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Book reviews

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Peter Byrne *God and Realism*. (Aldershot and Burlington VT: Ashgate Publishing, 2003). Pp. v+187. £45.00, $79.95 (Hbk); £16.99, $29.25 (Pbk). ISBN 0 7546 14611 (Hbk), 0 7546 14670 (Pbk).

Peter Byrne's book is a valuable addition to the discussion of religious realism. His agenda is ambitious, given the book's length, for he seeks not only to make a substantive contribution to the debate in philosophy of religion, but also to argue against several broader forms of anti-realism that may motivate religious anti-realism. The principal strengths of the book lie in the way it lends additional clarity to the structure of the debate about religious realism, and Byrne's provocative concluding argument that while it is plausible to interpret common theistic discourse (hereafter, 'folk theistic discourse') in a realist fashion, it is not possible to do so when discursively developed in theology. In the course of this review, an overview of the entire book is provided, but my discussion will focus primarily on these two aspects of the work.

At the outset, Byrne pursues the laudable goal of imposing order on the sometimes unruly conversation about realism in theology and philosophy of religion. He begins by defining what he takes to be the central question: 'Can the *apparent* intent behind talk of God to refer to an entity existing in some sense beyond us and the universe be taken seriously?' (4, author's emphasis). As the formulation of the question makes clear, Byrne sees the central issue to be whether to interpret the theist as intending to refer to God, not whether the attempted reference is successful – i.e. not whether God's existence is a metaphysical fact.

The content of the 'minimal theistic realism' Byrne outlines in his first chapter may be summarized as follows:

A Intent to refer to the extra-mental: Folk theistic discourse involves an attempt to refer to and make statements about a reality that exists independently of human cognizing (5, 16).

B Transcendence of the intended referent: That to which the theist is attempting to refer is transcendent – i.e. not only ontologically distinct from human beings but also capable of exercising a causal power on the universe to bring about order and/or good that is over

> and above those causal powers investigated by the empirical sciences (15–16).

Byrne's classificatory scheme of anti-realist views and the remainder of the book are structured around these two theses. The first and most basic distinction he draws is between anti-realists who are such based on 'global' vs 'contrastive' considerations. The global variety (discussed in chapters 2 to 5) rejects the first thesis above by insisting that it makes no sense to speak of a mind-independent reality. Contrastive theistic anti-realists (discussed in chapters 6 and 7), on the other hand, may grant that human beings can refer to and makes statements about a mind-independent reality but contend that there is something essentially problematic about attempting to refer to God and so reject the second of theistic realism's claims. Varieties of theistic anti-realism can be further subdivided according to whether they are reductionistic vs instrumentalist and by whether they are offered as descriptions vs revisions of theistic discourse.

Having sketched the conceptual framework within which Byrne will work, let me return to comment on his central contention that labelling a view 'realist' or 'anti-realist' should not hinge upon whether the view's proponent believes the attempted reference to be successful. Byrne contends that to make the designation hinge upon belief in success would obscure the fact that the disagreement between theists and atheists obviously depends on their sharing a conception of the intent of theistic discourse (4). This concern is legitimate. However, some readers familiar with realist views in other areas of philosophy may find it surprising to utilize a means of classification that renders belief in the success of the intended reference largely irrelevant to the designation, 'realist' (more on the qualification, 'largely' below). That is, while Byrne is certainly correct that there is no univocal use of the word 'realist' in philosophy, there is, I would hazard, a prevalent tendency to use the term to refer to proponents of views that defend the success of the relevant intended reference. Below, I further suggest that the issue is not merely terminological, for Byrne's disavowal of the relevance of success becomes strained at later points in his own discussion.

As noted above, some theistic anti-realists hold their view because they deny on a more global scale the existence of a reality independent of human mental representations. In chapters 2 to 5, Byrne defends its counterpart, innocent realism. According to innocent realism, there is one reality, the existence and definite character of which is largely mind-independent. It is the character of this reality that determines whether our representations of it are true or false (23–24). Here then, is a case where the use of the term 'realist' in another area of philosophy (metaphysics) presupposes belief in the success of at least the minimal reference to the existence of an extra-mental reality. As Byrne notes, the success of this reference is crucial if theistic realism is to get off the ground, for if it makes no sense at all to speak of a mind-independent reality to which we are capable of

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referring, then we cannot take seriously the theist's intent to refer to God. Byrne does not attempt to mount a positive defence of innocent realism but instead defends what he regards as a more or less naïve commitment to it in the face of particular arguments offered to unseat it. If these challenges can be turned back successfully, then one will have grounds for resting content with one's naïve belief.

Here is a quick overview of the book's middle chapters. In chapter 2, Byrne rejects the allegation that innocent realism is itself incoherent insofar as it requires the achievement of a transcendent perspective outside human concepts and language from which one can judge whether one's representations of reality are accurate. He argues in chapter 3 that the innocent realist can go some distance in acknowledging, as the conceptual relativist maintains, that concepts play an inescapable role in the formation of human experience without agreeing that reality itself is entirely constructed by that conceptualization. Against the contemporary heirs of verificationism, he holds in chapter 4 that innocent realism need entail no particular theory of meaning and certainly not one that imposes empiricist strictures on what it means to say that something exists.

Two postmodernist challenges are taken up in chapter 5. The first, which contends that linguistic meaning is unavoidably indeterminate and thus incapable of playing the representative role realism requires, is rejected as either a version of conceptual relativism or dependent upon a caricature of innocent realism. In reply to the second challenge – that what passes for truth is nothing more than an illegitimate expression of power – Byrne concedes that what has passed for truth has sometimes reflected illegitimate interests but argues that the remedy for this requires the truth of innocent realism. Though some familiar with the wider literature to which Byrne refers may occasionally feel that due consideration has not been given to one of these challenges to innocent realism, my overall sense is that these middle chapters will be helpful to readers, especially those whose focus formerly has been restricted to the realism debate in theology and philosophy of religion.

In chapter 6, Byrne turns from forms of theistic global anti-realism to contrastive anti-realists who allege that one cannot take seriously the purported intent of theists to refer to a transcendent reality (above, claim B of minimal theistic realism). He considers two varieties of contrastive anti-realism. The descriptive sort (exemplified in the work of D. Z. Phillips) contends that one misinterprets folk theistic discourse in an important way when one understands it as the realist recommends, since it unnecessarily saddles the theist with grossly anthropomorphic or patently incoherent views. Byrne does a nice job here arguing that a realist interpretation of theistic discourse need entail no such consequences. The second form of contrastive anti-realism he discusses is revisionist. Though revisionists typically do not question the theist's intent to refer to an extra-mental transcendent reality, Byrne regards some revisionists as

doing just that by insisting that a revision of theistic discourse is now mandatory, given certain fundamental convictions of a contemporary Western outlook (e.g. Don Cupitt's argument that realism in incompatible with personal autonomy, a bedrock value). Byrne exposes the serious shortcomings of several such arguments and argues that whatever merit some might have is far from sufficient to make revision *mandatory*.

In the final chapter, Byrne mounts his most provocative and intriguing argument. Having defended a realist interpretation of folk theistic discourse in the previous six chapters, he now argues that one cannot possibly understand theological discourse – the systematic and discursive elaboration of claims about God – in a realist manner. The two premises of the argument are:

(1) All disciplines that can be interpreted realistically show the accumulation of reliable belief.
(2) Theology does not show the accumulation of reliable belief (162).

The first premise is supported by appeal to the empirical sciences as our best model of a form of enquiry that generates an accumulation of reliable belief. By 'reliable belief', Byrne means beliefs that survive a critical procedure shared by a discipline's practitioners designed to confirm or disconfirm those beliefs. That some scientific beliefs survive such a process – sometimes across large-scale theory change – he contends, is best explained by supposing that they result from 'real-world influences' and that they thereby successfully track mind-independent truths about the character of the world (159).

Byrne takes the second premise of his argument to be nearly self-evident. Using the history of Christian theology as his example, he argues that the tradition exhibits no accumulation of insight into the nature and workings of God – that one could not claim to know anything more about the nature of God today than did the early Church Fathers. This, he contends, is due to the absence of a shared critical procedure for sorting true and false beliefs, illustrated by the existence of rampant religious sectarianism. Since there is no accumulation of reliable belief in theology, there is no good reason to think that these beliefs track truths about God. One of the enticing things about this succinctly presented argument is the way it opens up larger fertile topics for discussion – e.g. whether the empirical sciences should be taken as a model for all disciplines that aim to generate true beliefs and how best to explain developments in the history of Christian theology. Setting these larger issues aside, I will focus my comments on three smaller issues.

First, the argument presupposes the ability to distinguish folk from theological discourse. The boundary line here is not at all clear. Perhaps the best way to handle this concern is simply to acknowledge the ambiguity, point to paradigmatic examples, and note that while many distinctions are subject to this kind of ambiguity, this typically does not lead us to think that such distinctions are unreal.

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Second, note how the success of referential intent has taken a prominent position in this chapter. The issue of whether scientific discourse is to be interpreted as realist is primarily a matter of whether there is reason to think that it succeeds in referring to and characterizing a mind-independent reality. In parallel fashion, theology is indicted because there is no good reason to think that it succeeds in its intention to reveal God's nature and workings in greater depth. Again, as in the second and sixth chapters, Byrne might mean to handle this within his established framework by suggesting that the success of the theologian's intent is only indirectly relevant insofar as the claim here is that the intent cannot be 'taken seriously'. However, maintaining that intent rather than success is still the central issue seems strained to me in these last two chapters. One way to remove this strain and make transitions to other discussions of realism more fluid would be to make the following friendly amendments to Byrne's definition of theistic realism and classification scheme. First, add a success condition to the two earlier theses that constitute theistic realism:

> (C) Success of the intended reference: At least some of the theist's statements about the existence and nature of an extra-mental transcendent reality are true.

A second adjustment would address Byrne's legitimate concern that we not label every atheist an anti-realist in virtue of rejecting this condition. This involves trading the two-option scheme that says one must be either a realist or a non-realist for a scheme that allows for three alternatives. On this scheme, one may be a realist, an error theorist, or an anti-realist about theistic discourse. (This is meant to parallel a popular way of carving up options in meta-ethics.) A genuine theistic realist must embrace all three theses. If one rejects the success condition alone, then one is an error theorist. An error theorist grants that theists intend to refer to an extra-mental transcendent reality but concludes that they never succeed. Traditional atheists would fit into this camp. One is properly labelled an anti-realist only if one rejects one or both of the first two theses (and thereby the success condition as well). Amending Byrne's view in this way would also make plain the road to revisionist forms of anti-realism. The revisionist first defends an error theory about theistic discourse and then recommends a revision of that discourse in non-realist fashion.

Finally, I admit to being puzzled by a section of this final chapter wherein Byrne argues against construing the theological project along pragmatist lines. One might have thought, given Byrne's argument for theological anti-realism and his expressed tolerance for some forms of revisionist anti-realism, that he would be open to re-conceiving the theological project in pragmatist fashion. His objections are twofold: (1) that such authors often seem to shift from advocating a conception of God on the basis of its usefulness (e.g. in promoting certain moral or political ideals) to speaking as if such conceptions accurately mapped the nature of the

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divine (171–172); and (2) that such theology often fosters an uncritical acceptance of the underlying moral and political ('left-wing liberal') ideals by lending the authority inherent in God-talk to the promotion of those ideals (173–174). Here, I would simply note that while particular theologians may be fairly criticized for lack of care on these points, it is not clear how these faults are entailed by theological pragmatism itself.

As is evident from the foregoing, this is a book rich in thought-provoking arguments. Students (advanced undergraduate and graduate) as well as professionals working in philosophy of religion and theology will find much of value here. Anti-realists about folk-theistic discourse and theological realists will find both familiar challenges presented rigorously and new challenges demanding a reply.

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Paul Copan and William Lane Craig *Creation Out of Nothing: A Biblical, Philosophical, and Scientific Exploration*. (Grand Rapids MI: Baker Academic, 2004). Pp. 280. £14.99 (Pbk). ISBN 0 8010 2733 0.

The central thesis of the book is that a finite time ago God created *everything* (other than God) out of nothing. As Copan and Craig see it, this doctrine protects the absolute uniqueness of God, allowing them to affirm that God is the only eternal and necessarily existent being. The arguments offered on behalf of this thesis are of three kinds: textual, scientific, and philosophical. The first three chapters, making up about half the book, are devoted to the textual evidence. Here I have space to give the reader only the barest hint of what she will find in this part of the book.

Copan and Craig claim that both the Old and the New Testaments at least 'implicitly' endorse the doctrine of creation *ex nihilo*. Much (but by no means all) of chapter 1 is devoted to the interpretation of Genesis 1.1, arguing strongly in favour of an 'absolute' rather than a 'temporal' reading. ('In the beginning God created the heavens and the earth', and *not*, as in some modern translations, 'When God began to create, the heavens and the earth were …'). This leads to the conclusion that creation was a two-stage process. In the first stage, God created the heavens and the earth in a comparatively 'formless' state. In the second stage of creation, God imposed form, creating light and separating it from darkness, and so on. Why think the first stage is a creation *ex nihilo*? The authors think that the phrase 'the heavens and the earth' implicitly suggests that creation at this point is all-inclusive – that God created *everything* (other than God) that existed

at that time. If that point is granted, then it logically follows that there was nothing else (no material stuff) out of which the heavens and the earth could have been created.

Chapter 2 discusses numerous passages in the New Testament, beginning with John 1.3 ('All things came into being by him; and apart from him nothing came into being that has come into being' (NASB)). The authors take this verse to be 'an affirmation in the strongest possible words that ''everything without exception'' has been made by the Logos' (74). Chapter 3 attacks Ian Barbour's view that the doctrine of creation *ex nihilo* was a relatively late innovation designed 'to defend God's goodness and absolute sovereignty over the world' against various gnostic claims. The authors have no difficulty finding texts in the Apocrypha and the Pseudepigrapha and statements by early Jewish writers and Church Fathers that at least implicitly support the doctrine of creation out of nothing.

The basic argument of the remainder of the book will be familiar to readers who have followed Craig's work over the past twenty or thirty years, but chapters 4 and 5 break new ground. Chapter 4 argues that creation must be sharply distinguished from conservation. After a brief critical treatment of some of Philip Quinn's proposals, the distinction is explicated as follows:

> E1 *e* comes into being at *t* if and only if: (1) *e* exists at *t*; (2) *t* is the first time at which *e* exists; and (3) *e*'s existing at *t* is a tensed fact (158).
>
> E2 God creates *e* at *t* if and only if God brings it about that *e* comes into being at *t* (158).
>
> E3 God conserves *e* if and only if God acts upon *e* to bring about *e*'s enduring from time *t* until some $t^* > t$ through every sub-interval of the interval $t \rightarrow t^*$ (163).

Given these definitions, the difference between creation and conservation comes to this – that in the latter, but not the former case, something is already there (in 'tensed' time) and is acted upon in such a way as to keep it in existence. More generally, the authors say, 'In creation there is no patient entity on which the agent acts to bring about its effect' (158).

This last claim is puzzling. The authors themselves defend a two-stage view of creation in which the second stage consists in a 'forming' of the thing created at the first stage (cf. 60–65). The first stage is a creation *ex nihilo*, the second is not – but E1 and E2 entail that both are stages of creation. Again, to pick an obvious example, Adam was created out of the dust of the ground. A 'patient entity' – the dust – is acted upon in such a way as to bring Adam into existence. But surely Adam was created? The sentence quoted above may be a mere slip on the authors' part, but at the very least they need to distinguish more carefully between creation out of nothing and creation in general (as defined by E1 and E2).

Chapter 5 is concerned with the ontological status of numbers, properties, propositions, sets, and other 'abstract entities'. As noted above, the authors

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believe that, on the proper interpretation of John 1.3, the evangelist tells us that everything apart from God was created *ex nihilo* by God's word. But if abstract entities exist at all, they are eternal and necessary and therefore uncreated. It follows that Platonism (the view the numbers and properties and such exist in a timeless realm but can be instantiated in our world) is incompatible, not only with the doctrine of creation *ex nihilo*, but also with the doctrine of divine aseity, which the authors take to mean that God alone has necessary existence. For these reasons, they say that Platonism is 'unacceptable to orthodox theists' (173). (I daresay it will come as a surprise to Alvin Plantinga – to pick just one obvious example – that his ontology is heretical, but that does seem to be the implication of what Copan and Craig say.)

What, then, should an 'orthodox theist' say about properties and numbers and the like? One possibility is proposed by Thomas Morris. Abstract entities depend on God, but not on God's will. They do necessarily exist, but only *because* God necessarily exists and necessarily causes them to exist. That might seem sufficient to preserve God's sovereignty and even to restore a proper sense of divine aseity, since it allows us to say that only God exists 'through himself'. But this is not enough to satisfy Copan and Craig. Everything other than God must be created at a time and *ex nihilo* by a God who was at that time free to create, or not to create, that thing. Eternal and necessarily existent abstract entities – even ones that are sustained in existence by God – would be an unacceptable exception to this rule.

The authors do have other substantive objections to Morris's proposal. These centre on the properties making up the divine nature. How, without 'a vicious explanatory circle' (176), can those properties be causally dependent on God? For example, must God not already be quite powerful (and thus instantiate the property of being powerful) in order create the property of being powerful? Morris's attempt to deal with this objection is swiftly rejected, as is the doctrine of divine simplicity, according to which God just *is* his essential properties.

The remainder of chapter 5 consists in a brief tour of territory not usually considered by philosophical theists. The fictionalism of Mark Balaguer, the non-fictionalist nominalism of J. Azzouni, the conceptualist philosophy of mathematics of Stephen Kitcher, and the God-based conceptualism of Theodore Menzel are critically but sympathetically discussed and compared. The authors are especially intrigued by Kitcher's suggestion that we might think of arithmetic as the 'constructive output of an ideal subject'. If God exists, then God is just such an ideal subject. And since God is omniscient, it follows that 'there is no problem with his conceiving numbers or performing operations that no human being has thought of or performed' (193). They also seem favourably disposed toward Menzel's view that sets are products of 'a collecting activity' on God's part (192).

Large issues remain unresolved. Copan and Craig hold that actually infinite sets are impossible in the real world (their argument for this is presented in chapter 6).

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So they must avoid postulating an actual infinity of thoughts within the divine intellect. But if God's mental operations are to replace abstract entities in their ontology, how can they avoid postulating an actual infinity of them? The authors tentatively suggest that one might regard numbers and properties and the rest as 'pure concepts, the sort of things that are the intentional objects of thought' (194). They go on to suggest that a theistic conceptualist might combine this view with the claim that God knows all truth by way of a single, simple, non-propositional intuition, thereby avoiding the implication that God has infinitely many thoughts.

This way of working out theistic conceptualism is extremely underdeveloped, to say the least. For one thing, it leaves us with the problem of the nature and the ontological status of the supposed 'intentional objects' of God's intuition. Do they exist or not? If they do, then the actual infinite is reinstated in the realm of intentional objects. If they don't, then how can God 'intuit' them? In the end, however, the authors do not commit themselves to theistic conceptualism or indeed to any other view of the abstract objects. Their discussion is tentative and exploratory, and they say they are 'not prepared to pronounce judgment on which solution is the most plausible account available to theists' (195). As long as it isn't Platonism, of course.

Chapter 6 offers a spirited defence of Craig's *kalām* cosmological argument. Two familiar philosophical arguments against the possibility of a beginningless series of events – one rejecting the actual infinite outright, the other attacking the possibility of an infinite series formed by successive addition – are vigorously defended. Much of the chapter consists in material recycled from Craig's earlier writings, but some of the responses to recent criticisms (including one by the author of this review) are new.

Confirming 'scientific' evidence for creation *ex nihilo* is presented in chapter 7. Two arguments are given, the first consisting in the latest iteration of Craig's defence of the 'standard Big-Bang model', the second in working out the supposed implications of the Second Law of Thermodynamics. As in many of Craig's earlier writings, alternatives to Big-Bang cosmology – from the now discarded 'steady-state' model to the recently proposed 'ekpyrotic model' based on the latest in 'string theory' – are found to be fatally flawed, and the Big-Bang model is said to have the following 'astonishing implication':

> … as one reverses the expansion [of the universe] and extrapolates backwards in time, the universe becomes progressively denser until one arrives at a state of infinite density at some point in the finite past. This state represents a singularity at which the space-time curvature, along with temperature, pressure, and density, becomes infinite. It therefore constitutes a boundary to space-time itself. (222)

In this model, the authors assure the reader, the universe 'originates *ex nihilo*'. Few, if any, physicists would say that anything was ever in a state of 'infinite density'. But let us suppose that we can extrapolate backwards to an absolute

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boundary of space-time. And let us further suppose that a 'singularity' of some description exists right at that boundary. Does it follow that this singularity originated out of nothing?

The authors think the answer is obvious. If the singularity lies at the earliest boundary of space-time, they argue, there couldn't have been anything 'prior' to it out of which it might have originated. But this is much too quick. On the ground marked out by Copan and Craig themselves, there most certainly could have been something temporally prior to the earliest boundary of space-time. The reason is that they hold an 'A-theory' of time, according to which temporal becoming is real and only the present exists. So understood, time is not to be identified with the time-dimension of the physicist's space-time. If, as some believe, God created conscious beings (angels, for example) prior to creating our universe, those beings could have had conscious states succeeding one another in A-time long before the advent of space-time. More to the point, there could have been a relatively formless stuff enduring through the passage of A-time for as long as you please before the earliest boundary of space-time, and the universe could have been made out that. Given this logical possibility, Copan and Craig are not entitled to move as quickly as they do from the standard Big-Bang model to the conclusion that the universe came into existence out of nothing. What this shows, I think, is that the case for an absolute beginning must rest heavily on the two controversial and much discussed philosophical arguments against the possibility of an infinite series of events defended in chapter 6.

The alleged implication of the second law of thermodynamics is, of course, that in an infinite past the universe would long ago (indeed, would always already) have achieved 'equilibrium'. That it hasn't is supposed to prove that the universe has an absolute beginning. The authors do concede that 'an accurate description of the universe prior to Planck time [10^{-43} seconds after the Big Bang] remains unknown and perhaps always will remain unknown'. But, they say, 'no such uncertainty attends the laws of thermodynamics and their application', inasmuch as 'this field is virtually a closed science' (247).

Be that as it may. This reader is not convinced that the argument for an absolute beginning emerges unscathed. What physicists generally say about the pre-Planck-time era is that all known physical laws break down. From this it follows that one cannot naïvely extrapolate the laws of thermodynamics all the way back through Planck time. Consequently, the very most that the authors are entitled to conclude from the evidence of thermodynamics is that the history of increasing entropy has a beginning – not that the universe came into existence out of nothing.

The concluding chapter attacks several naturalistic explanations of the origin of the universe proposed by philosophically unsophisticated scientists. It also offers a brief 'conceptual analysis' of what the cause of the universe must be like (252–254). It takes the authors less than two pages to establish (i) that it

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must be timeless, immaterial, and changeless (at least 'sans the universe'), and (ii) that it must be an 'unimaginably powerful' person. The chapter concludes with rebuttals of objections by Adolph Grünbaum and Quentin Smith, both having to do with the proper analysis of causation and its bearing on the *kalām* argument.

I have been unable to mention, much less do justice to, all the many themes and arguments that come tumbling off the pages of this book. The book is lively and clearly written. It focuses single-mindedly on an important topic, and it vigorously defends what the authors take to be *the* 'orthodox' position on creation. One must admire the nimbleness and dexterity with which they deal with opposing points of view, though some of their arguments are a bit brisk, to say the least. That said, I would recommend this book to anyone who cares to know what the best and most up-to-date evangelical Christian scholarship has to say about the biblical doctrine of creation, or who wants to think carefully about the case for, and the philosophical implications of, creation *ex nihilo*.

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Niall Shanks *God, the Devil, and Darwin: A Critique of Intelligent Design Theory*. (Oxford: Oxford University Press, 2004). Pp. xiii + 273. Foreword by Richard Dawkins. £21.00 (Hbk). ISBN 0 19 516199 8.

'It is impossible to reason someone out of something that he did not reason himself into in the first place.' *Jonathan Swift*

Niall Shanks has given us an outstanding book. It is thoroughly researched, clear, informative, rigorous, and in its patient explanations and careful analyses irreproachable. It is lively, witty, and engaging. It's a shame he had to write it. Yet, almost paradoxically, four years into the twenty-first century, this book could hardly be timelier. It is indeed regrettable that someone of Shanks's calibre has to spend time and energy debunking such flimsy arguments so patently pseudo-scientific as those propounded in the popular presses by the likes of Philip Johnson, Michael Behe, and William Dembski, leading advocates of the erstwhile creation-science movement, shrouded now beneath the thin guise of 'intelligent design theory'. Nonetheless, the pains he has taken are anything but a waste. Precious few could be better suited to write it. Thank God for Professor Shanks.

In a Gallup poll conducted in the US in February 2001, 45 per cent of adults agreed with the statement, 'God created human beings pretty much in their

present form at one time within the last 10,000 years or so'. Only 12 percent opined that humans evolved from other forms of life without divine assistance; (37 per cent allowed for both a Creator and Darwin: a divine kick-start that evolved according to original ordination). An occasional note of mockery and intermittent polemics require no apology from Shanks. Open minds will love this book. Closed ones won't. Few will remain indifferent.

The book is arranged as follows:

Shanks's bailiwick is history and philosophy of science – specifically, philosophy of biology and philosophy of physics. He also holds university posts in *both* science departments. *Qua* philosopher, his ability to untangle arguments is on display. Not only the hidden assumptions, faulty premises, and errors of logic are exposed, but also the motivations that underlie the new species of intelligent design that he targets. Shanks's scientific expertise is equally evident. Of the present state of evolutionary biology he provides (chapters 2 and 5) one of the clearest accounts geared for novices that one could hope for. His elucidation of the laws of thermodynamics (chapter 3) are every bit as excellent. And for those with a taste for such ultimate brain teasers as 'What was before the Big Bang?' and 'How did matter originate?', Shanks's informed speculations on cosmology (chapter 6) provide for a good long chew.

Indeed, this book is addressed principally to non-specialists. The three challenges to Darwinism that it confronts concern: (1) evolution's purported violation of physics' Second Law of Thermodynamics; (2) the supposed 'irreducible complexity' of living things; and (3) the claim that 'anthropic coincidences' between cosmic mathematical constants are too precisely attuned to life support to permit of naturalistic explanation. These topics may sound so technical as to deter non-initiates. But this book is a model of accessibility. ID theorists forsake the rigours of peer-reviewed academic debate, and instead try their case, such as it is, before the uncritical court of public opinion. Thus, hot in pursuit, Shanks has taken to the streets. One should pray that those connected with matters educational – including especially school boards, administrators, teachers, parents, and students, not to mention law-makers, judges, and other elected officials – will study every line of it. And twice on Sunday.

A worthy accompaniment is Forrest and Gross's *Creationism's Trojan Horse* (Oxford: Oxford University Press, 2003). Documenting a host of sources public and private, these authors unveil the fundamentalist religious agenda – and financial backing – of the ID movement. In this they provide an outstanding service. Despite the validity of their assault on the claim that ID theory constitutes a genuine *scientific* alternative to Darwinism, a first-rate scientific account of the workings of evolution is wanting. Enter Niall Shanks. Shanks also documents the purposes of the ID 'wedge strategy'; but he goes further than anyone to date in meeting the claims of Behe and co. head-on, subjecting them to careful scrutiny on their own terms. Kenneth R. Miller, biologist at Brown University, proves Shanks's contention that not all Christians renounce Darwin. In *Finding Darwin's God* (New York NY: Cliff Street Books, 1999), Miller launches his own passionate defence of evolution. In the process, he, too, performs a thorough debunking of creationist dogma. His opposition to ID theory, whilst on target, is nevertheless considerably less rigorous, logically and philosophically, than Shanks's, and is far from thorough. Ultimately, Miller, a Roman Catholic, attempts to reconcile Darwinism with a benevolent Creator. But Shanks's attentive unpacking (chapter 6) of 'the cosmological argument' is sufficiently remedial.

In his introduction, Shanks locates the machinations of contemporary ID within the context of resurgent Christian fundamentalist quests. Most of this ground has been spaded by the likes of Forrest and Gross. But Shanks brings to light troubling contacts between zealots at California's Institute for Creation Research and counterparts within a radical Islamic circle in Turkey striving for theocracy. Though brief, this section makes for riveting reading. Secular leaders ought to pursue the several citations. Lest one hope to write Professor Shanks off as paranoid conspiracy theorist, consider this. In October last, Pennsylvania's Dover Area School Board outlawed the teaching of the origins of life in secondary-school biology classes, whilst mandating the use of *Of Pandas and People*, an intelligent design textbook. *The Washington Post* reports that, within the past year alone, forty of the fifty US states were beset with challenges to the teaching of evolution in local districts. George W. Bush, self-proclaimed 'born-again' Christian, when pressed publicly, has refused to say whether he believes our planet is older than 10,000 years.

In chapter 1 Shanks delivers a concise history of the argument from design. Not a few philosophers might learn here that the origins of this line of thought, quintessential tooth-cutter in university philosophy of religion courses, lie further back than Aquinas and are traceable to ancient Greek *phusikoi* who predate Plato. In turn, critical reactions from Hume and Kant are dealt with in industrious detail.

Chapter 2 focuses on the impact of genetics on evolutionary biology and recent research that ties issues in evolution to developmental biology. A central contention of ID's Michael Behe, chemistry professor at Pennsylvania's Lehigh

University, is that Darwin's theory of evolution by natural selection is an outmoded relic of the nineteenth century. In light of recent explosions in biological and biochemical knowledge, he says, in our twenty-first century it is time to discard it. Shanks opens with a splendid condensation of the development of Darwin's views on religion and naturalism. Darwin's historic discoveries are then presented in context, in relation to the then-new methods of science, the geological concept of 'gradation', and the work of luminaries like contemporary Charles Lyell and natural theologian William Paley of the preceding generation. Certainly, as both Shanks and Miller make plain, Darwin worked in total ignorance of modern genetics, cell biology, molecular biology, and biochemistry. Admittedly, a number of biological structures are not at this time completely mapped. But there is nothing in this to warrant any anti-evolutionist conclusion. Indeed, the remaining gaps in our knowledge are narrowing at a furious pace daily.

Shanks does an enviable job of leading the reader step by step through the intricacies of the 'new synthesis' in evolutionary biology. Explaining the nitty-gritty of genes and chromosomes, of processes of 'duplication', 'exaptation', and the like, Shanks lays bare the ways of genetic mutation, specialization, and resultant speciation. There's no hocus-pocus. Shanks hides nothing up his sleeve. The chapter concludes with a careful examination of the ID claim that the human eye necessarily refutes Darwin. Shanks establishes that 'the eye, far from being a challenge to evolution, has turned out to be a vindication'.

Chapters 3, 5, and 6 cogently address ID's three touted refutations of non-theistic *Weltanschauung*. Shanks's point-by-point assessment makes for some of the highest quality discussion found anywhere to date. Specialists would do well to read these passages, if only for their remarkable clarity of exposition. In chapter 3, Shanks provides a superb primer on thermodynamics,

> … partly because errors about the meaning of the Second Law of Thermodynamics pervade creationist literature and partly because the recent study of nonequilibrium thermodynamics has revealed how natural mechanisms, operating in accord with natural laws, can result in the phenomenon of self-organization, whereby physical systems organize themselves into complex, highly ordered states.

The latter is demonstrated deftly not only with respect to our non-equilibrium universe, but with such thermodynamical systems as heat engines, automobiles, hurricanes, and cellular processes. Shanks clarifies the concept of *entropy*, key to the relationship between heat and work upon which these laws are based. Dembski blatantly misses the point that, whilst the total quantity of energy in the cosmos remains constant, in local systems entropy can increase and order nevertheless arise: and so with galaxies and microscopic biochemicals. Energy flowing through an 'open-dissipative' system acts to organize it. Local increases in entropy are offset by reductions elsewhere. There is naught to quibble with here: the preposterous idea that biological evolution violates thermodynamical law is routed.

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Creationists complain of science being stacked against them from the start. In chapter 4 Shanks argues that science does not dismiss a priori the possibility of the supernatural. It simply demands *evidence*. If such is in principle beyond our grasp, justified belief gets jettisoned. The burden rests on the supernatural foot. Shanks readily concedes the *logical possibility* of design; but those who claim that the doings of deities must forever remain a mystery are left holding the bag. Shanks questions the very intelligibility of divine intervention, thus portending a potentially devastating threat to theistic 'theory'. In this journal I've argued that the notion is, as Shanks suspects, strictly incoherent (see my 'The very idea of design: what God couldn't do', *Religious Studies*, **40** (2004), 81–96).

In chapter 5 Shanks examines the quasi-scientific centerpiece of ID theory, 'irreducible complexity'. According to Behe, gradual evolutionary processes are positively ruled out, on the grounds that complex biological structures must, by definition, surface as integrated wholes. This is tantamount to the bizarrely rhetorical: What's the use of half an eye? Behe's criteria rest on confusions. Even worse, Shanks demonstrates how and why any number of naturally evolved structures, both physical and biological, satisfy his terms. The existence of *redundant* complexities (overlapping functions) – something Behe formerly denied but now accepts – are shown to provide the scaffolding upon which irreducible complexities can and do arise as a result of numerous, successive, slight modifications.

In chapter 6 Shanks dispatches the cosmological case for design. Astrophysicists have uncovered mathematical coincidences without which life could not have arisen. But the significance assigned to these and the conclusions drawn by ID theorists are inconclusive. Unable to specify in advance the likelihood of such variables occurring naturally, no basis exists for assuming – let alone asserting – that they signal (benevolent) intelligence. In a global lottery, my chances of winning are six billion-to-one against. But the probability that somebody will win is one. The chances of anthropic constants being 'selected' are, as far as can be determined, precisely the same as for any other variables.

Shanks shares with us current thinking about the initial micro-moments of Big-Bang. He conveys in fine detail collapse of the known laws of physics in the first 10-millionth of a quintillionth of a quintillionth (1^{-43}) of a second – and the consequent limits on our talk and thought. Obviously, these cut both ways. But whilst this epistemological gap licenses no inference to interventions supernatural, on the other side a partial explanation (from cosmology) fares better than forced silence. If there is aught to challenge, it is Shanks's confidence in scientific progress and his faith in a full explanation to come. This faith, however, is neither blind nor an empty wish. History is on his side: since the inception of modern science, inexorably these gaps have diminished. Still, it is arguable that knowledge is bounded. The minutest gap might necessarily elude disclosure. One orthodox interpretation of quantum theory holds that an inevitable degree of indeterminacy is a built-in physical feature of our universe. But true believers can

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seek no solace here. Miller's flight of fancy notwithstanding (*Finding Darwin's God*, 230–232), quantum randomness packs *no* theological punch.

Shanks finishes with some provocative, far-reaching remarks about science, morality, and God. Beyond dictating science curricula, creationists seek to impose social, political, and legal policies founded on 'an objective, transcendent moral order rooted in God'. Shanks counters that 'Darwin himself provides a way of thinking about the functional role of morality that, when developed, accords well with the democratic values that are our common heritage from the Enlightenment'. Naturalized, i.e. atheistic, ethics, are nothing new, of course. Euthyphro and Aristotle, not to mention Siddartha Gautama, long ago sowed those seeds. Concerning the natural selection of moral behaviours and attitudes, however, further development clearly is due from their contemporary descendants.

'At rock bottom,' says Shanks,

> … this book is about the Enlightenment and its enemies and about the choices we will all have to make, not just about science, but about life itself: how we want to live, how we want society to be structured, how we want to see the future unfold. Ultimately, it is about what we value and how this reflects differing estimates of the nature of the world we live in.

The dichotomous 'Enlightenment or foe' is possibly a tad simplistic. Not just heirs to Rousseau will cry false dilemma. On the face of it Shanks accepts without question not only Enlightenment values but their underlying premises. These, too, however, must be liable to rational critique. As for *choice valuations*, Shanks is right as rain. Yet it remains uncertain whether those things *he* prizes most are in any sense demonstrably *correct*, let alone universally deserving of allegiance. For the individual, it may finally come down to 'whatever gets you through the night'. Apropos a diverse society, as generals of the ID movement apparently understand, it reduces to who and what succeeds. Means are dispensable: if conceivably effective, appeals to reason are well and good; but so then are counterfeits. Either way, appeals to passion will play nicely as trumps.

Between naturalism and supernaturalism, Occam's Razor finds aught to slice. Unhesitatingly I side with Shanks. Ineffable mysteries give no account. Then again, although the cost of a selective irrationality (few creationists disown the blessings of medical science, after all) may be dear, a 'sentimental stance' cannot be rejected out of hand. Inconstancy, too, beggars an explanation that would do Darwin proud. A choice there is all right. Rational – to be or not? Aye, there's the rub. Richard Dawkins is surely prophetic in forecasting that the battle with ID will be a lengthy campaign.

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Donald M. Broom *The Evolution of Morality and Religion: A Biological Perspective*. (Cambridge: Cambridge University Press, 2004). Pp. xi + 229. £50.00 (Hbk), £18.95 (Pbk). ISBN 0 521 82192 (Hbk), 0 521 52924 7 (Pbk).

In *The Evolution of Religion and Morality*, Donald Broom seeks to show that an evolutionary account of morality and religion is compatible with moral and religious truth-claims. His is an ambitious interdisciplinary endeavour which seeks to bring together the insights of evolutionary biology, ethics, theology, and the social scientific study of religions. His goal cuts against the grain of the common intuition that any evolutionary theory of morality and religion, or any genetic explanation for the human propensity to moral autonomy and piety, is reductionist as such. He argues, instead, that natural selection has selected the cognitive traits which predispose humans to moral autonomy and religiosity because these practices are conducive to survival and reproductive success.

Broom begins with the assumption that any more or less universal feature of culture must ultimately rest upon biocognitive attributes which have been selected because they contribute to species survival and reproductive success. As such, this book ventures into the choppy waters of evolutionary and genetic explanations of human behaviour – the stormy waters in which the likes of E. O. Wilson and others have so dramatically floundered. The other great challenge mounted by Broom is that of the interdisciplinary character of his project. Genuinely successful interdisciplinary scholarship manages not to short-change any of the disciplines whose insights it seeks to harvest.

Broom's study displays two strengths: his command of the scientific literature in genetics and evolutionary biology, and a willingness to challenge the deep reductionist presumption about any evolutionary account of morality and religion. The deficits of his project are: (1) the incipient assumption that demonstrating a contribution to reproductive success for any behaviour amounts to a moral justification of the explained behaviour; (2) dependence upon impressionistic accounts of morality and religion; and (3) an unpolished style and way of quoting and making attributions to other authors that make his line of reasoning and connections very hard to follow. The end result is a book in which one hopes the author's less convincing and sometimes even naïve notions about religion and morality won't detract from the nobility of his as yet unrealized intellectual goal.

The outline of Broom's overall argument is laid out in his first chapter. Emergent moral and religious concepts and practices are part of the way in which the human brain controls human behaviour. Natural selection favours patterns of behaviour and behavioural control that conduce to reproductive success. Morality and religion (which are presumably cultural universals) constitute part

of the brain's regimen of control for conscious, self-aware, and social animals such as humans. Human grouping is enabled behaviourally by what Broom ought to call moral autonomy and are reinforced by religious thought-forms. Broom specifically focuses upon protection of the young, more efficient mating, and the reduction in competition as evolutionarily critical benefits of human sociality made possible by uncoerced moral self-restraint. And so natural selection selects traits that engender a bent toward moral autonomy. Finally, and more naively: an evolutionary account of morality and/or religion 'does not devalue spirituality. It may well encourage people to be a part of a religion because they understand it and its benefits better' (29).

In subsequent chapters, Broom makes it clear, unsurprisingly, that the beneficial behaviours he believes morality and religion engender are essentially reciprocal altruism and other trust- and co-operation-engendering patterns of conduct, as well as care for the young and mate-guarding. So the second and third chapters propose a genetic foundation for these behaviours. Some of Broom's best ideas are in the third chapter, in his discussions of biological foundations – both at the genetic and neural levels – of different levels of awareness and consciousness. Broom acknowledges that even for humans, many beneficial behaviours are not intentional as such. Morality, however, is essentially a social system for controlling intentional actions and promoting trust- and co-operation-engendering traits of character for an animal species that must be social in order to flourish. Broom's appeal to parallels between kinds of animal behaviour and intentional human behaviour to demonstrate how these behaviours conduce to survival and reproductive success are generally illuminating.

Broom turns to morality and religion in chapters 4 to 5, in what must surely be accounted the weakest sections of his study. He defines both morality and religion in impressionistic ways that ignore whole traditions of scholarship that call into question his ways of defining each. The sad fact of the matter is that it is not even clear that the conceptions with which Broom is working are the ones most beneficial or intuitive for his project. It is exactly here that Broom fails to give us a convincing piece of genuinely interdisciplinary scholarship. Morality is treated flatly and unconvincingly as (1) a code of rational rules (2) that enjoin beneficial actions and prohibit or minimize harm. Broom shows no cognizance of the deep challenges to the notion that morality even essentially or most universally is following a code of rules, as opposed to, say, cultivating virtuous traits of character. Broom quotes with approval Aldo Leopold's assertion that 'a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise' (Broom (121) quoting Leopold's *A Sand County Almanac*.)

Broom's chief counsellor on matters of moral theory seems to be Richard Brandt, and Brandt's version of rule-utilitarianism. Utilitarianism of any kind assumes, of course, that a human can reliably make (and, therefore, ought to

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make) intentional choices that optimize human advantage overall, counting his interests as one among others. What seems to have attracted Broom to the Brandt brand of rule-utilitarianism is that it is a moral theory that focuses, like the trajectory of natural selection, on the optimization of advantage. The trouble is that Broom seems to have collapsed intentional and non-intentional ways in which human behaviour might redound to human advantage, reproductively and otherwise. Broom *assumes* that if following a particular rule optimizes chances of species survival and reproductive success that this fact justifies it as a moral rule.

Broom's code-of-rules conception of morality, and his naïve consequentialism are hard to square at the theoretical level with his earlier claim (chapter 3.5) that it is through the emergence of a capacity for sympathy and altruistic and participatory emotions that humans acquire their evolutionarily significant bent toward altruism, co-operation, and trust. What is intentional about the intersubjective patterns of self-restraint is not well captured by the notion that humans reason their way by assessing optimal outcomes to the self-conscious adoption of rules of conduct. This makes about as much sense as the gathering-under-the-tree-to-sign caricature of social contract that is so appealing to every generation of undergraduates. It is more likely the case, as Adam Smith intuited, that the advantages of human co-operation, trust, and reciprocal altruism cannot rise to view until humans are already sufficiently evolved to exhibit moral autonomy and to enjoy other benefits of co-operation. Following Darwin, Broom has nothing to lose by admitting (following the model of Adam Smith) that natural selection functions like an invisible hand to reproductively reward predispositions to moral autonomy and sociality.

Philosophical confusion about moral justification becomes clearest in the five final sections of chapter 4, with a sweeping discussion about obligations, rights, evaluation, codes of sexual behaviour, conscience, etc. But not only are explanations and justification two different things, even Broom's explanations are not convincing. The weight given to mate-guarding, as well as disease-prevention in his discussion of codes of sexual behaviour make little sense of such rules, either as explanations or justification. This discussion is pervaded by a flat and conjectural use of the liberal 'harm-criterion'.

One needn't doubt that 'morality has a biological basis and has evolved'. I am convinced, though Broom didn't convince me (and probably won't succeed in convincing sceptical minds). But Broom declines to make the more powerful argument that the evolved character of human consciousness is that we are inescapably and deeply social animals, and it is the character of that sociality that is both evolutionarily accountable, and that thing about us which both requires and produces the socio-cultural phenomenon of morality – or of a capacity for moral autonomy.

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Broom's discussion of religion, like his sweeping discussion of morality, lacks a critical sense of nuance. He seems, for example, unaware that his way of defining religion: 'a system of beliefs and rules which individuals revere and respond to in their lives and which is seen as emanating directly or indirectly from some intangible power' (164) is widely regarded as ethnocentric and inadequate as a *characterization* of religion, like the naïve notion that all religions are 'faiths'. Only theocentric Western traditions vaguely answer to Broom's characterization. Broom's effort to accommodate non-theistic traditions such as forms of Buddhism or Confucianism to his definition of religion is strained. It is simply false that most religious traditions 'codify beliefs'. There is arguably a cosmogony – a most general sense of the character and order/disorder of the sum totality of things, and the place of humans and other living beings within it – *implicit* in everything that can be identified as 'religion'. But beliefs about 'the really real' entailed by it are less often made explicit and 'confessed' in a ritualized way as an institutional mark of *a* religious identity. It is simply false to equate religion, a religion, or religious identity with 'belief statements' and 'belief structures' in the absence of other fundamental components of religion.

The same must be said of the notion that religions evolve essentially to provide justification for morality. Goodness or rightness, as such, are most manifestly *not* 'a central issue for all religions' (173) – at least, if you aim to describe or identify any component or function of which the participants are aware. Nor is it at all obvious that religious practice always supports or makes more secure moral autonomy. The notion that 'morality is the core of religions' and that 'religion would have developed in order to provide a structure which encouraged the widespread observance of the moral code' (176) is simply not supported by evidence. This conjecture once again reflects Broom's uncritical assumption that a naïve conception of religion as a 'belief structure' perhaps represents a scholarly consensus, or that those who support this view have convincingly responded to critics of it. Broom appreciates some of the challenges that can be raised to the notion that they do so. He attempts to anticipate these responses in the final two sections (6 and 7) of chapter 5. His response is (shockingly) the vague and unconvincing claim that religious practice improves welfare, together with the notion that religious believers and organizations should tone down the features of their confessional ethos that tend to promote exclusivism and violence – as if this could just be done as a matter of decision. The trouble is that Broom proceeds as though the tendencies and notions that engender exclusivism and intolerance are somehow always less central and definitive of those traditions than the presumably beneficial universal features. (See his list of ten recommendations, 192–193.)

Broom sometimes quotes other scholars whose language he appears not to understand, and so quotes them out of context. For example, on 177, he twice quotes passages from John H. Crook *The Evolution of Human Consciousness*

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(Oxford: Clarendon Press, 1980), 185, 287, where the latter describes religious and ethical thought-systems as 'legitimizing' political institutions and socio-economic arrangements. In the ensuing paragraphs and section, it seems clear that Broom has simply read this term to mean 'support' or to provide a justification for something. But 'legitimation' is a critical term of art drawn from critical languages deriving from Marx's notion that religion and other thought-forms are *ideologies* which render the contrivance of oppressive social arrangements beyond challenge or criticism by representing them as part of a given order of reality. A closer reading of Crook's text leads me to conclude that this was how he was using the term as well. As such, Crook's quoted claims do not support Broom's claims about the origins and function of religion. Another baffling problem is Broom's assumption that religions as such are essentially theocentric, and that the idea of God is 'usable' (180). What follows for twenty more pages is a meandering discussion of religion in which it is alleged that the evolved presence and usefulness of the idea of God and other ideas Broom imagines are more or less universal features of religious belief are 'useful' in promoting reproductive success and survival, and so justified beliefs.

The book's final two chapters make further attempts to respond to a range of thinkers whose view, Broom thinks, are that morality, religion, and biology are inherently antithetical. He also articulates a social vision of religion and morality that mobilizes recognition of human connections to other species, and moral concern for them. One hardly encounters arguments here, and the claims are so general that they are hard to argue with. Broom's primary concern in chapter 6 settles upon those whom he regards as promulgators of the 'selfish-gene' notion. And his counter-argument advances little beyond an objection to the use of the word 'selfish' to describe genetic function in natural selection. Otherwise Broom relies, through quotation, upon Holmes Rolston's (*Genes, Genesis and God: Values and Their Origins in Natural and Human History* (Cambridge: Cambridge University Press, 1999)) argument against the 'selfish-gene' notion, and upon others by citation, to overcome the (as yet, unvanquished) idea that moral autonomy and 'religion' are anything other than irrelevant by-products in culture of human DNA's successful replication of itself.

The one genuinely fresh idea in the final two chapters of the book is the notion that we cannot characterize (what ought to be called) moral autonomy in such a way that we can meaningfully deny that it is an extension of observable animal behaviours in other species. The general idea here, and one which runs directly counter to Broom's characterization of morality, is that to the degree that a capacity for empathy is a capacity found in other species, the most fundamental and motivationally salient ingredient of moral autonomy is present. The specific form of 'morality' as a cultural product among humans reflects the character of human self-consciousness, and the cognitive necessity for generating linguistically communicable concepts. Interesting,

though hardly a new idea – but we do not really find a sustained argument for it in Broom.

Broom needs to return to the drawing board, and to do so with the aid of collaborators from ethics and religious studies. There is something to be said for sweeping and radically challenging programmes of conceptual revision and vision. And it is not unreasonable to think that interdisciplinary scholarship might impel them. But it isn't surprising that the most interesting and compelling moments in Broom's endeavour are those informed by his disciplinary expertise. As it stands, Broom's work is of interest to scholars primarily for its courage – his willingness to entertain a still radical seeming notion that ascertaining the bio-cognitive, evolutionary sources for moral autonomy and 'the religious' does not explain it away. This extends to his closing reflection that moral autonomy as such may not radically demarcate humans biologically.

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Richard Swinburne *The Existence of God.* Second edition. (Oxford: Oxford University Press, 2004). Pp. vi + 372. £55.00 (Hbk), £18.99 (Pbk). ISBN 0199271674 (Hbk), 0199271682 (Pbk).

The second edition of *The Existence of God* by Richard Swinburne is celebrated by the publisher as 'the definitive version of a modern classic'. Considered the most important contribution to the philosophy of religion by an author who is respected and read by whoever researches in this area in the contemporary English-speaking world, this new edition brings important improvements to the original version, issued in 1979 and revised in 1991.

Most of these improvements refer to ideas expounded in works Swinburne has published in the meantime, mainly *The Christian God* (1994), *Is There a God?* (1996), *The Evolution of the Soul* (1997), *Providence and the Problem of Evil* (1998), *Epistemic Justification* (2001), and *The Resurrection of God Incarnate* (2003). Another source of the many changes Swinburne makes in this edition are books and articles published by other authors defending ideas he attacks, such as the versions of Humean regularity championed by David Lewis, D. M. Armstrong, and John Carroll (30ff), and the approach to religious experience proposed by William Alston (327).

Apart from several refinements in the text, which have resulted in a general gain in clarity and readability, there is some new content, or new approaches to old content, which constitute a real difference to the positions adopted in the first edition. In chapter 6, for example, Swinburne puts the problem of the explanatory

power of a hypothesis in a form that reveals more clearly than before its comparative nature in a Bayesian approach. This change will have positive consequences for the assessment of theism in each chapter and the way he concludes the book in chapter 14, which I will comment upon shortly. Still in chapter 6, the explanatory power of theism is now presented with much less probabilistic formulae. Instead, Swinburne stresses the metaphysical principle that moral goodness is diffusive of itself, and because God is infinitely good, we can expect with some reasonable probability that a world like ours would be created by God. He also elaborates on the reasons why we could expect God to create human beings and why they should need bodies, which will reflect in the way he deals with the problem of evil in chapter 11.

Chapter 8 is substantially expanded. A whole section on the fine tuning argument, which appeared in the revised edition (1991) as appendix, is incorporated into the body of the text. New considerations about the argument from beauty are also included, changing his previous evaluation of its force for theism. Chapter 9 is also enriched with an initial, useful clarification about the properties of mental phenomena, leading to a dualism, both of events and substances, between mental and physical phenomena. He also changes the former argument from morality, dividing it into argument from moral truth and argument from moral awareness. This time, Swinburne argues that only the former does not confirm theism, while human moral awareness is something that would be probable in a universe created by God, but inductively improbable otherwise.

The discussion of the problem of evil is given a very different turn in the second edition, while keeping some of the previous text. Particularly, in discussing God's right to inflict harm, Swinburne now thinks that theism needs an additional assumption about compensatory life after death. Thus, God could still be considered infinitely good while permitting that some people had a life on earth that, on balance, would be better for them not to have had. Similarly, he now considers that another additional assumption – the redemptive incarnation of God Himself – is needed to save theism against a good C-inductive argument from evil. In this edition, then, he recognizes that the number of sufferers and the intensity of suffering produced by natural processes are factors that decrease the inductive probability of the existence of God (266). In addition, there is now a new argument against theism in chapter 11, called the argument from hiddenness, according to which God's failure to make Himself known counts against the probability of His existence, since one would not expect that a good God would hide Himself from his children. Swinburne thinks, however, that this argument can be neutralized (272).

In the final chapter ('The balance of probability'), he abandons the former typology of rival worldviews in terms of theism, materialism, and dualism for a comparison between theism (h) on the one hand, and the hypotheses that the terminus of explanation is a set of limited gods (h_1), an initial inanimate

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substance (h_2), or no explanation at all, i.e. the null hypothesis (h_3), on the other hand. This solves a problem posed by Charles Gutenson (*Religious Studies*, **33** (1997), 243–247), according to whom Swinburne's conclusion was far too weak in saying that, before considering the evidence of religious experience, the posterior probability of theism would not be higher than 50 per cent. In his argument, Gutenson compares the prior probabilities of theism (P(h/k)) and the rivals to it (P($\sim h$/k)) as if the latter could be considered as only one. As a result, since Swinburne held that the prior probability of theism was higher than its rivals', he should have concluded that each evidence he took into account in favour of theism constituted an argument that rendered its probability higher than 50 per cent, or, in Swinburne's terminology, each individual argument was a good P-inductive argument.

In the new edition, once theism is compared with three other hypotheses, the ambiguity that made possible Gutenson's criticism vanishes. Theism may be more probable than each alternative explanation listed above taken individually, but one cannot say it is more probable than the sum of its rivals' probabilities. Yet, although it clarifies this misunderstanding, the new form of exposition makes it more difficult to assess whether we have a good P-inductive argument for theism overall. Since no numerical values are assigned to the competing hypotheses' probabilities, and since as a whole the rivals of theism have relative low prior probability compensated by high explanatory power or vice versa, Swinburne's contention that 'it is something like as probable as not that theism is true, on the evidence so far considered' (341), becomes very poorly grounded.

Swinburne argues (as he did in the first edition) that the argument from religious experience is able to decide this indefinite situation by tipping the balance in favour of theism. Discussing it along basically the same lines as in the original edition, he holds that, although we should give to this phenomenon an internal description (as a mental event), the principle of credulity ('in the absence of special considerations, if it seems to a subject that x is present, then probably x is present') is able to transform it into powerful evidence for theism. According to Swinburne, to deny the principle of credulity is to fall into a 'sceptical bog' (304, n. 10), and one needs good arguments not to apply this principle to religious experience. Moreover, there are no special considerations limiting the use of the principle for alleged perceptions of God's presence taken as a whole. As a result, he thinks this phenomenon can confirm theism to a very high degree, and it is conveniently spared as a trump card, in the final balance, in order to grant to theism an overall posterior probability (the probability of a hypothesis given the whole set of pieces of evidence examined) higher than 50 per cent.

The principle of credulity seems a very reasonable criterion, but some authors (especially Richard Gale, in A. Padgett (ed.) *Reason and the Christian Religion*, 39–63, and Michael Martin, in *Religious Studies*, **22** (1986), 79–93) seem to have given very good reasons for accepting it for sense perception while being sceptical

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as to its use for religious experience. Fundamentally, the problem is that sense experience and its alleged religious counterpart are very, very different. Since Swinburne's argument is based on an analogy between them, it has much less force than he intends. In addition, the identification of an individual logical object such as God in a religious experience requires a considerable number of auxiliary beliefs for its recognition. The phenomenon of religious pluralism indicates that, even if one recognizes the authenticity of religious experiences, they are much more evidence for the existence of a more vague ultimate reality than for the very specific God of traditional theism. Moreover, even if theism is a good explanation for religious experience, naturalistic explanations of this phenomenon seem to have been dismissed too swiftly by Swinburne. They also provide good reasons and causes for the occurrence of that kind of event. At most, the religious believer is entitled to take those experiences as good evidence for the existence of the God of theism, but for the unbeliever it does not need to be taken as the decisive, knock-out type of argument Swinburne is aiming for.

Despite the important changes pointed out above, the second edition maintains the same chapter titles (adding to them three short additional notes – 'The Trinity', 'Recent arguments to design from biology', and 'Plantinga's argument against evolutionary naturalism'), and the same general theses of the original version. Swinburne's aim is to show that the belief that there is a God, of the sort postulated by traditional theism, is justified according to the same criteria employed for assessing any explanatory hypothesis. For him, theism is a personal explanation for many phenomena that are either too odd or too big for science to explain. According to the Bayesian scheme he adopts, a hypothesis is justified as long as it has good prior probability (initial plausibility, before relevant evidence is considered) and high explanatory power (evidence confirms more the hypothesis at stake than its rivals).

In the type of logical theory of probability Swinburne takes, prior probability should be estimated from universal, impersonal criteria, namely, scope, fitness with background knowledge and simplicity. Since the evidence to be explained refers to the whole set of contingent facts, scope will not matter, since all rival explanations will have the same range of phenomena to explain. Fitness with background knowledge will not count either, since, because they are all large-scale theories, there are no neighbouring fields the competing hypotheses could fit with. So, the prior probability of theism and its rivals will be a matter of simplicity, a central concept in Swinburne's proposal. Now, it is important to note that in this new edition, Swinburne defines simplicity in quantitative terms, as mostly a matter of economy, so that its application as a criterion can be impersonal and universal. However, even being connected by the idea of 'having few elements', the meanings of simplicity now listed (53) are still too many, and its multifaceted nature creates problems for its operation as a theory-choice

criterion. If simplicity has many facets, it is possible that they clash with each other at some point, and since rival theories can be assessed according to different facets, this criterion cannot be applied directly, for it can lead to contradictory results.

In addition, too simple a theory is frequently considered implausible, even before the phenomena it aims to explain are taken into account, on the charge of being simplistic. Indeed, instead of a linear gradation for evaluating a hypothesis in view of simplicity, so that the simplest is the most probable in principle, it seems more correct to take simplicity as a *medium optimum* above which we have complex theories and below which there are simplistic ones. As a result, the correct statement of the principle of simplicity should not be 'other things being equal the simplest hypothesis is the most likely to be true', but instead that 'the one which has the correct amount of simplicity, that is, which is neither deficient in this property (the complex ones) nor excessive in it (the simplistic ones), should be a priori the most probable'. If so, however, the application of the criterion for estimating prior probabilities is far from straightforward. It requires familiarity with the prevailing conception about what is the optimum of simplicity in the research area to which we are referring in order to sustain a trained judgement.

So, we can even agree with Swinburne that simplicity is not a sheer methodological or pragmatic criterion, but that it has something to do with truth. However, given the problems above, the definition of what simplicity amounts to and the application of this parameter for assessing the plausibility of a hypothesis need to refer to the background knowledge shared by a given community of researchers. Moreover, considering simplicity as part of background knowledge of a definite community of researchers makes possible that we represent it in Bayes' theorem as the k according to which we evaluate all terms involved in the discussion. In a formal and rigorous programme of rational justification, such as we find in Swinburne's proposal, the fact that a crucial concept like simplicity does not have a clear place in Bayes' theorem is not a small problem.

Yet, in spite of these critical remarks and others that could and have been made, this is certainly a book that deserves to be recommended. Much philosophy of religion that has been written in the last twenty-five years uses it as a point of reference. I hope that it continues to inspire reflection and good work in the area. This is what we can expect from a classic.

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