Reviews

Kneeling at the Altar of Science: The Mistaken Path of Contemporary Religious Scientism. By Robert Bolger. Foreword by Richard Olson. Eugene, OR: Wipf and Stock, 2012. xiii+ 160 pages. Softcover $20.00.

What do we aim for in religion and science (R&S) research? A dominant line of R&S research is to align religious concepts and beliefs with scientific concepts and theory, whether to promote the possibility of integration between religion and science, or of dialogue, or to show how religion and science are in conflict with one another. Bolger discusses cases in this alignment line of research and diagnoses them with religious scientism. Although he mentions how *conflict* thinkers like Richard Dawkins are guilty as charged, Bolger reserves his in-depth analyses for prominent *integration* and *dialogue* thinkers. In a misguided attempt to legitimize religion with the help of science, researchers take concepts and the explanatory goal from the natural sciences and apply them to religious phenomena. This only leads to conceptual confusion, Bolger argues, and misrepresents both religion and science in the process. True to his own Wittgensteinian spirit and that of his late PhD supervisor, D. Z. Phillips, Bolger attempts to provide therapy by dissecting the conceptual confusions. In this vein, Bolger critiques Ian Barbour and his treatment of 'models' and 'unobservables'; William Dembski's discussion of 'intelligent design' as an 'explanatory theory' of higher 'probability' than evolutionary theory; Philip Clayton's thought on 'divine action'; and Arthur Peacocke's panentheistic use of 'in' when speaking of 'the world in God', among many others. Bolger's general charge is that researchers in these cases have "thought too much and looked too little" (p. 10) at the meaning concepts have in their scientific and religious contexts of use.

Bolger fleshes out his own position in the final chapter of the book. Simply put, it is independence: religion and science belong to very different conceptual realms. Religion is not about the facts in the world; it is a stance people take toward existence. Although sympathetic, this part of the book is less thoroughly supported with arguments than the middle chapters. Bolger occasionally seems to be guilty of the charge he held against others: he thinks a lot and looks relatively little. Surely, there are contexts in which religious concepts and beliefs are treated as propositional. In effect, Bolger develops a view of what religion can be, what it certainly is for some, and, most of all, what it in his opinion should be.

So, where does that leave religion and science research? Those who want to keep aligning religious and scientific concepts find a formidable challenge in Bolger's argumentation. Does the reinterpretation of concepts that is often necessary for alignment to be possible not obfuscate more than it clarifies? Especially when it comes to clarifying what religion is? Taking Bolger's careful critique seriously, researchers should restrict themselves to aspects of religion that truly are about propositional content; and prove that they are by looking at their use in the religious context. Alternatively, researchers would have to provide argumentation that even when concepts do not align completely, they align enough, for example, on relevant

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dimensions. However, if one accepts an independence position, as Bolger does, the alignment strand of R&S research is problematic overall. A substitute aim could be the one that Bolger set himself with this book: to show precisely in what respect religious phenomena and concepts are different from their seeming scientific counterparts. Naturally, other aims at home in the R&S field are untouched by Bolger's critique. The scientific study of religion can simply employ its scientific conceptual vocabulary and stick to its explanatory aim. Religious reflections on scientific (and technological) developments may use religious conceptual tools.

Robert Bolger's book is an absolute pleasure to read. It is much more carefully argued than its title may initially suggest. Above all, it is thought-provoking. At 150 pages, this book is a great read for anyone involved or interested in attempts at analyzing religious phenomena in scientific terms.

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Did Darwin Write the Origin Backwards? Philosophical Essays on Darwin's Theory. By Elliott Sober. Amherst, New York: Prometheus Books, 2011. 230 pages. Softcover: $21.00.

This book opens new vistas in the science and religion dialogue by awakening both sides of the aisle to the consistency and limits of materialistic naturalism. Elliott Sober is a gifted thinker and writer who has made important contributions, singly or with coauthors, to the clarification of many debates within evolutionary biology and the philosophy of science as it pertains to this field. He has a profound understanding of Darwin's writings (across editions of *Origin* and other works) and his methods of reasoning. *Did Darwin* consists of four chapter-length essays: the first holding the same title as the book; the second "Darwin and Group Selection" is followed by "Sex Ratio Theory—Darwin, Before, and After." I will focus on the fourth chapter because it seems to me to break important new ground. The book concludes with a lengthy postscript that provides a more technical exploration of several topics considered earlier in the book.

Chapter 4 "Darwin and Naturalism" is an elegant and very pointed discussion about what naturalism can and cannot claim. Specifically Sober shows that evolutionary theory, as it stands, cannot rule out supernatural activity, nor is evolutionary biology damaged by this recognition. Several quotes will give a clear sense of the nature of his argument as well as indicate the concise analyses that characterize this important book. All italicized words in what follows are italicized in the original; the ellipses are the reviewer's. Let us begin (passing over much that is very rich indeed) with the following (134):

> What I want to consider . . . is the view that God *supplements* what happens in the evolutionary process without violating any laws. An intervention, as I'll understand the term, is a cause: it can trigger an event or sustain a process. Physicians do both when they intervene in the lives of their patients. Physician intervention does not entail any breakage in the laws of nature; neither does God's.

Endnote 14 sharpens Sober's stance, lest we misunderstand (201):

> I therefore disagree with Pennock's (1999, 195) statement that 'to say that some power is supernatural is, by definition, to say that it can violate natural laws.' The ability to violate natural laws might be a defining property of an omnipotent deity, but it isn't part of the definition of a supernatural power.

Sober drives home this line of reasoning in Section 4.3 "Why evolutionary theory does not rule out an intervening God." He writes (134–35):

> Consider the thesis that there is more going on in the evolutionary process than is dreamt of in evolutionary biology . . . . If evolutionary theory were causally complete, there would be no room for this idea. However, we have no assurance that the theory covers all the facts that are causally relevant to what happens in evolution. Please note that I am not saying that there is *evidence* that such hidden variables exist; my claim is only that they are not ruled out by current theory. The case for thinking that evolutionary theory does not preclude the existence of hidden variables begins with the simple fact that the theory is probabilistic.

Later in the same section, in consideration of the fact that "mutations do not occur because they would be useful to the organism" (136), Sober carefully develops the role of probability of various mutations and states (137):

> The hypothesis that the different mutations have the same probability in different environments does not rule out the possibility that there are hidden variables; perhaps each mutation that occurs is the result of its own suite of deterministic causes. If the data does not rule out hidden variables, they also do not rule out *supernatural* hidden variables.

Sober's reflections continue to build on this theme. He goes on to ask in Section 4.4, "Should scientific theories talk only about what exists in nature?" He begins by noting that some scientists and philosophers assert that we should accept methodological naturalism because (139) "science, by definition, eschews discussion of the supernatural." He continues (139–40):

> If the point is put by saying that *natural* science asserts nothing about the *super*natural [sic], the claim sounds like it *must* be true. In fact, this definitional ploy accomplishes nothing . . . . A substantive reason is needed for thinking that methodological naturalism provides good advice for inquiry . . . . It is interesting to note, in this connection, that science does not, as a matter of fact, avoid postulating . . . a different sort of supernatural entity—numbers. Evolutionary theory entails that numbers exist, and numbers are supernatural entities . . . . Mathematical Platonism says that number and other mathematical objects exist but do not have spatiotemporal location . . . . Consider the claim that there are infinitely many prime numbers. This is a true statement, as any number theorist will tell you. But what are these things called numbers? What must they be like for this statement to be true? First, it is important not to confuse numbers and numerals; numerals are names for numbers. The statement about primes isn't about names; it's about the things those names name. The statement would still be true if there were no language users, and hence no names for the numbers. Indeed, the statement would still be true if there were no matter in the universe. This is what leads Platonists to claim that numbers are supernatural entities . . . . What has this to do with evolutionary theory? The answer is that many statements in mathematized evolutionary theory entail that numbers exist. Scientists hardly notice that their models have this implication, but such models are everywhere.

But now, Sober asks the converse question (141), namely, "Does accepting metaphysical naturalism oblige one to accept the methodological thesis?" His argument is profound and stimulating:

> At first glance, the answer seems to be *yes*, if there are no supernatural entities, a true scientific theory cannot claim that such things exist. If the goal of science is to find true theories, then scientific theories should not assert that supernatural entities exist. The problem with this argument is that science *needs* mathematics, whether or not Platonic entities exist. If numbers do not exist, then mathematics is a useful fiction; indeed, it is an *indispensable* fiction. *Scientific theories should include mathematical statements that entail that numbers exist whether or not this existence claim is correct*. . . . My claim is that science would still be capable of explaining and predicting what we observe, and doing all the wonderful things that scientists prize, even if mathematical Platonism were true. The success of the scientific enterprise does not in any way depend on its eschewing mention of *all* supernatural entities. In fact, the success of science *requires* that science postulates some supernatural entities, if mathematical Platonism is true.

These observations and others throughout the book are extremely valuable in grasping what evolutionary biology *qua* science can and cannot say. Sober's development casts no aspersions on either science or religion. It does suggest that we would not be able to tell the difference between a DNA alteration caused by a cosmic ray or by the finger of God or by the finger of God directing a cosmic ray; we simply have no ways of distinguishing (see Figure 4.1, 133).

Lest Sober be misunderstood by virtue of the quotes I chose, it is important to note that he also clearly outlines the tremendous weaknesses of creationism—the primary one being that it fails to produce hypotheses testable by data that can be gathered. The first four chapters are eminently readable by anyone willing to engage; thinking with Sober is much easier than *Thinking with Whitehead* (Isabelle Stengers, 2011, Harvard University Press). Sober's book makes important and (for this reviewer) surprising and necessary contributions to the understanding of the strengths and limits of evolutionary biology. The answer to the book's title question is at the end of the first chapter.

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The Cosmic Breath: Spirit and Nature in the Christianity-Buddhism-Science Trialogue. By Amos Yong. Philosophical Studies in Science and Religion vol. 4, edited by F. LeRon Shults. Leiden/Boston: Brill, 2012. xv + 282 pp. Hardcover $182.00, Euro 131.00.

Amos Yong, presently the J. Rodman Williams Professor of Theology at Regent University School of Divinity in Virginia, attempts to accomplish a gigantic task with this refreshingly demanding book. As a second generation evangelical Christian in the Pentecostal tradition—his parents converted from Malaysian Theravada Buddhism (ix)—he conducts a thoroughgoing dialogue between Christianity and Buddhism on the topics of science, human nature, and world perception and relates this to the religion–science dialogue, a quest pursued by his mentor Joseph A. Bracken, SJ, whose work he gratefully acknowledges (xi; 185–91). He is convinced that such an approach will "provide illumination unavailable when [the topics are] taken up on their own or even in pairs" (2). Unfortunately, Yong labels his effort with the nonword "trialogue" (also using derivatives like "trialectic" [174/177] and "trialogical" [223/224]) to indicate the "complex interactions occurring amidst a tridirectional conversation" (note 2). Speaking of "multidimensional discourse" or using a similar term would have served the cause much better. However, the "task of the book is," he explains "to follow out a trialogue among Christian theology, Buddhist philosophy, and modern science, both in order to compare and contrast the religion—science and the interreligious dialogues, and to work toward the development of a philosophy and theology of nature appropriate to the needs of the religiously plural world of the twenty-first century" (174).

The book has a clear structure. Its Preface (XI-XV) informs about the origins of the Pentecostal author's interest to probe the suitability of Spirit and Pneumatology as topics for dialogue with Buddhists and also with science, while the Introduction (1–31) provides a circumspect methodological reflection on issues involved in the science–religion discourse as well as in interreligious dialogue, and in "pneumatological epistemology" (27). Pneumatology furnishes, according to Yong, "dynamic categories for comprehending science and religion" and provides "a dialogical and intersubjective means of adjudicating multidisciplinary and multireligious claims to truth" (20). Part 1, entitled "*Pneuma*: Divine Presence and Nature in the Theology and Science Dialogue" (37–98), takes off with an account of the conversations between theologians and scientists on Spirit/spirit pointing to highly interesting convergences in Pneumatology and Field Theory by alerting to the dimensions of potentiality and relatedness, on the basis of which Yong then discusses creation and anthropology, understood as "a reconception and extension of Pannenberg's pneumatological theology of nature" (57). He succeeds in opening fascinating insights into Trinitarian theology in general and a "pneumatological theology of nature" in particular (79).

The second part, entitled "*Shunyata*: Nature and Science in Mahayana Buddhism" (99–172), discusses the same topics as the previous one—science, nature, the human—albeit this time in light of two Mahayana traditions, the Tibetan and the Japanese, notably the Kyoto School. The author chose *Shunyata* (Pali/Sanskrit meaning "emptiness") as the topic, because "both Tibetan and East Asian Buddhist understandings of the world (nature) and human beings as ultimately

emptiness (without self-substantiality) will open up surprising connections both to the cosmological and cognitive sciences, and to the pneumatological theology of nature," even though in other Mahayana traditions and throughout Theravada Buddhism" *shunyata* "is of minor import" only (100). The section, which shows that the author is well informed about the discussions within Mahayana Buddhism and the dialogues between Buddhists and Christians, comes to the conclusion that *shunyata* does indeed stimulate the Buddhist—science dialogue "and yet" does "retain its religious and soteriological significance," a great advantage for his project (172).

The goal of part three (*Pneuma* and *shunyata*: Nature, the Environment, and the Christian-Buddhist-Science Trialogue, 173–241) is "to model a method of inquiry in a pluralistic and scientific context, and to explore the fecundity of the pneumatological imagination for such task" (174), thereby also aiming at developing "a normative theological vision for Christian practice" (178). Yong wants to show that "the incommensurability . . . between Christianity and Buddhism . . . and between religion and science . . . is not so radical that communication is impossible, especially not for those open to exploring possible avenues of bridging from one tradition to the other" (210). Taking the concept of time as an example he is able to show that it is indeed possible "to chart a mediating path forward" in these dialogues and to bridge the impasse "via a pneumatological hermeneutic" (217). He emphasizes also "that religion needs to confront the legitimate issues which science raises about the place and extent of critical rationality" and asks: "Can religion with its affirmation of transcendence engage in science with its assumptions about naturalism and the causal (at least) closure of the world? What truck has Jerusalem and Kyoto with Athens and Tokyo?" (218–9)

The argument could have stopped here with the bibliography (247–75) and two indices (names/subjects; 277–82) concluding the book. However, one is taken by surprise to find an additional final chapter on "Spirit and Environment: Toward a Christian Ecological ethic 'After' Buddhism" (224–41) and an Epilogue (242–46). Though the author wants "to sketch an environmental ethic that 'puts feet on' the pneumatological imagination" by showing "how to live relationally in a pluralistic and scientific world" as "people of Christian faith" (224–25), this chapter, while still raising pertinent questions like that of theodicy and the problem of evil, is much too short and cursory to be of real value; it rather lags behind and appears to be supplemental only, while the Epilogue is a straightforward apology. With it, Yong obviously responds to a felt need—or a real pressure—to explain to fellow Pentecostals why he has undertaken such a study at all. However, the remarks in these few pages free of footnotes show that he stands his turf well. Christians should get involved in interreligious dialogue, Yong argues, to "empower more faithful witness to the living Christ that will benefit the common good" and will be at the same time "a living expression of what Christians call the Holy Spirit, even if our Buddhist interlocutors might only experience this reality as no more than an ephemeral cosmic breath" (246).

On the whole, this book is a very valuable, stimulating read benefitting everyone who likes to be intellectually challenged and pushed outside the box of conventional thinking; especially those interested in interreligious dialogue will gain a lot from it. However, Yong's study suffers from trying to achieve too

much and from too much of self-referencing (more than 60 times). Genuine scholarship is not about cultivating egos; scholarship is about pursuing truth selflessly.

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