

Reviews

Wesley J. Wildman

Science and Religious Anthropology: a spiritually evocative naturalist interpretation of human life

Farnham: Ashgate 2009. 294 pp. hb. £50. ISBN 978-0-7546-6592-2

In this ambitious, informative but ultimately unsatisfying book, Wildman seeks to offer an account of what it is to be human that draws on evolutionary theory in biology, psychology, the neurosciences, cognitive sciences, sociology, anthropology, medicine, sexology, social constructionism and ecology, together with some elements of philosophy, ethics and theology. Humans are bodily creatures emerging within a natural environment that permits engagement with the 'valuational depth structures' and 'axiological potentials of reality'.

Wildman is a naturalistic humanist and atheist in that he adjudges all supernaturalism, including traditional theism, false. He notes the way traditional religions have sometimes exercised social control in an ignorant and unjust fashion. However, he is claiming to provide a theological account open to religion. He is theologically sophisticated and sympathetic in a way that the New Atheists are not, but he does not write in their clear and pithy manner, even when it is clear that his passions are engaged. He claims that he is using the terms 'religious' and 'theological' in a deliberately provocative manner and, when one realises that even New Atheists qualify as being 'religious' on his definition, one may well suspect that words are being stretched beyond their elastic limit.

The argument of the book did not seem well laid out and useful material was often not fully integrated into the book's overall purpose. Wildman's attempt to define his 'naturalism' jumps straight into a discussion of Tillich, and much of the final chapter would have been more

useful at the beginning, clarifying what the author is seeking to do better than do the preliminary chapters. Wildman takes his religious naturalism as a presupposition that best fits the scientific data, but does not defend this systematically. His interpretation echoes certain aspects of the world's religious traditions, but claims that the science is in tension with traditional religious ideas, for example immaterial souls. Such claims are plausible, but not explored in depth. He is working on a companion volume, *Science and Ultimate Reality* and another work on religious philosophical method, but he accepts that his arguments will not be compelling to all. A recurring idea is that scientific data constrain responsible religious interpretations without determining them.

Wildman affirms modern understandings of human rights without seeking to justify or ground them at any length. The ethical discussions usually seemed to me vague, tepid or banal, the religious and ethical language insubstantial in comparison to the factual content of the science, and the existential and moral relevance of the science was not always clear. That said, I thought the discussion of male dominance in mammals showed that evolutionary perspectives have real potential to shape and inform discussions by feminists, ethicists, theologians and politicians.

The book leaves the positive meaning of such repeated phrases as the 'valuational depth structures' and 'axiological potentials of reality' vague and undefined. Wildman seems to make a virtue of this by means of appeals to the negative, apophatic, mystical strains in traditional theologies. Some may find Wildman's language spiritually evocative and value parallels with certain religious ideas, but I consider the appeal to the mystical, apophatic strains in traditional religions to be misleading. Wildman's ultimate

reality beyond human knowing and telling is brute nature, lacking the qualities that inspire worship and devotion. We may be awestruck by the mysterious immensity of nature, but still feel ourselves more intelligent than it, and be dismayed at its dumb power to grind our conscious purposes and hopes to dust and ashes. The implied abandonment of ultimate salvation leaves Wildman's position far removed from the beating heart of most major world religions. I therefore found the claim that this was a spiritually evocative interpretation of human life unsatisfying, but the collection of such a wide range of scientific data about humanity will still be useful to those seeking a scientifically-informed, religious anthropology.

Patrick Richmond is Vicar of Christ Church, Eaton, Norwich and an associate of the Faraday Institute.

Thomas Dixon, Geoffrey Cantor and Stephen Pumfrey (eds.)
Science and Religion: New Historical Perspectives

Cambridge: Cambridge University Press, 2010. 317 pp. hb. £55. ISBN 0-521-76027-5

In 1991, John Hedley Brooke's *Science and Religion: Some Historical Perspectives* was first published. Since then, it has become the standard textbook for many undergraduate courses, teaching students the value of historical particulars over grand theories. Brooke was by no means the first to reject the conflict narrative, but he went further and replaced it with a complexity narrative, illustrated with many examples.

Twenty years later, Brooke has retired and his students and colleagues have gathered together this collection of new historical perspectives in his honour. Like many such collections, the contents of this book are of varying usefulness and quality. But given that it is priced to

appeal to academic libraries rather than to the general reader, it is worth highlighting those chapters which are especially worth reading. I would note that the editors have done a good job of ensuring that all the chapters are accessible to the informed lay person and that the book's production is of the highest standard.

Top of the pile are the chapters by Adam Shapiro and B. Harun Küçük. Shapiro sheds new light of the 'monkey trial' of 1925, when John Scopes was convicted of teaching evolution in Dayton, Tennessee. We learn about the politics and economics of school textbooks, as well as how the anti-evolution law arose as part of the deal to agree a wide-ranging and progressive reform of education. Shapiro's chapter is well written and tightly focused on just the kind of historical contingency that Brooke believed to be so important for understanding alleged conflicts between science and religion.

Küçük examines how the conflict thesis was extended to Islam in the nineteenth century by Ernest Renan and others. Renan's work formed part of a racist critique of Semitic religion, including Christianity, which was supposed to have polluted the Aryan cultural inheritance. Salmanazar Hameed's chapter is a fascinating survey of creationism in the Islamic world. Although Muslim creationists borrow much of their material from their American counterparts, they use it in a very different conceptual framework. For instance, young earth creationism has no traction among Muslims because the Koran provides no chronological creation narrative.

Ronald Numbers acknowledges in his chapter that Brooke's complexity thesis never quite satisfied historians' needs to find themes and patterns. Numbers seeks to redress the balance by identifying a number of smaller-scale frameworks that can be used to understand long-term trends in the relationship between science and religion. For

instance, it is true that supernatural explanations no longer have any part in science and those scientists who do have religious beliefs keep them private or at least completely separate from their scientific work. Such changes in behaviour are proper subjects for historians to study.

This secularisation has its origins in the nineteenth century when, as Peter Harrison reminds us, modern science took its current shape. Frank Turner examines the struggles during this period that gave birth to the conflict thesis in the first place. Thus we find that the thesis is itself a historical artefact in need of explanation. And in the final chapter, Geoffrey Cantor urges that, when rejecting conflict as an overarching framework, we do not neglect smaller scale struggles. The conflict thesis may be dead and buried, but that does not mean the relationship between science and religion is all sweetness and light.

Overall, this is a useful collection with several chapters that are likely to enjoy frequent citation. It is unlikely many general readers will feel it is worthwhile investing in the whole book, especially given its high price. Nonetheless, libraries should purchase it and lecturers may find that some chapters make succinct discussions of particular topics to which it is well worth pointing their students.

James Hannam is the author of *God's Philosophers: How the Medieval World Laid the Foundation of Modern Science* (2009).

John Weaver

SCM Core Text: Christianity and Science

London: SCM Press, 2010. 259 pp. pb.
£25.00. ISBN: 978-0-334-04113-9

In this book John Weaver attempts the daunting task of writing a relatively short book with the goal of covering the

major points of interaction between Christianity and Science, in an intelligible and accessible manner, and by and large he succeeds in doing so. The introduction is a good overview of the major points of interaction between Christianity and Science, and presents a framework for how the two disciplines can interact sensibly and address each other. A key point made is that 'it is at the philosophical level that science and theology meet' (17). This then sets the scene for the next seven chapters, which cover in some detail key areas of overlap:

1. The Bible and Science
2. Cosmology and the Structure of the Universe
3. Evolution and the Origin of Life
4. The Human Brain and the Development of the Mind
5. Genes, the Human Genome and Genetic Engineering
6. The Environment and Care for Creation
7. Models of God – Bringing Science and Faith Together

The author moves rapidly between related subjects, which allows much ground to be covered, but sometimes makes it hard to follow the logical flow of ideas, and the section headings often seem somewhat self-contained, and a bit disconnected from what goes before and lies ahead. A more detailed contents page, listing all the subheadings would certainly have helped. Having said that, by using this style, what the reader gets is an excellent one-stop text, which introduces a wonderful diversity of Science-Faith issues. I think Weaver has also struck a good balance between objectively writing, and then giving his personal viewpoint where appropriate.

In addressing the issues in chapters 1-6, in each case there is a succinct and up-to-date explanation of the current science, and then a discussion of the theological implications of and for the science, and of points of interaction. Most chapters finish with a helpful 'somewhere to stand' section suggesting sensible posi-

tions that Christians can take on the issues, without being over dogmatic. The references at the end of each chapter are helpfully set out as 'key texts' and 'further reading', and the key texts are heavily quoted in each chapter, so that by the end of the book, one feels quite familiar with a number of relevant texts for each topic. There are a number of diagrams throughout the text, but generally I found that these were often too lacking in detail to be helpful, especially without stand-alone legends describing them. With the print limitations of a black and white non-glossy paperback perhaps more tables (summarising key points or comparing and contrasting different viewpoints) and timelines (e.g. formation of the universe) would have been helpful.

In terms of content, Weaver displays an impressive array of knowledge and I found reading the book a real learning experience, both in the areas I would be familiar with, and in those that I am not. Chapter 2 tackles cosmology by first describing the 'biography of the universe', in that the universe has 'a beginning and an end yet to be written' (64). As a biologist I found this chapter fascinating and the science well explained. Important areas of current thinking covered include 'fine-tuning', the multiverse hypothesis, chaos theory and string theory. Overall Weaver demonstrates that nothing in modern cosmology is seen to be a direct challenge to belief in the Christian God, and in fact the way the world is, is entirely consistent with such belief. At the same time Weaver astutely outlines the dangers of arguing for God's existence from design.

Chapter 6 is the tour de force of the book, and here the author's passion for environmental issues is very apparent. This chapter reads less like a text book, and is more coherent and developed than the other chapters, and there is also a compelling sense of urgency in the writing. Importantly, this chapter presents a dynamic theology of creation and calls Christians into action as 'co-creators' and

'co-redeemers' in partnership with God.

Chapter 7 asks, 'given what we know about the natural world and taking the biblical revelation into account, what sort of model of God can we have?' In the answer, as the author deals with issues such as 'natural evil' and suffering, there is absolutely no mention of a role for Satan, the one whom 'the whole world is under the control of' (1 Jn. 5: 19) and who comes to 'steal, kill and destroy' (Jn. 10: 10). I felt this was a flaw. Another issue not really addressed in the book is the place of miracles (God's intervention as opposed to his immanence).

Overall, for a single author work, this book covers a broad range of interesting topics with sufficient depth to be a very useful resource to anyone interested in Science and Christianity.

Andrew Bowie is an Associate Professor in the School of Biochemistry and Immunology, Trinity College Dublin, and a leader in Trinity Church Network, Dublin.

Terry Eagleton

Reason, Faith, and Revolution – Reflections on the God Debate

New Haven and London: Yale University Press, 2009. 200 pp. hb. £10.99. ISBN 978-0-300-15179-4

This volume is the print version of the Dwight H. Terry lectures which the author delivered at Yale University in 2008 and represents a witty, incisive and extended critique of the views of 'Ditchkins', that wonderful fusion of Dawkins and Hitchens that crops up throughout the book as the target of the author's withering scorn. Critiques of the so-called 'new atheists' by Christians tend to be carefully researched and politely expressed; offerings by fellow atheists are often considerably more robust, and this book is well up the robust end of the scale.

One of the great strengths of the book is the author's firm grasp of traditional Christian creation theology. Here we have the gifted ventriloquist speaking words into the mouths of Christians that ought to be their staple diet, but sadly are so often replaced by caricatures. As the author correctly points out, it is not entirely the fault of Ditchkins that they have misunderstood the idea of God so systematically, given that Christians themselves have often communicated only a pale shadow of the biblical reality. The first two chapters in particular spell out the kind of theology that subverts scientism and renders many of Ditchkins' fulminations redundant. To give a flavour: 'Life for Dawkins would seem to divide neatly down the middle between things you can prove beyond all doubt, and blind faith. He fails to see that all the most interesting stuff goes on in neither of those places. Christopher Hitchens makes the same crass error, claiming in *God Is Not Great* that "thanks to the telescope and the microscope, [religion] no longer offers an explanation of anything important". But Christianity was never meant to be an *explanation* of anything in the first place. It is rather like saying that thanks to the electric toaster we can forget about Chekhov' (6-7).

The author is equally scathing of the Whiggish notions of inevitable progress, ushered in by science, as he is about the late Victorian idea, resurrected by Ditchkins, that science has a secularising influence, religion gradually retreating as science advances. Eagleton quotes from Charles Taylor's magisterial study *A Secular Age* with approval, one of the most powerful recent works demonstrating in great detail the fallacy that 'in the course of human affairs a religious view of the world was put to flight by a steady accumulation of scientific evidence' (76).

The author's third chapter 'Faith and Reason' provides some thought-provoking insights into the nature of faith, whereas the fourth chapter 'Culture and Barbarism' mounts a sustained attack on

the idea, so prevalent in Ditchkins, that religion is the major cause of human conflict. Throughout the four chapters the glue holding the narrative together is Eagleton's disdain for the blander aspects of Ditchkins' 'enlightened liberal humanism' which, the author maintains, provides tacit if not active support to the less savoury aspects of western materialistic capitalism.

Eagleton's Christianity is certainly not bland. Jesus is akin to the revolutionary who comes to subvert the social order, turning upside down commonly held religious assumptions. Whilst faith is ultimately beyond reason, it depends for the author on both reason and evidence, and 'If Jesus's body is mingled with the dust of Palestine, Christian faith is in vain' (116). Ultimately this book is a sustained political critique of the more naive aspects of western liberal democracies, and it is the blind faith of Ditchkins and their ilk in human progress that arouses the author's ire. The Christian faith is attractive precisely because it recognises the deep ambiguities entailed in human existence.

This is an exciting book full of new insights and quotable quotes. It is also very funny. It should be read by all with an interest in the contemporary 'God Debate', by those who think that science has all the answers, and by Christians who want their faith to be expounded, critiqued and challenged by one of the best known literary critics of our day.

Denis Alexander is the Editor of *Science and Christian Belief* and the Director of The Faraday Institute for Science and Religion, St Edmund's College, Cambridge.

Christopher Knight

The God of Nature: Incarnation and Contemporary Science

Minneapolis, Mn: Fortress Press, 2007.
xii + 164pp. pb. \$18.00. ISBN
9780800662219

This is a most unusual book, full of keen analysis, intelligence and flair. Knight begins with a brief review of elements of the science-religion debate. He distances himself from the sort of natural theology that would see God as the best explanation of phenomena; faith is trust, and it would be hard to know how to compare God-explanations with others. But he acknowledges also that atheist arguments can help contemporary theologians release themselves from now-unnecessary elements in the evolution of faith. Knight then turns to the problem of providence, and demolishes (in his view) the most prevalent view in the discussion of divine action in conversation with science, in which God, immanent in the universe and sustaining its regularities by 'general divine action', also uses some causal joint to effect 'special divine action' (here quantum indeterminacy is often cited as indicative of the locus of non-interventionist divine action).

Knight considers that this is God interfering, if not technically intervening, in the processes of the world. He uses a most interesting analogy: parents with student children. Is money given to the children by unmediated gift, which would correspond to voluntarism, is it given by standing order at the bank (general divine action), or by a combination of the two depending on the circumstances (general and special divine action). Knight is convinced that God must be capable of giving rise to the effect of the third model using a version of the second, a set of fixed instructions – many of which are of a character not known to us – rather than by responses or interferences.

Knight is aware that such a picture will grate with some naturalists, as going

beyond the mechanisms science indicates, and it will grate with many theologians as suggestive of deism. But he holds that within a panentheistic faith, in which the world is never separate from God, this is a consistent view. Moreover Knight draws on his knowledge of Orthodox theology, especially of Maximus, to hold that it is an incarnational view: all creation is sacramental, informed by the 'logoi' that derive from the divine Logos. The coming of Jesus is a consummation of this incarnational character of creation, not in any sense an intrusion into the natural order.

This was one of the steps that I found difficult to follow. The way the divine life informs creation need not be seen as *incarnation*; it can perfectly satisfactorily be described in terms of divine *immanence*. This reserves incarnation, more helpfully in my view, for the astonishing, gracious, humble gift of the Son's taking flesh for the salvation of all. I do however affirm Knight's emphasis on the sacramentality of creation, a motif strong in the work of Arthur Peacocke.

At this point the book, which is informed both by Orthodox conversation partners such as Lossky, Louth and Sherrard, but also strongly by Peacocke, takes a somewhat curious set of turns. Knight discusses in turn miracles, revelation, pluralism, the Fall and ecofeminism before returning to his central model in chapter 15. I found this structure less than ideal – it would have been better to consolidate the model and then show how it applies in various areas. Sometimes there was a sense of an undoubtedly very gifted thinker taking shots at topics that passionately concern him, but not in an altogether unified way. Which of these pot-shots will particularly engage readers of this journal? As implied above, Knight sees miracles not as special acts of God but as outworkings of instructions within creation – a view interestingly parallel to that of Denis Edwards in his important new book *How God Acts* (also from Fortress). To assess a claim to mira-

cle we need to consider carefully both the anecdotal evidence and the theological plausibility. Knight's treatment of the resurrection takes him on to his consideration of visions, which, if authentic, are both culturally informed and contain a degree of reference to the reality behind them. In turn this leads him to his conviction that in the visions of every faith such reference may be present. These are large steps which many readers will not want to follow, though Knight's argument needs careful scrutiny.

When Knight reverts to the Fall, he picks up the Orthodox reading that the 'garments of skin' in Genesis 3 are humans' physical organs, and processes of growth and ageing resulting from the Fall. We live, after the Fall, in a subnatural condition, and it is this condition that science characterises. Nature is always graced, God is never absent from it, but we cannot see its condition truly. I felt there was an uncomfortable elision here – the Fall having both ontological effects, as relegating our condition to the subnatural, and affecting our knowledge, such that we see in a glass darkly, but without adequate reflection on how or when this occurred, or the relation between the two types of effect. Knight seems to incline both to an Origenist view of a Fall into a temporal universe, and to humans' own moral rebellion. The latter draws him into talking of the cosmic consequences of this rebellion before its historical manifestation, an ugly move reminiscent of the recent contortions of William Dembski.

Where does Knight end up, after this long and sometimes wandering journey? Within his overall 'pansacramental naturalism', he offers a 'neo-Byzantine model of divine action', which he sees as a refinement of the Thomist model of primary and secondary causality. God's presence and action are one and the same thing; God's single set of instructions to creation is intricate enough to respond to every contingency of creaturely life. Like a Thomist model, this is

based on a nontemporal model of God's presence with the world. Knight acknowledges, and rejects, the reservations of such as John Polkinghorne that such a model does not do justice to the God of personal relationship. This is a key fault-line – for Knight our experience as persons cannot necessarily clarify our understanding of God's suprapersonal action – for many, including myself, the most generous and loving of personal actions is our best clue to how God interacts with us, and temporality is an essential element in that interaction.

There are all sorts of deep reflections in this intriguing book, too many to do justice to in a short review. There are a few slips – 'antimony' for 'antinomy' introduced a soft toxic metal at unfortunate junctures. In some cases a key source is not fully cited, and in other cases a rather old source is used – going back for instance to Polkinghorne's *One World*, or Peacocke's *God and the New Biology*, seems odd when those writers added so extensively to their early positions. But these are small details in a rich confection, which will repay careful study.

Christopher Southgate is Research Fellow in Theology at the University of Exeter, and the author of *The Groaning of Creation: God, Evolution and the Problem of Evil* (Westminster John Knox Press, 2008).

R.J. Berry and T.A. Noble (eds.)
Darwin, Creation and the Fall – Theological Challenges

Nottingham: Apollos, 2009. 208 pp.
£9.99. ISBN: 978-1-84474-381-0

Although the evolution debate can sometimes feel a bit circular there are always one or two topics that are particularly relevant at any given time. This is partly because science is quite fast moving but also partly because of the changing rhetorical strategies adopted in the latest

creationist literature. In recent years both young earth and intelligent design creationists have begun moving away from expounding scientific sounding arguments in favour of providing head-on critiques of opposing philosophies, probably motivated by the writings of the New Atheists. Unfortunately the rhetorical tone of the atheist writings has been adopted by some in the creationist movement both as they reply to the atheists but also unfortunately when they attack other Christians such as those who hold to the theistic evolution position. In a recent debate a member of the audience thanked me for a thorough scientific defence of evolutionary biology but then said they could never adopt the theistic evolution position because it was simply bad theology expounded by liberals. He claimed that this was because theistic evolution has been formulated primarily by Christian scientists who view scientific evidence as far more authoritative than scriptural truth. The area that concerned him most was a 'watering down' of the doctrine of the fall, especially as understood by Paul in Romans 5:18, 'Therefore, as one trespass led to condemnation for all men, so one act of righteousness leads to justification and life for all men...'

Given this context the publication of *Darwin, Creation and the Fall* is particularly timely. The volume represents a collection of eight essays by four scientists and four theologians bookended by a foreword and conclusion from the editors R.J. Berry and T.A. Noble. The essays are based upon talks given by the authors during two meetings in 2009 celebrating the bicentenary of the birth of Charles Darwin and one hundred and fiftieth anniversary of the publication of *The Origin of Species*. All the authors are Evangelical Christians (11) and the purpose of the book appears to be to provide a robust and up-to-date defence of the theology of the theistic evolution position. The first essay by David Wilkinson discusses the doctrine of creation in the context of Christian worship. This is fol-

lowed by two historical essays: the first by R.J. Berry who looks at the past and present wrestle between evolution and the Christian understanding of humanity, and the second by Darrel R. Falk who examines the theological issues that faced Charles Darwin himself. The book then turns to the four theologians, Rick Hess who provides a helpful analysis of the early chapters of Genesis, T. A. Noble who discusses and clarifies the doctrine of the fall, A.N.S Lane who examines the view of the Fall and original sin taken by the early church father Irenaeus, and Henri Blocher writing on how the doctrine of the fall has been interpreted from the perspective of different attempts at a theodicy. Richard Mortimer then provides a useful commentary on some of Henri Blocher's wider thinking before the epilogue by the editors draws the different strands of the book together.

Overall I found the book helpful although sometimes struggled with the essays written by some of the theologians who were often not as clear as their scientific colleagues. This book is certainly useful for those with an interest in the evolution debate whilst both Wilkinson and Hess's essays definitely should reach a wider audience. However, as with any collection of essays, it sometimes takes a bit of an effort to follow the thinking so this book might not be an ideal recommendation for those who are new to the discussion.

Simon Kolstoe is a structural biologist at University College London Medical School, has a degree in philosophy, an interest in research ethics, and is on the committee of Christians in Science.

Elaine Howard Ecklund
Science vs. Religion: What Scientists Really Think

Oxford: Oxford University Press, 2010.
228 pp. hb. £16.99. ISBN 978-0-19-539298-2

There are two ways of reviewing this book, one charitably, the other uncharitably.

The charitable review goes something like this. *Science vs. Religion* is written by an American academic (Assistant Professor of Sociology, and the Associate Director for the Center on Race, Religion, and Urban Life, at Rice University), published by an American publisher (OUP USA), and intended for an American audience.

Misconceptions of what scientists think about religion abound in America. Millions of evangelicals think that scientists are inherently godless. Many atheists agree. Many Christians think science is the cause of scientists' unbelief. Many scientists think Christians, in particular evangelical Christians, are anti-science or that all religion is invariably fundamentalist. Such views are a travesty of reality and Ecklund does a good job proving that the truth is far more complex.

Some scientists are indeed determinedly anti-religious. One of her interviewees, a physicist called Arik, 'proudly' told Ecklund that his children 'have been thoroughly and successfully indoctrinated to believe as I do that belief in God is a form of mental weakness'. Many others are sincerely religious, however, and Ecklund is good in discussing the different strategies they employ for deploying (or hiding) their faith in public.

There is tension on both 'sides' of the debate. Some scientists, including atheists, are frustrated with the scientific rhetoric used by the New Atheists, and argue that 'scientists who are using evolutionary biology as a club against religion are really doing a lot of harm'. Many others, included Christians, are angered

by the Intelligent Design movement, which 'has made it really hard to be a religious academic'. A significant minority fall into the 'spiritual but not religious category' and a still smaller minority actively engage in dialogue between the disciplines, earning themselves the sobriquet 'boundary pioneers'. Overall, the picture is far more complex than popular opinion, particularly popular opinion in the US, sees it, and Ecklund does a good job of charting and classifying the range of opinions.

That is the charitable view. The uncharitable one is compelled to point out that to anyone even vaguely aware of the interface between science and religion over recent years, much of this is rather obvious and that the book seems determined to state and restate the anodyne. Thus when Ecklund remarks 'after 275 interviews with scientists, I found that their responses fell along a continuum from non-intervention [with religion] to active outreach,' one is tempted to respond, 'You don't say!'

Most disappointing are the data that Ecklund chooses (not) to employ in the book. Early on she explains that her study draws on data from one-to-one conversations with 275 scientists, and a quantitative survey of nearly 1,700 scientists. Quotations from the former abound but the book is almost entirely devoid of statistics, previously published in a series of academic papers. This may have seemed like a sensible publishing decision, on the basis that a book full of tables and graphs would have looked more forbidding and sold fewer copies, but it has made for a much less interesting and informative book.

Had Ecklund/ OUP USA chosen to include these data, it would greatly have improved the book. It is useful to hear that scientists have a spectrum of complex opinions about religion, but it would have been far more useful to have some idea of where on the 'belief spectrum' scientists lie and how they compare to the general public. Ecklund's study seems to

have generated such information but it is a great shame she and/or her publisher have chosen not to share it with us.

Nick Spencer is Research Director at Theos, the public theology think tank.

Denis Edwards

How God Acts: Creation, Redemption and Special Divine Acts

Minneapolis: Fortress Press, 2010. 207 pp. pb. £18.99. ISBN 978-0-8006-9700-6

Readers familiar with the six volumes on *Scientific Perspectives on Divine Action* resulting from the Divine Action Project (DAP) undertaken between 1990 and 2003, jointly sponsored by the Vatican Observatory and the Center for Theology and the Natural Sciences [CTNS], will be grateful to the author for providing a convenient summary of much of what is contained therein. The author, Australian Catholic Theologian Denis Edwards, a participant in two of those conferences, namely, *Chaos and Complexity* and *Evolutionary and Molecular Biology*, has produced a well-researched and scholarly monograph that can also double as a stand-alone introduction to the dialogue between scientists and theologians regarding how we might begin to understand God's action in the world.

In keeping with the thrust of the Divine Action Project, Edwards argues that while God's action is non-interventionist, it is real and always active. He defends his claim that this does justice to the universe as we understand it, yet remains true to the central Christian truths concerning the goodness of God, God's promises, and the eschatological future of creation.

Within the space of 179 pages, the author manages to address topics such as providence, miracles, resurrection, Divine suffering, the transformability of the material world, original sin (as a fall from grace), the eschatological future of animals, resurrection and intercessory

prayer. A central theme is the Christian doctrine of creation in relation to the scientific picture of an evolving universe, in which natural processes are seen to have their own integrity.

Not surprisingly, Edwards raises the familiar theodicy question, 'Why does God, who is love, permit so much death and destruction?', a matter recently brought again into sharp relief by the New Zealand and Japanese earthquakes. Following N.T. Wright, he suggests that Romans 8: 19-25 provides the deepest New Testament answer to the problem of evil.

In seeing creation as God's self-bestowal in love and the centrality of what he calls the '*The Christ event*' (i.e. the incarnation, life, death, resurrection and ascension of Jesus Christ), Edwards follows fellow Catholic Theologian, Karl Rahner. He asserts, 'that this divine self-bestowing love enables evolutionary emergence, creates through processes that involve chance and lawfulness, enables creaturely autonomy to flourish, is characterized by a divine love that accepts the limits of creaturely processes, and acts with regard to creation in a non-interventionist way' (36). When referring to the kingdom of God and resurrection as transformation, the author again draws on insights from N.T. Wright.

The author sees Jesus' coming into the world as God's great act of self-disclosure and the Cross as God's saving act, bringing good out of evil. However, Edwards does not subscribe to a substitutionary view of the atonement as a result of God's intended will. Rather he sees the resurrection as being more important, ushering in the beginning of the new creation.

With regard to miracles, again influenced by Rahner, Edwards sees them as signs of God's saving action but not as interruptions to the laws of nature! He argues that God's respect for the integrity of secondary causes may mean that he acts in and through both currently known and as yet unknown laws of

nature (84-6). These views are expounded more fully elsewhere (See e.g. William R. Stoeger, *Quantum Cosmology and the Laws of Nature: Scientific Perspectives on Divine Action*, Vatican Observatory/CTNS, 2006, 207ff.).

The book concludes with a most insightful chapter on intercessory prayer that covers important practical pastoral issues.

In strongly recommending Edwards's book, this reviewer acknowledges that it has already proved to be a valuable a source of helpful insights for conversations with fellow Christians, agnostics and atheists.

John Pilbrow is Emeritus Professor of Physics, Monash University, and Immediate Past-President of ISCAST (Institute for the Study of Christianity in an Age of Science and Technology, Australia).

John F. Haught
Making Sense of Evolution: Darwin, God and the Drama of Life

Louisville: Westminster John Knox Press, 2010. xvii + 163 pp. pb. £12.99. ISBN 978-0-664-23285-6

This is the latest book from an author who is well known for his highly readable explorations interweaving theology with evolutionary thought, drawing particular inspiration from the process philosophy of A. N. Whitehead. This volume weaves in some new elements, while revisiting others that he has addressed in earlier books. As one might expect from the title, his target audience is those captivated by the atheistic mantra of authors such as Richard Dawkins and Daniel Dennett. His stated intention, at least, is to weave in new scientific insights into theological reflection. But this is not so much a theology according to particular key classical Christian doctrines such as creation, Christology or eschatology, as one that draws in elements of all these around key

themes that arise in the evolutionary account in order to construct a theology of evolution. A book of this type would not be complete without some discussion of Darwin's biography and theories, but, published in the wake of the flurry of activity around Darwin's anniversary year in 2009, some of this discussion is perhaps a little tired. Each chapter is, however, a remarkably short vignette on themes all beginning with the same letter for maximum rhetorical impact; that is, Darwin, Design, Diversity, Descent, Drama, Direction, Depth, Death, Duty, Devotion and Deity. This might create the impression of a ladder of ascent, from the created world through to humanity and God, and later in the book it is clear that this is precisely what Haught wants to do, as he resists any total flattening of reality or lack of distinctions between creatures.

However, he detects implicit theological themes of design, diversity and descent in Darwin's original work; how far this is a justifiable hermeneutic through which to read Darwin's work is at least plausible. Yet in claiming that Dawkins and Dennett are also crypto-theologians in a negative sense one wonders if the same accusation could be levelled at Darwin, except in his case Haught sees Darwin's theology as rather more benign, rather than deliberately substituting religious belief in the manner of the New Atheists. The layered understanding of reality that Haught advocates in relation to design is similar to Arthur Peacocke's top down approach to levels of reality except that the explanatory levels in Haught's case do not seem to intersect. But there are problems in claiming, as Haught does at the start of the book, that this amounts to a way of integrating or assimilating theology and science, since if theology works at a different level, then it seems to be *disengaged* from the scientific view and it would be entirely possible to have views from one layer of explanation that were incongruent with views in another layer. What Haught seems to be objecting

to here is the scientific layer *aping* a form of metaphysics that should be occupied by theology, not least in Darwin's account that he believes works to replace theology's role of explaining ultimate existence. Of course, the advantage in separation into layered reality in the manner that Haught attempts is that there is no possibility of conflict between two levels of explanation. The difficulty is whether reality can be so neatly divided in this way, even if crude versions of science becoming scientific or theology claiming to act as science amount to gross distortions of the respective disciplines.

Haught does not seem to want science to be completely untouched by theological reflection in arguing for an interweaving of the two through taking up the thread of drama. But in spite of the book title, this theme seems to be more of a rhetorical device through which to understand a grand narrative as portrayed in process thought. There is, therefore, disappointingly rather little here on precisely what drama might add to the discussion theologically, apart from the more obvious examples of how to consider life itself as a form of drama. The drama here is therefore one that is subsumed under a grand narrative characteristic of process thought, and it is a theme that Haught has developed on repeated occasions elsewhere, namely, a vision of the universe open to being infused with 'being, goodness and beauty as it is drawn towards its Absolute Future' (52). But when Haught argues that the drama of evolution in its 'tedious scientific detail' is part of the drama that we find in God (53) is he not fusing the two levels of explanation that he has argued in the first part of the book need to be kept separate? Further, he is ready to admit that this drama is actually 'a great epic', but does not this take away something of the particularity that is the essence of what drama brings? The theme of drama/narrative then takes on a life of its own through the rest of the work, becoming at times almost lyrical in its expression.

Overall Haught has done us a service in writing this book. It is bound to annoy academic specialists by a certain lack of precision and at times leaving ideas undeveloped or undefended. But its lively style, its analysis of problems in popular debate, and its determination to engage those who might find themselves confused by media coverage of the issues makes this a commendable book for students of theology, science or the general reader.

Celia Deane-Drummond is Professor of Theology and the Biosciences in the department of theology and religious studies at the University of Chester.

Michael Hunter

Boyle: Between God and Science

New Haven and London: Yale University Press, 2009. 366 pp, 46 b/w plates in text. hb. £28.00. ISBN 978-0-300-12381-4

Considering his great eminence as a leading figure in the early scientific movement, and as a man who was once reverentially referred to as 'the father of chemistry', the Hon. Robert Boyle has attracted astonishingly few modern biographers. Indeed, Michael Hunter's book is the first full-length scholarly biography since that by R. E. W. Maddison in 1969. In some ways, however, this is an understandable omission, for Boyle was probably the most complex, multifaceted, and in some respects the most 'alien', of the early Fellows of the Royal Society for a modern biographer to come to terms with. Alien in so far as whole realms of his abundantly-documented outer and inner life display deep concerns with a network of subjects that mean relatively little to most modern, as opposed to seventeenth-century, people. These include 'casuistry', deep moral analysis, a tender conscience regarding oath-taking, the dilemma faced by a Christian who no longer feels he has the resources with which to honour previous charitable pledges, constant spiritual

self-examination, and concerns about his salvation. It may seem a far cry from the Boyle of the gas laws or the *Skeptical Chymist*, but as Michael Hunter reminds us, they all relate to the same man.

Professor Hunter comes to his biography magnificently well prepared, not only having spent much of his distinguished academic career studying the early Royal Society, but also having edited *The Correspondence of Robert Boyle* (6 vols., Pickering and Chatto, London, 2001), along with Antonio Clericuzio and Lawrence M. Principe. For *Boyle, Between God and Science* is not just about Robert Boyle the influential scientist, but about the life of a privileged, tender-conscienced and profoundly devout man who was all too aware of the responsibilities that devolved upon one of his high station. Moreover, this is not a retrospective study by a present-day science historian trying to fathom the origins of modern science, but one which is kept firmly in the context of the seventeenth century, with its radically different values from those of the world of modern science.

Boyle follows a narrative structure, and makes extensive use of abundant surviving manuscript remains dating from all parts of Boyle's life. A product of the new Anglo-Irish aristocracy, Robert was the seventh son of Richard Boyle, First Earl of Cork, a shrewd English operator who originally hailed from Canterbury before seeking his fortune in Ireland. He grew up to be an instinctively devout, earnest, and responsible boy, who proceeded with his brothers to Eton, then to undertake a largely Geneva-based European Grand Tour. He never went to Oxford or Cambridge, or fought in the Civil Wars, but came to inherit as part of his patrimony Stalbridge Manor, Wiltshire, which was his principal residence for the rest of his life when he was not staying with his sister Lady Ranelagh in London or in lodgings in Oxford.

Boyle's original interest, which never left him, was what we might now call

Christian moral philosophy; but his encounter with the new scientific method and the apparent truth-finding potential of the new experimental science was to lead him into that career in scientific research for which he is best known today.

Boyle saw scientific research and discovery as essentially revelatory, in which the experimenter was privileged to have revealed to him new aspects of God's Creation hitherto unwitnessed by mortal eyes. Science was, therefore, a deeply spiritual and prayerful activity. Robert Boyle also saw it as innately useful to mankind, as the provider of new medicines or products that alleviated human suffering. In some respects, therefore, the scientist was analogous to a prophet or a channel of divine grace.

Throughout his life, however, the profoundly Protestant Robert Boyle was prey to a nagging sense of doubt. This was not a doubt of the existence of God or divine grace, so much as a concern about his own salvation and whether, on Judgment Day, he would be found wanting. I have mentioned his worries about the swearing of oaths, and whether or not it was blasphemous to invoke the name of the Almighty routinely and unnecessarily. For Boyle had a profound sense of God's majesty, and of the proper way in which mortals – especially privileged ones who had been shown new wonders by means of science and intellect – should respond. Similarly, from at least his years as an Eton schoolboy, he had been troubled by what came to be known as his 'ravings', or the tendency of his mind to escape conscious, disciplined control, and engage in all sorts of unintended mental activities. Could these 'ravings', along with his self-perceived shortcomings, be held against him in Judgment? Michael Hunter suggests that the 'ravings' may well have indicated that Boyle was mildly autistic.

Boyle is elegantly written, free from jargon, and very readable. It is also a meticulously-documented biography, con-

taining, in addition to 46 pages of notes and references, a 34-page 'Bibliographical Essay' which provides bibliographical synopses for each chapter. This is the definitive present-day study of Boyle, and makes a huge contribution to our wider understanding of science, Christianity, providence, and salvation as they were understood in the seventeenth century.

Allan Chapman lectures in the history of science in the History Faculty at Oxford and lectures extensively on the history of science in England and abroad.

Kölbl-Ebert, M. (ed.)
Geology and Religion: A History of Harmony and Hostility

London: Geological Society. Special Publications 310, 2009. 357 pp. hb. £95. ISBN 978-1-86239-269-4

This book is a treasure-store of good things and a pleasure to review. The title indicates its scope; it ranges wider than modern young-earth creationism although it certainly includes that. Rather, '(t)his book considers the development of geology from mythological approaches towards the European Enlightenment, biblical or geological Flood and the age of the Earth, geology within "religious" organisations, biographical case studies of geological clerics and religious geologists, religion and evolution, and historical aspects of creationism and its motives'. Some thirty-two essays, some quite specialised, and all replete with further references, throw welcome light on many lesser-known aspects of the relationship between religion and geology.

The editor provides in the first essay a historical perspective on current problems and writes, as do others, from a critical-realist Christian perspective. She highlights the important issues of how science is taught, and how students are encouraged (or *not* encouraged) to reflect

on religion and faith, and is 'appalled' (5) by the rise of fundamentalism. Especially relevant here is the paper by S.O. Moshier, D.E. Maas and J.K. Greenberg of Wheaton College, Illinois, on the history of the reception and teaching of mainstream geology in this well-known evangelical theological college since its foundation in 1860.

While much of the book's content refers to geology and Christianity, three essays venture into other territory. The relationship between water, geology, engineering and Inca cosmogony in the Peruvian Andes is dealt with by L.F. Mazadiego, O. Puche and A.M. Hervás; explanations of the earth's features in pre-Meiji Japan by P. Barbaro, while J. Zhang and D.R. Oldroyd describe Chinese glaciology during the Mao Tse-tung period. Given current interest in Islamic influences on modern science and Islamic versions of creationism, a notable omission is any essay on these subjects; nor do the words 'Islam' or 'Qur'an' appear in the 9-page index at the back of the book.

Some contributors will be known to members of *Christians in Science*. Martin Rudwick's essay 'Biblical Flood and geological deluge: the amicable dissociation of geology and Genesis' describes how evidence interpreted in the early nineteenth century as a widespread flood (and later as of glacial origin) became gradually dissociated from what is recorded in Genesis 6-8. Davis Young in 'The reception of geology in the Dutch Reformed tradition: the case of Herman Bavinck (1854-1921)' reports how evidence for the great age of the earth was not as well-received in Dutch Reformed theology as elsewhere because Bavinck was not working with the best information available. Michael Roberts ('An Anglican Priest's perspective on the doctrine of creation in the church today') notes with concern the rise of young-earth creationism in the British Isles, and its influence in the University and Colleges Christian Fellowship.

Of many other features of this book

that are worthy of mention, one must suffice. Given that phenomena such as earthquakes, volcanic eruptions, floods and tsunamis may cause widespread suffering, loss of life and damage, two studies dwell on the relationship between geological processes and the providence of God. A historical study by A. Udiás describes controversies amongst theologians and philosophers in Spain in the seventeenth and eighteenth centuries following the earthquakes at Malaga (1680) and Lisbon (1755) as to whether these were to be understood as divine punishment. A very different paper is presented by R.A. Peters on theodicean creationism, in which God the creator is removed from any guilt with regards to natural evil. Writing as 'a former insider', he describes how natural history is rewritten in order to satisfy the tenets of a form of creationism which is, in fact, a form of theodicy. He also challenges Christians of critical-realist persuasion not to write off creationists but to seek understanding with courtesy; a hostile approach merely reinforces the divisions.

Michael Roberts' essay mentioned earlier touches on this subject from a different standpoint. He affirms the kind of theodicy presented by theologians such as Sir John Polkinghorne, who relate the issue of suffering to the freedom God gives human beings within the world, and in which, in the Incarnation, God enters into the suffering of the world rather than sitting blissfully outside it (341f.).

There will be few readers, suspects this reviewer, who will not open this admittedly rather expensive, but beautifully produced, volume and immediately come across many aspects of the subject that are completely new to them. In bringing such an enterprise to fruition the Geological Society of London and the book's editor, from Jura-Museum Eichstätt in Germany, are to be congratulated.

Ron Elsdon is Rector of St Bartholomew's Church Belfast, and a former Lecturer in Geology at University College Dublin.

David Lewis-Williams
Conceiving God: The Cognitive Origin and Evolution of Religion

London: Thames & Hudson Ltd., 2010.
320 pp. hb. £18.95. ISBN 978-0-500-05164-1

We've all heard you shouldn't judge a book by its cover and this book is no exception – if you mean the front cover. From the title, you might expect a scientific account of religion that draws upon the latest in cognitive science and evolutionary studies – two thriving areas of research. You'd be disappointed. Despite the author's repeated genuflection at the altar of almighty Science, you'll find very little science in the book's 320 pages. For a more accurate first impression of the book's contents, look at the back of the dust-jacket. There you'll find an endorsement by Phillip Pullman, the anti-religious novelist. Now you have the picture. This book is a diatribe against all religions and contains more fiction than fact.

The vitriol with which David Lewis-Williams (DLW) blindly attacks Christianity in particular casts doubt on his trustworthiness as a historical and scientific guide through the material he presents. Three illustrative instances make the point:

(1) Throughout the book DLW assures us that *all* religious observance is irrational. Strangely, then, when discussing St Paul's Christian theology, Pharisaic legalism suddenly becomes rational. 'This experience [on the road to Damascus] inundated and swept away all rational thought, and he [Paul] began to proclaim the doctrine of salvation by faith (a mental state) rather than by rational observance of the Law (an empirical practice)' (38).

(2) In his presentation of the Roman persecution of Christians under Roman emperor Diocletian DLW concludes that the Christians only have themselves to blame for their endemic intolerance: 'By and large, the Romans had been tolerant of religions other than their own, as long

as everyone acknowledged, or respected, the Roman gods. Early Christians, following the Old Testament commandment to have “no others before me” (Exodus 20:3; Deuteronomy 5:7), refused to be tolerant of Roman beliefs, and hence the persecution (41). They had it coming!

(3) In rebuttal of Keith Ward’s argument that while religions have been responsible for great wrong, they have also promoted great good, DLW says, ‘Who is to say what constitutes “good” practice and what is “bad” practice? The Christian Crusaders (the original jihadists) believed that they were doing God’s will and waging a “holy war” (206). That’s right: DLW says that Christians were the *original* jihadists.

The sloppiness of scholarship and thinking that plagues this book is simply astounding. This lack of care to be consistent in argument, fair in evaluation, and accurate in presentation means the reader is unable to take anything DLW writes at face value – even when it comes to his own area of expertise: archaeology of religion. *Conceiving God* is clearly not a piece of popular scholarship but more likely DLW’s attempt to write his way into the New Atheist brotherhood.

Despite this book’s constituting little more than a polemic, DLW makes some good observations. By virtue of our common biological endowment as humans – including our nervous system – we would expect that we have common experiences of different types of consciousness. Like-

wise, pathologies or even just unusual experiences brought upon by environmental toxins, duress, or blows to the head might also have characteristic features. These experiences would undoubtedly be speculated about: why did that happen? What does it mean? We might even expect a degree of convergence regarding what kinds of explanations or interpretations get assigned to these various experiences. So far, so good.

What DLW misunderstands is the implication of such an account. He appears to regard the origins of religious beliefs in neural activity as a competing and defeating interpretation of the events. That is, DLW commits the genetic fallacy repeatedly. What is worse, DLW should have known better. One hero he quotes and cites repeatedly, William James, made very clear in his *Varieties of Religious Experience* that for the scientist that regards humans as fully embodied, all experiences – religious or otherwise – have a corresponding neurological account. Identifying that the origin of a belief was brain activity was irrelevant to the truth, goodness, or utility of a belief.

Conceiving God contributes little new or helpful – even by way of a foil – for science and religion scholars.

Justin L. Barrett is senior researcher in Oxford’s Centre for Anthropology and Mind, and lecturer in the Institute of Cognitive and Evolutionary Anthropology.