

## Reviews

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### Melvin Tinker

#### *Reclaiming Genesis*

Oxford, UK & Grand Rapids, MI, USA:  
 Monarch Books, 2010. 224pp. pb. \$8.99.  
 ISBN 978-1-85424-997-5

Melvin Tinker is Vicar of St John Newland, Hull. He has previously been Chaplain to Keele University. This book is primarily an exposition of Genesis 1-12 that seeks to show its relevance in the contemporary world.

In the 'Preface' Tinker deals with the issue of creation, evolution and Genesis. In it he argues that 'evolution, as distinct from *Evolutionism* (which is an ideological parasite), is as religiously neutral as Dirac's unified field theory'. (18) He recognises that those who believe in the biblical view of God as Creator are faced with two questions: Is evolution incompatible with divine creation? Do the biblical texts unequivocally deny such a process?

He argues that 'Logically the *process* of evolution is distinct from the *act* of creation: they belong to different categories'. (22-23) The fact that a self-contained scientific description can be given of a process does not mean that God cannot be active in it. 'God is the author of the *whole* show of creation, responsible for the action of *everything* in his gracious sovereignty.' (23) Whether God used an evolutionary process or not is something we can only discover by going out and observing the world. Tinker thinks that the evidence that he did cannot be dismissed lightly.

With regard to the Bible Tinker points out that while it was written *for* us it was not written *to* us but to original readers who lived in a very different cultural situation. We therefore have to begin by understanding what it was saying to the original readers. This leads him to treat the early chapters of

Genesis as primarily theological texts that are written not as strict historical prose but as figurative narrative. He follows J.H. Walton's suggestion (*The Lost World of Genesis 1*, IVP, 2009) that God communicated his truth to the ancient Israelites using the world-view of their time – including the ancient 'cosmology' which they shared with their neighbours. The ancient Near-eastern creation stories are not concerned with the origins of the material structure of the world, as modern scientists are. They are concerned with the *purpose* of the world as shown by the *functions* which God has established in it which relate to human society and culture. Tinker concludes that rather than trying to read Genesis for scientific information, 'a more natural reading of the early passages on Genesis is one in which we see God bringing about functionality in his cosmos in terms of purpose, rather than bringing about the material universe per se. If this is so, then questions of material origins are properly seen as belonging to the domain of science as it deals with the 'how' questions, whereas Genesis addresses the more fundamental 'why' questions'. (30)

Following this 'Preface' the rest of the book is a helpful section-by-section exposition of Genesis 1:1-12:3 with insightful applications of its message to contemporary issues. In discussing Genesis 1 he makes good use of comparative Mesopotamian material to help illuminate its meaning for the original readers, which helps to bring out its essential message before it is applied to us today. It is a bit disappointing that he does not continue to make use of such material as he deals with other parts of Genesis. There is material that is relevant to understanding the stories of the Garden of Eden, the Flood and the Tower of Babel.

Some of Tinker's interpretations and

applications of the text are debatable, but that is part of what makes this a stimulating and worthwhile read. Above all, it majors on the theological message of this part of the Bible, which all too often gets neglected because people ask the wrong questions of it. It deserves to be widely read.

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**James K. A. Smith and Amos Yong (eds.)**

***Science and the Spirit: A Pentecostal Engagement With the Sciences***

Bloomington, Indiana: Indiana University Press, 2010. ix + 217 pp. pb, \$24.95. ISBN 978-0-253-22227-5

In order put this review in context it is helpful to quote the editors' own account (vii) of the genesis of *Science and the Spirit*. 'This book grew out of a... research initiative... funded by the John Templeton Foundation from 2005 to 2009. *Given that Pentecostal engagements with science and even [with] the science-religion dialogue were nascent at best, the first task... was to find and assemble a team of scholars from across the disciplines who were also familiar and/or working from within the Pentecostal and charismatic streams of Christianity.*' (My italics).

Regular readers of *Science and Christian Belief* will be interested to know that the assembled team included Jeffrey Schloss. During the project, the team was joined for particular topics or events by other individual scholars. One of the outcomes of the project was this edited text with chapters written by some members of the research team plus some who were invited just to par-

ticipate at this stage. The exclusion of some of the research team (including Jeffrey Schloss) from the author team is a pity but I assume that it happened for good reasons which are somewhat hidden by the editors' own words 'due to the vagaries of theoretical surprises and other obstacles'.(vii)

The book starts with an Introduction by the editors. It is important to read this because it helps us to understand further the basis for this book. Much is made of the 'outpouring of the Spirit' at the Azusa Street chapel in Los Angeles in 1906, echoed by similar events elsewhere. These events led to a Pentecostal revival with churches such as the Assemblies of God preaching 'the baptism in/by/of the Holy Spirit', the reliable diagnostic sign of which was speaking in tongues. If individuals did not speak in tongues they were regarded as not having been baptised in the Holy Spirit. Since that time, there have been, at intervals, charismatic renewal movements on both sides of the Atlantic, including that which started at Toronto Airport church in the 1990s. In general, churches involved in these movements do not regard speaking in tongues as 'compulsory'. In addition, the rapid growth of the church in the global south has to a large extent involved charismatic Christianity emphasising the work of the Holy Spirit in the life of the believer and of the whole Christian community – 'pneumatic Christianity' as it is described at several places within the book. Now, it is clear that the renewal movement that flowed from Azusa Street was in the main suspicious of modern science and medicine, even to the extent of regarding the practice of medicine as contrary to Scripture. The only cures recorded in the New Testament were miraculous cures so, it was said, if we are truly 'New Testament', Spirit-filled believers then we should rely only on the miraculous. What they made of Luke 'the beloved physician' I do not know! Although attitudes to medicine have changed, the main

premise of the book is that 'traditional' Pentecostals and less traditional charismatic Christians remain suspicious of the scientific enterprise.

Following the Introduction, the remainder of *Science and the Spirit* is divided into three parts. Part 1, with three chapters, is entitled 'What hath Azusa Street to do with MIT? The big questions'. Chapter titles here and throughout the book are long and often quirky – the editors and authors obviously enjoyed making up long-winded (although usually informative) titles. The three chapters in Part 1 cover different aspects of the science-religion dialogue. Readers of *Science and Christian Belief* will have encountered similar discussions elsewhere but nevertheless it is often good to find fresh angles on familiar ideas, as happens in reading this text. However, I could not help thinking that the discussions surely relate to Christians in general rather than only Pentecostal/charismatic Christians. The same thought crossed my mind in reading Part 2. This has four chapters and is entitled 'The Spirit of Matter: questions and possibilities in the Natural Sciences'. Again this is quite useful as it extends the discussion encountered in Part 1. However, Chapter 5, which deals with evolution describes it as a controversial theory and gives the impression that you can believe it if you like, but ...

The final part, 'The Human Spirit: questions and possibilities in the Social and Technological Sciences', consisting of three chapters, was the part that I enjoyed the most. Chapter 8 shows how Craig Scandrett-Leatherman's work on social anthropology (and particularly on the role of participation in the quest for knowledge) led him to understand and then become involved in the lively worship involved in African American Pentecostal worship. Indeed, that involvement motivated him, as a middle-aged academic, to take a course in African dance! He also makes some very perceptive and useful comments

on Michael Polanyi's philosophy of science. Chapter 9 describes the personal spiritual journey of Margaret Poloma. At the start of her career as an academic sociologist she had rejected the Roman Catholic faith in which she had been brought up to become an agnostic. She rediscovered God, if I may put it that way, through the power of the Holy Spirit encountered in a group of charismatic Roman Catholics. She goes on to write in a very inspiring way about the effects that had on her career as God guided her into different ventures. One interesting comment early in this chapter is that post-modernism isn't all bad in that it helped to undermine the positivist confidence of modernism (although I would say that this is still a major influence in the experimental sciences). Speaking of modernism leads me to Chapter 10, a fascinating chapter in which Dennis Cheek challenges *all* Christians (cf. a point that I made earlier in this review) to think about our very ready acceptance of modern technology, especially in the areas of communication and IT. This provides a very thought-provoking end to the book.

It is already apparent that I enjoyed some parts of this book more than others and at this point I need to mention some specific features. Throughout the book, the level of scholarship is mostly very high. Inevitably in a multi-author volume there is variation in writing style: some chapters are much more readable than others. I like the use of case studies employed by several authors, the studies usually focused on the lives of Christian students. On the negative side, there are a couple of grammatical errors (even allowing for the differences between American and British usage). On at least two occasions authors drew conclusions that are not, and indeed cannot be supported by the data. For example, it is stated that 'neuroimaging ... corroborates Pentecostal and charismatic Christians' claims to be under the influence and control of the Holy Spirit when they

speak in tongues'.(124) I also noted a tendency in at least two chapters to place Christians on one side of an argument and scientists on the other, surely a position that runs counter to what the book is trying to do.

Culturally, the book is very American. In respect of higher education it mentions not only Christian colleges and universities but colleges and universities founded by specific denominations or groups within the Christian church, including Pentecostals and charismatics. This is obviously outside our current UK experience. And then there is the statement that I italicised in the opening paragraph indicating that Pentecostal and charismatic Christians had little engagement with the sciences. I cannot speak for 'traditional' Pentecostals such as the Assemblies of God but this lack of engagement is not true of, for example, charismatic churches in the Anglican or Roman Catholic traditions in the UK. Amongst the membership of my definitely charismatic church there are several professional scientists and science teachers, several doctors and quite a few science and medical students. I suspect, without specific data, that this would true of any church in, for example, the New Wine network. Yes, there are some leaders and members who are opposed to Darwinian evolution or who are suspicious of psychiatric treatments in dealing with mental illness (cf. 133, 134) but in general there is no antipathy towards the sciences. Thus, British charismatic Christian students of science do not in the main experience a clash between their faith and their studies, although they may be unhappy (rightly so) with the atheistic spin that is imparted to some scientific theories.

I need finally to make a comment on the intended readership. It was an agreed outcome of the Templeton grant that a book for (Pentecostal/charismatic) Christian students of science would be published. *Science and the Spirit* is that book. I have taught science students in several American universities

ranging from small specifically Christian (although not charismatic) institutions to large, prestigious research universities. Based on that experience I wonder how many science 'majors' would have the motivation to start reading and the stamina to finish reading this book. Perhaps the publishers and editors need to argue that the book should be adopted as a text for courses on Science and Religion.

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**Noah J. Toly and Daniel I. Block (eds.)**

***Keeping God's Earth: the Global Environment in Biblical Perspective***

Downers Grove, Illinois: InterVarsity Press, 2010. 300 pp. pb. £16.99, ISBN 978-1-8447450-3

This book is not an easy or comfortable read, but it is one that deserves to be read by serious minded Christians concerned with exploring the larger issues of environmental responsibility. We all know that being a Christian involves ethical responsibilities, but how can we formulate a robust and biblically authentic ethic on which to base our environmental obligations?

Despite the main title, it is not about recycling, energy efficiency or growing your own vegetables; it takes the reader into global issues and the theoretical perspectives that underpin any attempt to understand them. While anthropogenic climate change and biodiversity loss are the obvious topics, there are also essays on urbanisation and the impending global water crisis, presenting these issues with clear, well researched and sometimes chilling analyses. Taken

on their own, the environmental essays can easily leave the reader wondering if there is any hope at all for the planet; it is down to the theologians to present the possibility of future hope and of where that hope can come from.

Since 'Scriptures do not address current environmental crises directly, how can we use them responsibly for developing a response that is fundamentally biblical and distinctly Christian?'(18) Too often, writers seeking to explore this area offer us either weak and narrow theology or, more commonly, an understanding of environmental issues that, while being clear on the problems, has a somewhat superficial grasp of the theoretical background. This collection of essays, each of which could stand up in its own right, overcomes these shortcomings by creating a dialogue between environmental scientists and theologians. While each of the authors stays strictly within his own area, setting the two viewpoints alongside each other both equips and stimulates the reader to engage in the debate. One is left with a feeling that the discussions among the authors (most of whom belong to or are associated with Wheaton College) during the production of this book would have been especially interesting and it is something of a disappointment that the text barely gives us a flavour of them.

As an environmental scientist, I felt comfortable with this book from page one; I encountered familiar language, sources that I respected and arguments that many of us have shared in the university common room. The essays by theologians differ significantly from each other in their approach: some present extended, in depth biblical exploration, while others take the reader into challenging theological ground, but always they lead logically and clearly through it.

The final essayist has the difficult task of looking at the broad spectrum of approaches to environmental ethics

and reaching some kind of a conclusion, if indeed a conclusion is something which might appropriately be sought in a rapidly developing field of study. Inevitably, the scope of the subject means that some depth has been sacrificed for breadth, but for a reader unfamiliar with environmental ethics it provides both an informative and comprehensive introduction and a warning against those environmental ethics based on poor theology and a narrow interpretation of Scripture. While the author does not underestimate the difficulties of arriving at a genuinely biblical environmental ethic which can help us tackle the problems the previous essays have explored, his final conclusion, that such an ethic must derive from the value that God, and not humanity, however well intentioned, puts on all of creation, is one that is already more familiar in Europe than he finds it to be in the United States.

There are extensive footnotes and, where appropriate to the context, biblical references, throughout the book, as well as suggestions for further reading, which could make it a useful starting point for further study of any of the topics covered.

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**Peter Atkins**

***On Being: A scientist's exploration of the great questions of existence***

Oxford: Oxford University Press, 2011.  
105pp. hb. £10.99 ISBN 978-0-19-960336-7

As I write, the *New Scientist* has devoted a whole edition to the 'staggering mystery of being' with the big question

'How could our cosmos have come from nothing?' (23 July 2011). This is the question Atkins addresses in the first chapter of his book which he entitles 'Beginnings'. Free from all 'metaphysical claptrap' he states that the substrate of existence is 'nothing at all';(13) that our universe simply 'popped out of nothing becomes not just plausible, but probable' (Gefter). Cosmologist George Ellis however believes that science cannot determine whether the universe is pure happenstance, or purpose or intent somehow underlie existence, because 'these are metaphysical issues'.

The next chapter of this modest book of 105 pages, is entitled 'Progression' and is all to do with evolution. First he launches an assault on the bigotry of creationists 'for their unforgivable manipulation of data'.(24) More importantly, for him, the belief that 'information (as in DNA) can only be created by an agent' is 'nonsense';(28) DNA is 'not constructed with a message in mind'.(29) Evolution is about 'the random generation of successful junk. We humans are not arrogantly the apotheosis of creation but rather the 'currently top junk;... my view (is) that ultimately everything is junk'.(36) It is information not genes that struggles for survival. Evolution 'is the consequence of junk wars' (36) fought for the 'propagation of information'.(40) Atkins speaks of the 'primitive barbarity of natural selection'(34) which is incompatible with God's 'infinite benevolence towards his creation'. Still stuck with the 'selfish gene', Atkins does not consider the mounting evidence for group as well as individual selection, where survival is as much about cooperation ('fairer is fitter' – Bekoff) as it is about fierce competition. There is evidence of a limit to the capacity of selection and mutation – the edge of evolution – with life driven onward by its inherent codified information ('life's ability to navigate to its solutions' – Conway Morris).

Chapter 3 is on 'Birth'. Atkins dismisses the ancient myths surrounding

childbirth and shows how science fills in this 'chasm of ignorance'.(46) Nature has adopted sex. We are given a detailed description of meiosis and fertilisation at the cellular and molecular levels.

Chapter 4 is entitled 'Death' – the 'fag end of life'.(62) It is significant that Atkins should choose to devote fifteen pages of this modest book to a personalised, vivid and detailed scientific description of the disintegration of his own corpse. So why give so much space to describe his death in such a macabre way? And why personalise a process which is no longer personal? Presumably because death and annihilation are the sole consequence of human existence; there is no point in talking about his *life* as this would require some subjective, 'unscientific' descriptions – far more interesting but totally irrelevant to his cosmic destiny. Life is but a brief interlude of consciousness, 'the flicker of daylight between the dark of the cradle and the grave'.(103)

His final chapter, 'Endings', gives Atkins the opportunity to wade into the myths and theology of eschatology – the 'Last Things' – the summit of 'the Himalaya of nonsense'.(81) He expounds on the 'four donkeys of the apocalypse: Millennium, Tribulation, Armageddon and Rapture'.(82) Those who share his beliefs will be delighted by his biting sarcasm, eloquence, and razor sharp wit. Others will be disappointed that he does not engage with the profound truths at the heart of the Christian faith. In his only attempt to address Christian orthodoxy he says that for such believers 'real living ... starts once you are dead'.(87) This is simply not true. Eternal life is as much in the now as it is in the future (John 17:3; 1 John 5:13). Jesus himself taught us to pray 'Your kingdom come on *earth* as it is in heaven ...' (Matt. 6:10). He makes it clear that there is no evidence of afterlife, and no substance to the 'human spirit' beyond its 'verbal packaging'.(89) The real question about the 'Resurrection of the Dead' is 'how

people can take it seriously'.(92) But this event belongs to the category of the supernatural and so is a nonsense for Atkins for whom only natural events are possible.

Atkins' final conclusion is bleak: 'Science has revealed God's glorious plan for the universe... We have gone the journey of all purposeless stardust, driven unwittingly by chaos, gloriously but aimlessly evolved into sentience, born unchoosingly into the world, unwittingly taken from it, and inescapably returned to nothing. Such is life.'(99f)

In their *Suicide of the West* (Continuum 2006) Koch and Smith speak of 'the inspirations of modern science: belief in God and belief in humanity, a rational world view, and optimism about humanity's place in the cosmos... in losing the idea that science helps us make sense of the world the west has forfeited one of its major sources of optimism, success and commitment to a humane society... the notion that science deprives life of meaning is, after all, erroneous'.

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### **Rodney Holder**

#### ***The Heavens Declare: Natural Theology and the Legacy of Karl Barth***

West Conshohocken: Templeton Press, 2012. 286pp. pb. \$34.95. ISBN 978-1-59947-396-3

'The heavens declare the glory of God; the skies proclaim the work of his hands' (Ps. 19:1). John Macquarrie has defined natural theology as 'the knowledge of God ... accessible to all rational human beings without recourse to any special or supposedly supernatural revelation'.

The debate throughout the centuries has been concerned with the relative importance of natural theology and

revelation in guiding our thinking and determining our beliefs about the existence and nature of God. In this book, Rodney Holder provides us with an outstandingly helpful, clear and comprehensive account and critical discussion of this debate. Separate chapters are devoted to the twentieth-century theologians Karl Barth, Dietrich Bonhoeffer, Wolfhart Pannenberg, Thomas Torrance and Alister McGrath, but other theologians and many philosophers are not neglected.

Karl Barth provides a relevant starting point because of his vigorous opposition to the whole idea of natural theology. For him, the self-revelation of God in Christ as attested in Holy Scripture was all-important: uniquely and exclusively so. Indeed, he went so far as to imply that any reliance at all on natural theology amounted to a denial of the revelation of God in Christ. In his critique of this extreme view, Holder acknowledges the primacy of God's revelation but insists that God as creator has necessarily left evidence of himself in the natural world, and that the biblical writers attest as much. He makes a compelling case that Paul in his sermon to the Areopagus in Athens, as related in Acts 17, preached natural theology. The point here is that Paul was preaching to non-believers, albeit thoughtful and philosophically sophisticated non-believers. He had to start with them as they were. Such an approach is surely essential in our own Christian apologetics.

And so, starting with the antagonistic legacy of Barth and his disciples, Holder guides us through to the renaissance of natural theology, championed, particularly in recent years, by John Polkinghorne. The case for this renaissance is persuasively made, involving, as it does, a critical and well-informed analysis of such matters as the nature of revelation, how we interpret Scripture, the limitations of human reason, post-modern relativism, militant secularism, the value or otherwise of various types

of 'evidence' and the importance of trust in the Creator. The faith of Christians is not blind, irrational faith, but faith in a God of order and reason. Nevertheless, natural theology has to be allowed to be itself and Holder rejects the stance taken by, for example, Alister McGrath in claiming that natural theology can only be done legitimately from within the framework of Trinitarian Christian dogmatics.

A valuable emphasis in this book is on the desirability of expressing traditional arguments in probabilistic form. Those who have read the author's *God, the Multiverse and Everything* will be familiar with this approach. For us scientists there is a necessary provisionality about our conclusions and most of us must warm to the honesty of 'inference to the best explanation' as the appropriate way of handling such provisionality. Arguments for God's existence are not knockdown arguments but are based on the balance of probabilities. We learn and grow in faith, not by subscribing to dogma but by honest exploration from within the fold of the faithful, including open dialogue between science, philosophy and theology. Bayesian probability theory helps to confirm us in our beliefs in a cumulative way of confirmation by a process of formulating comparisons with competing alternatives. Here, natural theology has a fruitful part to play.

It is a pleasure to recommend such an accomplished account of the story and place of natural theology in our thinking and ministry.

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**Antonella Corradini and Timothy O'Connor (eds.)**

***Emergence in Science and Philosophy: Routledge Studies in the Philosophy of Science 6***

New York and London: Routledge, 2010.  
xiii + 314 pp. hb. \$128.00. ISBN 0-415-80216-1

Sponsored in part by a grant from the Catholic University of the Sacred Heart of Milan (editor Corradini's home institution), the fifteen chapters of and seventeen contributors to this book (two chapters were co-authored) provide a state-of-the-question report on the interface of the three topics in the volume title. The contents are organised into three parts of five chapters each, titled respectively 'General perspectives', 'Self, agency, and free will', and 'Physics, mathematics, and the special sciences'. Unlike some collections of separately authored essays, the level of argumentation is consistently high throughout the book.

The multidisciplinary range of the topics discussed and the density – in at least some places – of the volume will inhibit the understanding of the uninitiated, although the editors provide a short introduction at the beginning of each part which very helpfully summarises the basic arguments of the chapters. Almost all of the major issues and contested questions in the philosophy and science of emergence theory are taken up in these pages. The main threads focus on how to account for emergent features, characteristics and phenomena of the world. At the philosophical level these are undeniably constituted by their underlying physical or natural parts but appear to have unpredictably novel qualities that cannot be explained by merely adding together the sum of those parts. For the more scientifically oriented the quest is to understand the emergent laws, capacities and activities or behaviour.

More than one chapter complexifies the notion of emergence so that even

those familiar with *strong* and *weak* types will appreciate that theories regarding a continuum of emergence with various degrees of emergent phenomena are now being considered.

If essays throughout the volume discuss various aspects of epistemological versus ontological emergence – do emergent phenomena merely supervene upon their underlying parts so that they are observed that way by us, or do they instead make a causal difference for their parts quite apart from human knowing – part two confronts head-on what some philosophers have called the ‘hard problem of consciousness’, taking up in the process the challenges involved in selfhood, personal subjectivity, free will, libertarianism, compatibilism and determinism. The chapters in part III unpack the implications of emergence for the unity of the sciences, wondering if non-reductionistic levels of reality do require the various (special) sciences and if so, does such open up to a kind of either methodological anarchism or scientific disunity. Needless to say, positions that mediate between these two options are explored by a number of authors.

If the philosophers and mathematicians amongst the group trade in various modalities of analysis, the scientists – including physicists, neuro- and cognitive-scientists and psychologists, among others – attempt to stay close to the empirical ground. Yet both types of authors are equally at home with the empirical and theoretical issues. One chapter, on the emergence of vision, is a case in point: the development of vision cannot proceed apart from the development of meaning-making – and the latter requires also an account of consciousness – since the adaptability of vision at its different levels needs also to be consciously processed at various levels for evolutionary advantages to accrue.

If in the nineteenth and early twentieth centuries the cautions about

emergence discourse had to do with the fear that mystical or vitalistic forces were driving the theory, the authors across this volume all presume a kind of physicalist or naturalistic framework as they probe why emergence notions have persisted. Even reductionists will appreciate the tone and style of the writing, while all will benefit from the rigor with which each author prosecutes his or her inquiry. Religious scholars or theologians will observe that none of the chapters touch on theological transcendence. For the purposes of this volume, this will be a strength of the presentation – emergence is not affiliated to vitalism any more than it is to theological dualism, although other forms of self-body dualism are explored, based on the evidence, by some chapters. The more theologically inclined will gain from seeing how the argument for emergence can be sustained even without theological presuppositions. At the same time they will also recognise that theological issues come into play when questions about the whole – Why is there something rather than nothing? – are brought into play.

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**Marc Cortez**  
*Theological Anthropology, A Guide for the Perplexed*

London, UK & New York, USA: T&T Clark International, 2010. 167 pp. pb.  
£14.99. ISBN 978-0-567-03432-8

In a mere 140 pages of concise, didactic text, Marc Cortez covers a wide range of material with remarkable precision. As would be expected for a book in the ‘Guide for the Perplexed’ series, the author does not attempt to break new ground or persuade the reader of his particular opinion, but provides a balanced treatment. Apart from the Introduction and the Conclusion, the

book has four chapters of roughly equal length: 2, 'Imago Dei'; 3, 'Sexuality'; 4, 'Mind and Body'; 5, 'Free Will'. Each of these controversial subjects is fraught with particular difficulties, but in each case the treatment provided seems to me accurate and even-handed.

A difficulty with the *imago Dei* is that so much has been written on the subject that a novice like me tends to get lost in the vast jungle of sophisticated opinion. Chapter 2 shows a way through the jungle by providing a simplified map with four main interpretations (structural, functional, relational and multifaceted) summarised and briefly criticised. It concludes by emphasising that Jesus Christ reveals true humanity, and that human persons are unique within creation, mysterious, relational, responsible, embodied and broken. The centrality of Christ for the author's vision of humanness subtly permeates the whole book, reflecting perhaps his PhD research on the significance of Christology for the mind-body debate.

Chapter 3, 'Sexuality', takes up the very different challenge of synthesising Christian theology with secular anthropology. It is more about gender than sex. Delving into the social anthropological literature it outlines the essentialist and constructivist approaches to gender and provides a moderate critique of both. It then goes on to provide a theological overview, emphasising procreation, fecundity, marriage, relationality and bonding.

In chapters 4 and 5 Cortez attempts to integrate Christian theology with the extensive and technical literature of philosophy of mind. Again, he succeeds well. In chapter 4, 'Mind and Body', he focuses on the debate between substance dualists and physicalists. He categorises substance dualism into four main positions: Cartesian dualism and three modern forms that are currently advocated by Christians (*holistic* – Cooper, *emergent* – e.g. Hasker, and *Thomistic* – e.g. Moreland), and out-

lines the modern debate about each of these. He categorises physicalism into its strong and weak versions. *Strong physicalism*, regrouping positions such as mind-brain identity and eliminative reductionism, tends to be the reserve of atheists, but many Christians have favoured *weak physicalism*, arguing in several cases for an asymmetric dependence of the mental on the physical tempered by downward causation. Current debate about weak physicalism focuses on the causal redundancy of higher level descriptions and on the problem of mental-to-physical causation. In addition, theists debate difficulties to do with life after death, especially in the intermediate state before the resurrection of the body. A subject that seems to me somewhat neglected in this chapter is the biblical conception of human ontology. Cortez mentions briefly that the majority of modern scholars (e.g. Joel Green) argue for a physicalist conception in the Bible, but that a sizeable minority (e.g. John Cooper) argue for a dualist conception. A more detailed discussion of this would in my opinion have been useful.

Chapter 5 enters into another area of intense debate, that of free will, focusing on the two most popular modern philosophical positions, *compatibilism* and *libertarianism*. Compatibilism, the contention that determinism and free will are compatible, is subdivided into classical compatibilism and two modern forms, *hierarchical* and *reason-responsive* compatibilism. Other modern forms exist but are not mentioned. Libertarianism is the claim that free will is incompatible with determinism but that we are free, so that there must be some form of indeterminism in the brain. Cortez subdivides libertarianism into three forms: *non-causal* (rarely accepted), *event-causal* (e.g. Kane) and *agent-causal* (e.g. Chisholm). Inevitably, a vast and technical subject like the philosophy of free will cannot be dealt with adequately in a single chapter (33 pages), but Cortez sketches out clearly

and helpfully the main arguments for and against each of the positions outlined.

Covering such a wide range of controversial subjects in 140 pages has inevitably involved some simplification and corner cutting, but the book constitutes a remarkable synthesis of Christian theology with social anthropology and the philosophy of mind, providing an accessible introduction for Christians to the important question of who and what we are. It gives many up-to-date references for further reading. There is an index of authors but not of subjects.

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**David B. Burrell, Carlo Cogliati, Janet M. Soskice and William R. Stoeger (eds.)**

*Creation and the God of Abraham*  
Cambridge and New York: Cambridge University Press, 2010. 286 pp. pb. £58.00. ISBN 978-0-521-51868-0

This is an excellent edited collection of fourteen essays which not only are of the highest academic level but also work together as parts of the whole, achieving a coherent presentation of the issues raised by the notion of creation *ex nihilo*. The authors of the different essays analyse this notion from different perspectives in the three different monotheistic traditions, historically and systematically, a feature of this collection which needs to be acclaimed for its uniqueness in academia today.

The reader will thus find historical analysis of the early development of the notion of creation *ex nihilo* in Judaism as well as in early Christianity, as in the essay by Ernan McMullin on the early history of the doctrine and that of Janet M. Soskice on the Jewish and Christian foundations. Islamic perspec-

tives on creation *ex nihilo* are examined in Rahim Acar's account of Avicenna, and their influences on the medieval understanding of this notion in David B. Burrell's essay on Aquinas, Daniel Davies' on Maimonides and Crescas, and Alexander Brodie's on Scotistic metaphysics. In addition to these historical perspectives, the reader will also find analysis of how these different understandings of creation *ex nihilo* relate to contemporary Islamic and Christian philosophy of religion and theology. Ibrahim Kalin discusses will, necessity and creation in the Islamic philosophical tradition; Simon Oliver considers the relation between the doctrine of the Trinity and the doctrine of creation *ex nihilo*; while Eugene F. Rogers discusses contingency and the science of theology. With respect to twentieth and twenty-first century scientific theories, such as Big Bang theory, quantum cosmology, or evolutionary biology, Pirooz Fatoorchi discusses the compatibility between contemporary science and some Islamic solutions, William R. Stoeger Big Bang cosmology and creation, and Simon Conway Morris evolutionary biology and creation. The problems raised by the doctrine of creation *ex nihilo* for our understanding of the works of nature and their relation to God's providential activity as well as human free will and God's governance of history are considered in James R. Pambrun's and Thomas F. Tracy's discussions of creation and dual causality.

Given the vast array of arguments in each of these essays, it seems impossible to give credit to each of them and to the diverse emphases expressed in their different explanations of this doctrine. However, the basic idea expressed by the essays is that the theological doctrine of creation *ex nihilo* is not at odds with the works of nature (or, in the same perspective, with the causal description that contemporary science gives of the universe), but that it is complementary to our philosophical and scientific understanding of the

world: this doctrine does not attempt to describe the early beginning of the world *per se*, or to ascribe a tyrannical divine rule of the universe. Instead, the authors of these essays highlight that the doctrine of creation *ex nihilo* aims at realising the radical ontological dependence of the universe on God's creative action.

As might be expected from the very topic of discussion, the figures and teachings of Thomas Aquinas and Avicenna are almost ubiquitous in the pages of this volume. Aquinas, however, does seem to take the predominant place: his works and ideas are referenced in almost every topic discussed from the introduction to the end of the volume. Perhaps a chapter offering text-based analysis of Aquinas' teachings on this doctrine in relation to the power of God and that of nature could have been helpful for a full understanding of his ideas. These, it should be said, are present all through the volume and particularly in the introduction, but not in a systematic presentation.

The structure of the volume does raise some questions. Even though it is clear that the first six essays are of a historical character, while the following eight deal with contemporary topics on philosophy and theology, I believe that the internal disposition of the chapters could have been improved if a more chronological rationale for the historical section and a more topical one in the philosophical and theological chapters had been followed. Hence, in terms of the historical chapters, a better organisation would have introduced the discussions of the Islamic and Jewish figures such as Avicenna and Maimonides before introducing that of medieval thinkers like Aquinas and Scotus, even if this disposition would have meant separating the Islamic historical and philosophical analysis (four consecutive chapters in the present structure). In terms of the second part of the volume, it would have seemed more profitable for the reader to have discussions of

dual causality before those of evolutionary biology, for which the notion of God guiding the history of the universe has a profound importance.

Overall, the volume is an outstanding work, written by experts in their fields, which portrays the doctrine of creation *ex nihilo* in all its complexity, showing its relevance to today's academic and scientific world, particularly that of science and religion. Finally, the great deal of attention given not only to the Christian understanding of this doctrine, but also to Jewish and Islamic tradition, is a characteristic which, again, should be applauded and an example which should be followed in future research on science and theology.

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**George Cunningham**  
*Decoding the Language of God – Can a Scientist Really Be A Believer? A Geneticist Responds to Francis Collins*

New York: Prometheus Books, 2010. 269 pp. pb. £14.99. ISBN 978-1-59102-766-9

George Cunningham, a retired geneticist and former chief of the Genetic Disease Branch of the California State Department of Health Services sets out to give a response from a non-believer to Francis Collins' book, *The Language of God: A Scientist Presents Evidence for Belief*. Along the way he also tackles many of the ideas and writings of C.S. Lewis, since Collins quotes extensively from these sources in his 2007 book. Cunningham's book is pitched as a more respectful and reasoned rebuttal of Christianity than that produced from the likes of Dawkins, and in many ways it is. It is also very readable.

However one of the underlying problems with the approach taken is apparent from the back cover, where it is claimed that 'Collins says that science does confirm the existence of God', whereas in reality Collins in his original book is of course building a case that modern science has revealed to us a world that is consistent and coherent with the Christian world-view, rather than saying that 'science proves God'. So Cunningham's overall purpose, which can be summed up as attempting to show that science does not support belief in a personal God, is somewhat discordant from the stated purpose of answering Collins in a reasonable and rational way. The book does however manage to get through an analysis of most of Collins' main points, and is even structured in a similar way. Collins begins his book with a personal chapter 'From atheism to belief', whereas Cunningham's first main chapter is entitled 'From belief to atheism' (where he describes his journey from Catholicism to unbelief). Both books also share a chapter entitled 'The war of the worldviews'. Key chapters also include 'What's wrong with the moral argument?', 'Supernaturalism', and 'A personal God?'

I'm not sure, though, about the author's claim in the Introduction(15) to have 'addressed almost all of the points' raised by believing scientists attempting, wrongly of course according to Cunningham, to reconcile science with theistic beliefs. One of Cunningham's key arguments that permeates much of the text is that because, in his view, the existence of a theistic God is so unlikely and irrational, very strong evidence would be required in order to accept this belief. Evidence it seems that is not forthcoming from the God of the Bible. Another interesting perspective of Cunningham's is his apparent ability to know exactly what the world we live in would be like if a theistic God actually existed, which apparently would be nothing like the world we live in now.

This in fact seems to be one of his key points in rejecting theism. For example, he is pretty sure that free will is a terrible idea that would never be part of the plans of creation of a good personal God, and in fact we are told a number of times that there is good scientific evidence that free will does not exist (without being given much of the evidence in any level of detail).

Cunningham devotes his longest chapter to the Bible, rightly realising that the integrity of the Bible is central to Collins' theistic position. He especially takes exception to Genesis, and the resurrection accounts. I found his analysis quite superficial, and he sometimes comes across as out of his depth. For example, in rebutting the integrity of the resurrection accounts he tells us that after 'sampling the literature'(130) on these accounts, his analysis is that the whole thing was based partially on what happened, and partially on fictional embellishments, to 'enhance the legend'.(133) Thus, as for Collins' contention of the legitimacy of miracles and of the resurrection accounts, Cunningham apparently 'demurs and handily assails the tired semantics of these analyses' (back cover). Other points Cunningham makes that are central to his case against Christian theism are that behavioural genetics suggests a naturalistic reason for the traits of moral behaviour and altruism, and that Collins fails to address the problem of evil adequately.

Overall, I think that in order really to provide a reasoned atheistic response to Collins' book, Cunningham would need to suspend his disbelief somewhat more and provide a more detailed account of some of the evidence that he claims undermines Collins' position on matters such as the veracity of the Bible. One of the best apologetic exercises for me in university was regular discussions with a good friend who was an atheist, and as such I find this book useful as a springboard for Christians to think through further issues such as free will,

altruism, miracles, evil and the nature of God to be more equipped to give a reason for the hope that we have within the scientific community.

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**Karl W. Giberson and Francis S. Collins**

*The Language of Science and Faith*

Downers Grove, IL: IVP Books, 2011. 251 pp. pb. \$20.00. ISBN 0-830-83829-5

It can often be difficult to find a helpful book to give to a Christian friend who is sceptical about either science in general or specific conclusions about creation drawn from it. With this book the authors have attempted to meet this challenge. They have compiled and edited an extensive series of shorter articles from the BioLogos Foundation's website into a single resource. Although undoubtedly a very helpful task, after finishing this book I am left in two minds about the use of it with its intended audience.

Given its origins it is in many ways a natural continuation of the public conversation started by Collins in one of his earlier books (*The Language of God*, 2006). I agree with the authors about the need to generate considered and sensitive resources for Christians sceptical about science and this book is definitely a useful contribution to that category. This is accomplished through the specific content of the book but also in a tone in which the authors collectively go to great lengths to speak well of their opponents while displaying great patience and gentleness when explaining their own positions.

There are some more specific facts and perspectives provided that I think

will take many of the target audience by surprise or should at the least give pause for thought. Central concerns from both theology and science such as the evidence base for what we think about evolution or cosmology and the implications of both for perspectives on sin and physical death are well fleshed out without becoming too overwhelming.

However I think the book's effectiveness undercuts itself in two ways, both of which could perhaps have been avoided.

Firstly the structure of the book is very indicative of the format of the source material it is drawn from. This leads to some potentially off-putting problems for the reader. At times there are only vague connections between different areas of content within chapters, which can make the central message of some of them feel uncertain. Sections often end with intriguing ideas or stand-out statements which I can imagine being quite powerful – but only if a reader has managed to make it that far. A bit of sharper writing and editing could have drawn a reader in much earlier, capturing the attention of a casual reader much more. Information is also on occasion repeated unnecessarily.

Unfortunately, given the web-based, shorter article nature of the source material as well as the fact that this is a first physical publication by BioLogos, I think these problems were not easily spotted. Ultimately they don't detract from the message of the book but I think that they do not help ensure a smooth delivery of that message, which is unfortunate when you are trying to be as welcoming to a reader as possible.

Secondly I was surprised at the inclusion of (shorter) chapters on both cosmological fine tuning and convergent evolution. Arguably both of these areas are currently scientifically somewhat speculative and are perhaps subtler concepts to grasp in a book attempt-

ing to reorientate more basic scientific and theological concepts. Both of these ideas are indeed intriguing but perhaps needed more space than is given to them here for their limits to be properly explored. Certainly the fine tuning concept felt very much in danger of falling into the 'God of the gaps' explanation trap that the authors wisely warn the believer against earlier in the book.

In summary the question that must be asked of this book is, 'Would I give it to an inquiring believer?' Yes, but only if I felt that that believer was already sufficiently open and interested enough to stick with it enough to get at the many good snippets contained within.

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**David G. Horrell, Cheryl Hunt, Christopher Southgate and Francesca Stavrakopoulou (ed.)**  
*Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*

London: T & T Clark (Continuum), 2010.  
353 pp. pb. £24.99. ISBN 0-567-03304-8

In his introduction to the final four chapters of this fine collection of essays, Christopher Southgate claims that 'theologizing about the environment and humans' place in it... has come to stay', observing that 'few now would see its pursuit as spurious or marginal in the way that might have been possible fifty years ago'.(243) This necessary and welcome development within contemporary theology has nevertheless by no means resulted in widespread agreement about how Scripture and Christian tradition are to be interpreted 'ecologically', and hence the ongoing need for volumes like this one. For anyone interested in understanding the exegetical and hermeneutical challenges involved or looking for fresh resources to aid their own theological reflection on

ecology and the environment, this book should serve as a useful primer as well as a source of stimulating examples of how to go about this important task.

Despite the title, 'hermeneutics' proper is not the focus of most of the essays – not, at least, if we accept the definition of hermeneutics given in this volume by Ernst M. Conradie, as a 'second-order reflection on the praxis of interpretation'.(296) Conradie's own essay, 'What on Earth is an Ecological Hermeneutics? Some Broad Parameters' (295-313), and to a lesser extent those of Francis Watson, 'In the Beginning: Irenaeus, Creation and the Environment',(127-139) and Stephen Barton, 'New Testament Eschatology and the Ecological Crisis in Theological and Ecclesial Perspective',(266-282) are the only ones that engage at length in such 'second-order reflection', although hermeneutical reflection inevitably informs all of the authors and is treated at least briefly by many of them. The majority of the essays serve primarily to illustrate what various hermeneutical approaches look like in the actual practice of interpretation. Part I, comprising eight chapters, deals with individual biblical texts, ranging from the creation narratives of Genesis to the fiery conflagration of 2 Peter 3, and includes an impressive list of biblical scholars among its contributors. Part II, comprising another eight chapters written by another impressive group of contributors, focuses on major Christian thinkers and traditions, ranging from Irenaeus to Moltmann. Harry O. Maier's essay on 'Green Millennialism'(146-165) serves as something of a bridge between Part II on the history of interpretation and Part III on 'Contemporary Hermeneutical Possibilities' (four chapters, including Maier's and Conradie's), with a carefully nuanced reading – rare indeed when it comes to this subject! – of the influence that evangelical eschatology has had on environmental concern and practice in North America.

One of the strengths of this volume is that its editors, all members of what has proved a remarkably productive collaborative research project on 'Uses of the Bible in Environmental Ethics' based in the University of Exeter, did not seek to impose their own hermeneutical convictions on the contributors. This means that readers can't help but be in turn challenged, encouraged, provoked and enlightened by the varying and sometimes contrasting perspectives on offer here. Nonetheless, even within this pleasing diversity of approaches most of the essays reflect something of a middle way between the critical hermeneutic of 'suspicion' and 'retrieval' advocated by the Earth Bible Team – referenced a number of times, though Vicky S. Balabanski, 'Hellenistic Cosmology and the Letter to the Colossians',(94-107) is the only member represented here – and what David G. Horrell calls the 'stance of 'recovery'' often adopted in evangelical ecological readings of biblical texts.(8) The particular approach supported by Horrell and the rest of the Exeter group, an approach indebted to Conradie's emphasis on the need to develop adequate 'doctrinal constructs' to shape our reading of Scripture in light of today's environmental challenges, is hinted at in the preface, and it may well prompt readers to consult some of the group's other recent books and articles. But for readers without the time to follow the footnotes (and each chapter helpfully has its own bibliography), this volume represents an excellent compendium of recent approaches to ecological hermeneutics. A number of the essays indeed represent summaries or reformulations of arguments that have been developed at greater length or in different ways by their authors elsewhere, but it is a boon to have their work brought together into one collection. It should be noted that all but a handful of the contributors are drawn from the UK, but this is the result of a deliberate attempt 'to minimize the carbon footprint of the project'.(vii)

Those of us who engage in dialogue between science and Christian faith are sometimes accused of naivety, either in our portrayal of science or in our reading of Scripture and the Christian tradition. This is no less true for 'ecology and theology' than for anything else. We must, of course, do all we can to understand and fairly represent the science with which we hope to engage. We must also reflect critically on how we read and interpret Scripture, and here is a book to help us do this better.

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**Malcolm Jeeves (ed.)**

***Rethinking Human Nature: A Multidisciplinary Approach***

Grand Rapids: Eerdmans, 2011. 348 pp.  
pb. £25.99. ISBN 978-0-8028-6557-1

M. A. Jeeves' latest editorial work on anthropology may be interpreted as a broadening of his *From Cells to Souls*. Readers of that comprehensive work might be concerned that there might not be anything new to say without going into detail on one particular point. They will be encouraged to learn then, that this book, despite its large scope, has more than enough new material – indeed, its originality is constituted primarily by its multidisciplinary approach.

Particularly welcomed is an emphasis on the secular history of thought about the human person, both in the section of the book devoted to history and elsewhere. Historians Fernandez-Armesto and Vidal, along with geneticist Berry, give penetrating accounts which locate contemporary anthropological paradigms and dogmas firmly within their historical context. Fernandez-Armesto's paper tracks the evolutionarily recent idea of a common humanity and contrasts this with the attitude of most

historical peoples who rejected some *Homo sapiens* from their domain of morality while admitting other mammals. His discussion of human behaviour reflected in lower primates leads him also to submit a trans-specific ethical framework for consideration. Vidal focuses more specifically on the Western trend towards the 'cerebral subject' and emphasises the need to avoid cerebral reductionism, especially when this is seen to stem more from an earlier philosophical zeitgeist than directly from neuroscience. Berry, in addition to his overview of the peculiarities of human evolution, similarly points out that the idea of evolution from lower forms antedates Darwinism, and can be traced back at least as far as Gregory of Nyssa.

The book also provides a philosophical angle, with Agazzi and Mittelstrass offering some perspective on the need for accounts at different 'levels' of a scientific (and non-scientific) hierarchy. This is indicative of the book as a whole, and of the contemporary theme in Christian anthropology which asserts the fundamental physicality of the human person, but also the irreducibility and need for multiple analyses – from natural sciences, social sciences, arts and humanities – when giving an account of anthropology intending to capture the *whole* truth. From a slightly different perspective, philosopher Chiereghin locates another expression of human uniqueness, namely its particular approach towards aesthetic evaluation.

But the non-reductive physicalist emphasis is not the only concern of the work – indeed, the scientific chapters are extremely informative overviews of the authors' respective areas in their own right, even without the links to pertinent philosophical and theological issues. This is enough to commend the book to a secular audience qua a scientific overview of anthropology. Biologist Finlay gives a particularly useful account of interaction between genetics and environment, but also adds a third layer of culture – perhaps our human-

ity is not just constituted by our genetic and immediate environmental composition, but also by the particular features of the human culture that we happen to have evolved in. This view, that genes and an environment without a cultural-historical context are insufficient to explain humanness, may be seen as complementing well the idea that the *imago Dei* is something circumstantially conferred upon humans, without any major difference at the biological level, and is certainly worth exploring in some depth. Jeeves and Myers' chapters complement each other; while the former gives an extensive account of different theological approaches and links these with developments in psychology, it settles with emphases both on the fulfilment of the *imago Dei* in Christ, as well as the fundamentality of relatedness – Myers fleshes out this latter aspect with sociological data on the need for relationship.

Brooks offers an archaeological account of the development of humans, noting their gradual development, with some behavioural traits that collectively constitute human behaviour present in rudimentary forms in our evolutionary history. These are complemented by other archaeological insights into behavioural evolution – for example, a consideration of the origins of symbolic behaviour in human history.

Finally, theologians Green and Soskice offer their independent perspectives: Green outlines a biblical anthropology, relating this to eschatological issues, notably the resurrection. Soskice takes a quite different approach, focusing specifically on the role of sexual difference in humanity. She explores the tension between Christ's taking on the fullness of humanity in his incarnation and the simultaneous insistence that sexual difference is theologically important. Can men and women be Christologically different and yet extra-Christologically distinct?

Overall, *Rethinking Human Nature*

offers a thorough, diverse account of anthropology, yet without compromising its coherence. Each of the chapters is worthy of consideration within its own field, even set aside from the ecumenical Christian perspective the book offers. What is now calling out for attention in this area of Christian thinking is a multi-perspective dialogue on moral responsibility and the ethics of salvation in light of neurological and other advances. A project for the future, perhaps?

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### **Victor J. Stenger**

*The Fallacy of Fine Tuning: Why the universe is not designed for us*

New York: Prometheus, 2011. 345 pp. hb. \$24.95. ISBN 978-1-61614-443-2

This is an unusual addition to a large and growing literature, following Barrow and Tipler's seminal and magisterial exposition of 'The Anthropic Cosmological Principle'. Instead of expounding fine tuning, as for example Paul Davies does in *The Goldilocks Enigma*, and then looking for an explanation via the multiverse, as Leonard Susskind does in *The Cosmic Landscape*, Stenger's thesis is that there is no fine tuning to explain. His task is to convince us that scientists such as Brandon Carter, Freeman Dyson, Barrow, Davies, Susskind, Hawking and Martin Rees are wrong.

The confidence with which he writes reminds me of the definition of a cosmologist – often in error but never in doubt! While some of the topics he covers are extremely subtle and complex, and authoritative criticism would require deeper knowledge than this reviewer possesses, the book is so littered with elementary and glaring errors in both basic physics and logic, that I am

not willing to give him the benefit of the doubt in matters where I do not understand him. It is hard to know whether his errors and misrepresentations arise from his own lack of understanding, or from an unwise attempt to oversimplify complex ideas. This is not a good place to try to learn physics or cosmology. Unfortunately it will appeal to people without a good scientific background who like his conclusions.

There is no question in my mind that apologists have sometimes made ridiculously overblown claims about fine tuning; but I am also clear that Stenger's attempt to rubbish all the evidence fails. This is not the place to attempt a detailed answer to all his claims; two technical points will have to suffice. He correctly notes (103ff) that the extraordinarily fine balance required at, say, a microsecond after the big bang between the rate of expansion of the universe and its density can be naturally explained by an even earlier very rapid period of inflation. He does not note that fine tuning is almost certainly required in the properties of the so far unidentified forces and particles which are believed to have driven this inflation. He notes correctly (178) that the critically important mass difference between the neutron and the proton is to be ascribed to the mass difference between the d and the u quark; he does not tell us that this quark mass difference is currently completely unexplained, and that it is of the opposite sign from the other two comparable quark pairs.

Although I am clearly critical, I conclude that there are three reasons why this book may be worth reading. First, if you think, as I do, that the values of physical constants, the parameters that describe the development of the universe, and the form of physical laws are remarkably suited for life, and that this is consistent with a Christian understanding of the world, and if you have a reasonable background in physics, then you can test your convictions against the robust denials in this book.

Secondly, you may need to read it in order to point out its errors to people who have been influenced by it. Thirdly, and more positively, there is a full bibliography and list of references to the literature on this subject – I for one discovered articles and books of which I was unaware.

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**Tonie Stolberg and Geoff Teece**  
*Teaching Religion and Science:  
Effective pedagogy and practical  
approaches for RE teachers*

Routledge: New York and London, 2010.  
152 pp. pb. £19.99. ISBN 978-0-415-54820-5

When preparing materials for school teaching, care and attention to detail is essential. This can be particularly important when leading discussion and learning involving controversial topics.

*Teaching Religion and Science* is presented as a book that contains a wealth of practical advice to help teaching practitioners in turning pedagogical theory into practice, effortlessly! The book provides comprehensive lesson plans for ages 11-16 and 16-19 (Years 7-13). It specifies that it is designed to be a resource for all training and practising RE teachers and it makes reference to National Curricular and Framework documents for England, Scotland and Wales.

This is a short book, 137 pages in total. The authors clearly state that they have no hidden agenda, for example, in trying to promote a religious worldview. They see the book as a useful resource for a range of readers associated with the training and teaching of RE. There are significant numbers of references at the end of each chapter. These

could provide a useful basis of further study, particularly in the hands of the academically minded RE teacher with a science background with some spare time on their hands. To help the reader navigate these references the authors have provided brief introductory notes about many of the texts. In quoting so many learned ‘establishment’ authors, teachers may reflect that some of the texts lack a pedagogical underpinning and relevance to the immediacy of the needs of many school classrooms. However, such concern is partly addressed by making reference to some bespoke teaching materials, such as the Science and Religion in Schools Project (2006) and the inclusion of some generalised lesson plans.

In presenting an intensely theoretical approach to RE teaching and teaching about science, the authors are likely to engage with highly motivated and academically biased teachers. Reference is made to some web based resources; however, the authors do not appear to draw attention to the popular ‘Wonder Project’ or other IT based teaching resources that have been developed as part of the Test of Faith materials (Faraday Institute/The Stapleford Centre). This is a pity, as these types of resource material are explicitly linked to detailed classroom practice in a way that appears consistent with the authors’ objectives.

The authors seek to ground their theoretical approach with a series of lesson plans. Informed readers will find familiar reference to terms such as: learning about religion and learning from religion in the Years 7-11 resource sections. Engaging lesson plan openers are likely to touch on a range of student learning styles. Lesson openers include: web links to Apollo archive, the use of photographs, reflections on the histories of different objects and the performance of a dramatised account of the creation story. The authors also plan time for student reflection on their responses to the issues raised.

In Chapter 8, 'Planning lessons for ages 16-19', (108-135) the authors give useful examples of what they mean by their assertion that religion and science topics are best explored not in isolation but as a means of examining the key concepts of religious education.

Overall, this book was an interesting read. Many teachers may find it very academic in approach. It is an attempt at comprehensively supporting teachers trained or training in Religious Education who want to extend their teaching of science related concepts within RE. Teachers may find it helpful as a reference book, a guide to a selected range of further resources and a source of some thoughtful ideas for class lesson plans.

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**John H. Walton**

***The Lost World of Genesis One: Ancient Cosmology and the Origins Debate***

Downers Grove: IVP Academic, 2010.  
192pp. pb. \$9.99 ISBN 978-0-8308-3704-5

Walton's work is aimed at those who suppose Genesis 1 should be read as a scientific account of the origin of the universe. Well-versed in the literature of the ancient Near East from Mesopotamia to Egypt, Walton argues that Genesis 1 is like other cosmologies from that time and place and should be interpreted within the conventions of that genre of literature. This means that Genesis 1 is not describing God's making the heavens and the earth and their component parts, but giving them their role and function. (Walton believes Scripture teaches creation *ex nihilo* but not here.) He likens God's activity in Genesis to making a computer operational rather than the manufacture of the hardware. Another analogy he uses is the start of a new semester at

a university. It is not the buildings that make the institution, but the faculty, students and curriculum.

'In the ancient world, what was most crucial and significant to their understanding of existence was the way that the parts of the cosmos functioned, not their material status.'<sup>(28)</sup> Thus the creation of light was essentially creating periods of light and darkness. Day 2 which has the separation of the waters above and below the firmament is not dealing with the creation of water as a substance, but keeping it in the right place. Day 3 involves the growth of the plants which provide man with food.

Days 4 – 6, says Walton, show God installing functionaries, not merely assigning functions. Thus he makes the sun and moon to rule the day and the night. On day 6 mankind is created to have dominion over all other living creatures. Day 7, when nothing is created but God rests from his work, is the most important. The central idea is that God is now ruling in his temple, the cosmos which he has finally completed.

To sum up Walton's approach to Genesis 1: it is concerned with how God organised his creation, not with its manufacture. It shows what role the different components should play, not how they were made. His general approach to the nature of Genesis 1 would be accepted by most commentators and biblical theologians. Its kinship to other Near Eastern cosmogonies is clearly demonstrable. So if we wish to be fair to its author we should try to read it with ancient oriental preconceptions, not with twenty-first century scientific eyes.

Having said this, I am not sure that Walton has entirely succeeded in his objective. For example, he surely over-stresses the distinction between assigning function to something and God's making it. This is most obvious in the creation of Adam as described in chapter 2, where God makes him out of dust

before commissioning him to till and keep the garden. Further, Walton is so concerned to convince his readers that Genesis is an ancient creation myth that he overemphasises its similarity to Egyptian and Mesopotamian texts, so that Genesis' originality is downplayed. Its monotheism, the centrality of humanity to the divine purpose, to mention just a few of its distinctives, set this chapter apart from pagan texts, and indeed lay the foundation for central planks of biblical theology. Or to put it another way, the opening chapters of Genesis provide us with the theological spectacles through which we should read the rest of Scripture.

But despite these caveats, those looking for a sane approach to Genesis 1 could hardly do better than start with Walton.

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### **Philip Pattemore**

#### ***Am I my keeper's brother: Human origins from a Christian and Scientific perspective***

Christchurch: Philip Pattemore, 2011. 416 pp, pb. URL:[www.amimykeepersbrother.com](http://www.amimykeepersbrother.com) ISBN 978-0-473-18453-7

This book was a pleasure to read. Its appeal is immediate, showing on the attractive cover a thoughtful orangutan gazing at the reader. The book is neat and trim with a firm binding, a clear and reader friendly typeface and adequate page margins. There is a contents page and then a division of the book into nine sections each of which commences with a coloured logo and appropriate quotations. There are many figures and thoughtful illustrations adjacent to the topic being considered that are helpful in understanding difficult matters. There are no footnotes but there are extensive and detailed endnotes with

websites and a recommended reading list. The index is adequate.

The author is a Christian, an experienced medical researcher and Professor of Paediatrics at the Christchurch Clinical School. He has journeyed from creationism to an evolutionary understanding of the living world. He addresses difficult issues relating to the interpretation of the early chapters of Genesis in a lucid explanation. The message is that there is One God who made everything. The terminology used is explained. He writes an excellent validation of radioactive dating methodology.

Living in the Antipodes Pattemore uses this circumstance to illustrate what may happen when the Church's understanding of the Bible collides with observations and scientific findings. The Antipodean heresy was raised by the Church Fathers and Augustine of Hippo who considered the possible presence of two-footed, one-legged people living there as irrational because a torrid zone south of the equator could not be crossed. If it was inhabited then they could not possibly be descendants of Adam. Columbus was warned of the grave heresy he might be committing as he would enter this forbidden zone. Magellan found humans living there but he was not believed by the clergy. Copernicus, basing studies on careful observations postulated a heliocentric solar system but these heretical findings were assailed with venomous attacks after his death. Galileo, using his telescope, confirmed these observations but was shown the instruments of torture before confinement to home detention. In our own era the teaching of a creation in six days, a Sabbath and a global flood based on the mystic visions of Ellen White of the Seven Day Adventist's cult has intruded evangelical communities. Now called 'creationism', it has resulted in a divisive polarisation of beliefs amongst many Christians. The author is scrupulously equitable in accepting the sincere beliefs of these

people. He is concerned with the issues they must assess in coming to such a decision.

Pattemore, by careful assessment of the facts from different branches of the sciences explains the central theme of the book, that humans evolved from a common ancestor with the primates. Our genes link us with this lineage and hence with all of nature. Whereas the origin of species may not be clearly explained by science the concept of this ancestry is not in dispute and is supported by evidence from their morphology, fossils, genetics and metabolic similarities that are now largely independent of the postulates of Charles Darwin. However Darwin's theory on the *Origin of species by means of natural selection* or common descent with modification of the biota provided a useful and unifying approach to the relatedness already recognised in nature at that time. The author says that the current postulate among many is evolution by natural selection linked to Mendelian inheritance.

In Section 1 the author shows that there is no difference in the revealed truth in the Creation story and that discovered by science. Today the translation and interpretation of the former is often misunderstood because it was written for a people living in the Ancient Near East. Therefore the findings of current science cannot be imposed on this Hebrew text and there is no dichotomy between the God of the Scriptures and the God of nature.

Pattemore's discussion of the ancient lineage of the fossil hominids is excellent. Birth, living and dying are a part of God's good creation. There are similarities and differences in the biota but there is an overall relatedness present amongst them today. Everything needed for directing ongoing development from conception is in the 3.1 billion bases or letters spread amongst the 24 chromosomes in each cell. He says the 20,000 to 25,000 human genes control our lives. Pattemore explains

the DNA helix, the possible origin of mutations and gene damage and the multiple invasions of this genome by retroviruses from ancient times. The genes associated with  $\alpha$  globin are identical in humans and chimpanzees. The FOXP2 gene associated with language differs in primates and mice by only 3 amino-acids. The author shows by other examples the analogy between humans and these ancestors.

The author says he does not think that the beliefs of creationism make sense of the shared genetic features of humans and chimpanzees. Their arguments do not lead to a new understanding of the Creation because they take a literalist interpretation of this story and then add to it the findings of contemporary science. Therefore they are true to neither these Scriptures nor to the truth of science that also changes with time. Our descent from a common ancestor is a valid scientific inference. Millions of DNA insertions are shared with the chimpanzee together with about 95% of our genes. The author's conclusion is that there is compelling evidence that humans share ancestry with non-human apes and primates. Moreover the Genesis story is not a scientific statement about human origins and its theology is compatible with an evolutionary ancestry of humanity.

The author discusses the event in the garden in Eden that fractured a relationship between humans and their creator. The Fall from sinless perfection so central to the beliefs of many is a non-scriptural posit possibly arising from the influence of Greek philosophical concepts in the Septuagint. The teaching of Augustine of Hippo on original or hereditary sin is not a central theme of these passages and is not supported by the Hebrew Scriptures. As the author says, the Bible teaches that each is responsible for their own decisions and actions. He explains each of these matters, repeatedly emphasising that Christians must not cling to inadequate explanations of the Bible.

Pattimore broaches the controversial matter of the absence of any reference to an extra-corporeal soul in either the Hebrew or Greek Scriptures. He carefully explains from the Scriptures that the Hebrew *nephesh*, describing a living animated being is replaced by *psuche* in the LXX, the posited immortal component imprisoned within the body. The author says that the Bible teaches about a holistic human, a body, although Christians have acquiesced to the alternative Greek philosophical teaching of Plato and Aristotle of an immortal soul. The Apostle Paul does not buy into this belief but expands on the Christian's hope, the resurrection of their body.

This is a lucid, scholarly book that shows that both the Christian faith and science can contribute to an understanding of God's world. The Christian's world-view should be built on this truth found in God's two books and should be built into the Gospel message that has been entrusted to the Church. This book is highly recommended as it permits Christians to meld the truth of science with their faith.

[The book may be obtained from the author, email:  
info@amimykeepersbrother.com].

**Ken Mickleon has a theological degree and has retired from paediatrics.**

**Gennaro Auletta, Marc Leclerc and Rafael A. Martínez**  
*Biological Evolution: Facts and Theories. A Critical Appraisal 150 Years After 'The Origin of Species' (Analecta Gregoriana no.312)*

Rome: Gregorian & Biblical Press, 2010.  
747pp. £50. ISBN 978-88-7839-180-2

My (somewhat uncharitable) reaction to reading this book is summed up by words I had pinned above my desk when I was a student, 'Of making many books

there is no end.' *Biological Evolution* is the fruit of a five day conference attended by several hundred people, held at the Pontifical Gregorian University in Rome, 3-7 March 2009, 'to establish a structured program that would provide an itinerary for working through the many questions involved, while at the same time promoting a constructive dialogue that would be fully respectful of the specificity and autonomy of the various disciplines' (15). The meeting itself may well have fulfilled this ambition, educating and stimulating a gathering probably (because of its location) dominated by theologians and seminarians. The resulting volume is less happy: an unwieldy and uneven collection of 36 chapters. I fear that for most this is a book too far. This is a pity, because the reason for the conference which spawned the book was very worthwhile, and the topics covered are often misrepresented and hence cause confusion.

The contributions are in six groups. The book begins with lucid historical reviews from Francisco Ayala (University of California Irvine) and Jean Gayon (Sorbonne), answering a number of antiquated but reiterated criticisms about chance, the nature of selection, the existence of lateral gene transfer, the possibility of prediction in evolution, and more. The second section sets out some excellent science, including positive accounts of the importance of molecular data in confirming phylogenetic trees previously based of necessity on morphological features and a highly pertinent essay by Jeffrey Feder (Notre Dame) on the insight into speciation processes from the ability to study molecules. The chapters on human evolution are less satisfactory. The palaeontological evidence is set out clearly enough, but the relevant molecular information is not well explained. The best paper in this group is by Colin Renfrew (Cambridge), 'The concept of evolution as applied to the development of human cultures'.

The outstanding contribution in the 'Epistemological aspects' section is by Elliott Sober, defining and defending 'methodological naturalism', drowning the siren calls of 'intelligent design theorists' (367), and denouncing 'metaphysical naturalism'. Most of the authors in this and the next section (on 'Metaphysics and teleology') indulge in philosophical infighting of little relevance to science. More helpful chapters on teleology are contributed by Vittorio Hösle (Notre Dame) who has a useful section on the interchange between Darwin and Asa Gray and by David Depew (Iowa) who argues that epigenetic processes (or 'evo-devo' as they tend to be labelled) help modify reductionist denunciations of teleology. The section closes with a lucid summary of the genesis of 'Scientific creationism and intelligent design' by Ron Numbers (Madison).

The six chapters in the 'Theological debate' section might be expected to be the most relevant to readers of this journal. André Wenin (Louvain) introduces 'The creation in the Old Testament', concentrating on Genesis 1-2, Job 38-41, and Psalms 8, 104. Humans 'in the image of God' are intriguingly said to be enabled by their God-prescribed diet to exercise their 'duty of dominating the animals with mildness ... and [hence] able to preside over a universal harmony, a fulfilment of the hidden desire of God in his work of creation (see Isa. 11:6-9)' (546). Like most of the other writers in this volume, Wenin is very restricted in the authorities he cites; he does not refer to any of the standard commentators of the creation stories (scholars like von Rad, Westermann, Gunkel, Anderson, never mind Blocher, Walton, Collins, Atkinson, Lucas) which disturbs me somewhat. There is a danger of re-inventing the wheel. The only one of the book's editors to contribute a chapter is Rafael Martínez (Pontifical University), who writes on 'The reception of evolutionary theories in the Church'. 'Church' here means

the Roman Catholic Church. However, Martínez only deals with the pontificate of Leo XIII (1878-1903). There is nothing, for example, about the Vatican's vacillating attitude to Teilhard, who gets two chapters of homage (from Ludovico Galleni of Pisa, and Georges Chantraine, of Lugano).

The theology section ends with a useful summary of 'Theological debates around evolution' by Robert Russell (University of California Berkeley), largely summarising views put forward in the 2003 book *Evolution from Creation to New Creation* by Russell's colleagues Ted Peters and Martinez Hewlett. He adduces three ways whereby Christian theology can 'appropriate evolutionary biology' (649): inspiration from the beauty of nature; natural theology ('The myriad wonders of nature often appear to be designed'); and a theology of nature – or theistic evolution. 'Theistic evolution affirms that natural processes are ultimately the creation of God whose purpose is that life, and in particular self-conscious creatures such as *Homo sapiens* on earth, may respond to God's gracious self-communication and enter into covenant with their Creator' (652). He names Celia Deane-Drummond and Karl Rahner as extending the theology of nature to incorporate a Christology, and suggests that Simon Conway Morris's emphasis on the prevalence of convergence helps to underpin this (654). He then goes on to discuss 'the central challenge to theistic evolution: natural theodicy' (656).

Russell's chapter is a good ending to a 'curate's egg' volume. There is much that is good in the book as a whole, but it never seems to come to grips with the multiple interfaces between science, philosophy, history and theology. For example, fractals and chaos theory are only mentioned in passing (355) (neither are indexed), yet they have had a major impact on understanding ecological and therefore evolutionary processes, and are highly relevant to interpreting the appearance of chance phenomena.

It will be good if *Biological Evolution: Facts and Theories* fulfils its stated aim of 'an itinerary for working through the many questions involved' but I suspect its main value will be to provide useful material for specialists (not least for any wanting anti-'intelligent design' arguments).

**R J (Sam) Berry is the author of *Neo-Darwinism, God and Evolution, and co-editor of *Theology After Darwin* (with Michael Northcott) and *Darwin, Creation and the Fall* (with Tom Noble).***

**Celia Deane-Drummond and Heinrich Bedford-Strohm (eds.)**  
*Religion and Ecology in the Public Sphere*

London: T & T Clark, 2011. xi + 240 pp.  
pb. £24.99. ISBN 978-0-567-03508-0

This important book makes accessible an important dimension to a pressing modern debate, namely how to bring religious (and in the context of this book, specifically Christian) understandings of creation and ecology into wider public debates. The chapters are based on contributions to the 2nd International Conference of the European Forum for the Study of Religion and Environment in Finland in May 2009. The contributors are mainly scientists and theologians from Europe and North America, but also include Loreen Maseno, Lecturer in the Department of Religion, Theology and Philosophy, Maseno University, Kenya.

One of the two editors, Celia Deane-Drummond, will already been known to readers of this journal. She is formerly Professor of Theology and the Biosciences and Director of the Centre for Religion and the Biosciences in the Department of Theology and Religious Studies at the University of Chester, and now Professor of Theology at the John J. Reilly Center, University of

Notre Dame. The other editor, Heinrich Bedford-Strohm, is Professor in Systematic Theology and Director of the Dietrich Bonhoeffer Research Centre for Public Theology, University of Bamberg, Germany.

The rationale behind the book is stated by Professor Deane-Drummond in her introductory chapter. Given the need for political consensus to tackle global ecological issues meaningfully but with hopes disappointed so far, and the fact that such a large majority of the world's population is religious, it is vital that we generate 'a new public theology of ecology that takes account of the richness of religious resources and relates those resources to the requirements of political praxis' (4).

The ten chapters that follow are then set out in three thematic sections: Concepts of Religion in the Public Sphere, Contextual Approaches, and Towards Public Theologies of Nature.

As a former geologist, this reviewer judges especially significant the chapter in section 2 by Pauliina Kainulainen entitled 'Geology vs. Theology? Uranium Prospecting and Theological Arguments in Northern Carelia 2006-2009'. This chapter functions as a case history: it grounds some of the considerations dealt with in other chapters in the book in a particular issue in a specific setting. Exploration for uranium, with the prospect of commercial extraction, is linked to clear potential economic benefits to local communities on one hand and on the other, to pressing issues to do with the long-term ecological well-being of the land in which the communities are set. The contribution of the local Lutheran church was welcomed by some and viewed with hostility by others. Also interesting is Kainulainen's description of the positive effect on the church itself, and of its relationship to the wider community, of participation in the public debate.

The hostility noted by Kainulainen

came from two sources: firstly, on a theoretical level, by those who viewed the secular sphere in a 'programmatically' way with religions coming from outside the source of legitimacy, and secondly, by those who saw the church as embracing 'pseudo-science' rather than relying exclusively on the objective knowledge science provides. Those who welcomed the church's contribution to the debate were more likely to view the secular sphere as being a 'procedural' space in which different voices can be heard. These notions of programmatic and procedural spheres were previously proposed by Archbishop Rowan Williams and are described more fully in Peter Manley Scott's essay 'Right Out of Time? Politics and Nature in a Post-natural Condition' earlier in the book.

Two other contributions to this section of the book are also contextual. Elna Vuola warns of the danger that Latin American liberation theology needs a greater flexibility in order to embrace ecological issues. Loreen Maseno writes about the potentially fruitful relationship between Christology that understands Christ as the Wisdom of God and African wisdom traditions.

It is this central section that, because of its accounts of contextual concerns, points towards one of the huge tasks facing public theologies of creation. As Celia Deane-Drummond argues in her final essay, contextual theologies need to lead to inter-contextual theologies, given the global nature of some of the pressing ecological issues that face us.

This brings your reviewer back again to Kainulainen's essay. She observes that the issue of uranium mining figured much larger in ecological awareness in Carelia than other more global issues. She also notes that exploration companies have scaled back their activities since 2009 (119). What is needed, but missing, is a discussion as to whether the debate she describes has continued since then, and whether it has widened out into an awareness of

more global concerns. Again, this consideration will often figure large in the demanding practical task of developing inter-contextual public theologies of ecology.

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### **William Grassie**

#### ***The New Sciences of Religion: Exploring spirituality from the outside in and bottom up***

Basingstoke: Palgrave Macmillan, 2011. 284 pp. pb. £19.99. ISBN-13 978-0230108776

Grassie's position as previous director of the Metanexus Institute makes us interested to learn his views on the relationships between Science and Religion. While Grassie speaks kindly of religions, he is not a theist and so his basic ideas, while interesting, will not find much acceptance from evangelical Christians.

In the last chapter of the book he reiterates five concepts to be emphasised, each of which is discussed earlier in detail.

1. Nonreductive functionalism. Grassie says 'I will argue that religions are all partly true and that they actually correspond to something profound and real in the universe.' He sees religions, and also science, as being complex and so demanding several different methods for their investigation and therefore incapable of being reduced to a simple analysis. Religions are also functional in that for millions of people they provide an important part of their daily life.
2. Entangled narratives. It is true that we meet up with a variety of religious ideas in today's world and

some of these ideas occur within the stories of several religions. On the other hand some religious claims, for example the deity of Christ, are particular to one religion. Grassie does not like this and is quite scathing of the biblical documents. He describes the Bible as having 'enormous historical importance but is itself not an actual history.' (134). He continues to throw doubt on the origins of the New Testament, saying 'the authors of the four gospels are not actually known' and that many of Paul's letters are thought to be pseudepigrapha (135). This highlights the importance of modern evangelical scholarship in sorting out which parts of the Bible are stories and which is true history. In dealing with the different narratives, Grassie advocates 'intellectual nonviolence' or humility, an attitude much recommended by the John Templeton Foundation. Some of us Christians may need to heed Grassie's plea to learn from other religious writings but, at the same time, the truths of our basic Christian doctrines need to be supported by our own scholarship endeavours.

3. The interpretation of science. Grassie suggests that our beloved 'scientific method' is not considered adequate by most philosophers of science today (161). Whereas what science is done may be constrained by the situation and the presuppositions of the scientist, the results of the science should be unarguable. For example, if a computer model of atmospheric behaviour is set up, certain assumptions will be built into the code. If a particular physical parameter is measured, it will be measured under certain well-defined conditions. Either of these investigations can then be replicated by another scientist so long as they use the same assumptions or conditions. What has this to do with religion? The trouble is

that a confusion sometimes arises between considering what science is actually carried out on the one hand and the veracity of the actual experimental results. This leads to some attaching an undeserved unreliability to almost all scientific results, sometimes preferring a religious viewpoint over a scientific finding.

4. The new metaphysics. Miracles are discussed here. Grassie is right in pointing out that you can't use science to study something that is supernatural as that would be a category mistake. By substituting 'unnatural' for 'supernatural' he dismisses the miracles of the gospels and only allows a psychological, symbolic and mythological reading of the stories about Jesus. He does not deny that people have 'religious experiences' but again places these beyond the reach of science. Grassie uses the concept of emergence, moving from bottom to up, to reach into a transcendent sphere where God might be found. But he christens his deity the 'God-by-whatever-name' and defines him or it as 'the set of all phenomena – past, present, future – as well as what may also in some sense precede and transcend this universe'. (175). And so this god should not be identified with Jesus or Allah or Brahma. What we see in nature is this god working to increase differentiation (complexity), communion (such as symbiosis) and autopoiesis (self-creative freedom) (198). Grassie carries these natural properties over into moral imperatives to be pursued by humans. We are then led into the rather uncomfortable realm of Whitehead's process theology in which God loses his omnipotence and is only capable of a 'persuasive urging toward the good and the beautiful' (197).

Christians emphasise the importance of a person-to-person relationship with

God. Personhood may be seen as an emergent phenomenon and Grassie's God-by-whatever-name possesses this property as 'all our separate human minds and personalities' are included in his powers (199). This is quite different from the Christian perspective of God's person, which emphasises his special attributes, especially love and justice.

Yet there is much interesting material here. For example Grassie explores the ideas of August Comte and we learn about his positivist calendar with every day of the year named after a famous person. The relation of religion to economics is examined in various societies. The evolutionary appearance of religion in primitive societies is discussed, questioning whether religion is a meme, a spandrel or an adaptation. An introduction is given to the possible relation of neuroscience to religious experiences and how religion may be beneficial to one's health.

The belief in a Supreme Being watching over us is quite common and comforting for many people these days and Grassie applauds this function of religion. It remains a challenge for us to relate all the data he presents to the God revealed in Christ whom we are called to worship and with whom we can have a personal relationship.

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**John C. Lennox**  
*Seven Days That Divide the World:  
The Beginning According to Genesis  
and Science*

Michigan: Zondervan, 2011. 192pp.  
US\$14.99. ISBN 978-0-310-49460-7

The content of this short book is summed up rather well by its somewhat peevish title. Here John Lennox concentrates

on the first chapter of Genesis, having already published a broader take on science and religion in *God's Undertaker* (2007). His style is clear and accessible, with a welcome touch of humour, but it is also argumentative. This latter aspect comes out especially in the five Appendices, which take up more than a third of the book.

The first two chapters look back briefly at the old controversy over the earth's movement round the sun. Lennox explains how Old Testament verses that refer to a fixed earth were seen as speaking metaphorically once it became certain that the earth really does move. This account of the Galileo affair serves as a cautionary tale, from which he recommends humility in interpreting both Scripture and science. He also sets out his own position as a 'scientist who believes Scripture to be the Word of God' (28).

From this basis, Lennox moves on to consider what Genesis 1 has to say about the age of the earth. He acknowledges three main ways of interpreting the days of creation: as 24 hour days, as long periods of time or as a literary framework. He then offers a fourth way of his own, where 'the six days encompass a sequence of creation acts, each of which involved at least one creative fiat introduced by the phrase "And God said".' (55). Lennox suggests that these days occurred at intervals over the long history of the universe. However, as he explains in Appendix E, he believes the phrase 'And God said' means 'direct activity of the word of God' (186) and excludes 'unguided natural processes' (172). He therefore rejects any idea of 'theistic evolution' and this makes him, in current terminology, an old-earth creationist.

This position becomes even clearer in the next chapter where he argues that human beings are a special creation and not a product of evolution. He insists that, according to Genesis, you cannot cross 'the gulf between animals and

human beings by unguided natural processes ... Without God speaking there is an unbridgeable discontinuity' (70). Lennox offers us only two alternatives on human origins: either 'a supernatural intervention' (74) or 'random permutations of matter without any ultimate significance' (85). He does not include the possibility that, in a divinely sustained world, natural processes are due to the ongoing creative activity of God. The latter concept has long been part of creation theology, an area of study that is not really included in this book.

In a final chapter, Lennox considers the broader world-view of Genesis 1. There is no discussion here of the cultural and literary forms in which the message was conveyed to ancient Israel. Instead, everything is quickly linked to modern science and to the author's battle with atheism. Then the Appendices take over and these include a dispute with Old Testament scholarship that poses a threat to his position. The last one contains his arguments against theistic evolution.

Overall Lennox does seem to be driven by a desire for doctrinal certainty. His insistence on an unusual interpretation of Genesis is linked to his particular doctrine of creation as divine intervention at certain points in world history. This leads him to reject any mainstream science, such as evolutionary biology, that would throw light on these points. The irony of this is that he is treating biology rather as the church treated astronomy in the Galileo affair.

**David Young is a zoologist and author of *The Discovery of Evolution* (Natural History Museum & Cambridge University Press, 2007).**

### **Mark Lynas**

#### ***The God Species: How the Planet Can Survive the Age of humans***

London: Fourth Estate, 2011. 280pp. pb. £14.99. ISBN 978-0-00-731342-6

*The God Species* has caused considerable debate among environmentalists. Lynas, once a leader of the mainstream, has now turned on his former colleagues, accusing them of wanting to return to a golden age that never was. We can only go forward, but not thoughtlessly. Instead we should recognise that 'we hold the levers of power over the Earth's major cycles ... [and] take conscious decisions about how the planet should be managed.' (7)

The book is structured around the planetary boundaries model of Rockström et al: there are nine measurable areas (such as biodiversity, CO2 emissions and fresh water) and a limit on each beyond which we risk damaging the earth. In each, he gives a clear well-referenced analysis of where we are at present, and offers potential solutions, ranging from the uncontroversial through to nuclear power, genetically-modified food and at least research into geoengineering, all of which he favours strongly.

It is important that rational debates on these issues be had. There is some truth in Lynas' assertion that given the increasing urgency of the situation, we need to revisit certain things currently seen as taboo. Unfortunately, he fails to engage adequately with opposition positions sufficiently to foster such debates. For instance, the section on GM food fails to reference studies which suggest their yields are far less than promised, and the ethical concerns over restrictive trade practices are dismissed without adequate consideration.

The book does have value, though, as a window onto a modern secular mind – Lynas has dismissed religion as a historical irrelevance by page 7 – and its philosophy, at turns hubristic and

inconsistent.

He provides a fine depiction of the earth as an amazing self-correcting complex system inherently impossible for humans to understand fully. It can survive a considerable amount of perturbation, but the ensuing correction may be unexpected, delayed and severe. Traditional environmentalists thus urge caution, but Lynas would still have us pull the levers, albeit taking more care. His justification seems to be a high degree of faith in human ingenuity, technology and the workings of the capitalist system. But while optimistic about these aspects of human nature, he is equally pessimistic about any idea that humanity can opt for a level of restraint.

The clearest example of this line of thought is his economic theory. For him, the current crisis (which many would analyse similarly as a severe correction of a perturbed complex system) seems not to be significant enough to mention. Finding a large amount of credit for an investment in green technology through further quantitative easing is a 'minor concern', as is the risk of resource shortages pushing up prices and damaging the economy. Yet the alternative approach of a major cut in consumption is rejected as impossible.

Perhaps underlying this is an excessively reductionist thinking – a criticism levelled at the Planetary Boundaries Model generally. Lynas argues that we need to keep within the nine boundaries listed, but everything else is fair game, including breaching the conceptually parallel Global Footprint measure. Further, he does not seem to be concerned that geoengineering may cause new boundaries to come into play. Solving ocean acidification by adding lime will radically increase calcium concentrations, for instance.

Lynas asks 'is unwitting and bad planetary geoengineering really better than witting and good planetary geo-

engineering? I am not so sure.' (11-12) I remain unconvinced. But what I am sure about is that whatever we choose to do, or not do, to the planet, needs to take account of a more holistic view of the world and human nature than Lynas adopts.

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**Jack Mahoney**  
*Christianity in Evolution. An Exploration*

Washington, D.C.: Georgetown University Press, 2011. 188pp. \$18.75. ISBN 978-1-58901-769-6

In the dialogue between Science and Religion, there is a well-documented aspiration on the part of believers to create a discipline which incorporates scientific findings in theological discourse. This book represents an attempt, a very radical one, to fulfil that aspiration. Within the dialogue community it will be appreciated if not fully accepted; to outsiders it may well appear so radical a departure from theological tradition as to be reckless if not worse. But even those who do accept that evolution is 'more than a hypothesis', as Pope John Paul II once said, must find it difficult to come to terms with the extent to which its acceptance requires reformulating the core of Christian tradition. It is no small matter to deny the doctrine of Original Sin (as others have in effect been doing for quite a while) and then go on to declare, as Mahoney does, that the logical sequel is also to deny that Christ's death was a propitiatory sacrifice, with all the implications that follow for Christianity. It cannot but appear that the whole Christian doctrinal edifice is under threat and that the emeritus professor of moral theology at the University of London has taken on the task of providing a new hermeneu-

tic for fundamental beliefs.

His point of departure is how death has been perceived in the Judeo-Christian tradition and how it is to be understood in evolutionary theory. In the former, death was viewed as the divinely imposed penalty for human disobedience (see Rom. 6:23), while 'in evolution through natural selection the death of individuals, not just of humans, is rather seen as a biological necessity and a requirement'. (63) This approach of course renders otiose any discussion of a pre- as well as a post-lapsarian state of humanity and raises the question of how to explain the phenomenon of human sinfulness. Here he expresses disagreement with the overarching sense of sinfulness he believes Christianity has inherited from Judaism and explains moral evil in terms of the freedom with which God has necessarily endowed his human creatures (106). It must be said of course that many who have adopted a less radical approach to Original Sin (for example, Hick, whom he quotes) also treat sin from an existential or personalist angle in an attempt to avoid physical or psychological determinism.

The most significant theological novelty of his approach is his pursuit of the logic of an evolutionary perspective into the area of the Atonement – if there was no Fall there was no need for atonement. This is an area where new insights are surely to be welcomed as both confusion and controversy have long been equally evident. Paradoxically, he is nonetheless battling against a weight of tradition, which could be summed up in the Pauline statement: 'Christ, our passover lamb, has been sacrificed' (1 Cor. 5:7). Among those whom he quotes as upholding the traditional view is N. T. Wright, but he also quotes the nineteenth century Tractarian, J. R. Illingworth (who was attracted by the new theory of evolution), to the effect that the religion of the Incarnation had been narrowed into the religion of the Atonement (11).

Mahoney's own fundamental principle is that of the divine altruism, of which Christ is the prime image, so that human altruism becomes a 'break-out' from evolutionary self-obsession and can be seen as a reflection of, and participation in, the creative altruism of God. 'Jesus triumphed over death, and his death was more than a striking moral example of the extent to which altruism could draw one; it was also in evolutionary terms a cosmic achievement for humanity, taking our species through the evolutionary cul-de-sac of individual extinction to enter into a newer form of human living.' (51) What that implies for church and morality and human destiny is sketched out, but rather summarily.

At this point the reader may well ask how the 'mysterious and mystical association of the altruistic with the risen Christ' (121) becomes effective. Schleiermacher's idea of the church as the community of those who share the supreme God consciousness of Christ is the only model suggested. The question then is whether the church needs or even can have any visible structure. It is significant that in the book there is no mention anywhere of baptism, the point of which in this situation is hard to envisage in any case. In the text, discussion of church moves to the connected topic of the Eucharist but concentrates on the issue of sacrifice (central of course to the book's logic) rather than the issue of corporateness in its historical visibility which would be required at this point. It is hardly sufficient to talk of the Eucharist as 'the fellowship meal building the church into the evolutionary community of Christ' (138).

The author certainly argues very cogently against received doctrines using an abundance of quotations from writers Patristic, medieval and contemporary, for and against his thesis. There is the problem, however, of major consequences which follow from it and which he does not take into account, the nature of the church being perhaps the

most pressing one. Nevertheless, this is a very challenging book and must be taken seriously, however unconventional its conclusions. The Bibliography is extensive and there is also a Scriptural Index.

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### **Steve Paulson**

#### ***Atoms and Eden: Conversations on Religion and Science***

Oxford: Oxford University Press, 2010.  
pp. pb. 312. \$17.95. ISBN 978-0-19-974316-2

This book consists of twenty interviews between radio producer Steve Paulson and scientists, who represent a range of backgrounds and views on science and religion. Several of the interviewees are well known for their antireligious views, while others come from Christian, mystical or other faith positions. The book contains some insights into the personal backgrounds of the interviewees, and brings their disparate opinions together in a single volume. However, it is no substitute for reading in depth the longer arguments that each has developed in their own publications.

In this question and answer format each of the dialogues considers life's 'big questions' – origins, design, purpose, religion and the need for God. The interviewees are allowed to develop their personal opinions, though none of them is stretched to defend their views and the tone of each one is more of a fireside chat than any rigorous analysis. Little new information is developed, though it does provide insights into some of the 'softer' attributes of some of religion's harshest critics (for example Sam Har-

ris' sympathy for secular Buddhism). I suppose that we should not be surprised, but there were too many times when the claim was made that faith had nothing to do with reason. Even in the first interview with E. O. Wilson the questioner states 'religion is grounded in faith... in living with the non-rational part of your mind', but then proceeds to have rational conversations about religion with each of the interviewees! Several of the contributors clearly struggled with the need for some form of transcendence and spirituality, but resolutely refused to invoke the existence of God. Indeed there was no consensus on what they meant by 'God' or 'spiritual'. It was interesting to see how close some people came to theism, yet they still denied what seems like the simplest and most obvious explanation. The author deliberately excluded any 'creationists' or advocates of 'intelligent design' from the project on the grounds that their science is not credible. While this is quite justifiable one wonders why others were not excluded on the grounds of the credibility of their theology or philosophy! I couldn't see the relevance of one or two of the contributions to the science-religion debate, for example Elaine Pagels on the Gnostic gospels. As one would expect, issues of meaning and purpose were prominent, much more so than questions of origins, and almost every chapter acknowledged the problem of consciousness, without giving any clear leads.

Overall this was an interesting light read, but it failed to provide any new insights. One hopes that it might stimulate some people to read further, though the pot-pourri of opinions that it contains would leave the uninformed reader with no clues for where to turn next, as no further reading or bibliography is provided.

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**Alvin Plantinga**

***Where the conflict really lies:  
science, religion, and naturalism***

New York: Oxford University Press, 2011.  
376pp. hb. £17.99. ISBN 978-0-19-981209-7

Alvin Plantinga has, in various ways, been engaging with questions regarding science, religion, and naturalism throughout his career. Indeed, he draws heavily from previous work here, re-hashing familiar arguments to build a case for the provocative claim that it is atheism which deeply conflicts with science, not theism.

The case is made in four parts. Part 1 begins with biology: Plantinga rightly observes that it is only the view that evolution is *unguided*, which conflicts with theism. He then claims that theists ought not worry because, far from ruling out divine guidance, the available evidence only leads to the unimpressive conclusion that unguided evolution is possible. But this nonchalance is puzzling. All else being equal, we ought to prefer explanations that involve fewer (types of) entities; even if the evidence is weak, as long as unguided and guided evolution are evidentially equivalent, we should prefer the former, as it involves one fewer supernatural agent. Perhaps Plantinga does not think that the naturalistic and theistic accounts are evidentially equivalent; however, while he quickly asserts that various features of human existence (e.g., religiosity, morality) are more probable under theism than naturalism, he never defends these assertions. Furthermore, his discussion of Paul Draper's evolutionary arguments conspicuously neglects his major claim that the suffering in evolutionary history is better explained naturalistically than theistically. All this is somewhat dissatisfying. Fortunately, Part 1 improves with Plantinga's view on physics and divine action; unfortunately, this is prefaced by odd complaints about the Divine Action Project (e.g., John Polkinghorne, Nancey Murphy). Odd

because, despite his complaints about the incoherence of their concerns, Plantinga ends up rather close to many DAP members' positions. The view he defends, that general and special divine action are consistent with contemporary understandings of physical laws as indeterministic is hardly novel, nor is the related view that God acts at the quantum level, causing wave functions to collapse this way or that.

In Part 2, Plantinga argues that the conflict between science and theism comes, not from science proper, but from methodological naturalism, an extra-scientific commitment. To do so, he draws examples from evolutionary psychology (in particular, evolutionary psychology of religion) and, to a lesser extent, historical biblical criticism. In each case, Plantinga claims that the scientific theories only conflict with theism when anti-theistic assumptions are smuggled in or when theistic assumptions are omitted. But this latter claim seems trivial. Clearly, scientific theories cannot conflict with theism if theism itself is assumed to be true. But why should it be? Furthermore, can *any* belief be in such a way assumed as true? Plantinga seems to think not: he includes, in the Christian's 'evidence base', a particular view on *imago Dei* (that somehow renders altruistic behaviour rational) and excludes the view that the Earth has corners (Isa. 41:9). Perhaps he thinks that the former is a legitimate reading of the Old Testament, whereas the latter is not; however, no principles for biblical interpretation are provided.

The arguments get more technical in Part 3, as Plantinga examines arguments for theism from cosmological fine-tuning and biological complexity. The discussion about fine-tuning is a good introduction to this debate. The argument begins with the premise that for life to evolve, certain conditions must obtain and, given the massive range of possible conditions, the fact that the universe is conducive to life

requires explanation; the argument concludes that theism best explains the apparent fine-tuning of the universe. There are various ways to respond, and Plantinga deftly takes us through them, including claims about the arguments' incoherence or triviality and the potential alternatives to theism (e.g., multiverse theory). Somewhat surprisingly, Plantinga concludes that fine-tuning arguments provide only modest support for theism, though it is not entirely clear to me why this is. Similarly, Plantinga demurs from making much of Intelligent Design-esque claims that biological complexity supports theism. On this point, Plantinga suggests that 'design arguments' might not be arguments *per se*, but rather *perceptions*: instead of *inferring* design, we *perceive* it. This is meant, I think, to confer our design beliefs with the epistemic legitimacy that our other perceptions (e.g., visual perceptions) enjoy. If so, this seems a bit of a stretch. If we 'perceive' anything in this way, it is that there is some complexity to be explained, rather than that there is a designer (divine or otherwise). Plantinga's short cut is frankly dubious. In any case, he makes rather little of these cosmological and biological observations; instead, he finds 'deep concord' between theism and science in the very possibility of scientific investigation. Theism, Plantinga claims, provides the assumptions science needs to get off the ground, in the God-given reliability of human perception and cognition, the intelligibility and regularity of the physical world, and so forth. Again, these are not novel claims, and can be found elsewhere.

Part 4 recapitulates Plantinga's infamous Evolutionary Argument Against Naturalism, which has previously been scrutinised in various articles and books. Very roughly, Plantinga argues that science requires us to trust our cognitive and perceptual faculties; however, naturalism provides us no reason to do so, as the view that these faculties evolved by unguided natural selection

entails only that they should generate fitness-increasing beliefs rather than truth-tracking ones. Ergo, naturalism cannot provide the assumptions we need to do science. In contrast, as mentioned above, theism can. While much ink has been poured on this already, I wonder whether the naturalist could just assert that her trust in her epistemic faculties is a basic belief that enjoys the kind of warrant that Plantinga usually claims his theistic beliefs enjoy (*qua* basic beliefs). *Prima facie*, her claim seems more legitimate than his, but that is a matter to be resolved at greater length elsewhere.

No doubt, *Where the Conflict Really Lies* will generate much discussion among people interested in science and religion. However, very little in it is new and even less will be persuasive to those not already convinced by Plantinga's earlier work on Reformed Epistemology.

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### **Keith Ward**

#### ***Is Religion Irrational?***

Oxford: Lion, 2010. 176 pp. pb. £8.99.  
ISBN 978-0745955407

Keith Ward is a prolific writer, and I cannot pretend to have come to grips with his corpus. But I form the impression that this fast-paced and animated treatise on the subject of religion is a fair sampling of his thought. *Is Religion Irrational?* grapples with theology proper, free will, knowledge and rationality, consciousness, the fine-tuning argument and many more philosophical themes besides.

It would be impossible in a review of this length to summarise Ward's take

on all these different topics. Suffice it to say there is a good reason why the author has felt compelled to cram so much of his thinking into such a short and feisty paperback: Ward is rather irritated by the so-called 'New Atheists'. Understandably so. 'One of the key principles of a humane education', he explains, 'is that we should seek properly to understand the beliefs even of our opponents' (130), and popular polemicists like the egregious Sam Harris or the ubiquitous Richard Dawkins seem to make almost no effort to do that. More urgently, Ward considers them a menace for some of the same reasons that they attack religion: any ideology that makes us 'regard others as less than human or as dangerously irrational' can also 'make us most capable of incredible brutality' (135), and the contempt for religious believers that the New Atheists deliberately foster, and the *intolerance* of religion that they routinely demand, is deeply disturbing. Moreover, Ward thinks belief in God really does make an important difference, which the strident unbeliever may be missing out on: 'it could transform our lives, as we build a conscious relationship with... a personal reality and find ourselves, not as accidental by-products of a purposeless mechanism, but as persons who are important parts of the purpose of this universe, who can grow in understanding and appreciation of it, and who can find through it that supreme personal reality in which it is grounded' (17).

For these reasons, Ward feels compelled to lay before his readership an accessible cross-section of a reasonable religious mind, and to persuade the sceptic that neither science, nor reason, present insuperable problems for rational religion. On the contrary, Ward is willing to claim that 'belief in God is more, not less, rational than atheism' (29). But he is anxious to establish from the beginning that, contrary to the assertions of Richard Dawkins and his ilk, 'God is not a scientific hypoth-

esis' (10), nor is it appropriate to take a scientific approach to this question. Rather, 'if there are personal or mind-like realities in the world, they demand a special sort of attention from us' (15). However the debate may have recently come to be framed, 'to believe in God was always to respond to the universe in which we exist as the manifestation, expression, or creation of a personal, conscious, mind-like reality... Science cannot render belief in God obsolete, any more than it can render the appreciation of Shakespeare or belief in the value of human life obsolete' (17). Contrary to Comte and Frazer, religions do not 'exist to explain and control the world in a scientific way... They offer a different sort of explanation, an axiological explanation in terms of value and purpose. They try to show what is of true value in the world and what the purpose of the cosmos and of human life is. They offer a diagnosis of the unsatisfactoriness of the human condition, a goal for human life of great intrinsic worth, and a way to achieve liberation from that condition and realize that goal' (156, 157).

Working within this paradigm, Ward articulates a pluralistic 'faith-perspective', directed towards making 'sense of our total experience of the world in all its variety and depth', and offering the possibility of 'confirmatory personal experiences' (159) in various religious traditions. Although a confessing Christian, he is anxious to affirm the possibility of many paths to God. It is a winsome vision, but one at which some of his more conservative Christian readers may balk at several points. The particularist implications of Christ's claim to be *the way* (and, some would argue, any *biblical* doctrine of human sin) would seem to put a stumbling block in the path of any thoroughgoing pluralism – one which Ward is either unaware of or unwilling to address. What has happened to the gospel?

For what it's worth, this reader would like to suggest that fidelity to Christian

particularism is not incompatible with a qualified affirmation of the virtues of other faiths, or a generous soteriology. One finds precisely that in the writings of C.S. Lewis and, more recently, in the philosophy of Jerry Walls, who use the Christian conception of purgatory (construed as post-mortem sanctification, necessary for almost everybody) to good effect in resolving difficult questions concerning the fate of those who fail to attain complete knowledge and acceptance of the Christian gospel during their short sojourn on the earth. It is possible for a more conservative Christian to agree with Ward about there being many paths to God, but not unreasonable to claim that they must converge at the cross, before they can take us to heaven.

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**R. J. Berry (ed.)**

***The Lion Handbook of Science & Christianity***

Oxford: Lion Hudson, 2012. 267pp. hb. \$25.00. ISBN 978-0-7459-5346-5

*The Lion Handbook of Science & Christianity* attempts an ambitious project: to present those new to the subject with a thorough guide to the complex world of science and Christian faith in just a single volume. The lavish illustrations and handy break-out boxes make the book approachable, but the multitude of contributors results in a slightly repetitive and piecemeal product; as the contents page advises, perusal is the reading strategy of choice.

The first chapter addresses the 'Nature of Things' and the book's key argument is articulated at the outset: science and faith are deemed to be compatible. Unfortunately, though, there is no clear, introductory overview of the

major topics in the field. Rather, the discourse meanders through science, philosophy and history, jumping from 'Immanence and Transcendence' to 'Creation' to 'Worldviews' in just a few pages.

This is followed by a chapter on 'Science, Faith, and the Bible', a thoughtful examination of the interactions between science and Christian scripture. On the one hand, it was the Protestant Reformers' literalist approach to the Bible that allowed the natural world to shake off its metaphorical readings and become open to scientific enquiry (77-78). On the other, Jesus' comments on the eye as the 'lamp of our body' (Luke 11:34-36) are best understood in the context of the Roman view of the eyes as the channels through which light leaves the body. Our approach to Scripture affects our understanding of the natural world and vice versa; the relationship, it is argued, is one of symbiosis.

The next three chapters deal with 'Physical and Earth Sciences', 'Life Sciences' and 'Humanity and Humanness', meshing scientific advances in these fields with their theological ramifications. The division of material is slightly awkward: Earth sciences are nestled in the chapter on physics, environmental theology is put with the biology, and discussion of energy sources is left to a later chapter on ethics. Nonetheless, sections on Aristotle's division of causes (181), different types of reductionism (199), and possible relationships between determinism and free will (220) exemplify what is good about this book: clear and systematic summaries of the different opinions people have formed over the ages and the philosophical terms that describe them. Furthermore, the third of these chapters, which deals in neuroscience and artificial intelligence, is particularly fascinating.

The final chapter tackles 'Science, Ethics, and Christianity'. It is practical and thought-provoking, albeit with a, perhaps understandable, biological

bent. The variety of ethical systems is elucidated clearly and yet we are wisely warned that, 'we should be wary of those who purport to define *the* Christian view' (232) – a mantra that is gracefully lived up to.

The various contributing authors represent a range of Christian positions. One suggests that Jesus healed lepers as much by cleansing them of their 'socio-religious status of ritual impurity' as by curing a physical disorder (93), whilst elsewhere it is stated quite matter-of-factly the God 'will use fire to purge our current world' (141). A variety of perspectives is definitely healthy, but the differing opinions aren't made explicit enough for those who aren't familiar with the different strands of Christianity. It is also somewhat disappointing that only one of the twenty-six authors is female – although this is probably just a symptom of a broader concern.

The book aims to challenge 'those with or without faith who imagine that all the issues are decided and fixed', but it comes up against one of the endemic problems in the science and faith arena: namely, a tension between promoting an open-minded approach and espousing the joys of a Christian world-view. The authors oscillate between attempted objectivity and a more transparent admission of their own preconceived metaphysics. In practice, therefore, though this handbook is a valiant attempt to draw people into the discussion, it is unlikely to have much traction with readers who aren't already sympathetic to Christian concerns.

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**R. J. Berry**

***Ecology and the Environment: The Mechanisms, Marring, and Maintenance of Nature***

West Conshohocken, PA: Templeton Press, 2011. viii+232 pp. pb \$19.95. ISBN 13: 978-1-59947-252-2

The author Professor R. J. Berry is a distinguished ecologist and for many years has been involved in discussions about the relationship between science and religious faith. He is a past president of Christians in Science. This book is the ninth title published in the Templeton Science and Religion Series, in which scientists from different disciplines, writing for a general audience, share their experience and knowledge including the interaction between science and theology. Berry as an ecological geneticist writes about his efforts to link his scientific studies with his understanding as a Christian. He stresses the need for us all to become more environmentally literate. His stated goal for this book is to forge links between 'wise science' and 'wise faith'.

The book is divided into eight chapters. The enormous complexity of ecology and its centrality to other disciplines is introduced in chapter 1: Ecology – The Study of Place. Following this a concise summary of the earth's history and its life is given. Chapter 2: A Green Machine is a diverse chapter discussing evolution by natural selection, adaptation and variety of species, ecological niches and more. With respect to a changing environment Berry highlights the problem with Paley's Natural Theology: 'A creator could presumably design an organism perfectly adapted to a particular environment, but this perfection would disappear if the environment was not constant. Adaption to changes in climate, to the physical structure of the Earth's surface, or to predators and competitors is possible only if organisms change. A long Earth history is an Achilles heel for traditional natural theology.' (30). In chapter 3,

From Deluge to Biogeography, there is a review of natural history, including biogeography and genetic variation. Berry gives information on naturalists through history. A notable reference is about Scottish naturalist Robert Chambers, who tried to supplement natural theology by verifiable natural law(s): ‘Chambers wrote when there is a choice between God’s direct “special creation” of things in nature and the operation of general laws instituted by the Creator, “I would say that the latter is greatly preferable as it implies a far grander view of the divine power and dignity than the other.” Since nothing in the inorganic world “may not be accounted for by the agency of the ordinary forces of nature,” why not consider “the possibility of plants and animals having likewise been produced in a natural way?”’ (73-74)

A historical overview of mankind’s relationship to the natural world is given in chapter 4, Stewardship and Ecological Services. Berry includes a section on ‘The Value of the Natural World’ headed by Mahatma Gandhi’s profound statement ‘There is sufficiency in the world for man’s need, but not for man’s greed’ (113). In this chapter stewardship is shown as not only part of Christianity, but also of Islam (100). Chapter 5 is entitled Environmental Literacy, which Berry explains ‘involves head learning from books and libraries, but goes further and involves experiencing and interpreting real environments’ (119). Chapter 6, The Proper Study of Mankind, is a study of humanity. Berry describes human evolution as comprising both biological inheritance and cultural inheritance; but suggests in order to get to the root of our humanness, science has no answer. Therefore we need to think theologically ‘to regard the biological species *Homo sapiens*, descended from a primitive simian stock and related to living apes, as having been transformed by God at some time in history into *Homo divinus*, biologically unchanged, but spiritually distinct’

(144-149). In chapter 7, The Most Dangerous Species, we read how man, the ‘most dangerous’ of all species, is using up more of the earth’s resources than any other. The chapter lists significant environmental conferences and documents and Berry concludes the chapter by giving the essential ideas from these as ‘Ten Premises for Sustainable Living’ (179-181).

Chapter 8, God’s Two Books, is an excellent concluding chapter. The author addresses two of the controversies in Darwinian Evolution. Regarding the first – ‘survival of the fittest’ – Berry explains ‘What Darwin spoke of as biological fitness was reproductive success, not health or physical prowess. This concept is no threat or implication to morals’ (193). About the second – Darwinian Evolution depends on mere ‘chance’ – Berry explains ‘The Darwinian process does not depend on chance; adaption results from the selection of advantageous variants and this is a deterministic process. On the other hand, the origin of inherited variation is random’ (193). The confusion arises when these processes are combined. In a section on ‘Human Evolution’ the author gives some valuable insights into the nature of humanity. Genesis is explicit that humanity is created in the ‘image and likeness’ of the Creator (Gen. 1:26-27). But it leaves open how – and when – this took place. God’s image is not physical, but by a divine process the Creator has endowed humanity with uniqueness. Berry also puts it like this: ‘God’s grace in creating us involved establishing a relationship with him, not merely tacking something on to human existence. Humans are created in such a way that their very existence is intended to be their relationship to the Creator’ (201). Later in the chapter he has a noteworthy description of the fall: ‘the consequence of the human fall is not primarily about disease and disaster, or about the dawn of self-awareness. Rather it is a way of describing a fracture in the relationship between

God and the humans made in his image. The rupture means that we rattle around in our space, as it were, producing disorder within ourselves, with our neighbours, and with our environment (human and non-human)' (207).

I would highly recommend this book to scholars, students and others interested in the field of Ecology and the Environment – you do not have to be an expert in the area. It is a valuable resource. The author makes good use of figures and tables and provides an important contribution to the dialogue between science and religion.

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**John Hedley Brooke and Ronald L. Numbers**  
*Science and Religion Around the World*

Oxford: Oxford University Press, 2011.  
316 pp. pb. £18.99. ISBN 978-0-019-53282-2

Ron Numbers is well known to historians of science for co-editing two volumes with David Lindberg on the historical interactions between science and Christianity. John Hedley Brooke is, if anything, even more celebrated for his classic work *Science and Religion: Some Historical Perspectives* (1991). Now the two men have come together to correct the most serious omission of their previous books: the almost complete exclusion of non-Christian religions. Few historians now accept that the development of modern science was an exclusively Western preoccupation (although good arguments can be made for the case that, actually, it was). But no one can doubt that other religious traditions have interacted with science in their own ways, and that these are worthy of study.

With the whole of the world and all of history to play with, Numbers and Brooke were spoilt for choice in deciding what to include in the book. This makes it a great shame that the resulting collection of essays is so uneven.

Some chapters are excellent. For a book on science and religion, it is perhaps ironic that the pick of the bunch is Bernard Lightman's section on Unbelief. It begins with the words 'Richard Dawkins' but improves markedly from there on. Lightman knows his brief. He is writing for generalists and students who cannot be expected to possess in-depth knowledge of the subject at hand. So he leads us through a historical survey showing how the gentle scepticism of Voltaire grew into the radical atheism of the later Enlightenment. He explains how non-believers have harnessed science as a weapon in their dispute with Christianity, but also how T. H. Huxley and others sought to encourage science to stand on its own two feet as an independent discipline.

The contributions of Mark Csikszentmihalyi on Chinese religion and Donald S. Lopez Jr on Buddhism also deserve high commendation. Lopez shows how western views of Buddhism diverged from how it was practiced in the East, leading to a completely inaccurate picture of how the religion relates to science. Csikszentmihalyi provides a fascinating survey of ancient Chinese religion and natural philosophy.

Chapters on Judaism and modern Islam are more workmanlike, although still serve as good introductions to their respective topics. Peter Harrison, assisted by David Lindberg, provides a fine section on Christianity up to the Reformation, while Brooke himself continues the story into the contemporary era. While these two chapters might have been necessary for completeness, the space could have been better used exploring religions not so well served in the literature as Christianity.

Unfortunately, not all the contributors produced chapters suitable for generalists. Steven Feierman and John M. Janzen's section on African religion reads as if it were lifted straight from a journal on sociology. The subject matter may well be important, but it is quite hard for the non-specialist to follow. Ahmad Dallal's chapter on Early Islam is also disappointing. It is defensive and a struggle to read. More seriously, Dallal mistakes a discussion by the Golden Age Islamic philosopher al-Buruni on whether the Earth rotates with an assertion that some people at the time thought the Earth orbits the sun. Readers might be misled by this statement into believing heliocentrism was being actively considered by Muslim astronomers.

Overall, this collection does not live up to the promise of its premise. Nonetheless, a couple of hours spent in the library to read the chapters by Lightman, Lopez and Csikszentmihalyi would be a good use of anyone's time.

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

### **David H. Glass**

#### ***Atheism's New Clothes: Exploring and exposing the claims of the New Atheists***

Nottingham: Intervarsity Press (Apollos), 2012. 319 pp. pb. £16.99. ISBN 978-1-84474-571-5

This book is a thoughtful, thorough, careful and wide ranging analysis and refutation, from an orthodox Christian perspective, of the recent writings of Richard Dawkins, (*The God Delusion*), Daniel Dennett (*Breaking the Spell*), Sam Harris (*The End of Faith*) and Christopher Hitchens (*God is not Great*). It is well worth equally careful reading and reflection.

It seems to me that its strengths and its weaknesses, for the typical readers of this journal, are related to each other. In contrast to the cavalier and swash-buckling style of the New Atheists, Glass goes out of his way to qualify his statements, to be fair to his opponents, and not to overstate his case or his conclusions. This makes for more accurate writing, but not for such easy reading. He (correctly in my view) spends much time on the philosophical background to the discussion: the writers he is critiquing may claim that they are simply applying scientific discoveries, when actually they are taking a clear philosophical position. Hence much of the discussion is theological and philosophical rather than scientific, and he does not have the space to expound in detail the scientific issues which are raised; it would not be a primary source for studying the relation between Darwinism and design, or the implications of fine tuning in the physical constants or the history of the universe. However the book is well and accurately referenced, so that on any particular topic, further information could easily be found. (It seems to have been very carefully written and proof-read; the only error I picked up was the reference to Simon Conway Morris's book as '*Life's Solutions*' rather than '*Life's Solution*!') It is also both a strength and a weakness that this book is clearly a response to the writings of others, so his agenda is largely set by them.

The following list taken from chapter titles shows the scope and variety of matter dealt with: a new kind of atheism; is faith irrational?; does science undermine belief in God?; evidence for God (the existence and beginning of the universe, the order of the universe, and the existence of conscious minds); Dawkins' dilemma (Hume or Darwin?); evolution and the origins of religion; religion, morality and evil; God and revelation; Jesus, the gospels and the resurrection; science, God and the meaning of life. Hence I find it impossible to

review it both accurately and briefly. However my conclusion is that while it is not specifically aimed at those familiar with issues of science and Christian faith but for a more general audience, I warmly recommend it to readers of this journal as a very helpful resource.

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

### **Colin J. Humphreys**

#### ***The Mystery of the Last Supper: Reconstructing the Final Days of Jesus***

Cambridge: Cambridge University Press, 2011. 258 pp. pb. £14.99. ISBN 9780521732000

In this short but key book Prof. Humphreys has drawn together convincing scientific arguments to establish a precise date for the crucifixion of Jesus. Normally historical dates are the preserve of historians but with Jesus' death (known from the Gospels to have taken place on a Friday which was either the fourteenth or fifteenth day of a Jewish lunar month called Nisan), science can indeed come to the aid of the biblical scholars – that is, if it can be calculated when the new moon would have been visible in Jerusalem each spring during the years when Pilate was governor of Judea (AD 26 – 36).

This is what Humphreys now convincingly offers. Making due allowance for two variables (first, weather conditions that might have rendered the new moon invisible, causing the month to start one day later; and, secondly, the occasional intercalation of an extra month just before Nisan), he demonstrates that there are only five possible occasions when Nisan 14 or Nisan 15 might have fallen on a Friday. Three of these (in AD 27 and AD 34) can immediately be dismissed, because they flatly contradict other New Testament

evidence; this then leaves just two prime contenders – 7 April AD 30 or 3 April AD 33.

This is already hugely significant. If Humphreys' detailed work had come up with *no* dates that were scientifically possible, scientists would then have been able to raise significant questions about the Gospels' reliability and the Christian story of Jesus. Now, instead, their testimony is – at least in outline – confirmed.

Meanwhile for biblical scholars, Humphreys' focusing down onto just these two possible dates already has solved a key issue in biblical studies: for both these Fridays were Nisan 14 (not Nisan 15). This then means that the chronology of John's Gospel has been confirmed – Jesus died when the Passover lambs were being killed (on Nisan 14) *before* the Passover meal after sundown. To be sure, there are then issues (which Humphreys deals with later) for how this new fixed datum can be squared with the other Gospels (which give the impression that Jesus' Last Supper the *previous* evening was itself a Passover meal). Yet at least biblical scholars, if they accept Humphrey's strong arguments, now have a solid basis upon which to propose solutions to that issue.

In the remainder of the book Humphreys gives his arguments for favouring AD 33. His strongest arguments here are based on interpreting the chronological implications of Luke 3:1 and John 2:20; less convincing are his arguments based on some allusive comments in 1 Corinthians 5:7 and 15:20 and Acts 2:20. He also does not consider the problems which this choice of a later date for the crucifixion will have for reconstructing a chronology of Paul's life (based on Galatians 1 etc.) – as is done so well in, for example, Rainer Riesner's *Paul's Early Period* (Eerdmans, 1998).

He then tackles the issue of why the Synoptic Gospel writers (Matthew, Mark and Luke) refer to Jesus' Last

Supper as a Passover meal when in fact the local population would have been celebrating that the following evening (after Jesus died). Humphreys argues that Jesus was using a different calendar (going way back to Israel's time in Egypt) which reckoned the new month to start not at sunset on the first evening of visibility but rather at sunrise on the (earlier) day of *in*-visibility. Humphreys supports this from otherwise puzzling references in both the Old and New Testaments (e.g. Num. 28; Ezek. 45; Mark 14:12; John 11:55), which make sense if two such calendars were indeed operating side by side.

This is an intriguing new proposal, which biblical scholars would do well to engage with in the coming years – as too Humphreys' final argument that, using this calendar, Jesus' Last Supper would not have fallen on the (traditional) Thursday evening but probably on the Wednesday. However, it presumably remains possible that Jesus' deciding to hold his Passover a day ahead of the normal schedule was driven by a far more practical consideration: the next day he knew he would be dead. So Humphreys' speculation in the second half of the book about alternative calendars may be both far-fetched and unnecessary.

Even so, this book has bravely tackled what F.F. Bruce once admitted was the 'thorniest problem in the New Testament' and, in its earlier sections, has brought new, hard evidence to the table which enables a more secure solution. Biblical scholars may not feel themselves to be in a qualified position to question the science behind it; yet, if others confirm its accuracy, then many of us in New Testament studies may have to revise some of what we have published. Scientific facts would now be usefully clearing out some of the confused jungle which has grown up within biblical scholarship! What is less clear is whether the Christian church, after 2000 years of calculating Easter according to a *lunar* calendar, would

ever accept these scientific results and agree that Good Friday should now be fixed within the *solar* calendar as the first Friday in April. This much Humphreys has clearly established, and it could have a global impact; but how will others respond?

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### **Ian Hutchinson**

#### ***Monopolizing Knowledge: A Scientist Refutes Religion-Denying, Reason-Destroying Scientism***

Fias Publishing, Belmont, Mass., 2011.  
ix+261pp. pb. £14.50. ISBN: 978-0-9837023-0-6

This is a very personal book and that is both its strength and its weakness. The aim of the book is succinctly expressed in its sub-title: 'a scientist refutes religion-denying, reason-destroying scientism'. The passion of the author for his chosen topic shines through in the writing, and the issues covered are wide ranging. Hutchinson discusses the meaning, history, philosophy and sociology of science, as well as evolution, postmodern approaches to science, scientism itself, technology, and scientism and religion. In his final chapter, 'Integrating knowledge', he proposes a way forward. However, the wide-ranging nature of the writing leads to variable depth and quality in terms of the material presented in each chapter.

While agreeing with many of the criticisms of, and arguments against, scientism that the author advances, I found myself disagreeing with him regarding his definition of science. Fundamentally, his argument against scientism – the belief that only science leads to true knowledge – is that there is more to knowledge than can be encompassed by science, which is undoubtedly true. The question arises therefore as to what can be described as science?

Hutchinson, based on the two concepts of reproducibility and clarity that he sees as defining science, restricts science to the natural sciences (15). It is not clear to me that this is defensible. Hutchinson argues (68) that, 'Free agents' actions are precisely *not* reproducible.' and (71) 'Persons are not describable impersonally.' On this basis he dismisses sociology and psychology as not being science. While at the individual level perhaps his statements might be correct, I am not sure that when considering people en masse they are always true. For example, some aspects of crowd behaviour are predictable mathematically (see, e.g., Hughes R.L. (2003) 'The flow of human crowds,' *Ann. Rev. Fluid Mech.*, 35:169-182). How does this differ from quantum theory where the outcome of a single event is essentially unpredictable, but the outcome of many events or interactions is? Even on the individual level there is work on the application of mathematics to marriage that would seem to contradict Hutchinson's assertions (see, e.g., Gottman J.M., Murray J.D., Swanson C.C., Tyson R. & Swanson K.R. (2002) 'The mathematics of marriage: dynamic nonlinear models,' MIT Press – resulting from a collaboration between a psychologist, Gottman, and an applied mathematician, Murray).

With regard to scientific explanations Hutchinson (95) says that the 'gold standard' was set during the scientific revolution, 'The mathematical description of astronomical orbits contained in Newton's *Principia* became accepted as the model of what it means to explain phenomena by a scientific theory.' Again I am unsure that such a 'gold standard' holds true any longer. What comes to mind is the announcement by the Large Hadron Collider team regarding the Higgs boson that, 'We observe in our data clear signs of a new particle, at the level of 5 sigma, in the mass region around 126 GeV' (a quotation taken from the CERN press release;<sup>1</sup> see also Figure 3 of Miller J. 2012, 'The Higgs particle, or something much like

it, has been spotted,' *Physics Today*, Sept. 2012, 12-15). This, considered a major scientific advance, does not seem to me to conform to Hutchinson's 'gold standard.' Many modern scientific results rely on statistical evidence rather than a strictly deterministic 'Newtonian mechanics' type of link between observations and theory. Interestingly, Gottman et al. (*op. cit.*), in their chapter 1, 'What do we mean by theory?' also refer back to Newton's theory of gravitation in introducing their theoretical mathematical modelling of marriage relationships.

I have number of minor quibbles about the book. For example, it is unclear to me what the purpose of the illustrations is. If the aim is to make the book more appealing to a general reader then I am not sure the illustrations help. They certainly don't contribute to the arguments being advanced by the author. I also found the tone somewhat nineteenth century, being set early on (4) where the author speaks to the 'gentle reader' (one is reminded of Jane Eyre). This leaves the reader with the feeling of being addressed by someone older and wiser. A final quibble is that the book is written with US readers in mind, so some of the issues covered (for example, with regard to evolution or the 'science wars') may be less relevant to non-US readers.

Overall, I found the book interesting to read but, as noted above, I was not convinced by some of the author's definitions and explanations of what science is. Hutchinson may have achieved his aim of refuting religion-denying, reason-destroying scientism, but I am not sure that he has done equal justice to defining science.

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<sup>1</sup> <http://press.web.cern.ch/press/PressReleases/Releases2012/PR17.12E.html> (accessed 270912)

**Herman Philipse**

***God in the Age of Science? A Critique of Religious Reason***

Oxford: Oxford University Press, 2012.  
372 pp. hb. £40.00. ISBN 978-0-19-969753-3

This book attacks the rationality of belief in God. Unlike Richard Dawkins, Herman Philipse, a professor of philosophy, does not argue that religious belief does more harm than good, but offers a sophisticated philosophical critique of leading contemporary defences of religious belief, such as those by Alvin Plantinga and especially Richard Swinburne. He thus provides an update of J.L. Mackie's *The Miracle of Theism*, published in 1982. Since that time cosmology has moved on and 'fine-tuning arguments' have become popular, while theists have continued to develop their philosophical arguments.

Philipse organises his critique in light of a series of strategic choices faced by the modern theist which he terms (rather too pejoratively) 'dilemmas'. Does saying 'God exists' express a truth or a mere attitude or way of behaving? Philipse argues plausibly enough that most mean it to express a truth, so should theists think their belief is justified by evidence and argument or on non-evidential grounds? Non-evidentialism is most notably defended by Plantinga, and Philipse argues against him that the great variety of incompatible religions justifiable in this way undermines its claims to rationality. If theists opt for some form of evidence and argument, is this to be drawn from supposed revelations, such as the Bible, or from more general data? Philipse argues that apparent inconsistencies, along with scientific, historical and ethical problems with the Bible and other purported revelations make something like the cumulative case developed by Richard Swinburne the best strategy for justifying belief in God in our scientific age. He then concentrates his attack on this case, on the grounds that defeating the strongest case plau-

sibly shows that belief in God is generally unjustified.

Philipse argues that the concept of God is literally meaningless, in that disembodied consciousness and non-physical causation make no sense, but he follows this up with arguments that, even if the concept of God were meaningful, it would not really explain anything and make no real predictions. Unless the universe is finite in time there is a scientific explanation of every event in terms of earlier events. Offering God as an explanation of the beginningless series of physical events illicitly assumes further explanation is necessary and that God is more likely to exist unexplained than physical things, while science strongly suggests that intelligent agency results from evolved brains. Furthermore, as Darwin argued, morality plausibly results from evolution and is relative to species, so human morality tells us nothing of what God might want. Assuming for the sake of argument that God would share our values, Philipse argues that there are natural explanations for the evidence for the resurrection, that the cosmos contains too little life, too much suffering and too little belief in God to be plausibly what God would create, and concludes by arguing that religious experience cannot rationally ground belief in God.

Thus, Philipse draws on science, but this is a work of philosophy, some of it quite technical. It is generally clear, but compressed, occasionally to the point of summary dismissal. Swinburne has read a draft, but his comments are in brief footnotes and these, along with some of his key arguments, for example, as to why God might create this world and not just heaven, are not given thorough discussion. Though hostile to belief, the book could still usefully provide a clear, contemporary collection of sophisticated atheistic arguments to which Christian apologists might respond.

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