

Reviews

Katherine Calloway
Natural Theology in the Scientific Revolution: God's Scientists

London: Pickering & Chatto, 2014. 205 pp. hb. £95. ISBN 9781848934641

Notwithstanding the work of scholars like Alister McGrath and Alvin Plantinga, natural theology has been out of fashion for some time. While it still occupies a niche in popular apologetics, most theologians have avoided it since the early twentieth century. One reason for this is the historic defeat of the design argument of William Paley at the hands of Charles Darwin. But there is another more subtle reason that Christian theologians, typified by Karl Barth, have not used the arguments of natural theology: the deity revealed by such arguments, if one is revealed at all, bears little resemblance to the God of the Bible. In other words, natural theology might be of some help against atheism, but it has no real use as evidence for revealed Christian religion. Natural theology only lasted as long as it did because of the instinctive read-across Christians made from the deity of natural theology to the Triune God in which they believed. The nineteenth-century scholar, Leslie Stephen, drew up an even more damning indictment. By contributing to the de-sacralisation of the world, he found that natural theology was one of the forces leading to the loss of the influence of the transcendent in society. Much more recent studies of secularisation, such as those of Charles Taylor and Brad Gregory, have reached similar conclusions.

The research that underpins Dr Calloway's book, based on her PhD dissertation at the University of British Columbia, looks as though it started out as an attempt to rehabilitate natural theology. She is honest enough to realise that she doesn't succeed, but it is a

tribute to the men she studies and her own engaging writing that this book is still an interesting read. She subjects five seventeenth-century works of natural theology from the quills of Henry More, Richard Baxter, John Wilkins, John Ray and Richard Bentley to a close reading. Each of these authors gets a chapter to themselves in which we learn about their individual motivations, and how each of them went about natural theology. Henry More, as we might expect from a Cambridge Platonist, aims for logically watertight arguments to convince atheists of the error of their ways. John Wilkins examines all sorts of evidence but eventually finds it all wanting, rather in spite of himself. Richard Bentley was appointed at the age of twenty-nine to deliver the first Boyle lectures and his book, *The Folly of Atheism*, was the bestselling published version of these. Still, there is no better illustration of the fall of natural theology than the fate of the Boyle lectures. As the deist Anthony Collins famously said, 'Nobody doubted the existence of the deity until the Boyle lecturers had undertaken to prove it.'

Dr Calloway's book is aimed squarely at specialists. Readers without an intimate knowledge of English Restoration theology, such as your reviewer, might occasionally find themselves losing the thread. Another difficulty is that the five authors studied, despite all being English theologians of the late-seventeenth century, have relatively little in common. For example, Richard Baxter was a puritan, while John Wilkins is usually classified as a latitudinarian. Furthermore, the authors did not have much to do with each other, although Ray is ready to acknowledge his debt to More. With the exception of Bentley, none of them have much to say about the new philosophy and what we now call the scientific revolution.

This becomes a problem for Dr Calloway as she tries to pull together the threads of her enquiries in the conclusion. She has demonstrated the holes in Leslie Stephen's simplistic account of a straight line from natural theology to deism, but she is unable to deny that his general thesis was probably accurate. She has also shown that the period she has studied was one in which natural theologians took many approaches, from More's almost medieval arguments based on logic, to Ray's pile of empirical data. But in terms of overarching themes, the impression is simply that 'it's complicated'. In wrestling with these five very different authors, Dr Calloway has not been able to pin down what natural theology in the seventeenth century achieved, or the way that its latent dangers would play out. A particular omission is the extent to which her five authors achieved their aims of refuting atheism and shoring up orthodox Christianity. Did any of their books make converts? Some of them certainly sold plenty of copies, but we are given no indication of what readers made of them.

As a granular study of one genre of theological writing in seventeenth-century England, *Natural Theology in the Scientific Revolution* is a useful contribution. General readers looking for an explanation of the achievements and flaws of natural theology may find it contains less to interest them.

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Malcolm Jeeves (ed.)
The Emergence of Personhood: A Quantum Leap?

Grand Rapids, MI, and Cambridge, UK: Eerdmans, 2015. 246 pp. pb. £19.99. ISBN 978-08028-7192-3

The question of what makes us *distinctively* human and whether this implies continuity or discontinuity with our evolutionary past and current capacities of nearest animal cousins is the key focus of this excellent volume. This far from trivial question cannot be adequately answered by recourse to one discipline alone. Accordingly, Malcolm Jeeves has assembled an impressive array of contributors from fields including evolutionary biology and psychology, social and cultural psychology, cognitive neuroscience, neurology, genetics, archaeology, anthropology, philosophy and theology to bring to bear their collective expertise and wisdom on the issue. Given the multifaceted nature of the question, and the plurality of approaches, Jeeves rightly observes that we should not expect any single, simple, or converging answer; appealing to Mikhail Bakhtin, he notes the 'polyphonic' nature of the whole (2, 222).

But this polyphony is very well played, conducted and interpreted. Contributors evince remarkable intellectual maturity and restraint in avoiding overextensions from their respective fields. There is no crude scientism here, nor disciplinary one-upmanship. Two unfounded metaphysical fideisms, against which theologian Alan Torrance warns, are also skilfully avoided: nomological monism, or the assumption that complex issues like this can be exhaustively accounted for with one set of disciplinary laws, and an unjustified appropriation of science in support of metaphysical naturalism. Nor are the theologians summarily dismissive of science, though they are highly aware of its boundaries and philosophical scope. Contributors include atheists and humanists as well as theists but all show

great respect in their truth seeking for connections with, implications of, and challenges from other disciplines as well as the explanatory power of their own. In addition, the opening and closing chapters are models of their kind. The common criticism of edited volumes that they are accidental assemblages lacking integration and summarising conclusions fails to apply here. Chapters complement each other and Jeeves sets the scene well in the introduction and provides a masterful summary and evaluation at the end.

The volume's sheer scope, however, means that few readers will have in-depth knowledge of all the areas covered but all are well introduced and unpacked. Familiar themes appear such as the role of emergence and the potential relevance of consciousness, meaning and culture, language, the self and subjectivity, but generally with fresh insights and connections. Also addressed, to a lesser extent, are how personhood might grow and develop, and how it might be compromised by pathologies such as autism and agenesis of the corpus callosum (ACC). The notion of 'becoming' a person is thus well established by the end of the volume. None of us is really (yet) a full person, at least not in the Christian theological sense.

I was highly impressed by the two theology chapters. Anthony Thistleton's scholarly review examines the doctrine of *imago Dei*, drawing on premodern, Orthodox, as well as later Protestant sources. Like Torrance, Thistleton is alert to the importance of participatory ontologies. These help make sense of the nature-culture relationship, since all creation (including all that is, all nature, all meaning, all culture) is held in being by God and thus bears to some extent the imprint of its Creator. And yet creation is not God. As part of it we are imperfect images on the way to becoming full persons-in-Trinitarian-relation. Given this, I personally find that many claims from the so-called cognitive sci-

ence of religion, whether reductive or theist-friendly and especially when abstracted from cultural psychology, risk assuming a concept of God long ago deconstructed by serious theology, and attempt to force a fit where none is needed. I share Jeeves's suspicion that 'we shall in due course expect major revisions in this field' (234), not least I would add in its metaphysical assumptions.

Altogether, then, this is a sophisticated set of readings. Those seeking special pleading for intelligent design, or simplistic critiques of neo-Darwinism, will be sorely disappointed; equally, however, Dawkinsians looking for further reductive or overextended arguments to support their fideisms will leave empty handed. Science delivers no killer blow nor pours universal acid here, since the issue of personhood, at least as captured by the *imago Dei*, turns out to be more about relationship (with each other, the world, and God) and less a question of skills, attributes or propensities. But science is treated seriously as a useful source of detailed information as to what, precisely, those multifaceted attributes of personhood are, and whence they emerge and develop, thus potentially tempering unfounded theological and philosophical speculation, or naive appeals to the God of the gaps. The science and religion debate really has come of age when academics from such a disparate set of disciplines work together in such a productive way. As Sir Colin Humphreys rightly states on the book's cover, '*The Emergence of Personhood* is the best book I know on the subject. It deserves to be widely read by scientists, theologians, and the general public'. It does indeed.

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H. Floris Cohen

The Rise of Modern Science Explained: A Comparative History

Cambridge: Cambridge University Press, 2015. 296pp. pb. £18.99. ISBN 978-1-107-54560-1

Historical explanations work on many levels, and what I realise from Professor Cohen's *The Rise of Modern Science Explained* is how his perception of the past differs from my own. Yet let me make it clear that I regard this book as a truly masterly analysis of those circumstances which occasioned 'the rise of modern science', from classical Athens to the present day. And I also, like Professor Cohen, Joseph Needham, and many others, have puzzled over why modern science is so much a child of *Western* civilisation. This circumstance becomes especially interesting when Cohen spells out in detail how the Chinese and Islamic approaches to natural knowledge made major and fundamental advances before, and independent of, the West. Yet somehow, these advances, and even 'transformations', or cross-fertilisations of ideas among cultures, somehow ran into the sand, whereas in post-1600 Europe they took fire.

In his first two chapters Professor Cohen analyses the growth of organised natural knowledge in China, Athens, Alexandria, and the medieval Islamic and Christian worlds. His second chapter concludes with how a European 'trend-watcher' in 1600 might see the way ahead on the back of what had taken place in medieval and Renaissance times.

In what is clearly a concern with decisive ideas and intellectual insights, Chapter 3 elucidates 'Three revolutionary transformations': firstly, Kepler, Galileo, and the new mathematics; secondly, Beeckmann and Descartes, representing a new 'Athens plus'; and thirdly, Bacon, Gilbert, Harvey and van Helmont, with their emphasis upon observation and experiment.

The following three of the book's six chapters examine the intellectual circumstances in Europe which both were conducive to, and, in the case of the Thirty Years War, potentially threatened, Western scientific development. From a theological perspective, Professor Cohen also suggests that Catholic Christianity's outward-looking approach perhaps inclined it to an intellectual openness, curiosity and interest in innovation which was not found elsewhere in the world. This, argues Cohen, contrasts with what happened in Islam, which, after a 'Golden Age' in the tenth and eleventh centuries AD, became increasingly inward-looking, both intellectually and spiritually.

What happened in the West, however, is that a powerful intellectual dynamic developed, as scholars and natural philosophers built upon each other's work, to bring about a major point of convergence in the Newtonian synthesis.

The concluding 'Epilogue' enquires into the ideas and circumstances that paved the way for an 'Industrial Revolution', especially in Great Britain, followed by subsequent developments leading into the near-contemporary world.

The Rise of Modern Science Explained is an elegantly-crafted piece of historical architecture, rooted in epochs, changes and great *intellectual* developments. There are no facts or events discussed in the book with which I take issue, although in many respects my own vision of humanity's scientific past differs somewhat from Professor Cohen's.

For one thing, my own perception of scientific history places less emphasis upon intellectual developments and more on the random play of unexpected, even 'messy', practical circumstances which often turned history about. One hugely significant factor behind the 'Greek experience', surely, was not just the deliberations of philosophers, but also the chance spin-offs arising from

that nation's experiences as a great 'long-haul' maritime and commercial trader, in a way that did *not* happen in China or in Islam. The exigencies of living on islands, venturing over horizons, and discovering that an eclipse seen at 9 a.m. in Spain was seen at noon in Athens, compelled one to think about *practical* geometry, astronomy, and the behaviour of the heavenly bodies in a new way: especially if you had to rely on those bodies to guide you home!

A similar set of physical circumstances, I suggest, acted as a spur to Renaissance and post-Renaissance European science. It had been the Ottoman destruction of Christian Byzantium in 1453, driving Spanish and Portuguese navigators down the Atlantic in the hope of an alliance with the legendary Christian king Prester John, that unexpectedly led to the West's transformation of global geography after 1460. These voyages, and their 'spin-offs', brought a flood tide of new natural factual data into Europe which the traditional Aristotelian and Ptolemaic philosophies simply could not handle, and which demanded a fundamental re-think of the natural world. This included discoveries in geomagnetism, meteorology, geography, botany and zoology, to name but a few.

Discoveries made in the pragmatic school of chance demanded a different investigative approach from that of scholarly cogitation. It was not for nothing that Bacon, the prophet of the experimental method, was an overt admirer of the great navigators, and in his *Novum Organum* (1620) advocated experimental investigations into heat, magnetism, meteorology, and so on. Of course, Professor Cohen discusses many of these discoveries, yet, I felt, without saying much about which circumstances in that world first aroused curiosity.

From my own perspective, I would put greater emphasis on other causal factors lying at the heart of Western

science. These would include the legacy of Roman Law, and later the British Parliamentary system, in providing a model for stable, or at least self-correcting, constitutional governments of a kind not found in the Muslim world. The potentially damaging Thirty Years' War, mentioned by Professor Cohen, was, after all, stabilised and terminated via the negotiated Peace of Westphalia of 1648. And all of this took place within the wider context of a society, and an ethical attitude towards the value of human life, that derived from the Judeo-Christian tradition.

Likewise, I would place far more emphasis on the contribution of a negotiated, stable, politically-libertarian, free-market economy to the rise of the British so-called 'Industrial Revolution' (in contrast to the absolutist, state-directed nature of French technology) than just the action of great ideas.

Indeed, I have always had qualms about historical interpretations based upon 'Revolutions', even though Professor Cohen identifies no less than six such events in the seventeenth century alone. History, in my own perception, has always been too chance-driven and ragged at the edges to be defined within neat intellectual categories, and this is one of the key reasons why it has always so fascinated me.

But not everyone thinks alike, and I fully respect Professor Cohen's perspective. And within the genre of intellectual history, his *The Rise of Modern Science Explained* is an interpretative tour de force.

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Brendan Sweetman
*Evolution, Chance and God:
Understanding the Relationship
between Evolution and Religion*

London: Bloomsbury Academic, 2015.
224 pp. pb. £15.99. ISBN 978-1-6289-
2984-3

Given the title of this book, I expected to be plunged straight into a discussion of chance and evolution from Chapter 1. But the author has chosen to provide a critical overview of evolutionary theory in the first four chapters and only in Chapters 5 and 6 do we reach the heart of the discussion: the role of chance and randomness in evolution. This is a pity because those two chapters make some valuable points, whereas Chapters 1-4 are somewhat of a distraction. Chapter 7 reflects on divine action in the evolutionary process followed by a final chapter on the challenges of evil and morality.

Philosophers of science have a tendency to view all scientific theories according to the standards used to validate the theories of physics. This can be a problem when it comes to the messy world of biology and the author's treatment of the theory of evolution in Chapters 1-4 well illustrates this point. For a while in these earlier chapters I thought that Sweetman was about to launch into a defence of Intelligent Design [ID], but later in the book he places some clear water between his perspective and that of ID proponents. His position is that because Dawkins, Coyne et al have over-egged the scope and reliability of evolution as a 'theory of everything', therefore evolution needs to be taken down a peg in order to show its weaknesses. The problem with this approach is that the theory tends not to be viewed on its own merits, but rather framed within this particular ideological perspective. This helps to explain why the author then exaggerates some of the theory's weaknesses whilst at the same time underplaying its strengths, perhaps not realising that it is a work-

ing theory that, as a matter of fact, provides the paradigm within which all biological research is currently carried out, including biomedical research.

The author's specific critiques of evolutionary theory which are less than satisfactory in their scope and accuracy include the discussion of transitional fossils, human evolution, the distinction between micro- and macro-evolution, genetics and the falsifiability-in-principle of the theory. Other broader topics are introduced as the theory is discussed, including the most inaccurate summary of the reception of Darwin's theory in the nineteenth century that this reviewer has ever read in an academic publication. The author also appears to be under the impression that the goal of biologists is to 'prove' their grand theory, perhaps not realising that biologists are happy to leave such language to mathematical physicists and others. On a more positive note, the author makes some pertinent philosophical points along the way, for example helpfully explaining the distinction between 'facts' and 'theories'. Overall the author does seem to end up as a Darwinian evolutionist, albeit a reluctant one.

Finally, halfway through the book we reach the topic of evolution, chance and determinism, and Sweetman then plays to his strengths as a philosopher, helpfully distinguishing the various nuances involved in defining terms such as 'chance' and 'random'. As the author correctly points out, such terms are often used sloppily by biologists, conflating the word 'chance' with 'human inability to predict'. The inability to predict represents an epistemic uncertainty or indeterminacy on the part of the knower, not an ontological uncertainty or indeterminacy. The author defends a Laplacian view of the universe, excluding only God's 'interventions' and human free will from the deterministic net. Not surprisingly, to maintain such a position the author suggests that quantum uncertainty represents an

inadequacy in our current attempts at measurement, a position held by David Bohm, rather than an objective truth about reality, the so-called Copenhagen interpretation maintained by Werner Heisenberg. The author could also have pointed out, though does not, that in any case quantum events per se appear to play little part in biological processes: quantum events such as radiation do indeed increase the random mutational profile of a given genome, but in any event natural selection treats genomic variations the same way irrespective of their origin. A currently standard view is that the evolutionary process represents an interplay between chance and necessity. This author will have none of that, claiming that the process is entirely deterministic, necessity all the way through – not a popular view, albeit one surprisingly difficult to dislodge.

Based on this assumption the author discusses divine action. The Laplacian deterministic universe is presented in somewhat deistic terms: God sets up the physical laws and the universe runs according to those laws in a deterministic fashion. ‘We do not invent these laws, or project them onto reality; they are already true, and we discover them.’ The author defends himself against the charge of deism by claiming that God ‘intervenes’ in the natural process, for example by doing miracles, and perhaps (the author prevaricates) in the origin of life and the creation of separate species. Curiously, given his attempt to defend Christian theology, the author adopts a Humean-style definition of miracles as ‘interruptions in the laws of physics’. In contrast to the great majority of current thinkers in the science and religion field, the author is happy to use the language of ‘intervention’. Arthur Peacocke and the notion of God’s immanence in the created order are mentioned only briefly. A greater emphasis on God’s immanence might have helped the author to avoid a narrative that does have strongly deistic overtones: ‘God created the initial

ingredients and the laws by which they behave, and...each subsequent stage of the universe emerged in a deterministic way...’. Given a deterministic universe that arises from physical laws created by God, the author is only too aware of the challenges that this position raises for the problem of evil, pointing out, surely correctly, that the presence of chance elements in the universe would not absolve God from responsibility for the evils in the world. The discussion that follows in the final chapter goes on to present some fairly standard theodicy arguments.

Overall this is a rather frustrating book due to its inaccurate treatment of biological evolution, its occasional misrepresentations of the views of others (e.g. John Polkinghorne is cited as a proponent of process theology, which he is not), its cavalier treatment of the history of the reception of Darwinism and its inadequate deistic theology. Nevertheless there is here a kernel of useful argumentation in defence of an unpopular view (which contrasts with much current theorising in the science-religion field) namely, that evolution is a deterministic process, an argument that deserves to be heard and to be discussed.

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Thomas Jay Oord
The Uncontrolling Love of God: An Open and Relational Account of Providence

Downers Grove, IL: InterVarsity Press, 2015. 229 pp. pb. \$22. ISBN 978-0-8308-4084-7

This book is concerned with theodicy, arguably the most perplexing problem for Christian belief. If God is perfectly

good and all powerful, why is there evil in the world? Classically the problem can be stated thus:

Evil exists.

A perfectly good God would want to eliminate or prevent evil.

An omnipotent God would be able to eliminate or prevent evil.

Therefore, God, if he exists, cannot be both perfectly good and all powerful.

Oord begins by distinguishing various kinds of evil. Thus some evil might be necessary for a good end. For example, a woman needs to go through labour pains in order to give birth to a child (Jn 16:21). However, Oord says, there is a great deal of what he calls 'genuine evil', gratuitous unnecessary evil that makes the world worse than it would otherwise have been (65-66). He gives several harrowing examples, citing a girl Eliana Tova suffering from a debilitating childhood disease, and the brutal rape of a woman, Zamuda, and the murder of her husband and children, in the Rwanda genocide.

Some answers that Christians give to this problem simply won't do, says Oord. Does God allow Eliana Tova and Zamuda's sufferings because they can learn and grow from them? For Oord, that would be a grotesque way for God to express his love. Even worse is the idea that God doesn't simply allow suffering but causes it. That is the view of those who believe God causes everything. And the retreat to 'mystery' is unhelpful – we really need to say something about the problem. Critically for Oord, God's even allowing evil if he is able to prevent it makes God culpable.

The first direction all this leads Oord in is to embrace libertarian free will. Determinism is false so compatibilist free will is ruled out. There is genuine chance and randomness in the world. Not only does God not determine all that happens, but also he does not fore-know what will happen. The future is

determined by free creatures who exercise genuine choice. One reason there is pain and suffering is that humans misuse their freedom to do evil rather than good. Another reason, pertaining to what philosophers call 'natural evil,' is that God has endowed the universe with processes that are free or involve chance. Surprisingly, for Oord 'we can blame simple structures, various natural processes of the world, small organisms or creation gone awry' for natural disasters, birth defects, cancers etc., and 'God is not culpable for the evil that less-complex entities cause.' (172). This is because God's love for his creatures is uncontrolling.

The major difference between Oord and other proponents of the free-will and free-process defence such as John Polkinghorne is that Oord adopts a position he calls 'essential kenosis.' It is not that God voluntarily endows the world and creatures with freedom but could have done otherwise. It is that the nature of God is *essentially* one of 'self-giving, others-empowering and uncontrolling love' (159 ff.), and that means that he *could not* do otherwise. Love precedes power in the nature of God and the nature of love is to be uncontrolling. It seems to me that, in a sense, rather than solving the problem, Oord has shifted it. God may not be responsible for allowing evils because he cannot do otherwise, but is Oord's definition of love as essentially uncontrolling totally persuasive? I have two friends, both of whom I love. But if one physically attacks the other, I will try and restrain that one from causing harm. If I am willing and able to exercise such control over another for love's sake, it seems somewhat odd to deny God that capacity.

The other problem is that Oord's position makes God look impotent. Oord denies this, and argues that God can still perform miracles. Yet, as with God's providential action generally, these involve 'creaturely co-operation' and God does not break the law-like

regularities with which he has endowed the universe. He says, without spelling out how, that 'The special divine action that makes miracles possible occurs when God provides new possibilities, forms, structures or ways of being to creatures.' (199). Moreover, 'Miracles occur when creatures, organisms or entities of various size and complexity cooperate with God's initiating and empowering love.' (200) Yet this can fail to happen. The reason God heals some people and not others is not that the former have faith and the latter do not. Faith can be just as much present but 'The organisms, body parts, organs and cells of our bodies can resist God's offer of new forms of life that involve healing.' (213). I must say I find it unconvincing that the difference is simply because the cells of the body cooperated with God in the one case and did not in the other.

Despite my caveats, I think this is an important book. Open and relational theism needs to be taken seriously. Something like it, with some of the components Oord articulates, may be necessary as at least part of any response to the problem of theodicy, although, as Oord himself acknowledges, there will always be an unresolved element of mystery even if the appeal to mystery alone is inadequate.

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Alexei V. Nesteruk

***The Sense of the Universe:
Philosophical Explication of
the Theological Commitment in
Modern Cosmology***

Minneapolis: Fortress press, 2015. 543 pp. \$59. ISBN 978-1-4514-7038-3

Russian scientists and mathematicians have often been keenly concerned about the philosophical and theological implications of their work. The author of the present volume boldly follows in this distinguished tradition. Alexei V. Nesteruk received his Ph.D. in theoretical and mathematical physics from St. Petersburg State Technical University and currently is a senior research lecturer in the Department of Mathematics at the University of Portsmouth. He studied theology at the Institute of Orthodox Christian Studies at Cambridge University, and is currently a visiting lecturer there. In addition he serves as a deacon in the Russian Orthodox Church. Such a combination of physics/mathematics and theology gives the author a unique insight into the topic of the book.

From the very start of this tome, Nesteruk takes a somewhat unusual position for a scientist or mathematician who moves to address theological concerns. Most contemporary thinkers assume the primacy of the universe and the physical laws that govern her compared to humanity, which is but a momentary blip on a tiny insignificant speck of matter. Many seek to explain our spiritual or religious lives as a consequence of our biological, evolutionary, or neurobiological natures. Richard Dawkins and Daniel Dennett immediately come to mind. Others go further and attempt to explain humanity in terms of cosmology and fundamental physics. Examples include Stephen Hawking and Roger Penrose. Nesteruk takes a fundamentally different approach: he posits human consciousness and freedom (created in the image of God) as the starting point, 'the universe

is never-accomplished mental creation' (4). He considers theories about the cosmos, which do not include the human hypostasis as fundamentally incomplete, 'cosmological theories and hypotheses can be interpreted not as prepositions about outer realities but as movements of the human heart and spirit...' (14-15). Certainly a noble thought, especially coming from a physicist.

Nesteruk seems to rally against the discovery of the ultimate 'laws of nature'. He avers that, 'cosmology represents an endless hermeneutics of humanity's interaction with the universe, thus manifesting cosmology's intrinsic connection to anthropology in a profound philosophical sense...' (252). His criticism of the absoluteness and dominance of 'hard science' in general and cosmology in particular is reminiscent of *The Structure of Scientific Revolutions* by Thomas Kuhn. Reading the book, I hoped to discover the objections of Nesteruk to contemporary thinkers (including those mentioned above), whose ideas on the present subject are diametrically opposed to his own. It certainly would be enlightening if he had taken them on directly.

Occasionally, he is guilty of setting up a 'straw man' argument.

For example, the basic geometric structure of space-time adopted in the standard cosmological model corresponds to the belief ('cosmological principle') in the special and substantial homogeneity of the universe.... For naive physical realists or empiricists, this claim for the objectivity of the universe through geometrical structure would not be convincing since this allegedly existing structure cannot be verified because of a limited observational access to space of the universe along the light-cone. (235-236).

I am quite sure than any even minimally competent cosmologist is not

so 'naive' and is quite aware that at present there is no way to demonstrate uniformity of physical laws throughout the entire universe.

The author demonstrates a sophisticated understanding of philosophy, including Pascal, Husserl and Heidegger. He seems more at home with these philosophers than with specific contemporary cosmological ideas, which he hardly discusses. Perhaps this is a consequence of the intended, more philosophically inclined, readership. His transitions from phenomenology and Husserl to Christian theology (and Orthodoxy theology in particular) are not always clear.

At times he seems preachy and dogmatic with broad, sweeping, generalisations. His rather severe criticisms of the scientific (and medical!) community with accusations of a lack of love for their subject (30), 'merciless exploitation of physical reality' (30) are unkind. 'Supported through a system of grants from economically powerful groups, it is allegedly done for the sake of human good.' (29). I wonder whom he means: the National Institute of Health (NIH) in the US; the Gates Foundation? On the other hand, he does have a wonderful passage about love ontologically preceding knowledge (36-40), which is reminiscent of 1 Corinthians 13.

Nesteruk has an unconventional (by Western standards) understanding of person, their freedom and their relationship to authority. Although he certainly asserts that the problem with cosmology is that it does not place human beings in the centre (41), some of my Protestant colleagues may have some issues with his understanding of religious (and other) authority, 'The freedom of persons from spiritual authority eliminates personhood as the issue, reducing humanity to no more than a futile consubstantiality with the material...' (41). There are many theologians with a diametrically opposed view that the freedom of persons from

spiritual authority *elevates* personhood and *enhances* humanity.

The book could have benefited from editing, both in terms of organisation and sentence structure. I found myself subconsciously translating back into Russian, which helped me understand it better. For example, the title of the book makes much more sense if translated back into Russian, specifically substituting the word 'Smysl' for 'Sense'. Perhaps, 'Meaning' or even 'Logos' may have been more appropriate.

The whole idea of the primacy of consciousness to physical laws really lends itself to the discussion of quantum mechanics, where the actual observation of phenomena (presumably for a conscious entity) is often the crucial factor. I for one would be very interested to hear his thoughts on the application of Christian phenomenology to quantum mechanics. Not to mention possible quantum effects in the human brain/mind. Clearly, Prof. Nesteruk has a lot more issues to address. I eagerly await his next opus.

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Philip Hefner, Ann Milliken Pederson, Susan Barreto
Our Bodies Are Selves

Cambridge, UK: Lutterworth Press, 2015. 218 pp. pb. \$27.00. ISBN: 978-0-7188-9422-1

In *Our Bodies Are Selves*, the three authors present a series of takes attempting to overcome dualistic body-mind, body-soul, material-spiritual, and subject-object dualisms. With the title paying homage to the seminal

1971 book on women's health, *Our Bodies, Ourselves*, the authors incorporate relatively neglected voices of disability, ageing, and premature birth into a contemporary narrative informed by science and religion. Written in an accessible, conversational style the book addresses deep themes often relegated to much more philosophic works.

The author Philip Hefner is an eminent Lutheran theologian who has contributed significantly to the science and religion discourse for decades, including important understandings of the human person as 'becoming' and as 'created co-creator'. He is well positioned to contribute a fresh understanding of human nature that overcomes misleading dualisms. Ann Milliken Pedersen provides an embodied theological perspective and Susan Barreto gives an interesting journalistic perspective.

In what is something of a collected volume, the three authors write each chapter around the common theme, except for the first chapter which is a co-authored introduction. Chapters 2–4 share a personal narrative from each author with Hefner poetically capturing disability, Pederson describing embodied middle age, and Barreto's very engaging and informative sole chapter characterising the dependence of neonates on technology. Chapters 5–6 extend Pederson's personal narrative into her reflection on culture, medical technology and religion, and Chapters 7–9 describe Hefner's scientific and theological takes on bodyselves. In Chapters 10–11, Pederson writes a Lutheran perspective on body and Incarnation.

The organisational flow from introduction to personal narrative to cultural and then theological reflection increases accessibility and could serve well the reader unfamiliar with the philosophic, scientific, or theological context. The personal narratives also seem appropriate given Hefner's metaphor of 'body-self' as memoir (123). However, there are several issues that limit the book's

effectiveness. Although the authors bring in neglected voices and engage the reader on a personal level, they do not give sufficient context to what they attempt to communicate about 'body-selves'. Although 'bodyself' attempts to address such a long-standing misconception of the person that the authors could be forgiven for failing to define it directly, they also treat the 'body' and 'self' so ambiguously that 'bodyself' remains vacuous (e.g., self can dream (2), can soar (3), and conflates soul, spirit, and mind (8)). Numerous popular accessible books have been written on the same topic, such as, Joseph LeDoux *Synaptic Self* and Antonio Damasio *Self Comes to Mind*, and the authors do not even engage the popular literature on their topic (much less the scholarly literature). Chapter 7 on the science of 'bodyselves' also had a number of flaws: Although the chapter included creative and meaningful descriptors of dinosaurs (112), Big History (114), and the tangled inbreeding and separation of modern humans with Neanderthals and Denisovans (113), the chapter oversimplifies evolutionary science (as including Big Bang but neglecting inheritance, 116); mischaracterises designer drugs (109); misidentifies the specialised fields of nanotechnology (109), sociobiology (119), and evolutionary psychology (112) as having much broader influences than they do; and conflates social neuroscience, cognitive neuroscience and psychiatry (120). An additional and perhaps fatal limitation to their endeavour is not engaging social sciences. The authors aim to integrate objective material nature and subjective human self, but neglect the complex social influences constructing that self that far exceed an individual cultural reflection.

Chapters 8–11 form the meatier theological contribution to the study and are reviewed in more detail. In Chapter 8, Hefner develops the fruitful metaphor of a person creating a self-narrative as similar to an author writing a memoir

(123). As a memoirist constructs a meaningful narrative from life fragments, a person constructs a self-narrative from fragments that include innovation, transforming our common experience (129), expanding scientific perspectives (130) and the crisis of technological civilisation (132). Hefner uses the memoir and existential, narrative creation of one's 'self' to counteract the reductionism usually implied by physicalism. Rather than a disembodied mind or spirit creating a 'self', evolutionary and biological factors also come together to create the self. Conversely, as human technology increasingly affects nature (and our conception of nature) that aspect of culture is increasingly affecting our bodies.

In Chapter 9, Hefner reviews the idea of nature (136) and three historical conceptions of nature (140): a living organism as conceptualised by ancients, a machine by fourteenth to eighteenth century Europeans, and history itself by nineteenth and early twentieth century (Western) thought. He proposes three additional contemporary elaborations to the idea of nature as emergence (141), Mystery (142), and full-bodied and God-intoxicated (145), and finally combines them into his idea of nature as 'historical process of emergence that continually brings us face-to-face with mystery—full-bodied and God-intoxicated' (146). These six pages (141-146) could have been greatly expanded and draw too briefly from emergence (as novel characteristics appearing from wholes greater than the sum of their parts), Hefner's extensive thought on religious naturalism, and his expansion of Arthur Peacocke's understanding of Nature (only mentioned in *Suggestions* (192)). Hefner connects his full-bodied/God-intoxicated idea of nature to transcendence and ancient intuitions, such as Chalcedonian two-natures of Christ, which are incapable of articulation through ancient world-views but that could be articulated through views such as proposed by the book.

In the short Chapter 10, Pederson identifies theories of embodiment that resonate with Martin Luther's views of body, spirit and incarnation. In Chapter 11, Pederson expands the idea of church as body of Christ and the embodiment of selves by exploring hospitality, improvisation and pilgrimage. The two chapters identify themes of the body necessary for incorporating into a thorough definition of 'bodyself', though the book lacks a conclusion that pulls sketches of the book together.

Overall, the book identifies numerous fragments that a full account of an embodied self should incorporate; though, admittedly, it does not integrate them into a cohesive narrative or coherent construct of 'bodyself'. The authors effectively challenge the simplistic views of embodiment that only consider the brain or central nervous system as the 'body', and there are valuable and significant fragments within the book. However, the omission of critical engagement with existing work on the relation between body and self as well as minimal dialogue with social sciences limits the book's otherwise meaningful contribution to those discussions and its usefulness as a gentle introduction to the broader themes of embodiment and technology's impact on the self.

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Giandomenico Boffi and Marijan Sunjic (eds.)

Science and Christian Faith in Post-Cold War Europe: A comparative analysis 25 years after the fall of the Berlin Wall

Vatican City: Lateran University Press, 2015. 146 pp. pb. €15.00. ISBN 978-88-465-1045-7

As readers of this journal will be well aware, the twenty-first century has seen a steady broadening out of the dialogue between science and religion. There is a recognition that 'religion' is best understood not in monolithic terms, but as a richly-varied phenomenon; and, similarly, there has been an acknowledgment that 'science' encompasses a range of approaches to the natural world which may embrace considerable divergences in practice. Additionally, the particular local context in which the dialogue of science and religion is conducted may contribute its own nuances to the form and content of that dialogue.

The book under review is to be welcomed for its opening up of a particular context in which the science-religion dialogue has been taking place in recent decades: the European countries of the former Soviet bloc, in the wake of the collapse of communism. The papers it contains have their origin in a workshop which took place in Rome in 2014, bringing together participants from Croatia, Romania, Poland, Russia and Italy. The contributors are all academics, representing different disciplines. Whilst there are similarities in many of the stories told here (the withdrawal of religious freedoms and the state-sponsored promotion of a doctrinaire scientism during the Soviet era, for example), even in these geographically- and historically-constrained contexts considerable differences also arise.

After a scene-setting introduction by Marijan Sunjic, three papers relate to the situation in Croatia. Stipe Kutleša paints a bleak picture of that country

in communist times, and a scarcely better one of the period since, noting the persistence of the view of science as supporting Marxist ideology and therefore necessarily opposing religion as 'the opium of the people' (28). Despite this, Dalibor Renić notes that according to a 2011 census, the population of Croatia is 84.28% Catholic and just 3.81% atheist. The overall message of these papers, however, is that neither official state institutions nor the Catholic Church currently offer platforms for the constructive engagement of science and religion in Croatia. A fascinating alternative perspective, that of the Orthodox Church in Croatia (4.44% of the population, according to Renić), is given by Petar Tomev Mitrikeski, who maintains that any antagonistic understanding of science and religion is essentially a Western one, with its roots in scholasticism.

In Romania the situation is different, the proportions of Orthodox to Catholic believers being the reverse of those in Croatia. Magda Stavinschi believes the conditions there to be favourable for dialogue between Orthodoxy and science, and notes the way in which organisations dedicated to pursuing that dialogue have been established over the last decade or so.

Teresa Obolevitch's paper on the situation in Poland presents another very different situation. Here the Catholic Church retained a social presence denied to it in Croatia, so that although it had to contend with restrictions on its freedom and state-sponsored atheist propaganda, the perception of a conflict between science and religion did not take so firm a hold. As a result, the post-cold war situation has seen science and religion in a lively engagement. Well-known scholars such as Michael Heller have also had an important role to play. Obolevitch observes that in Poland surveys have demonstrated that the belief that science and religion are in conflict is held principally by those coming from a scientific perspective,

the attitudes of religious believers being rather more irenic.

In the Russian context, Alexei Bodrov notes that 'during the Soviet period no serious dialogue with religion was possible' (101), due not least to the exclusion of theology from the universities. With the demise of that era, however, there are now 'about 50 theological departments and chairs at state and private universities and approximately the same number of religious studies departments' (103). Although levels of theological literacy in the country remain generally low, the possibility for serious engagement between science and theology is now being pursued, not least through conferences and publications.

The five short concluding papers are all from Italian contributors. They describe the work of SEFIR ('Scienza e fede sull'interpretazione del reale', 'Science and faith in the interpretation of reality'), the sponsors of the conference giving rise to this book (Giandomenico Boffi); note the changing political scene in Italy in the post-cold war era, with the eclipsing of both the Christian Democratic and Communist parties (Piero Benvenuti); present some comments on secularisation theory (Stefano Crespi Reghizzi) and on evolution (Fiorenzo Facchini); and offer a perspective on science-and-religion from the Italian Waldensian Church (Giovanni Pistone).

Collectively, these papers offer some fascinating insights into the development of the dialogue of science and religion in contexts very different from those in which it has been most vigorously pursued to date. Several contributors note the important support which has been offered by the John Templeton Foundation to the pursuit of these aims, through the sponsorship of networks, conferences and publications. It is to be hoped that the shoots being nurtured here will continue to grow, thereby supporting fresh perspectives that can be offered to the wider science-

and-religion community.

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Graham Harris

The Destruction of Sodom: A Scientific Commentary

Cambridge: The Lutterworth Press, 2015. 191 pp. pb. £20.00. ISBN 978-0-7188-9368-2

This is the best reconstruction I know of the destruction of Sodom and Gomorrah. The author, Graham Harris, sadly died in July 2014, before his book was published. He was a professional geologist whose work as a consultant included assignments over a ten-year period to study the sediments and geology of the Dead Sea region. So the author has extensive first-hand knowledge of the Dead Sea and its surroundings.

The account of the destruction of Sodom and Gomorrah in the book of Genesis, and the transformation of Lot's wife into a pillar of salt, are among the best-known Bible stories. Many people, including biblical scholars and theologians, believe the stories to be a myth and the cities to be legendary. Those that believe the cities existed disagree on their locations. Graham Harris combines archaeology and ancient history with his geological expertise to argue that an earthquake-induced landslide transported Sodom to the depths of the Dead Sea. Before Sodom was destroyed he suggests that the mainstay of Canaanite commerce in this region was the exploitation of the bitumen resources of the Dead Sea, that the Sodomites were among the world's first chemical engineers and that large quantities of bitumen were exported to Egypt.

The book is written for both the general public and for scholars, with extensive references. Harris sites Sodom in

the Vale of Siddim in the south-eastern extremity of the North Basin of the Dead Sea in today's Jordan. He suggests that the remains of Sodom now lie in these waters at a depth of between 300 and 700 metres. He concludes that the destruction of Sodom and Gomorrah, and the other cities of the plain, was an actual historical event. His reconstruction, based on detailed scientific evidence, supports the biblical account. He dates the destruction to 2350 BC (I found this dating to be the weakest part of the book). As noted above, he says the catastrophe was a consequence of earthquake-induced liquefaction of the soil, the first in Judeo-Christian history (interestingly I note that a later event, the Israelites' crossing the River Jordan at the time of Joshua, was probably enabled by an earthquake-induced landslide). In the case of the destruction of Sodom, Harris concludes that the landslide involved a massive amount of material which slid beneath the surface of the Dead Sea, generating a tsunami wave which would have swept away all the shoreline settlements. The sequence of events, from start to finish, would have lasted no more than about twenty minutes. Harris says that there is evidence of a 'scar surface' in the North Basin of the Dead Sea suggestive of a major underwater landslide involving a volume of 3.5 cubic kilometres (i.e. 3.5 billion cubic meters) of soil, a massive event. He gives the grid references to debris mounds at the foot of the landslides and says that this is where the remains of Sodom are most likely to be found. So Harris makes a testable prediction of the location of the remains of ancient Sodom.

I found this book a pleasure to read and a mine of interesting and useful information. Harris writes with authority and I find his arguments persuasive (with the possible exception of the 2350 BC date that he gives). The final sentence of his book is: 'The biblical account is exactly what one would expect from untutored observers in the dawn of his-

tory, passed down through the ages by oral tradition.' If you are interested in the biblical account of the destruction of Sodom and Gomorrah, buy this book!

Sir Colin Humphreys is Professor and Director of Research in the Materials Science and Metallurgy Department, Cambridge University, and is the author of *The Miracles of Exodus* (Harper Collins, 2003) and *The Mystery of the Last Supper* (Cambridge University Press, 2011).

A.C. Grayling

The Age of Genius: The Seventeenth Century & the Birth of the Modern Mind

London: Bloomsbury, 2016. 351 pp. hb. £17.99. ISBN 9780747599425

Professor of Philosophy at London's New College of the Humanities, of which he is Master, A. C. Grayling will be familiar to many readers as a prolific author and newspaper columnist, whose views on matters of religion fit a 'new atheist' mould. In tracing the rise of modernity in this, his latest, book he sets out to demonstrate that 'the seventeenth century is truly the moment that history changed course, so profoundly that everything before it is another world, and that it and the times since are our world' (6). This is not the only place where a century is compressed into a 'moment' and it is indicative of the author's attempt, both passionate and overgeneralised, to contrast new minds with old in the spheres of religious, political and scientific authority. His argument is that the turmoil of the Thirty Years War, to which he devotes the first hundred pages, created turbulent conditions in which a religiously unconstrained mentality could begin to take root. Not only did conflicts driven by religious differences generate untold suffering and anxiety, but the ultimate failure of the Catholic Church to

reassert its hegemony also created a situation in which Christianity would henceforward remain divided, its epistemological claims compromised.

As the century which saw a great surge in scientific activity, the first permanent scientific societies and a remarkable explosion in scientific communication, nicely encapsulated in the author's discussion of Marin Mersenne in France and Samuel Hartlib in England, the seventeenth has been routinely singled out for its innovative methodologies and the potentially secularising philosophies we associate with Bacon, Descartes, Hobbes and Locke. In this respect Grayling's thesis is hardly new. Years ago, Richard Popkin showed how religious strife and the crisis of authority following the Protestant Reformation fertilised the growth of scepticism, both religious and epistemological. What gives Grayling's narrative its distinctive tone is the opposition he posits at every turn between the methodology of 'science' and the shackles of a persecuting Church. He works with a notion of 'real science', idealised in order to distinguish it from the so-called 'occult sciences', and with a hypostatized concept of 'religion', which, wherever it appears, is a bad thing.

But can this be an original thesis? When turning pages on Giordano Bruno and Galileo I could almost have believed I was reading one of those dated nineteenth-century books on the conflict between religion and science (J. W. Draper) or the warfare of science with theology in Christendom (A. D. White). In some respects Grayling is less discriminating than his precursors. Draper was prepared to say that he had no quarrel with the Protestant Churches or with Islam for that matter. White, like T. H. Huxley, stressed the importance of a distinction between dogmatic theology and 'religion', preserving a private space for spiritual sensibility while combating institutionalised theological orthodoxies. To be fair, it is the latter that receive Grayling's wrath, though

he has virtually nothing to say about the many minds who achieved conciliation between their science and heterodox expressions of religious belief. Disappointingly, he ignores the several respects in which Christian theology supplied or legitimised metaphysical principles of the order, unity and intelligibility of nature which, as Stephen Gaukroger among recent authors has argued, were crucial to the emergence of an enduring scientific culture.

Grayling's historiography is unashamedly whiggish. Many historical judgements are made retrospectively, the scientists who got the right answers by modern standards hailed as the heroes and their detractors, whether religiously or scientifically motivated, despised or disregarded. He has an old-style triumphalist story to tell, claiming, for example, that 'the history of seventeenth-century science moves seamlessly from Galileo to Harvey, Huygens, Boyle and the great achievement of Newton, taking the formation of the Royal Society in 1662 on the way'. It may do in Grayling's mind, but only if one ignores the fact that Harvey was an Aristotelian (in his teleology and the primacy he gave to the heart) or the fact that Boyle and Newton had competing views on the practice of alchemy, or the fact that Book II of Newton's *Principia* was a critique of Descartes's cosmology. Grayling is aware that neither Boyle nor Newton, given their fervent theologising, conforms to his wish to have 'science' separated from 'religion' by the end of the seventeenth century. But, no matter: the Enlightenment did them a good turn by sanitising their philosophies of nature. He seriously underestimates the degree to which internecine conflict within science itself has shaped theoretical outcomes, attracting religious adherents to both sides of a controversy.

Readers familiar with *Galileo Goes to Jail and Other Myths about Science and Religion*, edited by Ronald Numbers, should have it by their side if they

choose to give Grayling a hearing. More than a handful of myths exposed by reputable scholars in that book surface in Grayling's text, including the old chestnut that Copernicus's displacement of humanity from the centre of the cosmos represented a demotion. That is how it would appear later; but, during the lives of Kepler and Galileo, to place the Earth in the heavens among the planets was an elevation, a liberation from the *least* salubrious spot in the Aristotelian cosmos. This illustrates one of the problems with a linear historiography that streamlines events. In the quest for a big picture, historical accuracy is often the casualty.

Grayling does make a few, but very few, concessions to historical complexity. The situation, he writes, was not one in which there was a 'two-way fight between occultist and scientific ways of thinking, another two-way fight between religion and occultism, and another two-way fight between religion and science, but a three-cornered relationship which was sometimes a fight and sometimes not, between each of the three and the other two' (204). The emancipation of science from religious interference was a complex process and certainly not complete by the end of the seventeenth century. As Peter Harrison has shown in his Gifford Lectures, *The Territories of Science and Religion*, the separation Grayling wants to see during his 'Age of Genius', was arguably not achieved in the Anglophonic world until two centuries later. Grayling is happy to speak, as few historians would, of the seventeenth century's 'mind'. The much-praised 'modern mind' is undoubtedly that possessed by himself. More ambitious in scope than tightly controlled in its organisation, his book will find favour among those who share his stridently secularist views. But it is difficult to enthuse about a text that, with a philosopher's hauteur, so curtly dismisses historical interpretations that run against the grain of his project.

John Hedley Brooke was the first

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Roger Wagner and Andrew Briggs

The Penultimate Curiosity: how science swims in the slipstream of ultimate questions

Oxford: Oxford University Press, 2016. 468pp. hb. £25.00. ISBN 978-0-19-874765-6

Imagine a flock of geese crossing the summer evening sky in an aerodynamic V shape. The bird at the front works hardest against air resistance, whilst those behind can rest awhile, buoyed up by a small vortex emanating from the wings of their leader. Or think of a cyclist in the Tour de France, whose teammates sit in his slipstream, conserving their energy and benefiting from his wake of forward-moving air. This, suggest Wagner and Briggs, is a helpful metaphor for the relationship between religion and science. Religion is at the front of the peloton, setting the pace and asking the ultimate questions, whilst science sits on religion's wheel. It is science, therefore, that is *The Penultimate Curiosity*.

According to the Spanish philosopher José Ortega, 'Scientific truth is characterised by its precision and the certainty of its predictions. But science achieves these admirable qualities at the cost of remaining on the level of secondary concerns, leaving ultimate and decisive questions untouched.' ('El origen deportivo del estado', p.259) In *The Penultimate Curiosity*, Wagner and Briggs see a connection between penultimate, scientific questions and ultimate, decisive ones. However, their purpose, as they put it, is not to integrate science and religion, or even to

argue for the importance of religion in the development of science, but to try to understand why it is that there should be a 'long and continuing entanglement' between the two (64).

Two buildings are particularly important for the shape of the book, and to the authors themselves. The construction of the Oxford University Museum in the 1850s was promoted and overseen by Henry Acland, the University's new Reader in Anatomy. A Victorian, neo-gothic temple to the sciences, the museum was symbolic of an 'ambition to unite art, science and religion in a single enterprise' (371). Over the entrance is a stone angel holding a book and three living germ cells. Meanwhile, building of the University of Cambridge Cavendish Laboratory on Free School Lane was completed in 1874. The new head of the laboratory was James Clerk Maxwell, professor of physics and a devout Christian. Carved on the doors to the Cavendish are words from Psalm 111: 'Great are the works of the Lord; they are pondered by all who delight in them.' (Ps. 111:2) In these two buildings, Wagner and Briggs, find a vision of science and religion that both motivates, and later concludes, their book. Somehow, they suggest, the religious invocations on the outsides of these buildings must be inextricably linked to the science that takes place in their insides.

Part I is the least familiar to those who deal regularly in science and religion, describing both prehistoric cave painting and the emergence of human consciousness. It is in the Blombos Cave, in South Africa, that archaeologists discovered the oldest evidence on Earth of human symbolic markings: cross-hatching on a stone artefact from 77,000 years ago (31). Here begins humanity's ultimate and penultimate curiosities about the world. Yet ascertaining the place of religion in these prehistoric cultures is no easy task, since there is no simple division between the sacred and the secular. 'Down-to-earth

engagements with the natural world, such as hunting or gathering plants, were as closely entwined with religion as rituals associated with healing or death'; the entanglement began at the beginning (22).

Part II recapitulates much Greek thought, focusing especially on the idea of a single unifying principle (or *arche*) from which all else flows, a concept not dissimilar to that of the divine *logos* (72). It is this underlying order that provides the subsequent rationale for treating the natural world in a 'science-like' fashion. In other words, argue Wagner and Briggs, the rational pursuit of truth is a religious idea. Parts III and IV proceed to follow a thread of intellectual activity from Athens, to Rome, and then the Islamic Empire, before arriving in Western Europe at the foundation of the first universities in the eleventh and twelfth centuries. 'Enjoying a measure of independence from church and state [the new universities]... planted the seed of a new concept: an idea of education that stood at a slight remove from direct instrumental purpose and open to the pursuit of a more free-ranging curiosity.' (150) This, suggest Wagner and Briggs, marked another sea change in the nature of humanity's curiosity.

In Parts V to IX, many of the familiar faces in science and religion make their appearance. With Galileo, a new question came to the fore: 'should penultimate questions about the nature of the physical world fall under the jurisdiction of the church?' (209) Then, following Kepler, Bacon, Newton and others, it gradually seemed as if the answers to penultimate questions might also 'provide answers to ultimate ones' – science apparently usurps religion (251). It gradually becomes tempting to sideline Ortega's concern. But, to take the slipstreaming metaphor to its conclusion, is science really capable of cutting its own path at the coalface of curiosity without religion taking care of the ultimate questions? This, in many

ways, is the problem we face today.

The Penultimate Curiosity is a bold, magisterial and ambitious sweep through human history – indeed the book was sixteen years in the writing. Reams of academic literature have been summarised with flair, and the authors' storytelling mode, helpfully subtitled and regularly illustrated, is particularly effective. Interleaved narratives highlight contemporaneous progress in various aspects of science and philosophy. At times, however, the vast array of characters and a somewhat see-sawing chronology can be a little overwhelming. One wonders, given the necessarily breakneck speed, if specialists from particular eras or disciplines will want to quibble with the treatment of their patch. There are also points when the slipstreaming metaphor feels less like a hypothesis that is being argued for, and more of a convenient hook on which to hang a history of scientific endeavour. Nevertheless, the book contains much to recommend it. It is surely a distinctly valuable contribution to 'the entrenched need of human beings to make sense of the whole depth of their experience' (440).

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Colin Bell & Robert S White (eds.)

Creation Care and the Gospel: Reconsidering the Mission of the Church

Peabody, Massachusetts: Hendrickson, 2016. 353 pp. pb. £19.99. ISBN 978-1-61970-752-2

The book, a comprehensive collection of chapter essays, comes out of the 'Global Consultation on Creation Care and the Gospel' that took place under

Lausanne's banner in Jamaica in 2012. Rather fittingly I read the book on the long flights to and from the IUCN World Conservation Congress in Hawaii (September 2016). Between chapters, I looked out of the window to marvel at the wild beauty of Greenland's crystal blue ice sheets, a few chapters later at the seemingly endless Canadian Prairie carved into the chessboard fields that feed North America. While I marvelled at the scale of this planet we all call home, I was also keenly aware that the carbon pouring into the skies from the flight I was on, and the flights of the other 9,000 conservation delegates heading to a tropical paradise in the middle of the Pacific, were adding, mile by mile, to the greenhouse gasses causing so many of the problems which both conferences were called to address. This theme is picked up in the book; environmental issues are intertwined with our daily lives and there is no escape from human impacts on the earth, for good or ill.

The beauty of creation is a good place to start in any discussion on Creation Care and I was pleased that *Creation Care and the Gospel* does just that. Rather than diving straight into the environmental problems that drive the debate, Part 1, entitled, 'God's word', starts firmly where the Bible does; considering the key scriptural principles of God's good creation, his plans for it and mankind's intended role in relationship with God and this world. Tough issues are tackled head on with thought-provoking consideration of what 'mankind's dominion over the earth' means, what Christian hope is in the context of the ecological crisis and how creation care fits into the Church's Great Commission and an Evangelical understanding of mission.

Like most books drawn from collected conference papers there are recurrent themes and some duplication of material between chapters. Part 2, 'God's world' picks up the narrative of ecological crisis, fleshing out, with a litany of

evidenced examples, just how bad the situation actually is. Familiar to anyone involved in the work of conservation or environmental concern, the hard facts in chapters like 'Global warming, climate change and sustainability: challenges to scientists, policymakers and Christians' are a useful reference for some of the hard realities that must underpin any debate in this area. As in Part 1, 'difficult', often-avoided topics are examined, including the thorny issue for Christians of human population.

Throughout the book chapters are interspersed with short case studies, illustrating some of the most relevant themes and showing that the issues are far from merely academic, as communities are being impacted right now by environmental degradation. However, the book does not simply cast the debate in anthropocentric terms. Throughout the chapters there is biblical balance showing God's concern for both the human and non-human parts of his creation. Setting the scene with a consideration of planetary boundaries, the issue of biodiversity loss, as perhaps the most acute ecological crisis, is considered as a deeply Christian concern. If the situation is bad on the land the chapter 'Creation care of the other 71%' shows how much worse it is in the oceans – where out of sight we are allowing unparalleled biodiversity loss and ecological destruction.

At the heart of the book is a very big and often returned to question – 'Is creation care a gospel issue?' Indeed the sub-title, 'Reconsidering the mission of the church,' makes grand claims for the book. From the realms of social justice, evangelistic necessity and most profoundly, from a proper reading of Scripture, the answer is categorically 'YES.' The follow-up question must therefore be 'so what are Christians doing about it?' Unfortunately, to date, in comparison to other issues considered to be of gospel significance the answer is very little. However, in part 3 (the shortest section of the book entitled 'God's

work') as well as in a number of the case studies, there are signposts of hope to show what can and has been done when Christian communities take this vital message seriously.

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Rupert Shortt

God Is No Thing: Coherent Christianity

London: C Hurst & Company Publishers Limited, 2016. 96 pp. hb. £9.99. ISBN 9781849046374

Rupert Shortt is religion editor of the *Times Literary Supplement*, a biographer of both Pope Benedict XVI and Archbishop Rowan Williams and author of *Christianophobia: A Faith under Attack*. His literary background and writing style combine with evident wide-reading to produce this broad defence and commendation of Christianity, touching on issues of science, but going beyond them, tackling questions ranging from spiritual practice and experience to the role of faith communities in confronting the political issues challenging the whole world today.

The attacks of the new atheists, like Dawkins, Hitchens and Harris, provide much of the backdrop to the book. They themselves appeal to science but range much more widely, requiring a wide-ranging response. Shortt seeks to show that they are attacking crude caricatures of the classic Christian view of God and fundamentalist departures from mainline biblical interpretation.

Shortt directly tackles the claims of Lawrence Krauss and Victor Stenger that modern science involves things coming from 'nothing', noting that quantum vacuums and laws of nature

are not really nothing, but going beyond this as he seeks to inform readers of the classical theological tradition which does not see God as a 'thing' at all. As Thomist Herbert McCabe quips, 'God is no thing, but he is not nothing.' This is also the approach of David Bentley Hart in books like his *Atheist Delusions* but, while Hart is arguing from an Eastern Orthodox background, Shortt appeals more to the Western, Thomist tradition, with its well-known arguments to a unique unmoved mover and uncaused first cause of all things in creation.

Though I have long found this classical, Thomistic view to be attractive, it explicitly stretches language beyond ordinary usage and I remain concerned that many might not understand what is being claimed, let alone the reasons it might be thought true, and so they may remain tempted by claims that this is really all obscurantist mystification. However, Shortt does note that there are respected analytic philosophers arguing that it is not only meaningful but demonstrably true and on this and other issues there are end notes with further reading. This illustrates Shortt's method, seeking to outline influential arguments, authorities and positions to the extent that it can be seen that the Christian position is far more sophisticated and defensible than one might think from a casual exposure to the new atheists or even the media, and then pointing to further reading. This technique is evident as he tackles the Christian view of the environment, the use of the Bible, violence and war and other ethical and political issues likely to be of professional and personal interest to readers of this journal.

With such a brief and wide-ranging book the critic might occasionally wonder about the coherence of all the ideas outlined. An example might be the way that Shortt deploys free will in his discussion of evil and hell, without noting that philosophical discussion of Thomism raises doubts as to just how really free creatures can be in the system.

In discussion of the Bible, Shortt's essential point is that modern fundamentalism is not typical of main-line Christianity; the Bible should neither be interpreted nor applied as a selection of proof texts without regard for their literary and historical context. This I think has wide plausibility, but some reviewers, including Rowan Williams, have questioned the degree to which Christians worldwide might settle for Shortt's mildly liberal interpretations. Shortt's discussion of homosexuality is perhaps an example of this; he argues that the Bible was not addressing contemporary proposals at all, but does not discuss the underlying heterosexuality of the creation stories that seem to inform Jesus and the New Testament authors' sexual ethics.

Obviously, such a short work will not be compelling or even persuasive to all, but I do think that many will find its brief, sensitive and gentle treatment of a wide range of substantive issues good evidence that classic Christian belief is very different from the crude caricatures encountered in popular culture and that Christian believers can be sophisticated, literate and educated. This book is certainly not the final word, but it is certainly not nothing, either.

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Andrew Loke
Science and the Christian Faith

Singapore: The Bible Society of Singapore, 2015. 56 pp. pb. £6 approx. ISBN 978-981-220-534-6

This slim booklet is published by the Ethos Institute for Public Christianity in Singapore, as one of their Engagement series. Trying to summarise the issues involved in relating science and the Christian faith in about fifty pages is a challenging task, and Andrew

Loke's brave effort is not entirely successful. His primary audience seems to be Bible believing Christians, and he wants to encourage them neither to be intimidated by the onslaughts of Dawkins and the new atheists, nor to bury their heads in the sands of biblical obscurantism. So far so good! Moreover, he has clearly read the right books – perhaps the most valuable part of the book is the list of references included in the notes at the back!

The topics dealt with are not fully disclosed by the section headings. For example, the section entitled 'Is belief in God based on ignorance?' is mainly concerned with the Kalam cosmological argument rather than the 'God of the gaps', and the section entitled 'Does belief in God hinder science?' is mainly a discourse on the possibility of miracles. The section on the age of the universe and dinosaurs is mainly about different views of the seven days of Genesis 1.

The biggest difficulty is that there is simply not enough space to deal with the issues raised in any depth. His background is philosophical and theological rather than scientific, but the philosophical arguments, while well intentioned, are written in a style which is ponderous and hard to follow. My conclusion is that a reader not previously informed about these issues would not be very much wiser at the end, unless he used the references as a guide to further study. It is disappointing to give such a negative verdict on such a well-read and well-intentioned author, but I cannot really recommend this booklet, except as a challenge to someone to perform this important and difficult task more adequately!

Paul Wraight has retired from teaching physics and engineering at the university of Aberdeen, but maintains his interest in design and related issues.

Kathryn Applegate and J.B. Stump (Eds.)

How I changed my mind about Evolution: Evangelicals reflect on faith and science.

Downers Grove, IL: IVP Academic, 2016. 196 pp. pb. \$16.00. ISBN: 978-0-8308-5290-1

Stories are important as they are the lens through which we understand the world. When we have new experiences, or learn new pieces of knowledge, we add them to our developing narrative in order to form our sense of self. We therefore use stories to construct our identities, to understand relationships with and between others, and to understand how more abstract concepts such as philosophical or scientific theories are relevant. Critically, despite common cultural or environmental conditions, each of us forms our own story in slightly different ways due to inevitable genetic, psychological and environmental variations. This can often be a source of growth as we learn from others, but can also be the basis for disagreement and conflict. For example, if you see an issue (such as a specific telling of creation) as being fundamental to your own personal story, any alternative view becomes no longer about the issue itself, but rather about your story and thus a deeply held sense of identity. Such problems are compounded within cultures ruled by a dichotomous understanding of politics or religion where unrelated ideas are often packaged together as part of a broader position statement: 'If you don't believe (unrelated) propositions a, b and c, then you cannot be a proper Christian/ Republican/ Democrat (delete as appropriate)'; regardless of whether a or b are entirely reasonable and c is entirely wrong! This is the main reason debates between Christians on the topic of evolution and creation are almost never constructive. Evolution has become part of the 'Liberal' story, whilst 6-day or ID creationism has become part of the 'Conservative' story, irrespective of any of the facts or

indeed truth itself.

This problem is certainly most prevalent in the United States where the so-called 'Culture War' is raging, with repercussions and collateral damage affecting the rest of Christendom. In the US, and specifically within the science and faith arena, the Templeton funded BioLogos organisation is particularly influential in supporting an intellectually robust understanding of Christianity that is consistent with modern science. If Christianity is the truth then it will not have anything to fear from other truths discovered in different ways. BioLogos produces a gold mine of resources to be used in such discussions. This book, rather than another resource focusing on the facts and arguments, focuses instead on people and their own personal stories. It is thus an attempt to tell better science and faith stories through a collection of twenty-five short testimonies from scientists, pastors, biblical scholars, theologians and philosophers who all identify as Evangelical.

Amongst the collection some contributors seem to identify with more Conservative overall stories than others, but all tell why evolutionary creation is not just compatible with Christianity, but actually inherent to the worship of the Christian creator God. One particularly helpful contribution in this regard comes from Richard Dahlstrom, senior pastor of Bethany Community Church in Seattle, described as a 'vibrant' congregation of students studying 'every scientific discipline known to humanity'. He quotes from Matthew 23:4 to argue that indoctrinating young Christians into a false understanding of creation is the equivalent of religious leaders 'tie(ing) up heavy, cumbersome loads and put(ting) them on other people's shoulders' (174, 175). As a pastor working with students he wants to foster 'joyful Christ-followers to be wholly engaged in being the presence of hope in our glorious – yet broken – world, instead of retreating into narrow sub-

cultures where the false dichotomy between faith and reason becomes a wall that is, for too many, insurmountable' (179). This personal and pastoral tone pervades all twenty-five testimonies in the book.

Whilst scientists such as Francis Collins, Deborah Haarsma and Denis Lamoureux are contributors to this volume, they are in a minority among pastors including Ken Fong, John Ortberg and Laura Truax, biblical scholars including Tremper Longman III and Scot McKnight, and theologian/philosophers including Oliver Crisp, James K. A. Smith and Amos Yong. There is also an entertaining contribution from N.T. Wright commenting on the dichotomous nature of the debate happening 'on the other side of the pond' and rejecting it by concluding: 'so, am I a fundamentalist creationist or atheistic scientist? Answer: I'm a Brit.' (137) In this spirit, rather than using technical or abstract articles, all contributors tell their own personal stories of how they reconciled science with Evangelical Christian Faith. This makes the book an entertaining and easy reading package ideally suited to young college or university students looking for stories of Christian role models who uphold the highest standards of intellectual and academic integrity. The book is therefore not aimed to go on the bookshelves of academic scientists or philosophers, but rather in their coat pockets, to be passed on to young Christians studying science and perhaps struggling to create their own personal stories based on both the exciting story of Jesus, and the exciting story of creation as found in Nature.

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Robert H. Nelson
God? Very Probably: Five Rational Ways to Think about the Question of God

Cambridge: Lutterworth Press, 2016.
306 pp. pb. £21.00. ISBN 978-0-7188-9432-0

Robert Nelson is a professor at the University of Maryland. Nelson's background is in the field of economics and its engagement with the environmental movement. Nelson's intention in this book is to explore the question of whether 'a god exists' (x). This term is employed generically throughout the book and is assumed to be a 'monotheistic god' (x) unless specifically referring to the biblical or Christian God, where the noun is capitalised. Nelson notes that he has gone from agnosticism to the firm belief he presently holds, that a god most probably exists.

Nelson makes it clear that the question of a god is very probable. He marshals a number of arguments to add weight to this probability, and does so by appealing to the physical sciences, philosophy, evolutionary biology, social sciences and theology, which he calls his five rational ways to think about god. Nelson concludes that 'there is a strong (a very probable) case that a god...does in fact exist' (xii). Nelson openly admits his arguments do not prove the existence or non-existence of a god, but show it to be very probable.

In the Introduction, Nelson sets out to argue that he will employ rational forms of argumentation to prove the probability of god. One of the impediments Nelson sees to the acceptance of god among many scientists, is their unwavering commitment to scientism, that science is the ultimate realm of knowledge. Nelson also evokes the field of mathematics and its axiomatic truths as pre-existing truths, including the notion of abstract ideas, as points of contact with a reality beyond the physical universe. Nelson admits that the question of god's existence is outside

the scientific method because such a notion lies outside measurable time and space, which are necessary contingents for the scientific method.

The second chapter deals with the subject of thinking about god. Nelson addresses the subject of the existence of minds other than our own, which cannot be empirically proven by the scientific method. Nelson reasons that just as human minds generate immaterial thoughts that control our physical bodily functions, so it would seem the mind of God works the same way in the control over the physical universe. The consciousness humans share with God is reflected in the biblical doctrine of the *imago Dei* (Gen. 1:26-27). The fine tuning of the universe is also addressed as an example of a mind who established the laws of physics. The multiverse position, Nelson notes, is a position that must inevitably be taken on faith.

In the third chapter, Nelson addresses the subject of God the mathematician, and the wonder of the mathematical order in the universe. The orderly and rational universe reflects the rationality of God's mind. Mathematics is a science of the mind with abstract symbols, objective truths (e.g., $2 + 2 = 4$), it is something outside of the human, but is nonetheless apprehended and discovered by the human mind. The mathematical world exists independently of the physical world.

In the fourth chapter the subject of Darwinism as secular fundamentalism is addressed. Nelson accepts natural biological evolution. He does not fully endorse all of Darwin's views. This view is not incompatible with a belief in a god. Nelson cites Darwin in *Origin of the Species* referring to 'nature's productions' as bearing the stamp of 'far higher workmanship' (115). Nelson sees an inquisition amongst the scientific community which seeks to marginalise scientists who while adopting natural biological evolution, nonetheless hold to belief in the existence of a

god. Nelson cites the example of the late Stephen Jay Gould, who was reviled by many of his colleagues such as Richard Dawkins. Nelson shows the failure of evolution to account for the rise of rationality from irrationality. Nelson also devotes considerable discussion to the disastrous influences of Darwinism on Adolf Hitler and the field of eugenics.

Chapter five addresses human consciousness. Human consciousness remains a mystery in the scientific field as it cannot be spatially measured in either time or space. Consciousness is inherently subjective and cannot be objectively assessed. The enigma is how a material organ such as the brain, can create immaterial consciousness. Immaterial consciousness could not have evolved from material processes. The result of many scientific naturalists is to deny any metaphysical reality to consciousness. Nelson argues that this is an evasion of the reality of consciousness.

In chapter six, Nelson addresses the issue of divine agency in recorded history where he deals with miracles. This is not so much a defence of the miracles recorded in the Bible, as a defence that a god could intervene into the created system as a distinct conscious being. Nelson addresses some issues that appeared off topic such as the relations between Christianity and Islam.

In chapter seven, Nelson addresses the subjects of secular religion, Christianity and modernity. He traces the ideology of secular religion back to the Enlightenment. He sees many modern and past secular ideologies as merely renditions of Christianity, without theistic elements. Nelson points to communist Russia and Nazism as examples. The thrust of this chapter is to show that all systems of thought carry a religious sense in order to find ultimate meaning and purpose, which science cannot provide.

In chapter eight, Nelson concludes

by summarising the points he argued throughout the book. Modern science was a product of the Christian quest to know God better, and Isaac Newton is noted as an example of this. Two areas that Nelson argues will forever be inaccessible by the scientific method are mathematical order in the physical world, and human consciousness. Humans apprehend both because they are made in the image of God. Nelson concludes by asserting that his belief in a cosmic intelligence, and objective truth, and human consciousness, show that a god very probably exists.

The book was challenging, at times repetitive in its arguments, but an honest attempt to tackle the hoary questions of origin, meaning and purpose, and final destiny. It is academic in style, but understandable to those who are examining the areas of faith and science for the first time. This is not the first book written to address this question, nor will it be the last. A number of typos were found in the book which can be corrected in a future revision.

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Michael Ots
But Is It True?

London: Inter-Varsity Press, 2016.
208pp. pb. £8.99. ISBN 978-1-78359-404-7

Peter May
The Search for God and the Path to Persuasion

London: Malcolm Down Publishing Ltd., 2016. 247pp. pb. £9.99. ISBN 978-1-910786-37-6

Michael Ots' *But Is It True?* and Peter May's *The Search for God and the Path to Persuasion* take slightly different approaches in addressing those investigating the truth of Christianity. Both books are written by Christians seeking to present a reasoned defence of Christian belief in an easy to read way. However, while Ots focuses on addressing specific questions that might stand as barriers to belief in God, May's book targets those who already believe and are seeking to make a persuasive case for their faith to those around them.

But Is It True? takes ten common questions posed against the Christian faith and seeks to provide a framework towards answering these questions. It is written in such a way as to be accessible both to those who don't believe, as well as Christians who want to explore further some of the deep questions that arise. Ots examines questions about the reliability of the Bible, miracles and the resurrection, as well as addressing questions about the rationality of Christian belief and its relationship to science. He begins the book (Chapter 1) by examining the rationality of faith itself, and arguing that faith, like science, is not about having absolute proof but rather weighing the evidence and coming to a conclusion based on the best explanation of that evidence. A fitting beginning in a culture where science can often be viewed with an almost infallible reverence, and is often contrasted to faith; as if faith were a belief against the evidence.

Having set the groundwork by looking at the nature of faith, Ots turns to the question of how it is that faith relates to science. In particular he argues against the idea that science and religion have historically been in conflict. He begins with an examination of the faith of some of the early pioneers of science and argues that the Christian world-view was essential to the development of science. Moving on to address the origin of the conflict thesis, and the contributions of Draper and White in writing a history of conflict between science and religion. He argues well that the conflict thesis does not accurately represent the history of science and faith and that the story of conflict has been imposed upon history relatively recently.

Despite the fact that *But Is It True?* is written in an accessible manner that makes it easy to read without a technical background, the arguments contained in it are well constructed and very well researched. Furthermore, Ots includes a rich variety of further reading: ranging from accessible introductions through to more academic works, with indications as to the difficulty level of each book. For those interested in further examining in depth the arguments that he gives, Ots points his readers towards more full and robust formulations of the arguments. For example, for those wanting a more in depth discussion on the conflict thesis, Ots points them towards Peter Harrison's more academic work on the subject.

Ots picks up again on the discussion of science and faith in Chapter 4, examining arguments for the existence of God taken from nature. He presents arguments from the existence of the universe, and of matter in the first place, and then from the fine tuning of the universe required for the possibility of life. Engaging with some of the most recent work on fine tuning Ots argues that nature gives us good evidence to believe that God exists. He then goes on in Chapter 6 to examine the relationship between science and miracles,

addressing the concept of the laws of nature. He examines Hume's historic criticism of miracles and the role of evidence in addressing the possibility of miracles, ultimately arguing that it is a distortion of science to say that it precludes the possibility of miracles.

Peter May, on the other hand, focuses less on the specific questions and objections to Christian faith and more on the approach taken in discussing these questions with others. In *The Search for God and the Path to Persuasion* May begins by passionately making the case for being persuasive in talking to others about faith. He draws deeply on examples from the New Testament, as well as some examples from his own experience, in providing a framework for how to share faith with others in a genuine and persuasive way. His approach means that much of the book makes for a very interesting Bible study on the nature of persuasion in evangelism.

In this context he touches briefly on questions relating to science and faith. May presents a case against Barth's view that we can only rely on revelation to know about God, and makes a case for the use of natural arguments for the existence of God (Chapter 8). In his examination of the use of arguments in evangelism he mentions briefly some of the same arguments that Ots examines in his book, such as the fine tuning argument and the argument that something cannot come from nothing.

Similarly to *But Is It True?* Peter May also has some very insightful thoughts on the nature of science itself, stressing in Chapters 9 and 12 that science concerns an inference to the best explanation and is not infallible. He too notes that the concept of proof is one that is based within mathematics, and that science must take a more humble approach to knowledge, an approach which seeks the most probable explanation of the evidence given. Both of these books, I believe rightly, sketch out a view of science and faith as both being

informed by evidence and not matters of absolute proof. And both books note that faith goes beyond the acceptance of a particular conclusion based on an argument. The acceptance of the conclusion, given the evidence, is simply a starting place for faith, which involves not just belief in the existence of God, but also, crucially, involves trusting in him.

Although neither book is written purely to address the relation of science and faith, both have much to say to this area. Most notably both books put forward a helpfully corrective view of science as a discipline based on evidence and probability, of inference to the best explanation and not of proof. And both sketch out a concept of faith which finds support and evidence in the natural world. Ots' book is particularly helpful in dissecting further some of the specific questions, and in companion to this May's book aids in attempting to discern how best to use these evidences in a persuasive way.

For Christians looking to communicate their faith more effectively, reading both *But Is It True?* and *The Search for God and the Path to Persuasion* in tandem is an interesting and informative exercise. There is much in both of these books not directly linked to the questions of science and faith which is of great benefit to the reader. For those who are on the fence about faith, May's book, which draws heavily on biblical exegesis in examining persuasive evangelism, might not be the first port of call. But for those interested in exploring questions about faith further Ots' *But Is It True?* provides an interesting and accessible look at some of the issues, with a very useful selection of further reading for those wishing to dig deeper.

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Karl W. Giberson (ed.)
Abraham's Dice – Chance and Providence in the Monotheistic Traditions

Oxford: Oxford University Press, 2016.
376 pp. pb. £22.99. ISBN: 978-0-19-027716-1

This multi-authored collection of sixteen essays began life with a conference held in 2014 at Stonehill College, USA, where the editor is on the faculty. Many of the authors are well-known in their fields and some of the essays are real gems. Having said that, a common feature of essay collections of this kind can be a lack of focus with patchy quality, and this particular collection is no exception in this respect.

Essays that merit 'special mention' include James Bradley's 'Random numbers and God's nature' which is useful in its definitional cataloguing of the various meanings of 'randomness'. Unfortunately other authors in this volume are less careful about their definitions, assuming a common understanding of words like 'random' and 'chance' when both words are used in different academic disciplines, let alone daily speech, with a broad range of meanings. Mustafa Ruzgar provides an excellent overview of 'Chance and providence in the Islamic tradition'. A further useful overview entitled 'Chance and providence in early Christianity' is provided by Richard Miller who helpfully expounds his topic against its Greco-Roman background. One does not need to agree with the author's final conclusions in order to appreciate Miller's succinct summaries of the key ideas and players in this story. Ignacio Silva's treatment of 'Thomas Aquinas on natural contingency and providence' and Byung Soo Han's 'Chance, sovereignty, and providence in the Calvinist tradi-

tion' are both clearly written essays, albeit providing theologically technical summaries which some scientist readers may find a little indigestible.

For the non-theological reader, the most surprising essay in this volume might prove to be Oliver Crisp's contribution on Jonathan Edwards. Americans who (correctly) see Jonathan Edwards as one of the 'founding fathers' of American evangelicalism must also cope with the fact that Edwards was a convinced panentheist who held to a doctrine of occasionalism, similar to that of Bishop Berkeley, which maintained that matter was a fiction. As Crisp summarises Edwards' position: 'The world is a collection of ideas and created minds, which are sustained in being by God, who is an infinite mind. This view means that there is no mind-independent reality...' Edwards' version of occasionalism was nothing if not robust. Not for him a *creatio continua*, but rather God's atemporal creation of the world which then immediately ceases to exist, followed by the creation of a numerically distinct but qualitatively identical world with small incremental changes built into it. And so on, like the flickering images in an early film-show. His occasionalism entailed that creaturely action was at root merely the occasion of God's action. Crisp likens his panentheism to a world in which God 'projects' or emanates a series of ideal world stages on to a screen. Therefore, claimed Edwards, in the author's words: 'we should not ascribe to God moral responsibility for the actions of creatures, though he actualizes them and the state of affairs in which they obtain'. As Crisp points out, there is much in Edwards that resonates with more recent thinkers in the science and religion field, such as Arthur Peacocke.

A highlight of this volume is a series of fine historical essays, by John Hedley Brooke on 'Divine providence in the clockwork universe', by Alister McGrath on 'Chance and providence in the thought of William Paley' and by Peter

Harrison on 'Evolution, providence, and the problem of chance'. The Harrison essay in particular provides a veritable feast of apt historical quotations from the history of ideas. Truly, as the writer of Ecclesiastes points out, there is nothing new under the sun.

Somewhat curiously (in terms of order) the section on the history of ideas is followed by a masterful exposition of the current understandings of the quantum world by Shaun Henson. As the volume heads to a close, there is then a fine opportunity for a drawing together of the threads in terms of applying the various ideas about chance and providence to the arena in which those ideas become most contentious, the world of evolution. Unfortunately Michael Ruse's essay entitled 'Darwinian evolution and a providential God' is rather disappointing in this regard. For a start Ruse's schoolboy attempts at humour do not particularly enrich the text (the editor's scissors might have been useful here). But, more importantly, Ruse describes an understanding of theistic evolution that most people left behind with the nineteenth century, suggesting, given the unsatisfactory nature of such a scheme (indeed), that 'we turn therefore to other possibilities'. Ruse (an atheist) seems to think that Christians require evolutionary mechanisms that require some kind of 'guarantee' that the process generates humanity, but it is not quite clear why that should be the case. The essay ends up with multiverses which, perhaps unsurprisingly, the author finds unsatisfactory as a way of 'guaranteeing humanity'. If only Ruse had focused on the role of chance, randomness and providence in the actual historical evolutionary processes that we know about, then perhaps more progress could have been made.

The final essay in this collection, 'Abraham's dice in the flow of life' by Reinhold Bernhardt, Professor of Systematic Theology at the University of Basel, is featured as a 'Closing reflection', raising one's hopes that now at

last the threads will be drawn together to leave us with a coherent story. But the author chooses to focus on what it means to experience something as 'tragic' which apparently requires a radical reinterpretation of the doctrine of original sin. This reviewer unfortunately became somewhat lost in the disparate threads of the essay and indeed the connection to the overall theme. Yet another example, perhaps, when continental philosophical theology and Anglo-Saxon pragmatism seem to flow in different directions. What a pity that the final reflection was not used to draw together the rich seams in the history of ideas presented on the topic of chance

and providence in the earlier essays.

Those looking for the application of ideas about chance and providence to specific areas of contemporary science, in particular evolutionary biology, will be disappointed by this volume. But the essays on chance and providence in the history of ideas are well worth a read, and that alone might justify the investment.

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