

**Institute for the Study of Christianity in an Age of Science and Technology**

**ISCAST BULLETIN 28**

**(incorporating VISCAST News)**

**Spring 1999.**

(October-November 1999)

*The views in this Bulletin are those of the individual authors or the editor.  
They do not necessarily reflect the official views of the ISCAST Board*

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**Editorial:**

**Wonder and humility**

*"When I look to the heavens." Ps 8:3*

The world is charged with the grandeur of God. Sunrise, sunset, the stars, the sky, the mountains and rivers, rapids and billabongs, oceans and lakes, all speak a wonder grasped by the Psalmist especially in Psalms 8 and 19(18). That capacity to wonder is sometimes more deeply felt by the scientific amateur than the professional. We are sometimes too close to our subjects to stop and enjoy their intricacy and beauty. Yet that capacity to stop and enjoy is an important aspect of our vocation. We need to give ourselves time to enjoy, to savour and to wonder.

At other times however, the sense of beauty, has been used as a lodestone guiding the development of fundamental equations in physics. Truth and beauty coincide. That in itself is a source of wonder!

*"what is humankind that you are mindful of them?" Ps 8:4*

The wonder of the world raises very basic questions. Who made such a world? What is my place in this world? Can I know more about this world? What is the purpose of this world?

It is possible to brush these questions aside, or to cynically dismiss them as unanswerable or unsophisticated. But these fundamental questions, usually asked by children, call us to be like children: for it is only the humble who will learn. You cannot teach the proud anything new.

The psalmist knew the Lord made it all. The awe of the stars caused the writer to reflect on humankind's relationship to the creator. Humans are lower than angelic beings but

crowned with glory and honour - material/spirit amphibians in Polkinghorne's memorable phrase.

The COSAC 99 conference caused us to reflect on our frailty as ecological beings and yet the wonder of our increasing understanding of the fundamental mechanics of the way we are made. Such knowledge brings responsibility. Are we up to the task or will our moral failings, as discussed in another COSAC paper, prevent us from fulfilling our destiny as responsible stewards of a marvellous creation?

One of the Huxleys said, "Sit down before the facts as a little child". Such humility is fundamental to science. It is also fundamental to the big questions of life. Have we the courage to allow our discoveries to take us to new and uncharted territories?

Ed.

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## News

### Templeton Awards

The following tertiary courses in Science-faith in Australia have received Templeton awards:

1. Barry Butcher and Ian Weeks. Deakin University, Geelong, Victoria. *God, Genes and Genesis*.
2. Brian Edgar, Bible College of Victoria. *Genes, Sex and Science: Issues for Ministry*.
3. Denis Edwards. Flinders University, South Australia. *Theology, Cosmology and Evolutionary Biology*.

### ISCAST Board Member Templeton Regional Director

Dr Mark Worthing has recently been appointed Regional Director of the Templeton Course Program, based in Adelaide. This program internationally seeks to raise the profile of science-faith courses round the world. Mark's courses will seek to do this in Australasia. More details in future Bulletins.

### New Board

At a recent Annual General Meeting the following were elected as board members of ISCAST. -

Professor John White, Chemistry, ANU, Canberra.

Dr. Jonathan Clarke, Geology, ANU, Canberra.

Dr. Ken Smith, Mathematics, UQ, Brisbane.

Rev. Dr. Mark Worthing, Theology, Luther Seminary, Adelaide.

Assoc. Prof. Robert Stening, Physics, UNSW, Sydney.

Rev. Dr. Brian Edgar, Theology, Bible College of Victoria.  
Dr. Alan Gijbers, Medicine, Monash University and University of Melbourne.

### **COSAC 99 Report**

How do you condense a seven page report of the questionnaire into a meaningful article for the Bulletin? Perhaps try and let the delegates themselves speak in kaleidoscope:

#### **What was the most helpful part of the conference?**

Agenda of theistic evolutionists became much clearer, as did their problems with theology... the workshops... meeting scientists who have a Christian faith and willing to discuss topics... to hear a Christian's perspective on many scientific issues... combination of discussions and talks to explore relevant issues... the breadth and depth that was achieved succinctly... having time to talk to people with similar interests but different background and direction... talking to people with a range of viewpoints (session on environmental ethics also very good)... someone with a quiet voice to remind us to have reverence for God... getting to know scientists in all fields and "trying" to have a glimpse of their reality of the universe... worship... demonstration of the convergence of Christianity and evolution... workshops... theological discussion... Sam Berry was excellent... the fall: helped tie in my already strong evolution/Christian beliefs... new ideas to work on... the question times and forum... general discussions, people met...

#### **What was the least helpful part of the conference?**

People throwing round the labels existentialism, determinism, reductionism, ex-Jesus (sic), etc., which for the new was simply baffling... not having enough time for questions at the end of each session... jargon - need to write an ISCAST dictionary... numerous assumptions, especially in a philosophical viewpoint, ie not very scientific but basing science on philosophy... lack of theological input, reflections, organisation of workshop... morning prayer... workshops choices difficult, discussion sidetracked and inconclusive... fudging the answer on missing links... not getting the papers in time to read them... public lecture they are good in theory but this one did not deal too well with the issues for a once off attendee... complementarity... small groups in workshops, all were too big... not enough awe of God, your faith in evolution...

*COSAC 99 papers (\$15.00 add p&h) and tapes (\$8.00 + \$2.00 p&h) are available from either the Ridley College Bookshop, Melbourne (phone: (03) 9387 1449) or Prof Day, Exec Sec ISCAST (Vic) (03) 9817 5265.*

#### **Future Issues for further COSACS**

These are ranked in descending order of deemed importance:

Environmental responsibility 95%  
The nature of the person 85%  
Science/Christianity relationship 82%  
Bible/science of humanity 82%  
Biomedical ethics 71%  
Cosmology and the Bible 70%

Organic evolution and Genesis 69%  
The age of the earth 58%

**Further programs for ISCAST**

Speaking to students 92%  
Professional association for Christians in science 91%  
Speaking to churches 90%  
Bible colleges and seminary courses 86%  
Discussion programs and seminars 84%  
Another science-faith conference 83%  
Weekend special group workshops 74%  
Visiting notable speakers 66%

**Comments:**

Allan Day and his committee should be highly commended for their hard work and enthusiasm. There were a number of valuable lessons learnt. Like any field of intellectual endeavour there is a technical language to master. That language is necessary for clarity in the discipline, but daunting to those new to the field. If we are speaking to a broader audience those terms need to be used clearly. The other outstanding feature is our need to deal with Scripture (and especially its interpretation = exegesis) accurately, fairly, humbly and with true Godliness.

Ed.

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**AUSTRALIAN THEOLOGICAL FORUM**

Symposium on Science and Theology  
Thursday afternoon 27 Jan - Saturday night 30 January 2000  
Lutheran Laypeoples League and Luther Seminary, Adelaide.

**LIFE, INTELLIGENCE AND THE UNIVERSE: SCIENCE AND THEOLOGY IN  
DIALOGUE**

**Speakers:**

Dr Anne Foerst MIT USA  
Rev John Puddefoot Eton College UK  
Rev Dr Mark Worthing Adelaide Oz  
Registration includes all catering.  
Non - Residential: Early bird by Nov 30 \$215, After Nov 30 \$245  
Residential: Early bird \$285, Regular \$315

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## Book Reviews

*There are continual requests for books on the science-faith interface. There are a number of booklists available - some of them have been published over the years by ISCAST. Lawrie Lyons has drawn our attention to the bibliography which is part of the John Templeton Foundation Science and Religion Course Program application form found as part of the <http://www.ctns.org> website. It is worth revisiting every now and then as the list gets regularly updated.*

**General Science-faith issues** Alister McGrath is already well known as a prolific author of historical and theological texts. Most students use his introductory texts to theology and Christianity. He writes well and has a high standard of intellectual integrity. Alister started his intellectual career in chemistry and gained his doctorate in molecular biophysics. While finishing his doctorate he also embarked on a theological degree. He has since majored in mediaeval and renaissance thought, but in the end returned to his original interest - the interface of science and religion. He has written an introductory text for theological students and a more advanced volume, the start of a number in the science faith area, dealing in detail with the science-faith interface.

**McGrath AE.** *Science and Religion: an introduction.* Blackwell. Oxford. 1999. pp 240. RRP \$47.95.

This is an introductory textbook on the interaction between science and especially the Christian religion. It starts by looking at three important historical landmarks: Copernicus/Galileo, Newton and Darwin, before exploring the conflict model of the relationship between science and religion. McGrath is equally at home in the philosophy of religion and in the natural sciences and there are helpful chapters on interactions between physics, biology and psychology and religion. The book closes with a description of key individuals who have looked at the science-religion interface including Barbour, Polkinghorne and Torrance. Throughout there are suggestions for further reading and helpful summary boxes.

This book could well become one of the standard text in science-faith courses in theological colleges and universities. Disappointingly the book does not deal with the ethics of the scientific pursuit or the ethics of technology. While it acknowledges the diversity of the sciences and tries to address these by describing problems in cosmology, biology and psychology, it is disappointingly brief in these areas. While ecological theology is touched on, it is not deeply explored nor is there much on genetic engineering (in all its many forms) and the mind-brain controversy. There some profound issues to be discussed in the medicine-religion area but that would be to open up a whole new range of science-arts-religion-ethics dimension. While the current limited science discussion is welcome at present the science -faith dialogue is far too dominated by basic scientists. It is time more complex scientists and technologists enter the dialogue area. Apart from Ian Barbour's *the Ethics of Technology*, there seems to be a dearth of writing addressing the latter issues from a Christian perspective. In spite of these drawbacks, this book is a welcome addition to the growing number of accessible yet scholarly books in the science-faith area.

AJG

**McGrath AE.** *The Foundations of Dialogue in Science and Religion.* Blackwell, Oxford. 1998. 256pp.

I was particularly impressed with the introductory chapter outlining the approach of the book. McGrath is particularly severe on those who adopt a "whiggish" view of history. This approach interprets the past in the light of the present understanding of things. Those in previous eras who agree with the historian are lauded but those who present contrary views are castigated. This approach distorts our understanding of previous debates. Thus the Galileo controversy is reduced to a struggle between the dark traditions of the church and the light of scientific reason, rather than, so McGrath claims, a debate over the authority of Scripture. Likewise the debate over origins, and especially the Wilberforce-Huxley debate the year after Darwin published his theory, has been encrusted by myth far removed from reality. Further McGrath engages with the current developments of post-modernism and its impact on science and the science-religion debate. The next four chapters explore in considerable detail issues of natural order and natural law (showing confluence between scientific and religious points of view), (chapter 2); the similarities and differences between experimental and revelational approaches (chapter 3); dealing with the world as an artificial construct of our imagination or as an objective reality (chapter 4); and the similarities and differences between scientific models and theological analogies and metaphors (chapter 5).

McGrath promises that this book is only the beginning. It needs to be. Thoughtful Christians in multi-cultural societies need to grapple with the contribution of Islam to the development of modern science. The interaction of science with other religions would be a useful way of trying to understand other cultures and open the way for dialogue and evangelism. As McGrath himself acknowledges, one can hardly call the book science-religion dialogue and then confine the discussion to Christianity.

As with his other book, dealing with the above analytical issues avoids the question of synthesis into complex systems, and hence issues for complex sciences are overlooked. It is more difficult to understand order among chaotic drug users or psychologically disturbed people. The mind/brain discussion opens up whole new areas of complexity. This is something we will be discussing at the ATF conference in January (see advert in this Bulletin). However this book is a welcome start to a series and we look forward to further volumes.

AG

### **Books considering origins**

**Behe M.** *Darwin's Black Box,* Touchstone. 1996. 307 pp.

This popular book by an American biochemist has been immensely influential in North America. Behe is perhaps the best-qualified and highest profile exponent of "Irreducible complexity" in creation as evidence of "Intelligent Design". He has been extensively quoted by American apologists such as Phillip Johnson, who are seeking to overturn the theory of evolution.

Michael Behe is Professor of Biochemistry at Lehigh University. His contribution to more than 70 papers lend his considerable profession weight. As a catholic, he has no

theological problem with evolution. Nor does Behe endorse young-earth creationism. Furthermore, he says "I find the idea of common descent ... fairly convincing, and have no particular reason to doubt it." He gives cautious support to the Margulis hypothesis that symbiosis may have led to the development of eukaryotic (and perhaps more complex) organisms. It is to Darwinian evolution, evolution by natural selection, that Behe objects.

To this end he marshals evidence for "irreducible complexity" which he describes as "...a single system composed of several well-matched interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning." Behe's lucid examples include bacterial flagellum, blood clotting, antibodies, and metabolism. The systems are awe-inspiring and beautiful. Behe argues that eliminate even one element of such complex systems does not simply make them less efficient, but stops them working. These systems cannot have evolved through natural selection operating on chance processes. Hence Darwinism is false.

Behe presents an apparently convincing argument, especially to those who are predisposed to reject Darwinism already. But is he correct? Just because Behe cannot come up with a good Darwinian model for "irreducible complexity", does not automatically mean that there is not one. Nor does Behe clearly state an alternative model. He coyly hints at intelligent design and an intelligent designer, but fails to explain how he integrates this with the evidence for common descent, which he accepts. Did the intelligent designer guide evolution? Did the designer use micro-miracles to create changes of an irreducibly complex nature to organisms? Behe does not say.

Behe argues that the problems posed to evolutionary theory are so intractable that there is almost a deafening silence from evolutionary biologists and biochemists in addressing them. In chapter 8 (Publish or Perish) he claims that only a tiny fraction of published papers on biochemistry deal with evolution. However Behe over-states the problem. I searched using the phrase "molecular evolution" on "MEDLINE" an on-line database. In all 4832 references were found. Interestingly 3880 were written after 1996, suggesting that there have been considerable advances since Behe wrote.

The book is written in a popular manner and is at times superficial in dealing with important issues. Much of Behe's understanding of evolution seems very superficial, culled more from popular and slanted books such as Dawkin's *Blind Watchmaker*, rather than from any deep understanding of the issues. However, Behe gives a good and interesting critique of Paley and elegantly demolishes arguments against design based on perceived imperfections in biological systems.

Perhaps the biggest problem with the book is that in the end it is just another version of the God of the Gaps position. Behe claims that irreducible complexity requires miraculous creation and thus a creator. All an atheist needs to do in such an argument is prove that "irreducible complexity" can be produced by some natural process. He/she has then eliminated the "need" for God. It is far better to avoid such logical traps by having a robust theology that recognises, as the Bible teaches, that God is sovereign over His creation and all processes within it.

Does Darwin's Black Box highlight fundamental problems with Darwinian evolution or does simply provide an agenda for further research? Personally, I feel it is the later, but readers must make up their own minds.

JC.

**Ward RS.** *Foundations in Genesis: Genesis 1-11 today.* New Melbourne Press. 1998. 208pp. RRP \$12.00.

Dr. Rowland Ward is an ordained minister of the Presbyterian Church of Eastern Australia. This book grew out of a series of sermons preached to his Melbourne congregation in 1998. Typical of the Free Church of Scotland approach, the book shows a very high view of the authority and reliability of Scripture. At the same time it shows a respect for modern Biblical and scientific scholarship and its impact on Biblical interpretation. From the text itself he rejects a strict literal interpretation of the seven days of creation and accepts the standard evangelical interpretation of parallelism between the first three and the second three days. Ward makes the important distinction between the nature and purpose of creation (which he sees as the primary question) and the method of creation (which is very much a secondary question). While Ward after thoughtful consideration rejects what he calls "Macro-evolution" he does acknowledge it as a possible mechanism by which God may have acted, and he also acknowledges the importance of distinguishing primary and secondary causes.

Throughout Ward wants to deal with the basic message of Genesis to God's people, a message addressing primarily theological not scientific concerns. Some conclusions (eg on the relationship between man and woman) are still open to debate, and it is a pity that the final sub-editing is incomplete, but this book is welcome in that it shows that accepting a high view of Scripture does not automatically lead to strained literal Biblical interpretations.

AJG.

**Sayers DL.** *The Mind of the Maker.* Methuen. 1941. 186pp.

This remarkable little book was first published in 1941 and still contains excellent insights. Dorothy L. Sayers is best known as a literary figure and was a contemporary of Chesterton, Lewis, Elliot, Williams, and Tolkien who also have enriched the Christian imagination.

What does a book by a novelist and literary critic have to say that is relevant to the relationship between science and faith, between God and His world? The power of Sayers' approach is that it transcends the theological and scientific difficulties in thinking about the relationship between God and His world by using as example the creative action we are all familiar with, that of human creativity. Such an approach allows us to think of God's creative action as a dynamic rather than static. God's sovereignty is not that of a cosmic dictator or computer programmer, but rather that of an author, playwright, or film director.

Sayers' book defines creativity in Trinitarian terms. In her play *The Zeal of Thy House* (quoted on page 28) Sayers writes:

"First, [not in time but merely in order of enumeration] there is the Creative Idea, passionless, timeless, beholding the whole work at once, the end in the beginning: and this is the image of the Father.

Second, there is the Creative Energy [or Activity] begotten of that idea, working in time from the beginning to the end, with sweat and passion, being incarnate in the bonds of matter: and this is the image of the Word.

Third, there is the Creative Power, the meaning of the work and its response in the lively soul: and this is the image of the indwelling Spirit.

And these three are one, each equally in itself the whole work, whereof none can exist without other: and this is the image of the Trinity."

The book goes on to explore the relationship between divine sovereignty and free will, between law and miracle, and the existence of evil in a good creation. The model is especially powerful in explaining freedom within the creation of an omnipotent creator. This model was taken up and developed further by C. S. Lewis in some of his essays. The triune model of creativity for Sayers is relevant not only to understand divine creativity, but also human works. Unsatisfactory human creations reflect what Sayers calls "scalene trinities", trinities where the different components are not balanced and equal.

An interesting postscript discusses the worth of human work as being part of the image of God. Written during WWII, Sayers highlights (page 179) the commitment to their work of wartime workers. In a war of complete mobilisation, workers were encouraged to see their own labour, no matter how menial, as contributing in some small way to national victory. Sayers then points out that it is unfortunate that in peace time people are not encouraged to see their own work in the same terms. This is despite the fact that someone working for the mass production of lavatory cisterns (Sayers' analogy) is working to a much more glorious goal, a hygienic world, than a munitions worker.

In conclusion I found Sayers' vision of human creativity as a picture of divine creativity, springing from our being in the image of God, inspiring. Creativity is not just restricted to the literary or artistic work, but can be part of all that we do, including our science, and done to God's glory. The book is not an easy read, but a stimulating one and well worth the effort, especially of tracking it down.

JC.

**Grainger E.** *The Remarkable Reverend Clarke*. Oxford University Press. 1982. 292pp. William Clarke (no relation to this reviewer!) is an important but little known figure in the history of Australian science. This biography reveals the life of an extraordinary man, although he would have denied such a description.

Clarke was one of many clergyman-geologists who played such an important role in the development of geology in the English speaking world in the late 17th to early 18th centuries. Their number included men such as, Edward Clarke, Sedgwick, Buckland, and Fleming. Although the church was one of the few career openings for an educated man of no means at this time, we should not assume that their faith was any less real for that. Not

all clergymen of 17th and 18th centuries were like the odious and obsequious Mr. Collins of *Pride and Prejudice*!

William Clarke was born in 1798 in East Anglia and educated at Lambe's school, Dedham Grammar, and then Jesus College, Cambridge. His geological interests were greatly stimulated by Edward Clarke (no relation of his), Sedgwick, and Murchison. He became a curate of St Mary's church at Longflete, in Dorset in 1835, shortly after his marriage to Maria Stather in 1832. They remained there until 1861. During that time Clarke fulfilled his parish responsibilities, acted as local magistrate, and published on geology, meteorology, archaeology, Genesis and science, and a range of other religious subjects. In 1839 the entire family emigrated to NSW as a chaplain under the auspices of Society for the Propagation of the Gospel. Clarke remained in Australia for the rest of his life.

From 1839 to 1870 Clarke served God in a diversity of roles. These included parish priest at St Leonards and St Thomas, as chaplain to the Bishop of NSW, headmaster of St James' school, and chaplain to outlying districts. He was also involved with both the Society for the Propagation of Christian Knowledge and Society for the Propagation of the Gospel. He published extensively of a range of social and religious issues. Clarke was very interested in the aboriginal population of NSW, many of whom he came to greatly admire. He was well aware of what a later era would call cross-cultural evangelism, and inquired extensively into aboriginal customs and beliefs. There is ample evidence that Clarke was both respected and loved in his ministry.

Clarke's geological interests extended across the whole field of geology but were particularly focused on mapping, stratigraphy, palaeontology and in the origin and distribution of coal. Clarke was one of the earliest discoverers of gold in Australia and travelled widely though NSW and visited Queensland, Victoria and Tasmania. A notable achievement was the discovery of the first Australian Silurian fossils in what is now the ACT. This showed that applicability of Palaeozoic biostratigraphy to the southern as well as the Northern Hemisphere. A confirmed letter writer, Clarke compensated for his geographical isolation by corresponding with a number of leading overseas geological figures, including Murchinson, Owen, Silliman, and Dana. Some, such as Murchison and Dana, also visited him in Australia. He also was a close associate of many of the explorers of inland Australia including King, Strezlecki, Kennedy, and Leichhardt. In addition to geology Clarke wrote on issues as diverse as astronomy, meteorology, the effect of vegetation on climate, and the problem of deforestation.

All this was achieved against a background of immense personal hardship. In addition to indifferent health and a heavy workload, Clarke struggled with homesickness, exacerbated by the return of his wife and family to England from 1842 to 1845. Money was a constant problem as neither the church nor the government repaid him generously for his efforts.

Grainger has written a fascinating and detailed biography, but has a tendency towards being hagiographic. The book glosses over of Clarke's character defects, including his thin-skinned reaction to criticism and the difficult relationship with those charged with

setting up the NSW Geological Survey. Of course many of us would be thin-skinned and irritable too, if faced with Clarke's health, family, and financial problems.

Clarke died in 1875. What lessons does his life have for the present reader? We may feel our lives to be inordinately busy, but how many of us could match Clarke, who effectively held down two full-time careers as clergyman and government geologist? Fortunately few of us will have to experience Clarke's material privations. His success as a Christian geologist should serve to encourage all Christians in science in our work in God's world.

JC.

**O'Conner D, Oakley F. (eds).** *Creation: The Impact of an Idea*. Charles Scribner and Sons. 1969. 262pp.

This classic work explores Tertullian's classic tension of Athens and Jerusalem by bringing together a diverse group of writers who developed the theme that the Judaeo-Christian doctrine of creation has had a profound impact on the western world's philosophy of nature. This has had major implications for the development of western science, technology, law, society, and philosophy. The traditional separation of philosophy and theology in the western world has often obscured the influence that Judaeo-Christian ideas have had. This was especially the case when this book was published and some of the credit for the subsequent revived interest in the interaction of science and theology can be attributed to it.

In their introduction the editors point out that while origins are an important part of Genesis, they should not be over-emphasised. Genesis deals with the issues of covenant, faith, and election, as well as beginnings. The editors then briefly highlight the cultural context of Genesis and set the scene by highlighting some themes developed further by the other contributors. Of particular importance is the fact that the world is God's creation entails that it is real intelligible, and good. In chapter 1 O'Conner contrasts the "what and why?" of classical thought with the "how?" of modern science. This is partly because of the classical disparagement of sensory experience and emphasis on the ideal forms behind visible reality. The Judaeo-Christian worldview showed that sensory experience was important because it revealed to us God's handiwork. O'Conner also cautions that influence of the Judaeo-Christian worldview on the development of modern science can be over-emphasised. O'Conner also points out that although it was an essential prerequisite, it was not the only one. Stability, leisure, creative imagination, genius, and sufficient mathematical development were also important.

The rest of the book is divided into three parts. Each is introduced with an essay by one of the editors. The sections bring together papers written between 1901 and 1966. Part I is on Nature. It contains Martin Foster's classic paper on the doctrine of creation and the rise of modern science, one by Francis Oakley on theology and Newtonian science, and a third by Lynn White the medieval technological revolution. Part II is on Man. In it are papers by Emil Brunner on time, Erich Frank on freedom and law, and one by Ettine Glison on Christian optimism and hope. Society is dealt with by part III. Here are compiled papers contrasting Babylonian and Israelite models of kingship (Arend Th. van Leeuwen), reviewing the influence of Christianity on styles of government (Numa Fustel

de Coulanges), and the influence of the church on the post-Roman world. Finally, there is an epilogue in which Hans Jonas attempts the difficult task of disentangling the different Jewish and Christian influences on western thought.

Different readers will find different chapters of interest. Personally, I found the general introduction, O'Conner's essay on two philosophies of nature, and the chapters of Foster, White, Brunner, van Leeuwen, and Parker the most helpful.

This is a truly excellent compendium of important papers that have revolutionised the way science and Christianity have been regarded. The book also shows that the fruitful interaction of science and secular thought has not been confined to science, but extends to every aspect of life. The last 2000 years have shown that Jerusalem has had a great deal to do with Athens, to their mutual benefit.

JC.

**Collins P.** *God's Earth*. Dove. 1995. 280pp.

It is not every day that I get to review an Australian book, particularly one about such an important issue as environmental stewardship. Father Paul Collins is a Catholic priest and former specialist Editor-Religion for the ABC. He lectures in environmental ethics at St Marks College, Canberra.

Collins goal and agenda is described as:

"What I have tried to do in this book is to provide, within a brief compass, a context within which we can begin to look at environmental and religious questions more creatively. I also want to articulate some theological principles upon which a practical set of environmental ethics can be based. At the deepest level we need to undergo a form of conversion so that old attitudes can be changed and out dated ideologies jettisoned."

After an introduction rich in hyperbole and, I suspect, deliberate provocation, the book has with chapters on anthropocentrism and sustainability. Collins then discusses Christianity and ecological thinking. The book closes with a theology of nature from a Christological perspective. There are extensive notes and a useful bibliography.

The book has a number of strengths. Collins highlights traditional weakness of Christian theology in recognising the importance of environmental stewardship. He also, unlike all to many writers, recognises that all humanity has sinned and fallen short of God's requirement to replenish the earth. Collins also points out that it was not Christian theology that severed the close intellectual connection between the human and the non-human world, but Platonic dualism and its Cartesian descendent. Collins is to be congratulated for not only recognising that the biggest environmental challenge is population, but for criticising the Catholic Church's position on population control. I also found Collins<sup>1</sup> outline of the history of the Christian perspective on the rest of creation helpful. In particular he points out the consequences of adsorbing classical dualistic views of the world into Christian theology for our understanding of the created world. A final point is that he points out that the incarnation and the cross have significance for the

whole Cosmos, not just humanity. This perspective is often lacking from our understanding of Jesus.

Unfortunately these helpful aspects are more than balanced by the number of negative features. First, his approach to science and theology seems to be one of almost anything goes, and preferably the more way out the better. This is illustrated by his support for people on the fringes of science such as Robert Sheldrake and James Lovelock. This rather uncritical attitude is even stronger in his summary of ecological "theologians", each one more exotic than the last. None could be called orthodox and some, such as Matthew Fox have no real claim to call themselves "Christian". While their views are very influential and therefore need review, it would have been better to have had included in his survey at least a few who held to a recognisable Christian doctrine. Collins is too credulous with respect to some environmental problems, accepting apocalyptic environmental statements uncritically. He is also uncritically opposed to any kind of commercial activity. However all of us, even Paul Collins, live on the fruits of commercial activity. What is the issue is how to ensure that commercial and industrial activity can be carried out in a globally sustainable manner. In uncritical criticism of industries such as mining Collins ignores the enormous advances that have been made in responsible stewardship of the environment. Collins also ignores the unpleasant reality that environmental protection is largely a luxury of the affluent. The greatest strides to reducing population growth, conserving the environment, and reducing pollution have been made in the wealthy countries he criticises. When you are struggling for survival, saving the forests or coral reefs is not an option.

Like the proverbial curates egg, this book is good in parts. If the reader is interesting in environmental mysticism, this is a good place to start. However, for those interested in practical environmental management or more orthodox Christian approaches to the environment would do better to look elsewhere.  
JC.

**Ward Keith.** *God, Chance and Necessity* One World, Oxford. 1996. pp212.

Ward is Regius professor of Divinity at Oxford and in this book he attacks the new materialism of Hawking, Atkins, Dawkins and Ruse. While writing in a popular and readable style, he nevertheless uses his professional skills as a philosopher and theologian to demolish the logic of his opponents and to present a rational justification for theism from the findings of modern science. The evidence for design in nature is brought out and the naturalism of the scientific populists exposed in a point by point refutation of scientific atheism as presented by the above writers in the fields of cosmology, biology and sociobiology.

AJD.