

## Book Reviews

R.J. Berry, *God's Book of Works: The Nature and Theology of Nature* (London: Continuum/T. & T. Clark, 2003), pp. xvi + 286. Paperback £17.99, ISBN 0-5670-8915-0. Hardback £45.00, ISBN 0-5670-8876-6.

In the Preface to his own Gifford Lectures (2001), Stanley Hauerwas remarks that they are 'best done on a large canvas'. R.J. Berry plainly took the same view in his 1997-98 series: in twelve chapters and with a bibliography of over 500 works, he surveys the history and current state of the encounter between science and theology, genetics and its implications for theology and ethics, and the religious, scientific and political dimensions of the contemporary ecological crisis, before making his own constructive Christian proposals. Helpfully, he sets out his four specific aims at the beginning: '1. To explore religious faith(s) in the light of biological science; 2. To test whether scientific understanding is a sufficient description of the human condition; 3. To investigate the credibility of religious belief in the twenty-first century; 4. To seek a robust basis for behaviour in a crowded and ill-treated world' (p. xii).

These aims do not map neatly onto the different sections of the book, but the first three are most clearly addressed in the first four chapters and in the closing part. There is much of value in the early chapters, though it is also here that one of the hazards of choosing a large canvas – the need to paint with a very broad brush – is most evident. One single chapter surveys the whole history of the relationship between science and religion in the West from antiquity to the present. Another includes discussions of molecular genetics, sociobiology, consciousness, the *imago Dei* and the ethics of genetic engineering. Professor Berry enters several disclaimers: 'I have repeatedly had to resist the temptation to dig deeper into some topics, and I may have got the balance wrong and be accused of superficiality' (p. 225). After that, it would be churlish to nitpick, but there are points at which I wished that he had dug a little deeper. To give one example, even hard-line sociobiologists could agree with everything he says about the complex interactions of genes with one another and their environment (pp. 65-67), so his discussion is not as effective a critique of sociobiological accounts of human nature as it might be. However, these early chapters do remind us of the historical context of current debates, and direct us to some useful sources (Midgley, Ayala and perhaps MacKay) of a richer picture of humanity and nature than is offered by the doctrinaire reductionists.

Professor Berry's fourth aim, 'to seek a robust basis for behaviour in a crowded and ill-treated world', comes to the fore in chapters 5-9 and continues to be pursued in the closing chapters. His tone becomes surer as he addresses this aim: on environmental matters, he speaks with considerable authority, derived both from his own distinguished scientific career and from the ring-side seat which it has afforded him at

some of the most important environmental-political events of recent decades. This is not to say that broad brushwork is absent from this part of the book: one could wish, for example, that the summary of New Age religion (pp. 90-92) had not been almost entirely drawn from a book entitled *Unmasking the New Age*. Nor does he shy away from controversy: one imagines that his trenchant comments about the role of Greenpeace in the Brent Spar affair (pp. 156-58) might not endear him to committed environmental activists – though at this point, I must enter a disclaimer of my own, since the technical and political details of this saga are beyond my expertise. This fourth aim alone could have provided enough material for a Gifford series, which might have had a sharper focus and allowed for a more in-depth treatment of the issues than the book as it stands.

This kind of project is necessarily interdisciplinary, and as a biologist-turned-theologian myself, I can testify to the difficulties, as well as the rewards, of such work. Professor Berry recognizes the difficulties and dangers, and repeatedly stresses that he is a scientist, not a philosopher or theologian: 'I am not qualified to comment on nor particularly interested in theological or philosophical disputes about the meaning of texts; the underlying...question is the credibility of belief in any divine input to, or control of, the natural order' (p. 3). It is difficult to know how to understand this: as a recognition of his own disciplinary boundaries, certainly; but might there also be a little gentle caricaturing of theologians and philosophers as pedants who quibble about the meaning of words? Yet Berry inevitably finds himself doing theology and sometimes philosophy, and even discussing the meaning of texts, so it is legitimate to ask how successfully he does these things. Is it good exegesis and hermeneutics, for example, to read the Parable of the Talents as a set of guidelines for environmental stewardship (pp. 185-87)? Or again, what problematic theological and moral commitments, if any, might follow from the speculation (pp. 227ff.) that God 'created' Adam about 10,000 years ago by transforming an individual *Homo sapiens* into the first *Homo divinus*? Space precludes much more than raising the questions on this occasion. However, my view of the second, for what it is worth, is that we would be wise not to take the bait of creationist writers like Duane Gish who insist, on the strength of one reading of Romans 5, that without an historical Adam and historical fall, the notion of atonement through Christ becomes unintelligible.

In these Gifford Lectures, Professor Berry has tackled a set of big themes – arguably some of the biggest intellectual and practical questions facing Christians and others in the industrialized world today. The hazards of taking on so much in one lecture series have already been alluded to. But notwithstanding these, the author has reminded us of some vital questions and pointed us towards valuable resources for addressing them.

Dr Neil Messer  
Department of Theology and Religious Studies  
University of Wales Lampeter  
Lampeter  
Ceredigion  
SA48 7ED

Richard Foltz, Frederick Denny and Azizan Baharuddin (eds.), *Islam and Ecology* (Religions of the World Ecology Series; Cambridge, MA: Harvard University Press, 2003), pp. xxxv + 584. £18.95, ISBN 0-9454-5440-6.

This edited work, consisting of a number of articles predominantly by insiders, provides the most comprehensive exploration of the relationship between Islam and the contemporary ecological crisis. As with other works in the series, the articles assume the premise that religion, in this case Islam, can be instrumental in resolving the dilemmas created by the environmental crisis. However, it is imperative that the authors can distinguish between text-based approaches that focus on enlightened beings or special persons and the mass of credulous believers. This is particularly important in Islam where there is a conscious and articulated division between the ideal and the real. It is here that the most significant critique can be made of many of the insider's articles, who too often focus on an ideal based on contemporary hermeneutics of sacred texts, which were probably never meant to carry such meanings pertinent to ecological issues in post-industrial society, rather than the practices of Muslims worldwide. In other words, too many of the articles were presented as apologetics in defence of a religion that has said little about ecological issues, and rightly so, as these did not exist at the time of the production of the Qur'an, Hadith and the development of *fiqh* (jurisprudence).

A number of authors point towards the Qur'an's doctrine of *khalifa* or vice-regency, keen to separate it from the notions of dominion over creation found in Genesis. At stake here is the issue of the innate value of other life-forms. For example, Ibrahim Özdemir states that 'even if humankind is vice-regent of God on earth, it does not necessarily mean that the whole of nature and its resources are designed for human benefit only' (p. 23). These authors are well aware of Lynn White's provocative article which blames the Judaeo-Christian tradition for environmental problems, and they attempt to distance Islam from it, however, as in many defences of a particular religious standpoint the quotations from the Qur'an are very selective, choosing unproblematic passages that appear to endorse the argument and avoiding those that appear to confirm the more exploitive relationship established by Genesis, for example Qur'an 80.24-32.

The key issue is whether the Qur'an has a sufficient content in its understandings of nature, in particular human relations with the environment, to construct an environmental ethic. Many of the authors feel that it does but to orthodox Muslims, the Qur'an must contain answers to all questions faced by humankind as it is the final and complete revelation of God. However, to a more sceptical and agnostic mind, the Qur'an omits any explicit reference to the issue, and nor was the ecological balance of nature and human beings central to the book's main themes. It is true that the Qur'an on numerous occasions urges human beings to observe nature as a 'sign' but the central reason is not to point towards nature in itself but rather to see in nature evidence of a divine creator. The Qur'an's references to nature are to do with a quest for ultimate meaning not for securing the environment. The references are there as a 'finger' pointing to the Absolute and, if anything, encourage a move away from creation to a renewed focus on the Creator. Any concern for nature in itself, is always secondary to the quest for God. The Qur'an does suggest that each creature has its own relationship with the Divine (Qur'an 20.50), thus providing evidence for the argument of their ontological existence, but on the other hand, Muslims are one of the last of the world religions to maintain animal sacrifice on a large scale.

A more promising line of enquiry, pursued by some authors, is provided by the Qur'an's imperative for justice. It is a fact that a disproportionate amount of the world's poor are also Muslim, and as pointed out in the Introduction it is the poor who suffer more direct consequences of global degradation of the environment (p. xxxix). Thus Muslims are in a position to use the Qur'an's defence of those who suffer at the hands of the 'godless' powerful or greed-obsessed, to develop a religion of resistance to globalization of corporate capitalism, but so far there is little sign of Muslim nations warming to such an ideal or its subsequent activism. The main problem for both Muslim states and religious activists is balancing the need for development against environmental concerns, and up until now, the religious activists have been more concerned with issues of political and social inequality between the West and Muslim nations within a post-colonial framework than with ecological issues. For a Westerner, who once asked the question concerning deforestation to a group of subcontinent Muslim activists, to be told that I had no right to morally lecture the world's poor for wanting to improve their standards of living, when I myself had benefited from my own nation's exploitation of nature on a grand scale, it is difficult to critique without the counter of subaltern attitudes.

The problem for Muslim environmentalists lies in persuading the rest of the Muslim world to share their concerns and to convince the traditional leaders of religion, the *ulema*, to reinterpret Islam's message in an ecological framework and to make it a central concern of their preaching. The main difficulty is that although many of the scholars in this book acknowledge that the present is imperfect, the solution for a believing Muslim is to seek perfection in the past, for if the religion is the 'truth' then it is the past that contains the ideal. However, in the past of Islam neither sacred texts nor spiritual traditions may have sufficient context to deal with the future's ecological crisis.

*Professor Ron Geaves*  
*Department of Theology and Religious Studies*  
*University College Chester*  
*Parkgate Road*  
*Chester*  
*CH1 4BJ*  
*r.geaves@chester.ac.uk*

Keith B. Miller (ed.), *Perspectives on an Evolving Creation* (Cambridge, MA: Eerdmans, 2003), pp. xiv + 528. Paperback £20.11, ISBN 0-8028-0512-4.

This volume attempts to convince lay evangelical Christians that science and theology can be compatible. Written by people who view their scientific investigations as part of their larger Christian vocation (xi), the volume's underlying theme is the reclamation of the natural world as evidence of God's continuing creative power. From their orthodox Christian perspectives the contributors engage a variety of scientific disciplines – including astronomy, geology, paleontology, anthropology, biochemistry, genetics, philosophy, theology, and the history of science. Although the aim of the volume is to overcome the traditional 'conflict' model between science and theology, in many ways it resembles traditional apologetics.

Section I, entitled 'Providing a Context', addresses the basic framework within which the rest of the volume will compare scientific and theological portraits of the evolving cosmos. The first chapter, written by Miller, describes the book as trying to create a new consonance between the 'proposed mechanisms by which evolutionary change occurred' and 'God's sustaining and upholding of creation; divine cooperation with creaturely action; and the governance of creation toward God's desired ends' (p. 3). A chapter by Conrad Hyers ('Comparing Scientific and Biblical Maps of Origins', pp. 19-33), asserts that the Genesis creation story and the scientific narrative describing cosmic origins are compatible if viewed as symbolic representations of origination that reflected the particular cultural milieu of the authors. Section I concludes with a chapter by physicist Loren Haarsma ('Does Science Exclude God? Natural Law, Chance, Miracles, and Scientific Practice', pp. 72-94), who argues that the 'laws of nature' do not have ontological status, suggesting that divine intervention in the physical world need not be seen as violating the laws of nature, since the laws themselves are merely evidence of God's ongoing creative energies.

Section II, 'Scientific Theory and Evidence', begins with a chapter by Deborah Haarsma and Jennifer Wiseman ('An Evolving Cosmos', pp. 97-119) that describes an evolutionary cosmology. They assume that the universe began with a Big Bang, a model that naturally feeds religious speculation about the divine impetus for such an initiatory event, but that unfortunately ignores other plausible theories concerning universal origins that do not require a single grand beginning. Even if the Big Bang theory provides the most adequate explanation of universal origins we must come to terms with the probability that the universe will eventually die a 'heat death' when the expansion of the universe slows (but never reverses), and the temperature reaches absolute zero. Haarsma and Wiseman suggest that this pessimistic denouement is not problematic, since God will undo the present creation in favor of a new heaven and earth (p. 116). This reliance on an eschatology that transcends our current material predicament has come under heavy fire from many environmentally minded theological voices.

Much of the remainder of Section II explores how to reconcile the archeological and anthropological evidence of a very long hominid (pre)history with the creation, *ex nihilo*, of humans in an Edenic garden. The question of how we are to interpret the biblical appearance of Adam and Eve in an already agricultural world (which according to the fossil record must be within the past 15,000 or so years) is weighed against a fossil record that demonstrates 100,000 years of *Homo* activity ('Hominids in the Garden?' pp. 208-233). There are other chapters on the genetics of human origins (chapter 11), the role of biochemistry in evolution (chapter 12), and the tendency toward complexity in evolution (chapter 13). These chapters argue that productive emergent properties can only be properly explained by a turn to theological commitments that assume a divinely inspired world that is more than the sum of its parts.

Section III tries to unpack some of the theological implications of the portrait of an evolving cosmos presented in sections I and II. Most of the contributors believe that divinity works *through* the mechanisms of evolution not *instead* of them. Robert Russell's chapter ('Special Providence and Genetic Mutation: A New Defense of Theistic Evolution', pp. 335-69), is particularly instructive here, describing the important differences between an interventionist and a noninterventionist concept of divine action. By asserting that the indeterminate quantum engines of evolution are themselves divinely influenced it is possible to sidestep the argument that accepting any sort of religious creation myth leads inevitably to some scientifically- untenable deism.

Of course, it may be theologically untenable to assume that divine action consists solely in 'bottom-up' mechanisms like quantum actualization or genetic mutation and replication. Some broader 'top-down' mechanisms are also needed to explain fully the need for a theologically informed evolving creation.

Responding to these issues Warren Brown notes that research in cognitive science suggests that human cognitive capacities demonstrate emergent imaginary components that cannot be easily reduced to mere neurophysiological mechanics ('Evolution, Cognitive Neuroscience, and the Soul', p. 502), and George Murphy argues that cosmology can best be understood if viewed through an evolutionary, Christological lens ('Christology, Evolution, and the Cross', p. 387). It is worth noting that other theologians and environmental philosophers, including Larry Rasmussen (*Earth Community, Earth Ethics*) and Holmes Rolston ('Does Nature Need to be Redeemed?' *Zygon* 29.2 [1994]: 205-29), have also argued that the universe is best conceived as 'cruciform creation'. But unlike Rasmussen and Rolston, who take seriously the paradoxical and frustrating realities of life in the world, Murphy softens the evolutionary blow to humanity by suggesting that when the world is again subsumed into the body of Christ, all balance will be restored (p. 389). Murphy's approach denies the real difficulties of reality. Worse, it assumes that all of creation undergoes this difficult ordeal we call life only to buoy those lucky chosen Christians into the next plane.

This book does not fulfill its aims of integrating science and theology. But it may be, as Miller hopes, a good think piece for young evangelical Christians facing the 'crisis' of a scientifically-biased collegiate environment. With the exception of Russell and Brown's chapters there is little evidence of constructive theology. We are no longer relegated to the positivist/reductionist scientific paradigm. Although most of these authors acknowledge the situatedness of scientific inquiry and the increased capacity for fallibility that is characteristic of contemporary scientific research programs, they stand steadfast within a conservative theological program that is largely unable to contribute to the broader science and religion dialogue.

Perhaps social scientific research on evangelical communities whose actions demonstrate their recognition of the inescapable dependence of humans on their surrounding ecosystems would be illustrative. While there are many reasons not to disregard evolutionary theory, there are no reasons given here why the evangelical Christian perspective provides any advantage over competing models.

The gift of science is that it utilizes language and methods that may be generalized across cultures. But the modern scientific paradigm has nothing to say about how this knowledge should be used. The gift of theology is that it can carry greater moral weight than scientific observation. The real trick in our contemporary world is to honor our intellectual achievements without compromising the habitats that allowed our cognitive capacities to develop in the first place. Unfortunately, this volume seems more concerned with reassuring evangelical Christians than with providing insight into how an evolutionary perspective might inform Christian environmental ethics.

*Lucas Johnston*  
*Department of Religion*  
*University of Florida*  
*107 Anderson Hall*  
*Gainesville, FL 32611*  
*lucasjohnston1@hotmail.com*

Anne Primavesi, *Gaia's Gift: Earth, Ourselves and God After Copernicus* (London: Routledge, 2003), pp. 149. Paperback £15.99, ISBN 0-4152-8835-5.

With *Gaia's Gift: Earth, Ourselves and God After Copernicus* Anne Primavesi has treated us to a sequel to her book *Sacred Gaia: Holistic and Earth Systems Science* (London: Routledge, 2000). Both of these books are exceptional. *Sacred Gaia* and *Gaia's Gift* can be read independently, but why deprive yourself! The first book is an introduction to a theology informed by earth sciences. In it Anne reflects on a theology from the standpoint of James Lovelock's Gaia hypothesis; that the earth is alive, holistic, interactive, inter-relational, and in evolution. Although an introduction, *Sacred Gaia* provides thorough and exacting research, and points to a profound theological revolution. This book ends by reminding the readers that life, and all of the earth community, is a gift and is sacred.

Here is where *Gaia's Gift* begins. The first part of this book is a brief introduction to understanding the Earth as a system and a whole. While providing a basic evolutionary framework Anne also introduces notions about the interpretations of the earth, such as human entitlement, homocentrism, heliocentrism and a multitude of issues that swirl around epistemology. These reappear again and again throughout the book.

The first half of the book is a fascinating read back into the worldview of Copernicus. One might initially wonder why a theologian, such as Anne, who is deeply distressed by the ecological crisis, militarism, and the global patterns of social injustice – and hears the urgency of their cries – would take a trip back through time to a period when even less was known about the universe and the earth than today. I will suggest two reasons. One is that many who work in ecotheology often refer to the Copernicus revolution and its significance for the science/religion interface. We talk of how theology divorced itself from science, and even from the ways of knowing that science brings to human consciousness. It is a historical period to which we point to say 'here theology lost consciousness of the earth'. However few of us, myself included, actually know much about the Copernicus revolution in detail, or what it meant, and even more importantly why is it crucial to understand today. The second is that if we can understand the radical shift of reference points that occurred for Copernicus and company, including the resistance to accepting the obvious, then we will gain insights into the revolution of reference points of our era.

Anne's work is exemplary. In her customary style of solid research from original and secondary sources, and from arts, sciences as well as theology, Anne walks through this historical moment and reveals the story of the shift from an earth-centered to a heliocentric or sun-centred worldview. Not only are the facts presented, they are discussed using a variety of postmodern epistemological and critical theories. This allows the reader to see what occurred, the parameters of interpretation, the reference points and the worldview consequences.

Several chapters are devoted to Copernicus, the debates and issues with Galileo, Kepler and others, and the discoveries that the earth is not the centre of the universe. Anne discusses how they navigated their own religious beliefs as well as church authorities. Perhaps there is too much detail in places for some. Nonetheless the salient points are woven throughout, and I will mention four. The first is the unbelievable self-centeredness and indeed arrogance of homosapians of Eurowestern heritages. This self-centeredness is embedded in most thought systems, and humans

continually make themselves the reference point- for the universe, the earth, and for God. The second is the extreme difficulty science and theology have in recognizing these homocentric patterns of perception. Theology is saturated with human-centered reference points. Yet even in cosmology, and even with the most current understanding of the universe, scientists continue to speak of intelligent design theories and the anthropic principle, as if human consciousness is supreme—in the universe!. Throughout the book Anne shows us the reference points hidden within both scientific and religious theories about the world. The third is that once one steps outside of traditional or classical theological paradigms it is starkly obvious that God is fashioned in the image of rational, linear and conceptual human consciousness, and that this mode of knowing is judged as superior throughout the universe. Humans have made God, the earth, indeed even the universe, human-centered and human-referred. It is so absurd that it is almost laughable, and yet not.... as we witness an era of ecological decline on a unprecedented scale. Yet the best paradigm that mainstream Christianity offers is to see humans as co-creators with God or as responsible stewards of a creation of which we are not intrinsically a part. The fourth theme is that of the magnificent universe and resplendent earth out of which we emerged and to which we belong. Anne draws from the wells of earth sciences to reveal the existential themes of inter-relationality, interdependence and diversity that are embedded within earth processes. She shows in poetry and prose the unique and awesome gift-exchange that is endemic to the earth life systems of which we are a member. Now this is verging on miraculous! It is the existential reality of Gaia's gift of life that should, and could, orient us to see a sacred dimension hidden within these processes of the sacred gift of life.

The theological ramifications are daunting, and yet make great sense. Anne is one among several visionary theologians doing theology from the earth sciences. This orientation is far more radical than the endless discussions in the emerging 'discourses' of religion and science. The latter, for the most part, is a blend of conjecture, hypothetical ideas about multiple universe, God and the Big Bang, etc. and remains intensely theoretical. *Gaia's Gift*, also using philosophy, science and religion, is based in the existential reality of evolution and the complexity of Gaia. If we want to enter into the needed revolution of reference points, this is where we must begin. And that is why the Copernicus revolution matters; because we need to do it again, and on a much larger scale. We are not the centre of the universe, nor is the earth in our solar system, and nor are we on this planet. This radical shift of reference point is decisive if we want to address the urgent problems now facing life on earth. It is that simple. Our theories and theologies are wrong.

Given the riches of the book I am reluctant to mention two areas that were minor problems for me. One is that lack of inclusive language. I could not follow the use of 'man' as often as it was written, however knowing Anne she was likely being faithful to an author or a viewpoint in those places, but the subtlety eluded me. The second is more serious and not a criticism per se. It is that living in North America, witnessing the rise of Christian creationism, teaching students who reject evolution, watching evolution taken out of science curriculum, and listening to the American republican version of Christianity teaching that 'man' is not an animal and that 'man' is in the image of God, the tame comments Anne makes about creationism fading out is just not what I see. To the contrary I think that the creationist 'know' that the homocentric reference points are challenged, and are digging in as did those around Copernicus.

Their opposition to this decentring is fierce, aggressive, and could be decisive. All the more reason to read and understand *Sacred Gaia* and *Gaia's Gift*.

Professor Heather Eaton  
 Saint Paul University  
 223 Main St., Ottawa  
 K1S 1C4, Ontario, Canada  
 heaton@ustpaul.ca

Celia Deane-Drummond and Bronislaw Szerszynski, with Robin Grove-White (eds.), *Reordering Nature: Theology, Society and the New Genetics* (London: Continuum T. & T. Clark: London, 2003), pp. xiv + 368 Paperback £17.99, ISBN 0-567088782.

This book arose from a colloquium held at Lancaster in March 2000. Four papers from the colloquium together with responses comprise the first part of the book. Here the central theme is the nature of the issues raised by genetic modification. The first chapter by Deane-Drummond and Szerszynski argues that public concern over modern genetic techniques and their application is more than consequentialist in its concerns. That is such public concern is religious in nature, being influenced by 'deeper religious issues about the ordering of the natural world' (p. 9). In contrast, Christopher Southgate in his reply to the authors argues that such public concern is much more mundane, based on a mistrust of commercial exploitation on the part of biotechnology companies. It is difficult to disagree here with Southgate: the religious or theological nature of public concern over genetic modification is I think overplayed by Deane-Drummond and Szerszynski. John Hedley Brooke's chapter is a reminder of the historical ebb and flow of public concern over any new technology and leaves us with an open question: does human manipulation of nature enhance or detract from divine power?

Michael Banner argues for a much more robust public use of the Christian tradition. A central element of his argument is that the religious point raised by genetic modification is that we should learn to love and enjoy nature rather than fear it. Like Michael Reiss in the following chapter, I thought that this was veering heavily towards an anthropocentric view of the value of nature and that Banner's call for a return to traditional Christian ideas seemed to be inward looking rather than seeking ways of engaging theologically in the public debate about genetic modification. Part II, focuses the discussion away from the general concerns raised in part I and onto some specific issues. The chapters by Reiss about trans-species genetic transfer and Stephen Clark on a theory of just animal experimentation are easily the best and most focussed in the book. Reiss considers the significance of boundaries, in determining what can and cannot be safely eaten for example, but concludes that a key element of the Christian tradition is the breaking down of all barriers. However, Reiss resists the inference from this that there is no theological problem about transferring genetic material across the species barrier. He is particularly concerned with the human/animal boundary and considers that this particular boundary is different from others. Reiss does not resolve the issues but invites further reflection. Boundaries feature also in Stephen Clark's discussion. Clark begins by noting the public acceptance of animal experimentation for serious purposes but notes that such

approval is conditional and that there is concern over the extent of harm and pain inflicted. The infliction of lasting pain is rejected on principle but, says Clark, there are other possible intrinsic wrongs which should be considered in animal experimentation. One of these is the violation of the integrity of an individual animal or its 'species-specific life'. The notion of an animal's *telos* is also important here and raises questions about the extent to which genetic hybrids should be produced. Animals engineered to produce particular human proteins may not raise much concern; rather the concern is over the production of creatures with overtly human properties.

Part III returns us to more general discussions of the nature of public attitudes to and concerns about genetic modification. The best feature of this part of the book was the very interesting survey of the attitudes of young people to the issue reported by Mairi Levitt. Part IV returns to an overtly theological theme with a consideration of theological approaches to the issue of genetic modification drawing on the work of Jaques Ellul by Jacqui Stewart, and on the work of St Thomas Aquinas by Celia Deane-Drummond. Stewart argues that churches' contributions to the public debate should be more technical and political in nature rather than being couched in the language of ethical precepts, which is too easily dismissed as a matter of private morality. Conversely, Deane-Drummond argues for a return to virtue ethics. Inevitably given its origin and range of contributors, the quality of individual chapters in this collection is variable. Nevertheless, taken as a whole, it is clearly the product of much thought and hard work and is well worth reading.

Mark Hocknull

*Department of Theology and Religious Studies*

*University College Chester*

*Parkgate Road*

*Chester*

*CH1 4BJ*

*Mark.Hocknull1@btopenworld.com*

Anthony J. Sanford (ed.), *The Nature and Limits of Human Understanding* (London: Continuum/T. & T. Clark, 2003), pp. xviii + 259. Hardback ISBN 0-5670-8946-0. Paperback ISBN 0-5670-8947-9, £19.99.

This book is based on the 2001 Glasgow Gifford Lectures. It will appeal to those with an interest in how human understanding can be conceived and its limits drawn, provided such readers are happy for the problem to be approached from a number of separate perspectives. Unusually five different lecturers, each of who gave two lectures, delivered the 2001 series. The lectures are reproduced in this book as single chapters and the pairs of lectures are grouped together as separate parts from each contributor. The preface makes reference to a round table discussion at the mid-point of the lectures. If it had been possible to incorporate this into the present volume it may have gone some way to unifying the book. This is a minor criticism however, for the lectures are each highly stimulating. The five contributors consist of three philosophers (Lynne Rudder Baker, George Lakoff and Michael Ruse), a psychologist (Phillip N. Johnson-Laird) and one theologian (Brian Hebblethwaite). The editor of the volume is also a psychologist. The contributions made by each lecturer are wide-ranging, reflecting their wide-ranging interests.

In the first pair of lectures psychologist Phillip Johnson-Laird argues that one limit to understanding is our systematic inability to understand language. He sets out to achieve three things: how we understand language, how we succumb to systematic misunderstandings and how these lead us to make errors in reasoning. In the first chapter Johnson-Laird considers the question of how we understand sentences and our illusions in understanding them. The nub of the argument here is that we comprehend a sentence as a whole with little problem, but when we pause to consider the meaning of individual words our understanding begins to falter. The second of Johnson-Laird's chapters is concerned with our inability to detect inconsistencies and our tendency to resolve them when we do find them with causal explanations.

According to George Lakoff, knowledge is always embodied knowledge and he argues that we understand the world around us in terms of what our bodies can do. This leads to a complex metaphorical way of understanding. Our understanding of time, events, causation, morality, the self and even Being, knowledge and truth are all metaphorical drawing on the body for its logic.

Michael Ruse will be well-known to many readers of *Ecotheology* who will not be surprised that he tackles the question of human understanding from a Darwinian perspective. His chapters include a review of the landmarks in the development of evolutionary theory. He examines the question of whether we are biologically programmed for scientific understanding. This is a particularly interesting question in the light of some recent claims that we are hard wired for religion. Ruse takes the view that biology and culture are inseparable. In the second of his pair of lectures Ruse addresses the issue of evolutionary explanations of ethics. His own views hinge upon an intrinsic human collaborative instinct. For Ruse because there is no guarantee that the principles that underlie this collaboration will work there will inevitably be many situations where there is no definitive set of rules that apply; there are no moral absolutes outside the realm of evolved human experience. Lynne Rudder Baker begins to move us in a more theological direction and argues for the priority of first person knowledge. Amongst other things this means that the knowledge claims of the natural sciences are necessarily incomplete; it might be possible to explain how first person knowledge arises scientifically, but it fails to capture the experience of first person knowledge. In chapter seven she defines 'scientism' as the view that science provides the key to the understanding of all things and in chapter eight she links scientism with reductionism. Broadly her argument is that physical reality is more than the sum of its parts. In the final two chapters Brian Hebblethwaite introduces overtly theological concerns. He argues that the attempt to capture human understanding within a single framework will always leave a 'residue' of something that is unaccountable within the framework. In what reads as something of an overview of the contributions of theological and metaphysical thinking in dealing with such residues, the underlying point seems to be a plea for a reinstatement of theology as a meta-discipline. Theology for Hebblethwaite is metaphysics plus revelation and he argues that theological perspectives enrich our understanding by dealing with that which is unaccountable in other frameworks. It would have been good to have been able to read Hebblethwaite's responses to the lectures that preceded his; again the lack of reference to the round table discussion is felt here.

Five speakers with two lectures each inevitably means that ideas cannot be developed and explored fully by each of the individual contributors. Nevertheless,

there is much food for thought here in a book that deserves a wide readership within and without the confines of theology.

Mark Hocknull  
Department of Theology and Religious Studies  
University College Chester  
Parkgate Road  
Chester  
CH1 4BJ  
Mark.Hocknull1@btopenworld.com

Samuel M. Powell, *Participating in God: Creation and Trinity* (Minneapolis: Augsburg Fortress, 2003), pp. 238. Paperback ISBN 0-8006-3602-3, £9.80.

While there are books on science and religion that weigh too heavily on discussions of science, others are insufficiently aware of scientific analysis. This book succeeds in attaining a balance between both in a creative interchange. The author presupposes a philosophy of critical realism, as evidenced by his thematic approach to understanding the universe, grounded first of all in physical reality, then biological, then human existence and finally the Kingdom of God. He is convinced that a doctrine of creation needs to be informed by the physical and biological sciences, while at the same time viewing it in the context of other theological traditions, including salvation history. His approach to theology is traditional in the sense that it offers a survey of historical approaches to each question from the early church through the mediaeval period to contemporary reflection, alongside some references to biblical material throughout. It also offers a trajectory from more theoretical doctrinal considerations to ethical analysis, understood from a Trinitarian perspective. It differs, however, from much contemporary Trinitarian discussion in resisting engagement with political or sociological notions of reality. This book will inevitably irritate the specialist, while serving an important pedagogical function in introducing key themes and ideas.

The first section of the book outlines the author's views on creation and Trinitarian doctrines. He argues that the Christian faith must include regulative, hermeneutical and ethical dimensions. The regulative dimension refers to the self-definition of Christian dogma; the hermeneutical dimension refers to understanding of faith by different Christian communities and the ethical dimension refers to the implications of faith in practice. In terms of the regulative dimension the author refers to the 'church' in a way that implies rather more consistency than is actually the case. He offers a succinct survey of the teachings of key early church authors, including Irenaeus, Athanasius and Basil the Great. The regulation extends to a critique of interpretation of Genesis texts in the light of creationists accounts. Nonetheless, critical biblical study could have served much the same purpose. The section on hermeneutics is similarly broad, engaging in a discussion of the rise of Aristotelian philosophy in Aquinas, amongst other topics. Yet the argument slowly emerges that as far as the author is concerned, science is the medium in which we need to consider faith today, just as Aristotle was the medium in the sixteenth century, and Plato the underlying medium in the thirteenth century. To do otherwise, he suggests, amounts to an unfounded conservatism. While this suggestion is appealing at one level, to

assume that there is a core of Christian belief that can be extracted from, for example, authors such as Aquinas, or even the early fathers of the Church in detachment from their philosophy is likely to be somewhat misguided. In addition, the assumption that science provides the philosophical paradigm into which Christian theology needs to be fitted is an attractive thesis for scientists, but less so for those influenced by the humanities. A central thesis of this book is that creatures participate in the life of the Trinity, but given that he is committed to an underlying scientific philosophy, he believes that the view of the Spirit of God in the Old Testament points to 'vitalism'. He also surveys the account of participation in God through history, assuming that the most recent versions of it are 'advances' on earlier traditions. The implication that we have inevitably 'progressed' in terms of our theological understanding is characteristic of more liberal Protestant positions. Certainly there are aspects of modern theological work, such as that of Tillich, which are more aware of current problems than would have been feasible in earlier generations.

Section 2 deals with the question of how to understand the participation of the universe in a Trinitarian way. This section makes self evident the outcomes of his earlier discussion. His discussion of eschatological existence is particularly revealing of his position. It becomes clear that he accepts realised eschatology to the fullest possible extent, so that eternal life means, for the author, life lived without death becoming the decisive event of human life. He remains agnostic about the possibility that eternal life and the resurrection mean what Christian teaching has traditionally claimed, namely a life after death. But does the presence of the kingdom of God now offer an adequate concept of eschatology according to the very regulative function of Christian doctrine that he eschews? Of course, from a scientific perspective it is virtually impossible to imagine such a scenario, and this is the heart of the problem he encounters, for our scientific knowledge of biology presents us with a world in which death is inevitably inherent in the processes of life. Once we are committed to an underlying scientific paradigm in the philosophical sense, it is hard to imagine any other alternative. As we probe further into the nature of his understanding of what participation means, it becomes clear that Jesus Christ is the exemplar of what it means to live in the kingdom, neatly avoiding problematic issues associated with the doctrine of the incarnation. The aim of humankind in the kingdom is to acquire the qualities of Jesus Christ. The section on the relatedness of all things spans a vast spectrum of physical and biological realities, culminating in a lengthy section on human existence. While offering some promise in ecological terms, the discussion of ecology is somewhat disappointing. The natural environment amounts to a restriction to human autonomy, though suggests that in a Trinitarian perspective humanity needs to shift away from self assertion to a more positive understanding of the natural environment.

The final section on Trinitarian ethics is much shorter than the earlier sections, which meant that the arguments could not be developed in any detail. Like other writers before him, he points to the disjunction between humanity's world transcendence and world participation. His suggestion that we need to recover virtues of humility, praise and wisdom is welcome, though while he mentions justice once in passing this theme is not developed. He also touches on theories such as that of natural law, without situating the discussion. The final chapter concentrates on a critique of consumerism, though the discussion is very generally related to Western culture,

without any attempt to think outside this context. The final postscript offers a tantalising suggestion that Christian faith can offer a distinctive contribution to science. His notion that theology can call attention to alternative philosophical strands in science seems to me to be more a task of philosophy, rather than theology. He does suggest that Christian faith can help inform which choice of topics might be pursued, though the way this might work in practice is not spelled out.

Overall, this book is one that is densely packed with ideas and themes, drawn from historical, theological, philosophical and scientific study. The interdisciplinary nature of the task is welcome. There are also important points raised for consideration. It will serve as a good starting point for students wishing to begin work in this field.

*Celia Deane-Drummond*  
*Department of Theology and Religious Studies*  
*University College Chester*  
*Parkgate Road*  
*Chester*  
*CH1 4BJ*  
*c.deane-drummond@chester.ac.uk*

## Conference Reports

'Soil and Soul: Is there a Link?',  
19 June 2004, Waltham Place, Maidenhead, Berkshire

The Quiet Garden Movement co-hosted a one-day conference entitled, 'Soil and Soul: Is there a Link' at the invitation of Mr and Mrs Oppenheimer, owners of Waltham Place. The objective of the day was to provide a rich context in which to engage in fruitful dialogue about the relationship between nature and spirituality in recognition of the urgent need to sustain, and nurture both the earth and the human spirit. Waltham Place which is affiliated to the Quiet Garden Movement, provided the ideal setting for this conference with its focus on organic husbandry and its beautiful gardens. The Revd Philip Roderick, founder director of the Quiet Garden Movement introduced the day and invited those present to engage in a perception of reality from a contemplative and pragmatic viewpoint rather than exploitative. Using the term 'mystical realism' he reminded us that the mystical is at the heart of the secular: the sacred is the very depth of the secular. We live at the meeting-point of two dimensions which belong to one world.

The two plenary speakers Patrick Holden, Director of the Soil Association and the Rt Revd John Oliver Bishop of Hereford complemented each other in their chosen themes, and stimulated many questions from the conference participants.

Patrick Holden addressed the topic 'The Health of Soil, Plant, Animal, Man and the Human Spirit is One and Indivisible'. His overriding theme was one of the urgency for re-connection between material existence and spirituality, with particular reference to agricultural practices and higher values. He explicated this with the following points. We are in a dance with nature, be it in the garden, which is a microcosm of a farm, or in farming itself. Sense of being is strengthened when we can be stilled and close to nature, and similarly, when we are well connected to place, our sense of identity becomes more deeply rooted. Since the Enlightenment, many of our dealings with the natural environment hitherto have been characterized by dominant, even arrogant attitudes, but it is time to identify and activate new ways of relating, which both recognize responsibility and open up higher possibilities.

Sustainable farming and the bio-dynamic farming of the organic movement need to maintain the links endorsed by their founders who were motivated by the connection between the material and the spiritual world. It would be deeply unfortunate should this awareness be eroded, as it would pave the way for solely mechanistic approaches and attitudes. Patrick outlined the consequences of the reductionist thinking of much industrial farming with its intense use of fertilizers, heavy suppression of pests through chemicals, and the attendant reduction of plant complexity, expansion of genetic engineering and consequent residues in food.

He warned that if we ignore the deeper levels of existence, we are in danger of losing the plot altogether, and exploitation of the natural environment will continue unabated. Attendant on this are the adverse effects of global farming, whereby lack of relatedness to the land by a high proportion of the population contributes to rootlessness.

Through a policy of education, communication and experimental projects, such as the Food for Life programme in schools, the Soil Association is attempting to encourage local producers, and to foster both re-connection with the land and an

attentive awareness to the natural environment. Results have been positive. Addressing the more destructive effects of reductionist scientific mind-sets upon agriculture could help reinstate lost bio-diversity, and enhance morale, well-being and sense of identity by reconnection with local food systems and the natural environment.

Bishop John Oliver addressed the theme, 'The earth is the Lord's and all therein is'. He also spoke of the need for re-connection with the physical environment, which has its own spirituality. Using examples from literature, and the monastic tradition, he pointed out that how the natural environment provides a place for deep tranquil internal reflection, appreciation of beauty, and stimulation, as well as demanding particular skills, creating challenge, work, and rigour. Moreover, the natural world keeps us in touch with the rhythms and seasons of life with all their own richness.

Bishop John proceeded to outline some philosophical and theological underpinnings of the link between the physical and the spiritual. Recent theological debate has recognized that the whole of the creation is sacramental, so that everything in creation expresses the presence, power and wonder of God. All is interconnected. As co-creators with God, we need humbly to maintain the balance between an awareness of the privileges of our position and the responsibilities that it entails. Is it time to reinterpret and appreciate the meaning of Sabbath rest as being the 'crown of creation' so that we might step back from the potential idol of constant busyness and the greed of unremitting production?

The Bishop drew his talk to a conclusion by reminding us of how we know God partly through creation itself, both in its grandeur, mystery and numinous power, but also through the quiet revelation of art, music, poetry and other still images. In the twenty-first century we need to respect, value, love and care for the relationship between soil and soul. In this way, we might redeem the environment from the worst effects of a mechanistic mind-set.

Both talks stimulated a thought-provoking question and answer session. The day included an organic lunch with produce from Waltham Place and opportunity to explore the delightful environment.

Mollie Robinson  
The Quiet Garden Trust  
Stoke Park Farm  
Park Road  
Stoke Poges  
Bucks SL2 4PG  
England

Email: [quiet.garden@ukonline.co.uk](mailto:quiet.garden@ukonline.co.uk)

'Fabricated Nature: From Global Ecology to Biotechnology'  
Friday 8 July, 2004, Centre for Religion and the Bioscience,  
University College Chester

This one-day conference brought together theological, sociological, political and scientific approaches to the issue of globalization and ecology.

Dr. Anne Primavesi's paper, 'Gaia: Gift to Science and Theology', drew on her book *Gaia's Gift*, and stressed the necessity and complexity of the cycles in nature where

death plays an important role. She also drew on a recent conference on Gaia and climate change as indicative of a growing number of scientists who have affiliated themselves to Gaian theory. She argued that Gaia is a gift to theology as it challenges more traditional notions of God as 'over against' nature, instead of God being viewed more as one who is embedded in the natural world. She also objected to traditional notions of creation, fall and redemption, believing that classic notions of the fall of humanity once more puts humanity into a position of elevated significance that now needs to be challenged. While the challenge began with Copernicus and then Darwin, Lovelock's Gaia theory serves to reinforce the relative insignificance of human life compared with the life of the planet as a whole. Her theological views emphasized the need to think about God in less hierarchical ways, and humanity in less individualistic ways. Her paper generated much lively discussion and debate.

Professor R.J. Berry's paper, 'Limits: Intrinsic, Sociological, Altruistic or What?', offered some reflections on the constraints on technological development. He started by giving a brief account of the birth of the modern concept of technology. He argued that the contemporary understanding of the technology resulted from the illegitimate uses of science and religion. There is a need of retrieving the idea of God as the 'ultimate enabler', hence opposing those views championed by the Prince of Wales that nature should be 'untouched', instead, God gave us permission to tend nature as a gardener would. He suggested that here is a need to redefine the notion of human dominion in the light of a caring, nurturing and loving king. Berry also contended against the idea of stopping scientific research and technological development because of the possible and unknown hazards and unforeseen consequences. Berry's paper attracted much discussion on the extent to which GM crops could be viewed as positive in a global context.

Dr. Bronislaw Szerszynski's provocative paper entitled 'Technodemonology: Environmental Risk and Unrecallable Agency' developed the concept of technodemonology as a way to understand environmental risks. He suggested that such powers released by us soon have become unrecallable, hence contrasting starkly with the position presented by Professor Berry. He argued that we are now bearing witness to the reification and autonomy of the results of technological development. There is a need to restore technological development to its rightful place in the light of human and divine purposes. Dr. Szerszynski expanded the use of the term technology to encompass any kind of structure such as bureaucracy and market forces. While Francis Bacon promoted this ideal whereby human beings could be set free from their necessity and finitude, Ellul opposed the idea of removing uncertainty from human life by the use of technology. Modern technology is different since it has the capacity to act into nature. Szerszynski's paper generated a lively discussion as to the extent to which technology could be seen as 'demonised'.

Dr. Lionel Clarke's paper 'Biofuels: A Sustainable Option for Future Mobility?' explained what biofuels are and the pros and cons in their production and use. He argued that the reality we find ourselves in today is the swift increase in energy consumption towards the end of the twentieth century, with levels of consumption dependent on the degree of development and wealth societies acquire. He also stressed the fact that Western governments have been sponsoring the development of alternative fuels in the face of the steady decline of oil production such as the production of biofuels in order to ensure sustainability, since the emission of carbon dioxide is less in the long term when biofuels are used. However, the production and

use of biofuels is problematic in various ways. In the first place, they are more expensive to produce and they compete with land for food production. Clarke's paper was welcomed by many scientists in the audience, but challenged by those who argued that it presupposed expansion and growth is simply inevitable.

Dr. Peter Scott's paper 'At Nature's End: The Domestication of Nature and the Rioting of God' addressed the issue of rethinking theologically political authority and action in relation to environmental concerns. He argued that basic categorical distinctions have fallen away and become emptied of their ontological content. Dr. Scott contends that the boundary between the human and the non-human is now less clear-cut, whereby the independence of nature is called into question. His main theological point was the idea of a rioting of God by means of the action of the Spirit leading us to what he calls the 'creative liberty of God'. He understands political authority in the light of divine action and unrestricted divine presence. This creative liberty conceives of a new way of living together because the Spirit always inaugurates a social and an ecological movement. This creative liberty of God is impartial and militant in the redistribution of blessing. His paper generated further discussion and a lively debate about the relationship between theology and politics.

Professor Robin Grove-White, in a final plenary, successfully weaved the themes of the day together, and offered some critical insights into the contrasts between the positions put forward in the papers offered. Altogether the conference was densely packed, having previously been scheduled to last over two days rather than one day. Those who participated agreed that the event was highly stimulating, and it succeeded in offering alternative ways of thinking about biotechnology in the light of environmental debates and concerns. The papers from this conference will be published in a revised form, subject to the authors' permission, in the January 2006 issue of *Ecotheology*.

Victor Morales  
University College Chester  
Parkgate Road  
Chester  
CH1 4BJ  
v.morales@chester.ac.uk