematical statement, in a complete fashion, without it making a difference to the success of the explanation whether mathematical objects really exist (in some Platonic realm for example) or whether they amount to mathematicians' intuition.

Richard Swinburne attempts to argue that the very fact of the Universe being the way it is (with stable laws and life) renders God's existence (and a Judeo-Christian God at that) more probable than not. He begins with a lucid overview of types of reasoning, including probabilistic forms, and introduces Bayes' theorem. He then argues that the God hypothesis can explain both fine-tuning and laws of nature in the sense that it makes the values of the constants and the stability of the world (and so the existence of life) more likely. Swinburne nowhere considers the vast literature on probabilistic explanations for God and also the problems with theistic explanations of fine-tuning. He briefly considers the idea of a multiverse only to dismiss as the 'height of irrationality' to invoke so much to explain the particularities of our one universe. It is more rational, he thinks, to postulate one new existent: God. This is no argument. Perhaps if there were no independent support for a multiverse, then it might be a leap to invoke it to explain the 'just so-ness' of our world. But inflationary cosmology and string theory both involve a multiverse populated with worlds characterized by different laws and constants. This alters the prior probabilities in such a way to render it certainly non-irrational. Even

without this independent support I find an explanation that says that our world is one of many, with anthropics supplying the rationale for our finding ourselves located in our world, far superior to an explanation that invokes a personal God.

Peter Dodson provides a paleontologist's perspective on the debate. Like others in this volume, he believes that evolution is part of God's creationary toolkit, offering a precise mechanism for the generation of variety. But in later chapters he points to science's inability to say much about 'matters of the heart' and suggests that those without religious inclinations (who believe that science can offer total stories) are somehow defective, since to be human is bound up with holding religious beliefs. I find his statements to this effect highly offensive (no doubt as offensive as Dawkins' remarks against theists are to them).

Plantinga addresses whether some unwarranted associations (namely that science and secularism go hand in hand) have entered the debate, leading to claims of conflict. One of the scientific secularist's chief concerns, according to Plantinga, is with removing any human elements (especially moral ones) from the fundamental description of the world. This leads to a methodological naturalism. But Plantinga insists that methodological naturalism does not imply *philosophical* naturalism, and that only the latter poses any kind of threat to the religious worldview: the former is an approach to the *practice* of science (and says nothing itself about how the world is *in reality* put together), while the latter says something about the *content* of science. This is true, as it stands, but one might certainly launch something along the lines of a no-miracles argument on the basis of practical success. That is, the fact that methodological naturalism has resulted in many advances and correct predictions might give one grounds for believing in philosophical naturalism too. Plantinga goes on to defend what is by now a common thread: evolutionary creationism—the idea that natural selection is not necessarily a blind, unguided process. But, there is no claim that it *could not be* a blind, unguided process, therefore one is left wondering why one would jump through philosophical hoops to reintroduce what is not necessary.

Don Page is a well-known cosmologist. He begins by giving some sense of the scale of reality—extending to the multiverse (an ensemble of universes differing with respect to values of constants, laws of physics, and so on)—and the place of humankind relative to this vastness. What results from Page's investigations is the view that there can be copies of humans (perhaps even individual humans) amongst this ensemble, so that one should not place too much emphasis on our *uniqueness* in the scheme of things. Rather, says Page, we should view humans as being important on their qualities instead. The debate then considers what the implications are for theology if we also involve human copies in other universes (who will also view their worlds as finely tuned for life). Page's response is to allow that the multiverse poses no conflict here and one may just expand out such features as 'God's love' and Christ's dying on the cross to cover all humans and related copies—I note that he doesn't consider whether and why Christ is instantiated in just one element of the ensemble, though that strikes me as a reasonable question to ask if one has already gone this far!

The final two parts of Volume 1 both consider the implications of the kind of research that places religious belief under the proverbial microscope. Michael Murray argues that adaptationist accounts of religion must fail since there is nothing about religion that makes it adaptive (in fact, quite the contrary). He also dismisses the idea that religious beliefs instead ‘piggyback’ on other adaptive traits (in a spandrel fashion). One such example is the notion of a ‘hyperactive agency detection device’ (HADD), which itself increases fitness by having organisms assume that phenomena are caused by agents (and so be primed for the fight or flight response, for example). Murray argues that the universality of religious belief across different spatiotemporal locations poses a problem for this view, since one would not expect to see repeated instances of the same by-product. However, I’m not sure I buy the argument. Given that we have roughly the same cognitive equipment, and have very similar experiences, it makes perfect sense that we would look for agency in the same places.

Kelly Clark begins by denying what strikes me as an essential component of rationality, namely that one should withhold belief in cases in which one has insufficient evidence—though it quickly becomes clear that he allows the notion of trust in the evidence-gathering procedures of others, so that one can acquire beliefs vicariously as it were. However, Clark has a more radical notion in mind: *reformed* epistemology, namely the possibility (advanced by Plantinga, amongst others) that our brains are ‘preloaded’ with a store of God-related beliefs (*‘sensus divinitatis’*) that fall outside the remit of ordinary beliefs gained through experience. Even rationalists, who claim that some truths (e.g., logical and mathematical ones) can be known *a priori*, would have a hard time stomaching this view! Of course, it is really just another way of talking about *faith*, and it is precisely this feature of religious belief that so disturbs most atheists (myself included). So far as I can tell (from introspection, memory, behavior and whatever other method one could care to name), I have no such preloaded beliefs. Indeed, I have the opposite impression: that there *couldn’t be such a being*. Thus, following Clark’s (496) claim that we ought to trust our cognitive faculties until they prove unreliable, I am led to the opposite conclusion to Clark. Am I, and are other atheists, *defective* in some way? Clark (509) suggests that we are merely ‘suppressing our natural belief dispositions’! Moreover, the fact that God-thoughts might arise in atheists at certain troubling moments (family deaths and so on) does not imply that there is an innate faculty, but might simply mean that strong (cultural, psychological) associations have been built up between such moments and religious beliefs. Finally, even if there is a God-faculty, it does not, of course, mean that it is reliable and can allow us to form true beliefs about God. As Murray noted, it might be that the faculty is a mental spandrel.

William Lane Craig employs his usual hobbyhorse that the universe must have had a cause since it came into being, and *ex nihilo nihil fit*. However, despite reviewing several recent cosmological models, he ignores several models, including that of Roger Penrose, according to which the universe is eternal (though cyclic). Moreover, we don’t necessarily have to accept the principle of *ex nihilo nihil fit*. Craig then suggests that the causal agent must itself be uncaused and eternal, and be a ‘personal agent’. I don’t see how he is able to help himself to this conclusion. Moreover, there are alternative uncaused, eternal entities, such as logical and mathematical truths that could function in

the role Craig has God occupying.

Paul Davies tackles the issue of fine-tuning and the related issue of the nature of the laws of physics. He exposes a physics-theology analogy, arguing that the status of laws of nature as being outside the realm of the physical places them in a role akin to God. Of course, philosophers will be quick to note that this is not the only way to understand laws! One can select regularities on the basis of their simplicity and generalizing power *à la* Lewis, for example. This aside, Davies discusses many deep, interesting philosophical issues, including the issue of a distinction between possibility and actuality. Davies' answer to these problems is to introduce the mind in a fundamental way (much as John Wheeler did in his 'participatory universe' scheme).

Dean Zimmerman deals with issues lying at the intersection of theism and the philosophy of time, specifically the notion of an open future and its compatibility with God's omniscience. He argues that open theists (viz. theists who believe that the future is open so that God does not have foreknowledge of it) ought to be presentists. He goes on to defend this position, arguing that with it one can make sense of the idea that God's creating free creatures implies that he cannot know ahead of time what they will do. In fact, I'm not convinced that follows logically. Putting this aside, Zimmerman nowhere considers the fact that there isn't any way of grounding presentism in modern physical theories, since the notion of a present is not an invariant notion (i.e. it is transformed depending upon one's frame of reference).

Alan Padgett discusses, amongst other things, God's relation to time, and outlines a view he labels 'relative timelessness'. He claims this to be based on special relativity, but I cannot for the life of me see what the connection is (beyond the word 'relative'). For one thing, Padgett assumes that the universe is a temporal entity ('time-bound'). That is placed under pressure already in special relativity, in which the block universe picture is seemingly supported. More recent work is more radical, often denying the place of time altogether in the generally relativistic world. None of this is discussed. The whole discussion struck me as immensely sloppy, in fact, with such gems as 'Nothing that is temporal can be timeless' (888). Padgett also seems to make a blunder in the line following this: 'all times cannot and do not coexist in any sense—and certainly not "timelessly"' (ibid.). But in a block universe model, or a cosmological model consisting of the four-dimensional manifold with events distributed in various relations, this is exactly what we find (at least we can interpret it as such).

Stephen Barr focuses on the design argument in physics (based on 'cosmic order') as opposed to the more recent biological arguments. He argues that the elegance (potentially) revealed in superstring theory offers more evidence for design, rather than explaining it away as an illusion. But this misses out the importance of the string landscape. The landscape contains many solutions (corresponding to universes, characterized by different parameters or 'moduli'). He considers the multiverse later, but does not really consider the potential significance for the place of a designer. It isn't clear, either, what his view is. In his final chapter he turns to the interpretation of quantum mechanics and makes some philosophically naïve statements such as 'If you are

a philosophical materialist, you really must accept the many-worlds interpretation, whether you like it or not' (939). This ignores all sorts of collapse interpretations, which Barr seems to assume are 'non-materialist'. He presents his own view, which is frankly ridiculous. It involves accepting the branching structure of many-worlds, but only allowing that minds 'travel' along one single branchline, the others being 'zombies'. Clearly, he is denying psychophysical supervenience: one can have brains that could differ by as much as one neuronal firing such that only one has a mind.

Philip Clayton's is amongst the more sensible chapters. He feels that it is hard (and always will be hard) to find common ground between people of faith and atheists (specifically *naturalists*). He urges religious folk to adopt, as a matter of course, methodological naturalism. A gulf separates the two as one probes beyond this methodological level.

Clearly 'evolutionary creationism' plays a crucial role in many of these chapters: evolution is seen as more or less beyond doubt, but is then utilized in the creation story providing a modified mechanism used by God. The logic seems to be as follows: some claims of science (S) and of religion (R) can be shown to be compatible. S seemingly can stand on its own, and yet many contributors in this book wish to state S+R. If one has independent reasons for believing R, then so be it. However, without such reasons, clearly S as a standalone claim will be preferable.

Also central is the notion of a distinction between two 'books' that are not necessarily isomorphic: the book of the *word* of God (e.g. Genesis) and the book of Nature. The Bible does not reveal scientific facts; rather the universe (and so science) reveals facts about God. Distinguishing between these 'books', and thereby distancing themselves from the hard line creationists, a new breed of creationist can emerge, seemingly able to make use of whatever bits of science they like. This is for sure an evasion of conflicts between Nature (as revealed by science) and religion (as described in Genesis), but once one has gone this far, why retain the religious component at all? What substance remains? However this might be answered, I find the liberal viewpoint that results (weak though it is) much more preferable than that of the old-fashioned creationist.

My only real criticisms of the book as a whole are 1) that the arrangement of parts could have been bundled thematically (biology, philosophy of time, physics and cosmology, etc.) to give more coherence, and 2) that it would have been preferable to have some 'nay-sayers' represented in a book that purports to be at the cutting edge of research on the debate between science and religion. The contributions themselves do not consider enough of the *cogent* negative portion of the debate. Dialogue, to my mind, does not involve everyone in agreement! It's all a bit too uniform in its stance, and I certainly missed anything like the good sense of a Hume. Remedying this would have considerably enlarged the book's audience, impact, and credibility. But, this aside, the case is well made that a dialogue between science and religion can be opened and, moreover, does not necessitate those in dialogue themselves being of a religious persuasion. This approach seems a far sight better than the recent provocative polemics of Hitchens and Dawkins, *et*

*al.* (whether or not one might agree with their basic position). Stewart's book will be hard to top as a defence in favour of more friendly debate rather than blanket dismissals. Would-be combatants against religion would do well to scrutinize the arguments and themes from this pair of volumes, rather than those of the usual Intelligent Design crowd.

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