

## Reviews

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**Stephen C. Meyer**  
***Darwin's Doubt: The Explosive***  
***Origin of Animal Life and the Case***  
***for Intelligent Design***

New York: HarperCollins, 2013. 498 pp.  
 hb. £17.90. ISBN 978-0-06-207147-7

Stephen Meyer's previous book, *Sig-nature in the Cell*, sought to show that evidence for an Intelligent Designer is written into life's genetic code. Now this philosopher of science turns his eye to the Cambrian 'explosion' – the diversification of complex animal life some 500 million years ago. He contends that the major animal groups (phyla) arise suddenly, without the intermediate forms or ancestors that natural selection would predict. On this basis, he discounts natural selection as an explanation for the origin of complex body plans (without denying it a role in post-Cambrian history). Instead, Meyer contends that information was added by an intelligent agent, through an unspecified process that we cannot directly observe. Unfortunately, both his central tenets meet with substantial difficulties.

First, Meyer constrains the Cambrian explosion to a geologically brief five million year spell. This figure comes from a twenty-year-old study that revised the date at which the explosion began (72). The reader is not told that the *end* of the explosion was redated soon afterwards, restoring its length to a more conventional 25 million years. Meyer substantiates this 'five million year' illusion by highlighting a detail from a separate study (73) – but ironically, the study itself explicitly states a 25 million year long explosion.

Secondly, Meyer defines a 'phylum' in a fundamentally confusing way – despite the elegantly lucid alternative expressed in one of his key references (Budd & Jensen 2000, *Biol. Rev.* 75).

Put succinctly, every member of a phylum must possess all features of the phylum's characteristic body plan. For example, membership of Phylum Onychophora – the rainforest-dwelling 'velvet' worms – is restricted to organisms that possess differentiated jaws, slime glands, stubby telescopic legs with flexible feet *and* claws with a cone-in-cone construction. The earliest fossils that exhibit this complete body plan are a mere 40 million years old, which provides a date for the origin of the phylum. Yet Meyer includes superficially similar Cambrian fossils – lobopodian worms (pl. 8–10) – within this phylum, stretching the group's apparent 'origin' back 470 million years to the Cambrian period.

This is a mistake. Some lobopodians represent ancestors (or more accurately 'great-aunts') of onychophorans; others share many features with Phylum Arthropoda and are intermediate between, or even ancestral to, both these phyla. This is not the only example – the Cambrian fossil record contains countless other taxa that exhibit incomplete precursors of modern body plans. By shoehorning these ancestors into the groups themselves, Meyer both obscures the beginnings of the modern phyla and deprives the term 'phylum' of any useful meaning. His approach obscures the incremental nature by which modern body plans arose, and falsely implies that today's phyla appeared, fully formed, in the Cambrian.

Meyer concludes that 'vast amounts of new functional or specified information' (168) appeared in a geologically short 'explosion', and infers that this information can only have arisen through outside intervention. To assess his claim it would be necessary to calculate the maximum rate at which 'specified information' might naturally arise. Alas, as Meyer offers no way to quantify

'specified information', his hypothesis cannot be falsified and thus lies outside the (Popperian) domain of science.

Meyer's otherwise engaging and highly readable background on the origin of animal diversity is undermined by selective representations of the literature and persistent conceptual misunderstandings. This is not to belittle his laudable search for signs of the supernatural in the natural world: we know that God made the earth and all that is on it (Neh. 9:6). He also holds creation together (Col. 1:17), whether that manifests itself in the provision of rain, the growth of grass, or the feeding of animals (Ps. 147:8-9). Under the uniformitarian approach that Meyer advocates (393), the present is the key to the past; if natural explanations suffice to describe God's ongoing involvement with creation, could they also account for the origins of animal diversity?

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**Colin Bell, Jonathan Chaplin,  
Robert White**  
*Living Lightly, Living Faithfully:  
Religious faiths and the future of  
sustainability*

Cambridge: The Faraday Institute and the Kirby Laing Institute for Christian Ethics, 2013. 301 pp. pb. \$7.00. ISBN 978-0-9559074-3-2

This book has an ambitious agenda. As it states, the environmental crisis, and in particular the effects, current and predicted, of climate change are 'the worst thing that has ever happened on the planet and it is happening now.' (28) In light of the seriousness of the issues the question the book addresses is one of the defining issues of the age for anyone of faith: 'Can the beliefs and practices of major world religions make a meaningful contribution ... or will

invoking faith bring distraction or divisions to the environmental movement when maximum unity is required?' (11) To answer the question a range of speakers took part in a conference in Cambridge and the essays in the book are a record of the presentations given. Although a number of disciplines are represented, including campaigners, NGO practitioners and those involved in business, the majority of the contributors have an academic background and this is reflected in the text. In terms of religious diversity there are strong voices from the Christian and Muslim faiths and to a lesser extent from Buddhism.

To answer this vital question the book is divided into six parts. Following an excellent preface where Bill McKibben sets the scene for the 'Challenge of Sustainability', Part 1 entitled 'Sustainable Growth' starts by looking at whether economic growth is compatible with ecological principles and then moves to a Christian, Muslim and Buddhist critique of current economic practice. In each case the authors, working from their different religious world-views link 'easy or lackadaisical ethics in relation to money, credit and interest' with climate change. Strong alternative economic ethics are presented from each religious tradition. Part 2 looks at 'Sustainable Consumption', with a return to questions of ecological v economic models and an in-depth look at value drivers. Part 3 'Sustainable Production' comes the closest to some practical application of theory with a 'critique of sustainability in the business world from a Christian perspective' (chap.7) and a case study of energy (chap.8). Part 4 examines issues around governance and campaigning with, particularly in chapter 11, some practical ways in which engagement with the world's religious communities is strategic for the environmental and conservation agenda. Part 5 with the title 'Sustainability Potential' picks up the thread of strategic engagement with

Christian and Muslim communities. Elaine Storkey in particular returns to the central question of the book and looks honestly at both the positive potential for engagement with the Church but also cases where certain theological interpretations are increasing the environmental problems. Part 6 brings the questions down to the congregational and personal level with a consideration of how churches, mosques and temples will be tested with increasing environmental impacts felt by the communities they serve. Ruth Valerio's contribution is a tonic after reading so much bad news, as she shares insights in how to live a hopeful life in such a landscape of loss.

In conclusion the book brings together a cross discipline and multifaith perspective on the key question as to whether the world's religions will be part of the solution or part of the planet's great environmental crisis. Although the authors show that there are huge resources in the religious texts, traditions and communities for the environmental task ahead of us, the book is light on practical examples where religious communities are making a significant contribution; where, because people believe what they believe they live differently and are engaged in the planet's biggest problem. In that regard the book reflects a sad reality. In twenty years of 'Creation Care' work it has been my experience that it is usually only a minority who integrate their faith in their work, travel, shopping and everyday lives. However, I have also seen the extraordinary difference it can make when communities do live holistically by their faith. As the book demonstrates there is no neutral ground here – how we live matters.

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**Thomas Nagel**

***Mind and Cosmos: Why the Materialist, Neo-Darwinian Conception of Nature is Almost Certainly False***

Oxford: Oxford University Press, 2012.  
130 pp. hb. £16.99. ISBN 978-0-19-991975-8

*Mind and Cosmos* is an excellent title for these pages. Sadly it is the subtitle, *Why the materialist, neo-Darwinian conception of nature is almost certainly false*, which has drawn most attention, and generated more heat than light. In a critical review for *The Nation*, Brian Leiter and Michael Weisberg attribute this 'mischief' to the publisher.

Thomas Nagel is a distinguished philosopher whose arguments against reductive physicalism are well known from his seminal 1974 essay 'What is it like to be a bat?' and his 2002 response to Kripke, 'The Psychophysical Nexus'. What is new is an extended argument that the mind-body problem 'invades our understanding of the entire cosmos and its history' (3). If the extraordinary advances in physics and biology since the seventeenth century were achieved by 'excluding mind from the world' (9), then mind must somehow be re-integrated if the rational and evaluative intelligibility of nature to conscious subjects is itself to be rendered intelligible.

If certain features of nature appear upon conscious reflection, but could not appear otherwise, the question arises not only as to their ontological status, but to what implications they have for the historical processes which gave rise to their discovery. The strong claim of *Mind and Cosmos* is that these processes must be reconceived in light of what they have produced, if Cartesian dualism and psychophysical reductionism are false.

Noting that 'theism pushes the quest for intelligibility outside the world' (26), Nagel's goal is intelligibility 'from within' (paralleling Hegelian trends in Christology), although it is not clear

why this is incompatible with theism. Nagel confesses his rejection of theism to be ungrounded assumption, recalling that 'fear of religion' he described in *The Last Word* (1997): 'I don't want there to be a God, I don't want the universe to be like that', but 'theism' here seems as ill-defined as 'naturalism'.

Nagel admits he may be wrong about materialistic reductionism, but seeks to outline conditions that an alternative account, plausibly a 'non reductive neutral monism' would have to meet. The target of these speculations is a naturalistic *Weltanschauung*, or 'what scientific optimists mean by a theory of everything' (9). Nagel assumes the possibility of 'an all-encompassing form of understanding', but questions the presumption to know the form of intelligibility in which the unity of science will be disclosed. In a spirit of intellectual humility, he hopes to 'extend the boundaries of what is not regarded as unthinkable, in light of how little we really understand' (127).

Invoking Leibniz's Principle of Sufficient Reason, Nagel seeks to demonstrate why the prevailing materialist orthodoxy *cannot* plausibly provide a sufficient 'constitutive explanation', and that neo-Darwinian orthodoxy *cannot* plausibly provide a sufficient 'historical explanation' for consciousness, cognition and evaluation. In chapter 5 (on 'value') he takes the second horn of Sharon Street's dilemma between Darwinism and moral realism. 'Street's argument relies on an empirical scientific claim to refute a philosophical claim in meta-ethics. I, even more strangely, am relying on a philosophical claim to refute a scientific theory supported by empirical evidence.' (106)

As Elliot Sober replies in *The Boston Review*, Nagel's argument seems to imply that Darwinian explanations are *incomplete*, not that they are *false*, but to see this is to recognise that what is perhaps most controversial is not his conclusion but the conditions Nagel

sets for explanation, upon which his argument turns. 'Explanation, unlike causation, is not just of an event, but of an event under a description. An explanation must show why it was likely that an event *of that type* occurred' (47). Expectation is a heavy constraint on explanation As Sober observes, cannot something be both remarkable and real, yet unlikely and wholly unexpected?

It is conceivable that our cognitive and moral faculties are search engines in a wider world, not 'merely' strategies for survival in a 'world-flattening reductionism', but rather than rejecting materialist or Darwinian explanations, we could simply reject Nagel's requirement for intelligibility – that an explanation reveal the *explanandum* as a thing to be *expected*. This requirement is why Nagel rejects 'theistic intentionality' and 'physical causality' as possible explanations. Appeals to Intelligent Design add nothing to our actual understanding of why these particular features emerged when and where they did in the course of time, but nor does appealing to some underlying material cause. 'That leaves teleology' (121): 'the propensity [not just the possibility – sic.] for the development of organisms with a subjective point of view must have been there from the beginning' (61).

In essence, this is a form of the strong anthropic principle. It is also highly controversial, because as Sober explains, 'the conventional story of the emergence of modern science maintains that Galileo and Newton forever banished Aristotelian teleology'. If rumours of philosophy's death at the hands of cosmology have been greatly exaggerated, *Mind and Cosmos* is certainly cause for thought.

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**Justin Tomkins**

***Better People or Enhanced Humans? What it might mean to be fully alive in the context of Human Enhancement***

Sunnyside Books, 2013. 205pp. pb. £7.99.  
ISBN 978-0-9576718-0-5

The bioethics literature these days seems to be deluged with books and articles on human enhancement, including moral enhancement. As one reads more and more of these, troubling issues emerge. The major problem is to know what so many of the writers actually mean by the term ‘enhancement.’ For some drinking a glass of water or cup of coffee is enhancement, and if this is enhancement so is everything else that may improve human existence or extend life span by ten or even 500 years. If routine activities can be justified, so can the most radical of enhancements. Others are more circumspect, making clear distinctions between therapy and enhancement, between treatment and improvement, thereby limiting enhancement to means (frequently speculative) of improving bodily and cognitive performance beyond what is currently possible.

But of what relevance is this morass of debate and controversy to Christians and the church? On the surface it sounds highly academic in the worst sense of that word. However, it does not take much reading of the literature to realise that proponents of radical enhancement are on a religious quest, albeit one with no supernatural connotations of any description. For them, human beings have all the ability and technological know-how necessary to overcome limits imposed by disease, ageing and ultimately death. Immortality beckons, a physical form of immortality, dependent upon our own expertise and creativity. No longer is there any room for God or for any hint of spirituality.

That is the background to this book by Justin Tomkins, written during his

theological training and prepared with church groups in mind. In a mere 200 pages he spans the broad vistas of the enhancement debate, providing accurate information on some of the main currents in the debate and endeavouring to ground his responses within a theological context. Indeed it is these reflections that mark out this work as being so valuable.

The book is worth reading for a number of insights. Three examples will suffice. Tomkins points to the deliberate attempt made by some to blur the distinction between therapy and enhancement. The aim of this move is to transform all ‘normal’ activities into enhancements, thereby justifying the notion of radical enhancement. Secondly, he reminds us that looking to medicine (especially in the guise of enhancement) to fix the ultimate problems of the world will lead to excessive (and misleading) reliance upon human endeavours. Christians, by contrast, have not been called to the task of looking to human enhancement as a tool for ending ageing and death. Thirdly, the command to love one’s neighbour incorporates caring for communities and not just individuals; in this it protects us from the selfishness that could destroy our very identity (a selfishness so glaringly demonstrated by many advocates of radical enhancement).

Tomkins calls for Christian churches to model an alternative to a world of enhancement as he works through the dangers of idolising technological efficiency. For him this is the profoundly life-changing lifestyle to which we are being called. How this will work out requires far more space than Tomkins has here, and whether he is correct in envisaging a world in which Christians will find themselves outsiders in a technologically enhanced and virtual world remains to be seen. I doubt this, but there is much food for thought here.

Tomkins refers to three visions of enhancement, enshrined in the writ-

ings of Aubrey de Grey, Lee Silver and Ray Kurzweil. The theological tools he employs to address the vistas opened up by these extreme forms of enhancement are what he refers to as tools of eschatology, with particular emphasis on love of God and love of neighbour. In dealing with these themes, he stresses the centrality of the human body that is to be valued as a gift of God and modified only in ways that continue to recognise the intimate connection between our body and our identity. It is at this point that he could have referred to the writings of Julian Savulescu and associates from Oxford, who also pose radical challenges to those of faith.

There are many gems in this little book that is written in a readily accessible style and language – quite a feat for a topic as complex and demanding as this one. The discussion questions at the end of each chapter provide a rich source of stimulation for group discussions, while the notes and references are useful for those wanting to look more deeply into the matters raised in the book. I sincerely hope that churches will rise to the challenge of engaging with this unlikely, but surprisingly relevant, topic.

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**D. Evers, M. Fuller, A. Jackelen, and T. Smedes (eds.)**  
*Is Religion Natural?*

London & New York: T&T Clark, 2012.  
210 pp. pb. £33.99. ISBN 978 0 5672 2727 0

For those new to this material the book opens with a chapter by Justin Barrett that is one of the most concise and non-polemical introductions to this field available. Additional chapters also review this research from the cognitive science of religion (CSR), some in order to defend it and others in order to criticise it heavily. Some clearly regard cognitive science as a threat to religion

and embrace it for that reason; others reject it for precisely the same reason. While most of the authors argue that the CSR poses no significant threat to the truth claims and practices of the world's religions, and while none of the chapters represent the most virulent anti-religious CSR arguments that have often dominated the discussion in the popular media, still this book represents a fair sample of the kinds of discussion the CSR has engendered. In addition there are representative responses from within both the Christian and Islamic traditions and references to other traditions as well.

By natural is here meant that our cognitive system makes arriving at, understanding and transmitting some basic religious concepts easy, virtually inevitable. Acquiring them requires little or no instruction (although cultural teaching can obviously build upon and elaborate these more basic ideas). CSR research finds that, even without family input (and even in opposition to it) children 'naturally' arrive at the beliefs in an omniscient divine agent or agents, a world intentionally created, and later in a soul distinct from the body.

Several themes run through most of these essays. One is methodological and concerns naturalism, reductionism and the study of religion. CSR obviously argues for a naturalistic approach to understanding religion. There is clear disagreement within CSR ranks about whether its naturalistic accounts should be regarded as complete and final or whether a cognitive scientist can also endorse other methods as well. But all proponents of CSR insist that it is a valid and important (and perhaps the most fundamental) approach to understanding religion. Several authors in this collection take issue with that claim. They argue instead that naturalistic approaches are inherently limited when it comes to understanding religion and that such approaches should be rejected or at least supplemented by other methods.

Another common, more philosophical, theme that follows on the methodological debate, concerns the status of naturalism as a world-view. Some authors clearly think that naturalism is the most rational and only true world-view. Many here dispute that claim, arguing with direct reference to the findings of CSR rather than in general terms. That dispute partly plays out around the topic of defining human nature: can human beings be completely and comprehensively described in naturalistic terms alone? Or does an account that does justice to the full range of human experience require constructs and models that go beyond the strictly naturalistic?

A related theme that does not get as much play here as in some other volumes debating CSR, is the role of culture. CSR proponents often make a big point of contrasting the natural and the cultural. Saying religion is natural, they usually insist, means that it is not fundamentally (let alone entirely) the result of cultural influence. Most of the authors here, even when they are intensely critical of CSR, appear to accept that fundamental CSR claim. Readers particularly sensitive to that topic will have to look elsewhere for an in-depth treatment of it.

The main thrust of this book seems to be the encounter of CSR with theology in particular and less with its possible impact on religious studies in general. At least three of the book's editors and many of the authors appear to be professional theologians (an odd but important editorial omission is that the book appears to contain no biographical or even identifying information on the authors). Basic articles are provided by cognitive scientists and philosophical concerns around epistemology, naturalism and scientific explanation are mentioned in many places. Still, the deep structure here seems to be, in the words of one chapter title, 'What could theologians possible learn from the cognitive study of religion?'

So this collection is probably most relevant for the theologically-minded reader. One need not be a professional theologian or philosopher of religion. The chapters contain little technical theology or philosophy. Quite the reverse. The text is remarkably clear and readable and complex topics are accessibly presented for the general reader. And while most of the chapters appear to be written from a Christian perspective, or at least with Christianity in mind (there is one chapter written from an explicitly Islamic standpoint), the issues raised by CSR are obviously of concern to any religiously interested or committed person. For such a person who is interested in reflecting on the possible relevance of CSR for religious belief, this book would be an excellent resource.

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**David R. Montgomery**  
*The Rocks Don't Lie: A Geologist Investigates Noah's Flood*

New York & London: W.W. Norton, 2012.  
302pp. hb. US\$26.95. ISBN 978-0-393-08239-5

Why should a geologist investigate Noah's flood? Montgomery tells us of his curiosity about the geological basis of ancient flood stories around the world. As someone who teaches geology at the University of Washington, he is also concerned about the impact of young-Earth creationism in North America. He is well equipped to look into such matters because his speciality is geomorphology, the study of processes that generate the world's landscapes.

Montgomery does not deal with this subject in textbook style but rather uses more of a narrative format, built upon a number of personal journeys. For example, one of these was a trek from the bottom to the top of the Grand Can-

yon. Here he encountered numerous features that show how the Grand Canyon must have been formed over many millions of years. This combination of expertise and personal experience enables him to be quite definite about the shortcomings of creationism. He writes that 'belief in a several-thousand-year-old history shaped by Noah's Flood is as scientifically illiterate as the idea that the Sun circles us' (13).

Possibly the most profound of Montgomery's journeys was to step back in time and look at the people who laid the foundations of geology. He devotes four chapters to contributors from the seventeenth to the nineteenth centuries. Unlike some commentators, his treatment of these people is always thoughtful and considerate. Indeed one of the things he found was that the popular idea of a centuries-long conflict between geology and Christianity 'was too simplistic. The real story was far more interesting' (10).

Following this richer narrative, Montgomery shows how ideas about Noah's Flood played a positive role in seventeenth century studies of Earth's history. By the early nineteenth century, these continuing studies had set aside Noah's Flood as a driving force in geological history and had discovered that the Earth was vastly older than previously thought. He notes how all this was accomplished before Darwin began his work on evolution. The famous unconformity at Siccar Point in Scotland, which influenced James Hutton's thinking in 1788, was also visited by Montgomery and features on the book's front cover.

Montgomery continues his historical narrative with two chapters on how our understanding of Genesis was refined by new archaeological finds and biblical criticism in the nineteenth century. He then moves on to the rise of fundamentalism and eventually creationism in the twentieth century, including an account of his personal visit to the Crea-

tion Museum in Petersburg, Kentucky. This is followed by a careful review of *The Genesis Flood* published by Whitcomb and Morris in 1961, 'the book that launched the modern revival of young-Earth creationism' (225).

In a concluding chapter, Montgomery points out what a recent form of Christianity modern creationism is, and asks if that is really where we want to go. He suggests that it would show more respect for the Genesis account of creation to treat it as a story of its time 'rather than a Bronze Age scientific treatise' (251). He also rejects the claim, shared by creationists and atheists, that science denies the existence of God. As he puts it, 'science can no more prove God does not exist than it can prove He (or She) does exist' (254).

It is so refreshing to come across a book that discusses this tricky topic in such measured language. The author's expertise in modern geology is combined with a respectful account of the subject's history, and there are numerous nuggets of useful information. I have no hesitation in recommending Montgomery's book to anyone looking for a sensible and reliable source in this area of science and religion.

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**Matthew Barrett and Ardel B. Caneday (eds.)**

***Four Views on the Historical Adam***

Grand Rapids: Zondervan, 2013. 288 pp. pb. \$19.99. ISBN 978-0-310-49927-5

**Peter Enns**

***The Evolution of Adam: What the Bible Does and Doesn't Say About Human Origins***

Grand Rapids: Brazos Press, 2012. 172 pp. pb. £10.99. ISBN 978-1-58743-315-3

In the *Four Views* book (part of Zondervan's *Counterpoints* series) the views

represented are evolutionary creation (Denis O. Lamoureux), archetypal creation (John H. Walton), old-earth creation (C. John Collins) and young-earth creation (William D. Barrick). All contributors belong to the orthodox evangelical fold and take the early chapters of Genesis seriously as Scripture. There is little reference to science here as contributors focus on the interpretation of biblical texts, but the positions adopted towards evolution are clear.

Denis O. Lamoureux is a convert from young-earth creationism who now believes that 'the evidence for evolution is *overwhelming*' (40, his italics). He describes evangelicalism as 'a scientific concordist Christian tradition', that is that it reads the Bible expecting to find it concordant with modern science. Lamoureux is highly critical of this position, insisting that the Bible reflects 'ancient science' or, in his more nuanced phrase, 'an ancient phenomenological perspective'. He makes a distinction between the biblical message (inerrant spiritual truths) and the 'incidental' ancient science through which it is often conveyed. Applying this to the creation of life in Genesis 1 and the creation of Adam in Genesis 2, Lamoureux argues that in both cases we are presented with ancient phenomenological perspectives. The upshot is that '*Holy Scripture makes statements about how God created living organisms that in fact never happened*' (56, his italics). Anticipating the question 'Did God lie in the Bible?', Lamoureux responds: 'No! The Lord accommodated in the Bible.' Pressing this argument to its conclusion, '*Adam never existed*' (58, his italics), and should be understood 'as an incidental vessel to deliver inerrant spiritual truths' (61). References to Adam in the New Testament are likewise read through this 'Message-Incident Principle' and viewed as accommodation to what was believed at the time (59-63).

In contrast to Lamoureux, John H. Walton argues that Adam and Eve are 'historical figures – real people in a real

past'. However, he sees them as archetypal figures representing humanity as a whole. Examining the verbs used for the archetypal man's task in Genesis 2:15 (used elsewhere in the Old Testament 'in reference to caring for sacred space'), he argues that Adam is given 'a priestly role'. Others have made a similar case but for Walton it leads to the suggestion that 'The "forming" in Genesis 2:7 then finds credibility for being understood as role/function oriented rather than as a statement of material origins of humanity' (95). Once the text of Genesis 2 is divorced from the issue of material origins, 'nothing here necessitates that Adam was the first human being' (106). He insists that historicity is important when considering the account of the fall in Genesis 3, but 'Even here this real event in a real past becomes significant archetypally.' That is, 'we are all represented in Adam and Eve' (117).

C. John Collins begins his argument with a discussion of what we mean by history, helpfully distinguishing historicity from literalism. He rightly argues that history can be conveyed by a variety of literary genres and that to call an account 'historical' does not mean that it lacks 'figurative or imaginative elements' (148). He then moves on to look at Genesis 1-11 as the beginning of the entire biblical story line, eventually distilling a lengthy discussion thus: 'In sum, the story line of the Bible, to be coherent, leads us to expect that (1) humankind is actually one family, with one set of ancestors for us all; (2) God acted specially ('supernaturally') to form our first parents; and (3) our first ancestors, at the headwaters of the human race, brought sin and dysfunction into the world of human life.' (164)

In insisting that God acted 'supernaturally' to form Adam and Eve, Collins does not rule out 'some level of intermediate process' (by which he seems to mean an evolutionary route); he merely wants to insist that 'God's creative activity is involved' (170-171). Nor does he

rule out the possibility that there were other human beings around at the time of Adam and Eve, but he does insist that, if this were the case, these human beings must have been closely-related members of a single tribe, and that 'this tribe "fell" under the leadership of Adam and Eve' (172).

For William D. Barrick, to take Adam and Eve as anything other than the original parents of the entire human race is to abandon a high view of Scripture and to question its truthfulness and perspicuity. He defends the 'traditional view' from within the Old and New Testaments and his conclusion is a familiar one: '*Denial of the historicity of Adam, like denial of the historicity of Christ's resurrection, destroys the foundations of the Christian faith.*' (223, his italics.)

Each main essay is followed by responses from the other three contributors and a rejoinder by the original essayist. The debate is usually gracious but always robust and produces some of the most interesting sections in the book (e.g. lively exchanges between Lamoureux and Collins over concordism and a 'God of the gaps', and between Collins and Barrick over inerrancy). More than once I found my agreement with one writer being challenged by the incisive comments of another. The book ends with two contrasting pastoral reflections by Gregory A. Boyd and Philip G. Ryken.

This an excellent book for anyone in the process of forming an opinion on the issues. But it is unlikely to change minds that are already made up, as I suspect most readers will simply agree with the contributor whose view comes closest to their own. As the book comes from the USA, where beliefs concerning Adam and Eve can be a touchstone of theological orthodoxy and acceptability, it is heartwarming to see Boyd emphasise in his reflection that 'this debate should be construed as a debate *among* orthodox Christians, not as a debate

that determines *whether or not* one is an orthodox Christian' (266).

Despite not being a contributor to the *Four Views* volume, Peter Enns receives a fair amount of comment in it (the index gives his name far more entries than any other writer apart from C. S. Lewis), and it is good to read his *The Evolution of Adam* alongside it. In contrast to the debating style of the former book, this is a relatively short (148 pp., not counting Introduction and endnotes) and sustained argument for one position.

In the first half of the book Enns argues (along with many Old Testament scholars) that in its final form Genesis was a product of the Babylonian Exile, an attempt to grapple with what he calls Israel's self-definition. He then broadens the context of its authorship by looking at the origin accounts of Israel's neighbours, using those to illuminate what the Genesis writer was aiming to do. Enns argues that 'a condescending and incarnating God' is a God who 'will allow ancient Israelites to produce a description of human origins that reflects the ancient ideas and so will not satisfy scientific questions' (58-59). He goes on to argue that, notwithstanding 'some slight universal overtones', the story of Adam is told as 'the story of proto-Israel' (69). The argument is well made and draws on the many ways in which creation language in Genesis 1 and 2 echoes temple and Sabbath language used elsewhere in the Old Testament. These points have been made by others but for Enns the important implication is this: 'It is questionable, therefore, whether the Adam story is even relevant to the modern question of *human* origins.' (69, his italics.)

In the second half of the book Enns turns to the knotty problem of St Paul's understanding of Adam. He shows that Paul's reading of the Adam story (like his handling of much else in the Old Testament) was creative and innovative and was determined by his understand-

ing of Christ's death and resurrection. However, for Enns the way Paul makes use of the story of Adam in Romans 5 and 1 Corinthians 15 should not govern how *we* read Genesis. 2-3; the scientific evidence for human origins is such that 'belief in a first human, such as Paul understood him, is not a viable option' (122). Furthermore, 'the uncompromising reality of who Jesus is and what he did to conquer the objectively true realities of sin and death do not *depend* on Paul's understanding of Adam as a historical person' (122).

Enns is equally forthright in dismissing attempts to read the story of humanity's origin and fall in terms of Adam's federal headship: 'We do not reflect Paul's thinking when we say, for example, that Adam need not be the first created human but can be understood as a representative "head" of humanity.' Indeed any attempt to bring evolution and Paul's view of Adam into conversation runs up against the same problem – it introduces ideas which are quite foreign to Paul's thinking and intention (120).

This reader found it frustrating that while Enns affirms the reality of sin and death as 'foes vanquished by Christ's death and resurrection' (125), he offers no alternative to the rejected Pauline explanation of their introduction through Adam's disobedience. His thinking in the book is, he admits, 'focused solely on hermeneutical issues' – a statement which some readers will feel is a cop-out. However, he expresses the hope that his discussion of Paul 'will open doors of further exploration and perhaps put some readers on new paths of discovery', and adds: 'I do not think for one moment that my thoughts on the matter are the final word' (122). There is certainly plenty to think about in this slim but provocative volume.

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**Neil Messer**

***Flourishing: Health, Disease and Bioethics in Theological Perspective***

Grand Rapids, USA/Cambridge, UK:  
Eerdmans, 2013. xvii +238 pp. pb. £23.99.  
ISBN 978-0-8028-6899-2

What do we mean by *health, disease and illness* or by *disability and impairment*? Is there a difference between *disease* and *illness*? We may think that these are simple questions to which there are straightforward answers but we would be wrong. My 'straightforward answer' may well not be same as yours and those differences may become even more marked when we try to place our definitions within a theological understanding of suffering. It is questions such as these with which Neil Messer's book is concerned.

In Chapter 1, 'Philosophical accounts of health, disease and illness', the author covers a huge range of definitions and philosophical ideas, ranging from the Aristotelian idea of flourishing (*eudaimonia*) to the very broad definition of health presented by the World Health Organisation. He clearly shows that there are tensions between supposedly 'objective' medico-scientific definitions and definitions that in a more overt way embody, to varying extents, elements of social construction. Further, the problem of providing all-embracing definitions becomes even more marked when we include (as indeed we should) mental illnesses. The chapter gives us much to think about; one of the topics that especially fascinated me as a biologist was the discussion of the relationship between health and 'fitness' both in the evolutionary sense and the conventional sense. The evolutionary sense of fit brings in ideas of genetic variation that enables a 'flourishing' within a particular environment but even in this very limited corner of the discussion we can see the difficulty in making general statements. We can also see the inadequacy of a purely reductionist approach

to understanding human flourishing.

The scene is thus set for the in-depth discussions of Chapters 2 to 4. Chapter 2, 'Disability perspectives', is again a real eye-opener for those of us who thought we had our ideas sorted. We are challenged to think about the differences between *impairment* and *disability*. At one end of the range of views, the two words are nearly interchangeable. However, at the other end of the range there are those who insist that *disability* is socially and societally constructed. A person with an *impairment* may not have the full range of faculties that an unimpaired person has but they are *disabled* only because of societal attitudes or because of inadequacies in provision. This point is brought home for me in watching someone like David Weir compete in a marathon whilst realising that many London Underground stations are inaccessible to him. Nevertheless, while paralympians may support the view that being impaired does not mean being disabled, there are many people with impairments for whom we cannot make such a clear distinction. Once again we come back to the idea of flourishing and in particular, how do we make it possible for someone with an impairment/disability to flourish?

Chapter 3, 'Theological resources for understanding health and disease' and Chapter 4, 'Theological theses concerning health, disease and illness', then embed the whole discussion in the context of theology and Christian thought. Rightly so, the difficult issue of suffering is aired fully in these two chapters. In Chapter 3, the author looks particularly at Christian practices in the care and treatment of those who are ill and at the theology of health and disease in the writings of Karl Barth and Thomas Aquinas; there is also an extensive treatment of theological approaches to disability. This chapter leads naturally to Chapter 4 which, after a 'story so far' section, presents and discusses a series of statements ('theses') that express

the author's own views. The theses are organised in four groups: 1, Humans as creatures; 2, Health and creaturely flourishing; 3, Disease, suffering, evil and sin; 4, Practical applications. Inevitably not all readers will agree with the authors' theses but whether we agree or disagree, there is a large amount of material to challenge us and to stimulate thought. The sixteen theses are summed up in a short final chapter ('Conclusions') which also deals specifically but briefly with the bioethical/social issues of quality of life, resource allocation and therapy vs enhancement.

Those already familiar with Professor Messer's work will be aware of his clear, ordered and logical writing style. Those qualities are all very apparent in *Flourishing*. I also need to say that this is a very scholarly book, drawing on a very large range of background literature. It deals in-depth with some important and sometimes difficult issues. It is not a book to be read on the beach or by the pool; it will reward the reader who gives time to take it seriously.

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**John Chryssavgis and Bruce V. Foltz (eds.)**  
*Toward an Ecology of Transfiguration. Orthodox Christian Perspectives on Environment, Nature and Creation*  
New York: Fordham University Press, 2013. 487 pp. hb. \$125. ISBN-13 9780823251445

This book represents the first substantial anthology that addresses environmental issues from the point of view of Eastern Orthodox Christianity. It contains more than thirty articles by Orthodox theologians and philosophers, including such eminent figures in the worldwide discussions on environment as Metropolitan John Zizioulas, Chris-

tias Yannaras, Nikos Nissiotis, Philip Sherrard and Elizabeth Theokritoff. The book has a prefatory letter by the Ecumenical Patriarch Bartholomew (who is famously involved in the ecological movement) and is endorsed by HRH The Prince of Wales.

It is because of the variety of contributors to the volume that the book exhibits a variety of approaches, methodologies and writing styles, being unified by one of the major concerns of our time, namely, the degradation of environment, merciless exploitation of nature and its possible social and political consequences. However, the book's major stance is not entirely a matter of ethics and is not based on the principles of morality as such. Such an approach would be limited, leading inevitably to conflicts between demands for prosperity and technological advance on the one hand, and diminution of the natural in human life on the other, between economic progress and pollution of nature. The problem of the natural, or to be more precise, of the conservation of nature, is the problem of overcoming contemporary nihilism with respect to nature. But this nihilism does not come alone, for it doubts the basics related to all aspects of human existence. What is the point of the humanity of humans; the naturalness of nature; the justice of the *polis* and the truth of knowledge? Why not rather their opposites: the dehumanisation of humans to improve humanity; the systematic 'raping' of nature to develop the economy; injustice committed to render society more efficient; the absolute empire of distraction by irrelevant information to escape the constraints of the true?

Hence, as it is understood by the Orthodox Christian thinkers, the problems of ecology and environmental ethics are closely connected with the problems of the human spirit and of the morality of human persons in the context of their perception of their place in creation. It is on this basis that the present anthology positions the discussion on ecology

in a particular, distinctive way, related not so much to dogmatic formulations as to spiritual life as perception of a good creation by a good God. All pathos of the book is to appeal to the restoration of the unity in appropriation of the surrounding nature with the contemplation of life, the whole created nature as having its deep foundation in the life of the Divine. In this sense nature as such loses its meaning as an abstract, rational idea that is so typical for modern sciences and technology. It is rather treated as an aesthetical or even an ethical category, as a modality of personal relationship with God. In this sense the role of humanity with respect to nature is seen in the perspective of the history of salvation where nature is treated as part of human history and thus is destined to be transfigured by human beings made in the divine image. And here the motive of creation is complemented by the very possibility of the incarnation of God: nature must be life-sustaining and accommodating the logos of God in flesh. Thus the standard of ecological thinking is the precedent of the incarnation in order that human beings may be able to ascend to God from within nature, thus involving nature as such in this saving process. However when talking about nature, Orthodox mystics and theologians think of the whole creation, about the universe. For those divisions and moral tensions between parts of the created order on this planet manifest the postlapsarian state when the sense of 'all in all' is lost. Orthodox theology advocates that nature be a sacrament such that through the contemplation of its *logoi* (together with words of Scripture and ecclesial sacramental communion) communion with God is established. Nature becomes the eucharist.

The book is divided into four sections: 1) patristic insight in the sense of nature and creation, 2) twentieth-century Orthodox thought on environment and creation, 3) historical, theological and philosophical dimensions of theo-

ecology, and 4) insights from Orthodox spirituality. Many papers from the collection have been already published in journals and volumes which are not easily accessible for a reader. Correspondingly the papers represent a compendium of views related to a wide historical period. In spite of this the volume exhibits a striking coherence and integrity in terms of its persuasion for our need to be recalled to our relationship with the divine, to see through the beauty and grandeur of nature's variety its own and our own creator. It becomes evident that the ecological issues bring into its discourse both science (with its technological applications leading to the environmental degradation) and theology (as facing the dilemma of the moral indictment with respect to damaging scientific and technological practices and the necessity for biological survival).

One then may suggest that any dialogue between theology and science, in particular within the Eastern Orthodox setting, will be incomplete without recourse to ecological issues. Thus, one may conclude that this book represents a unique contribution to the discussion on science and Orthodoxy in general, supplying future research, so to speak, with the 'classical' references. In this sense the publication of this volume is indeed invaluable for all those who are interested not only in theo-ecology as such, but also in Orthodox theology in general and its dialogue with modern scientific and technological culture. The book also poses some essential questions for philosophical anthropologists and ethicists, thus complementing a secular discourse on humanity and making vivid the inseparability of cosmological and anthropological problems. As part of the Orthodox tradition, any insight into spiritual issues demands prayer and communion. This volume is not an exception, for at the very end of it one finds the whole text of the 'Vespers for the environment'. Another important aspect of the book is the bibliography of

texts in English on 'Environment, nature and creation in Orthodox thought' compiled by the editors.

One can only repeat that the book represents a unique and valuable contribution to literature on Orthodox theology in what concerns nature and creation, as well as to the list of books on the dialogue between science and Orthodox theology. In spite of the fact that the book is written by specialists, its style and content are accessible to all interested in theology, philosophy and ecology. As a first systematic compendium of ideas on ecology from the perspective of Eastern Orthodoxy, it is highly recommended to all who endeavour an enquiry into the field of theo-ecology.

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**Elizabeth A. Johnson**

***Ask the Beasts: Darwin and the God of Love***

London and New York: Bloomsbury, 2014. Xviii + 323pp. hb. £18.99. 978-1-4729-0373-0.

This title is drawn from Job 12, and the underlying argument of the book is that understanding of the natural world, in particular as Darwin taught us to see it, is a source of wisdom – indeed an essential source for the ecological crisis. The author is Distinguished Professor of Theology at Fordham University, New York, and has written many well-known books, including most recently *Quest for the Living God*. She is a member of the Sisters of St Joseph. This book is lucidly and articulately written and conveys complex concepts in very accessible ways.

Elizabeth Johnson wants to see a subtle change in theological method, resulting from attending closely to the natural sciences, a change she believes will be as important as the contributions of liberation and feminist theologians. She begins her consideration of the relation of science to theology from Ian Barbour's familiar fourfold taxonomy of types of relationship. Very helpfully, she adds a fifth, that of practical cooperation. She is right to suppose that this is so badly needed in respect of the ecological crisis, which is currently *the* crucial case of theological interaction with the sciences.

Johnson then gives a very clear and accessible summary of Darwin's theory of evolution by natural selection, one that I shall certainly offer my students. Interestingly she also proposes Darwin as a model of a contemplative of nature, and writes very movingly about the importance of deep looking, combining examples from Darwin and Gerard Manley Hopkins. After considering how the theory of evolution has itself evolved, she turns to the question of God's involvement in the evolving biosphere, emphasising the importance of the Trinity, divine immanence and the work of the Spirit. Interesting as this material is, it does not seem to me to add to what has been explored by scholars such as Arthur Peacocke, John Haught, Celia Deane-Drummond, and (especially) Denis Edwards. This is a balanced synthesis of their views, rather than an innovative proposal.

Johnson affirms, as I would myself, not only God's panimmanent compassion for all creation, but also divine engagement with every element of the created world in 'deep incarnation', in Niels Gregersen's phrase. This line of thinking tends to hover between logocentric restatement of divine omnipresence, and some form of soteriological statement about the redemption of creation. Johnson does not indicate where she herself stands on this. But her extension of the concept, in writing

of 'deep resurrection', is interesting.

The author then turns to the question of God's providential action – an under-explored area in relation to evolution. She follows Edwards in espousing a neo-Thomist model of primary and secondary causality. But her own emphasis is striking – she wants to insist that creaturely secondary causes are not the instrument of God's purposes, but act in freedom.

In a sense every model of divine action must involve a view of primary and secondary causes. God is everywhere present to every event, and yet this is not a magical world but a world of empirically testable regularities. But it is hard to sustain the view that God has no long-term purposes in creation, that God did not desire certain ends. (Ruth Page does defend such a view, but is not cited here.) And if natural processes are free and do not serve divine purposes, it is hard to see why their freedom is a value, or at least a value sufficient to set against the disvalues these processes cause. A God who uses suffering-causing processes to give rise to divine ends faces a certain charge within theodicy, of having used creaturely suffering as a means to an end. But in a way a God who simply turns loose suffering-causing processes, without an underlying purpose, is just as culpable. And for all Johnson's affirmation of the Spirit's immanent and empowering engagement with the unfolding of creation, it is hard to see what difference this is taken to make, beyond the gift of freedom to the world to make itself.

The question of theodicy must be central to any theological contemplation of evolution. How is it that God made, or allowed to evolve, a nature so red in tooth in claw? Johnson proposes a compound theodicy based on the value of freedom of process, plus God's compassionate engagement with every creature, plus the eschatological hope of a new life purged of suffering. Although I might have constructed such a position

somewhat differently, I am convinced this is the right type of approach to take.

Readers of this journal will be concerned at the lack of really up-to-date material in evolutionary biology – the book referred to in Johnson’s summary of recent developments was published in 1985. Perhaps Johnson is so keen to emphasise the scientific consensus on evolution that she is reluctant to explore current controversies. But the themes of convergent evolution, as explored by Simon Conway Morris, and evolutionary cooperation, as reflected on theologically by Sarah Coakley in her 2012 Gifford Lectures, are huge omissions. Both may significantly alter the character of the narrative Darwin constructed (with, as Patricia Beer and others have shown, specific rhetorical intent). Fascinatingly, recent work by Niles Lehman and his group on cooperative behaviour among oligoribonucleotides suggests that the importance of cooperative strategies may go all the way back into the proto-biotic world.

After consideration of what humans are, considered as evolved animals but emerging as a ‘singularity’, a uniquely gifted and powerful species, the book ends with a passionate appeal for us to take our place in the community of creation and develop a spirituality of wisdom that learns from the natural world and takes a less exploitative and unsustainable role in relation to it. Again, this is a beautifully written section, though arguably it does not offer any novel contributions. She follows Richard Bauckham in his understanding of creaturely praise; perhaps a little more critical engagement with this concept (as one sees for instance in the work of my colleague David Horrell) would have been merited here.

This is a book that could be given to any articulate and exploring church group, and could be used in first- or second-year undergraduate teaching. Johnson adds her passionate and persuasive voice to those calling for a

robust engagement with the realities of an evolving world, and for a real sense of our (humble) part in the community of creation. There are constituencies, especially within North American Christianity, that urgently need to hear both calls. I wish I thought they would be likely to listen to this eloquent plea.

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**Robert S. White**

***Who is to blame? – Disasters, Nature, and Acts of God***

Monarch Books, 2014. 208pp. pb. £8.99.  
ISBN 978-0-85721-473-7

Seeking someone to blame is a natural human impulse. In our anger or our distress we imagine that we would feel better if only we could attribute our suffering to a cause. But to ask, ‘Who is to blame?’ can also be a misleading question in such circumstances. White’s book takes a risk in this regard. He sets himself precisely this question—and I am not convinced that his answer is entirely satisfactory.

The book comes in three parts. The first provides an overview of natural disasters and the problems they pose, to humankind at large and to the theist in particular. The second comprises brief cameos of various types of natural disaster and their scientific background. This section is informative and engaging, though there is a danger that the plight of individual victims is lost in the wealth of statistics. The third, and final, part is where White offers some biblical and theological reflections.

White’s principal message is resoundingly clear: ‘almost always the disaster is exacerbated by the actions, or sometimes by the inaction, of humans’. He continues, ‘we conclude that often the blame for more than 95 per cent of

the casualties can be laid at the door of humans, because they were avoidable even with current expertise'(46). White's thesis is that we humans make things worse, but *which* humans are we blaming here? Is it the impoverished rural labourer who moves to a megacity in search of work? Is it the pressurised politician, whose limited financial resources barely stretch to education and healthcare, let alone disaster risk reduction? Is it the wealthy business person the other side of the world who could have been giving a bit more money to international charities? Or are we talking about a collective, structural sinfulness? If you blame someone for something, then you saddle them with responsibility for the outcome. But the corollary is that it should have been within their power to produce a different outcome – and it isn't clear that this is always the case. Furthermore, many have suffered from natural disasters in the pre-technical age, when there definitely wasn't sufficient scientific knowledge to avert disaster. White's approach doesn't address this historical difficulty.

But there is also a second, arguably more acute, problem. What about the remaining five per cent? What about the small, but morally very significant, proportion of suffering that is innocent, undeserved and unpreventable? It is these tragedies that pose the real challenge for the theodist. Chapter eleven is the crucial one in this regard; here White fleshes out his theodicy in more detail. He reviews various options, including open theist, vale of soul-making, and cosmic fall approaches, and acknowledges the potential flaws of attempting a rational explanation. He also quotes Nicholas Wolterstorff writing about the death of his own son. (144) White suggests that at such times we need not theology, but compassion; we need someone to weep with us as we weep (Romans 12:15). But should we not have a *compassionate theology*? Christ came to Earth and suffered with

us. As Jürgen Moltmann stresses, God as Christ participates in our sufferings. Indeed, White rightly notes that the many theodicies pay short shrift to the incarnation (149), but he himself moves very rapidly from the crucifixion to the resurrection, without spending any time in the place of suffering. It feels like there is more to be said here.

So, what can we take away from this volume? At the beginning of chapter eleven White quotes from Harold Kushner: 'Is there an answer to the question of why bad things happen to good people? That depends on what we mean by "answer". If we mean "Is there an explanation that will make sense of it all?"... Then there probably is no satisfying answer... But the word "answer" can also mean "response" as well as "explanation" and in that sense there may well be a satisfying answer to the tragedies in our lives.' (141)

With this in mind, there is some hope in what White has to say. A more profitable enquiry than 'Who is to blame?' might be, 'How do we enable ourselves, and those around us, to live with the suffering in this world?' And this is a question that White very much addresses. He writes: 'It is a human responsibility to work to prevent the deleterious effects of natural processes, and it is part of God's grace to humans that we have the capability to do so.' (79) Furthermore, '[hope for the new creation] gives added impetus to work to remove the injustice and carelessness that so often cause disasters in this world, and to align ourselves to God's priorities in this world' (119). Aiming to live up to our responsibilities seems much more fruitful than looking for someone to blame.

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**Julian Evans**

***God's Trees: Trees, Forests and Wood in the Bible, An Illustrated Commentary and Compendium***

Leominster, UK: Day One Publications, 2014. 208pp. hb. £20. ISBN-13 978-1846254109

This book, written by a specialist in forestry, was clearly a labour of love for its author, growing out of his compendious knowledge of trees and his evident personal faith. It is also a pleasure to read, being generously illustrated, with photos or drawings on virtually every double spread, and it is full of fascinating details: for example, the processes by which leaves provide 'ecosystem services' (157-8) or the fact that tamarisk trees provide unusually cool shade as they exude tiny salty droplets and thereby cool the air as they evaporate (19).

The bulk of the book (and all the numbered chapters) comprises a discussion of allusions to trees and wood in the Bible, considered in the order in which they appear in our English versions. Given the uneven distribution of such references, it is inevitable that the amount of space allocated to different biblical books is also extremely variable. Thus, the first chapter is devoted to Genesis 1-4 and the second to Genesis 5-50 and Exodus, but Ezekiel to Malachi are compressed into a single block of 17 pages (chap. 8). Similarly, with respect to the New Testament, two chapters (9 and 10) are allocated to the gospels, then just one (chap. 11) to Acts to Revelation. Complementing the discussion of the relevant biblical material is a brief (fifteen-page) compendium of tree species that are named or implied in the Bible, arranged alphabetically according to their common English name. A few additional species native to the eastern Mediterranean and others which visitors to the region may encounter are discussed separately, and this is followed by a short annotated bibliography of books specifically

concerned with the plants of the Bible, advice on seeing and growing biblical trees and shrubs and creating a biblical arboretum (in all, these sections comprise four and a half pages).

Notwithstanding the second sub-title, Evans's work is better described as an extended Bible study than a commentary. He relies for his sources on a plethora of botanical and arboreal evidence, in which he is clearly highly knowledgeable, but his biblical reading seems to have been restricted to the more conservative types of publication aimed at the devotional and popular market, and mostly such sources remain unacknowledged. As a result, at times he misses aspects of the significance of trees which might be unedifying from a Christian perspective but which illuminate ancient religious practices in which they were clearly important. Thus, when he reaches the mention of the tree of Moreh at Shechem, he reflects on the commemorative function of tree-planting even today, but simply assumes that the 'oak of the pillar' in Judges 9:6 reflects the remnant only of the 'great hulk' of the tree 'as is typical only of very, very old oaks', rather than considering aspects of Asherah worship. Evans quotes the Hebrew and Greek names for certain trees, but, in the absence of diacritical marks, his transliterations can be crude and at times erroneous (e.g. *t'einah* for *t'e'nāh*) (11). He is aware that the identity of certain trees remains uncertain, so discusses probable candidates. The reader is in general not initiated into exegetical debates as to why one species might be preferred over another, but he offers insights into the appropriateness of different trees or woods to the context based on his knowledge of their properties.

In many ways, Evans is well informed about the biblical context, drawing at various points on Assyrian and Egyptian material on topics as diverse as trade, warfare and coffin construction, as well as on the Gilgamesh epic, and this contributes to the broad scope of the

discussion. On the other hand, his is a naive reading, in which the historicity, for example, of the story of Noah's Ark is taken for granted and prompts reflections on the practice of re-using building materials in various contexts in order to explain the lack of physical evidence for the Ark. Characteristic, too, of the Bible study genre is the engagement with wider aspects of Evans's experience and interests. Some of this is illuminating – for example, the 'pleasant to look at' trees of Genesis<sup>1</sup> provide a springboard for reflections on the therapeutic effects of trees in the built environment; the 'tree of life' provides occasion to discuss various species (such as the African Baobab) which have been so described; and he treats the reader to an explanation of the qualities of different woods as a building material. At other points, however, he makes recourse to unanswered questions (e.g. on the source of the wood used by Jesus and Joseph for carpentry (127)) or personal reminiscence, and just occasionally seems to lack anything incisive beyond this to say about a particular reference (Zacchaeus being a salient example) (133). In a few cases, the reader is referred to discussions elsewhere (e.g. for an explanation of the cursing of the fig tree) (136). Frustratingly, he rarely gives page references in his sources, but only basic bibliographic information and there are other instances where information which might be anticipated by the non-specialist reader is lacking (e.g. in respect of Jonah's leafy plant, which is simply dismissed as not a tree, and of Noah's viticulture, presumably for the same reason).

However, these are but occasional glitches in a book that has much to interest and inform the general Christian reader from the perspective of Evans's specific area of expertise.

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**Jonathan Moo and Robin Routledge (eds.)**

***As Long As The Earth Endures: The Bible, Creation and the Environment***

Nottingham: Inter-Varsity Press, 2014. 256 pp. pb. £19.99. ISBN 978-1-78359-038-4

'Part of Christian 'discipleship of the mind' must be to learn to cultivate theological acuity, so that we see things as God sees them – and act accordingly.' Thus begins a brief description of the book's contents on its back cover. In impressive fashion the introduction, ten main chapters, written by theologians from Britain, Australia and the U.S.A., and the afterword seek to offer a comprehensive biblical theology of creation that can undergird a Christian response to the pressing environmental issues of the early twenty-first century. It is important to note that it is theology of creation which is helpfully offered here, rather than a theology of the care of creation, so that readers should note carefully how the theology is then *applied* to issues of environmental care.

After a comprehensive twenty-page survey by the editors of the contents of the eleven main chapters, there is first a theological reflection by Alister McGrath on the doctrine of creation. This is followed by four chapters on the Old Testament (David L. Baker, Robin Routledge, Jamie A. Grant, David G. Firth), and three on the New Testament concentrating on the theme of eschatological hope (Paul Williamson, Jonathan Moo, Sean McDonough). Chapters follow describing the creation theologies of Jürgen Moltmann (David Rainey) and Colin Gunton (Graham J. Watts). The final chapter reprints Sam Berry's paper 'Does Disputing Evolution Discourage Creation Care?' (*Science & Christian Belief*, (2013) 25.2, 113-130). The afterword, penned by I. Howard Marshall, then offers some thoughts on ethical decision-making, in which he proposes a distinction between actions which are, on the one hand, mandatory

or clear and those, on the other, which are recommended or dubious (246).

David Baker's chapter on the goodness of creation in Genesis 1-2 largely covers well-trodden ground. I missed any reflection on God's 'rest' in Genesis 2:4 which is, I suggest, partly to do with the distinctiveness of the people of God in their attitude to creation. Robin Routledge deals with the impact of human sin upon the environment under the twin headings of cursing and chaos. There are brief acknowledgements of how both of the positive and negative outcomes of biological evolution (72) and natural disasters (91) intersect with this theme, but the author then concentrates on the outlook of the Old Testament writers rather than on scientific insights. Of particular interest is Jamie Grant's chapter on Psalms 93-100; Anglicans encounter these psalms regularly at Morning Prayer. He adduces evidence that this group of psalms reflect the trauma of the Exile; in their portrayal of an alternative 'vision of reality' (97) they speaks incisively into our present age with its scepticism (93,105). They also offer a bridge between the present and ancient worlds in their portrayal of the natural environment and the God who is sovereign over it. David Firth's chapter on the Spirit and creation in the New Testament draws upon a range of biblical material not normally considered in biblical treatments of environmental issues. Using references to both the Spirit of God and the Hebrew term *ruah* ('breath') he discusses Psalms 33:6; 147:18; 104:29-30 and Isaiah 32:15-20; 34:9-17. Their function includes the invitation to praise God in his sustaining of creation, even in challenging circumstances (118).

The following three chapters all deal with God's eschatological purpose for creation as expressed in the New Testament. Paul Williamson deals with a wide range of scriptural material while Jonathan Moo concentrates on Romans 8, 2 Peter 3 and Revelation 21.

Both consider the tension between the continuity and discontinuity which are both evident in the text; Sean McDonough emphasises the discontinuities which are often downplayed. All three see environmental care as an expression of the Christian's eschatological hope; here, as elsewhere in the book, the call to 'save the planet' is seen as idolatrous, because this is eschatological work which only God can carry out. A particular feature of McDonough's chapter is his allusions to natural disasters (170) but, tantalisingly, this is not developed.

Of particular note are the two chapters dealing with the theology of creation as expounded by Jürgen Moltmann and Colin Gunton. This is partly because most Christian environmental reflection stops with the biblical text, partly because of the contrast between the ways these two prominent twentieth century theologians have dealt with the subject, and partly because each carefully relates creation theology to a Christian stance on environmental care. Moltmann's theology has often been criticised as an exercise in panentheism; it begins with the Exodus rather than Genesis 1 (188). His theology also incorporates the Jewish mystical concept of *zimsum*, which conceives that God 'makes space' for creation by his own voluntary self-emptying (193ff.). The command to 'subdue the earth' must then be interpreted in a novel way as freeing the earth (199).

Gunton, by contrast, develops a more conservative theology which draws heavily upon the Cappadocian Fathers and is critical of Augustine. He develops a concept of 'otherness in relation' in which our relationship with creation reflects the Trinitarian being of God. As with the chapter on Moltmann there is a careful analysis which highlights the strength of Gunton's model, while remaining critical of it at certain points. These two chapters also highlight, in a way consistent with other chapters, that a fully Christian theology of crea-

tion must be closely related to a Trinitarian understanding of God, rather than simply dealing separately with the work of Father, Son and Spirit within creation.

This book will be read with profit by preachers and Christians concerned about the future of creation, although it will be a challenging read for church people with little grasp of Scripture. Although many prospective readers will already be aware of much of the relevant scriptural material, its input into a full biblical theology of creation is a notable feature of the book, along with the chapters on Moltmann's and Gunton's systematic theological treatments, and the proposed implications throughout to considered Christian environmental action.

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**Paul Thompson and Denis Walsh (eds.)**

***Evolutionary Biology. Conceptual, Ethical, and Religious Issues***

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Has an edict gone out from publishers, that 'thou shalt not publish festschrifts'? *Evolutionary Biology* is an unashamed festschrift for Michael Ruse – or perhaps it should be called an ashamed festschrift, for the word and the concept are nowhere used. One can see that a book titled *Festschrift for Michael Ruse* is not as likely to sell as many copies as one called *Evolutionary Biology*. In addition, a problem about festschrifts is that authors asked to contribute may have to dredge for ideas to make a suitable tribute to the recipient of the festschrift. Both these problems are evident in this book: it is largely about philosophy, not biology *sensu stricto*; and

some of the authors seem to be straining to say anything usefully original. Please don't misinterpret me: I share the authors' high regard for Michael Ruse, who has contributed greatly to the science-faith debate whilst sitting on the sidelines, as it were; and there is much that is interesting and refreshing in the book. It may add to evolutionary philosophy, but hardly at all to our understanding of evolutionary biology.

The first sentence of the editors' Introduction is 'Contemporary analytic philosophy was forged in the 1960s.' They then give their game away with a footnote, 'A few biologists – J.H. Woodger, C.H. Waddington, and Bernard Rensch, for example... had tackled philosophical aspects of biology, but philosophical interest in biology by philosophers of science dates from the work of [Morton Beckner, Thomas Goudge, David Hull, and Michael Ruse].' By their restricting definition, they sever themselves from a not unimpressive intellectual heritage. This surfaces to various degrees in some of the chapters. As they mention C.H. Waddington only in this footnote (1), it is pertinent to recall his considerable contribution to evolutionary ideas through his embryological work and influence on his successors. His *Strategy of the Genes* (1957) brought together many of the ideas being discovered (or re-discovered) by the current generation of evo-devo-ists, and he built on these in such books as *The Ethical Animal* (1961) and *Tools for Thought* (1977), together with his chapter in Julian Huxley's *The Humanist Frame* (1961), which prefigures many of the themes in the Thompson and Walsh volume. And Huxley is also ill-served by being mentioned only in passing (155) that 'rate genes control the timing of developmental processes'. He did pioneering work on rate genes, and one of his more important books was on the *Problems of Relative Growth* (1932). I am not arguing for the uncritical acceptance of either Waddington's or Huxley's thought, but to ignore them completely detracts

from the current volume.

Likewise, the chapter on the origins of variation fails to note Darwin's eight-year long study on barnacles, which he undertook to answer the criticism that he was ignorant of variation in the natural world, or Simon Conway Morris's impressive presentation of the constraints on new variation in a variety of taxa, and the implications of these for human evolution (*Life's Solution: Inevitable Humans in a Lonely Universe*, 2003).

This intellectual isolationism does not apply throughout the book. There is an excellent introductory chapter by Francisco Ayala ('Human evolution: whence and whither'), followed by two very useful chapters grouped as 'Evolution and theology' by Elliott Sober (on 'guided' mutation) and Philip Kitcher (excoriating bad arguments from both biblical literalists and dogmatic atheists). The next two sections ('Taxonomy and systematics' and 'The structure of

evolutionary theory') are less impressive. The most interesting is an examination by Jean Gayon on the use by R. A. Fisher of economic concepts in developing his argument about adaptation in the *Genetical Theory of Natural Selection* (1930). Some of Fisher's seminal thoughts came from considering lepidopteran mimicry. I would be intrigued if Gayon develops his idea by seeing if he can integrate Fisher's use of these two very different inspirations. The book concludes with three chapters on 'Function, adaptation and design'.

There is good material in *Evolutionary Biology*, but not £60 worth. I hope my criticisms of his faux festschrift do not detract from Ruse's own work. It is well worth absorbing. Perhaps he can be given a more rigorous celebration sometime in the future.

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