

# ISCAST BULLETIN 43

Summer 2003

*Great are the works of the LORD: they are studied by all who delight in them Ps 111:2 (NASB)*

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

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## **Editorial**

To state the obvious, which my family would say is my wont, we have come to the end of another year. For ISCAST the past year has seen the very successful conference at Avondale College and increased usage of our web site. We can look forward in the New Year to the ecology and biodiversity conference sponsored, among others, by the Australian Theological Fellowship and ISCAST. While some might consider this conference too broad for ISCAST, I would see this as an excellent opportunity for evangelical Christians to engage with a broad range of theological and philosophical perspectives and make a difference in how these issues are perceived.

In the world of science and technology 2003 has seen many developments. It has also shown the limitations of technology, most clearly in intelligence related to weapons of mass destruction in Iraq. Despite highly sophisticated means of intelligence gathering, ranging from signals interception to satellite reconnaissance, and sophisticated means of interpreting the data, no conclusive proof of WMD was found. Despite this politicians ignored the clear messages from the technology and those who interpreted the data and invaded Iraq anyway. Subsequent events have proved that there were no weapons of mass destruction, any programs for WMD were moribund and the most public justification for a war of aggression was baseless.

This raises an interesting question for those of us interested in how science and technology are used in the real world – or not used as the case may be. How do we, as Christian working on the interfaces between science, theology, philosophy and technology, ensure that those we advise, be they company boards, governments, government agencies, community groups, churches, and church leaders, are given the best information so that they can make the best decisions on areas such as environmental stewardship, cloning, biotechnology, nuclear power, biblical

exegesis and hermeneutics? What responsibility do we carry if our advice is not followed? Should we as Christians act as whistle-blowers, and how and when, in a complex web of contractual obligations, security agreements and confidentiality clauses, should we decide to do so?

These are not abstract issues. Some of us will, in the course of the coming year, face issues where our science and technology may be

misused or misunderstood. How we respond may have a bigger impact on our witness as Christians in science and technology than the original position we took. It may also be costly. Whistleblowers suffer persecution, discrimination, vilification, and loss of employment and even careers. But for some, that may be the road to which God calls us.

May all readers have a blessed 2004.

## **ECOLOGY AND BIODIVERSITY: THEOLOGICAL AND SCIENTIFIC PERSPECTIVES**

**The Monastery  
5 Cross Road  
Glen Osmond Road  
South Australia 5064  
23–25 Jan 2004**

*Biodiversity maintains the Earth's life-support systems. It is essential for our physical survival. We engage with it to express our artistic and spiritual values. We call on it to understand our faith traditions. It is essential for our cultural survival. So it is appropriate and important for theologians and scientists to meet, talk and share their perspectives on biodiversity.*

*This conference is being sponsored by: The Australian Theological Forum (ATF), Institute for the Study of Christianity in an Age of Science and Technology (ISCAST), St. Marks Centre, Canberra, the Flinders University, and the Adelaide College of Divinity's Centre for Theology, Science and Culture (CTSC)*

**Please forward your Registration to:** Centre for Theology, Science and Culture (CTSC) ACD Campus, 34 Lipsett Terrace Brooklyn Park, South Australia 5052

**For further information ring:** Denis Edwards: 08 8416 8473

**Conference Convenor** Dr Mark Worthing, Tabor College, Adelaide 08 8373 8777

### **Articles**

#### ***What Does It Mean to Be Human?***

There is little argument that humans should be treated as persons—the fact of human rights etc. is universally agreed and protected. But the *basis for such personhood* in the adult, and

when it begins in the human embryo, is frequently answered in different ways, both explicitly and implicitly. *Genetic Anthropology* is, biologically at least, the most fundamental way. Our genetic constitution (now laid bare by the Human Genome

Program) defines us in terms of our genes. These are not magical life entities, but basic chemical (DNA) compounds that virtually control every aspect of our life from conception to death. To reduce our personhood to genetic differences provides however only a partial anthropology. *Neurophysiological anthropology* brings further insights but also potential conflicts with some Christian presuppositions. Mind, the property of self-consciousness, characterises humanity in contrast to lower animals. But mind (soul, spirit) can be subjected to neurophysiological investigation and is now seen to be integrally related to the brain and expressed through it. Information is emerging that confirms the close link between the brain and the intellectual, emotional and volitional aspects of humanity. Even spiritual and creative artistic experience can be related to measurable changes in brain activity. *Physical Anthropology* emphasises humanity as a product of human evolution having a unity with lower animals, but evolving both in a genetic sense and in a cultural sense. Evolution however includes not just physical human characteristics, but also religious capacity, language capability and the generation of self-consciousness and freewill, aspects that might readily be expressed theologically in terms of the “image of God” and of the “fall”. This picture of humanity may be threatening for some Christians. However it needs to be emphasised that physical anthropology does not give a complete picture of humanity any more than does genetics or neuroscience. Anthropology does not presume that humanity is not created by God, but rather concludes that an explanation of origins, including higher (unique) aspects of humanity may be expressed in scientific terms by genetic and cultural evolution.

There are other biological pictures, physiological, psychological, social etc. These give different but complementary views of humanity. It is perhaps helpful to understand these different views as expressing different levels of *progressive emergence* of the whole person, firstly from the standpoint of a living organism, through to that of a thinking self conscious person made in the “image of God”. The most basic level is that of the physical and chemical, progressing to the level of the biological organism and finally to the cultural, spiritual level. Each level is appropriately studied by its own particular approach and methodology and gives its own level of information. The properties of each progressively higher level express aspects that

are not reduced to the lower level. The whole is greater, as it were, than the sum of the parts. As we move in our approach to humanity from the most basic (genetic) picture to pictures of more complex systems (social and religious) we see new and emergent properties appearing that cannot be described by or reduced to brain responses, to physiological systems, or to physics and chemistry, although they may be expressed through all of these levels.

Biological pictures do not conflict however with or *exclude a theological anthropology*, informed by Scripture, which forms the real basis for our concept of human worth and dictates our ethical restraints with regard to the “manipulation” of humanity. Nor can a complete definition of personhood be reduced to purely scientific parameters as some scientists triumphantly proclaim. On the other hand we do need to consider our theological model of humanity in the light of the understanding developed by modern science. Many Christians consider immortality to be intrinsic, an expression of the presence of an independent “spiritual” substance (a soul) infused at conception and capable of separation from the body. It needs to be asked whether this is consistent with biblical theology or just an overhang from Platonist metaphysics. Such a preconception certainly presents a conflict with the modern scientific understanding of mind (soul).

*Biblical Anthropology* as seen in Scripture views humanity from a different perspective (a different level) than does biology. It is concerned with **purpose** not description or mechanism and thus **complements** not conflicts with the various biological pictures of humanity. The first creation account (Gen 1:1–2:4a) outlines the basic theological aspects of Creation. It is set in a framework of six days of activity, followed by a Sabbath rest. This creation “hymn” culminates on the sixth day, which occupies considerably more space in the account than any other day, with the creation of humanity, male and female in relationship with each other, with the rest of creation, and with God. It is important to recognise however, that God’s creative activity with respect to humanity need not be envisaged as a special and separate creative act, inserting a soul as it were. God is able to create sequentially, through scientifically describable processes, with respect to humanity as with other aspects of creation. The stress is on the artist’s freedom and power—a picture of God’s sovereignty in creation. Humanity is described as being created in the “image of God”

(Gen.1:26–28). The term is used sparingly in Scripture. It appears again in Gen.5:3, where Seth is born with a transmitted "image", and again in Gen.9:6 referring to humanity created in the "image of God" and therefore having certain human rights in contrast to other animals. It is a term used also of Christ (Col.4:15). He is the perfect image of God to which we in redemption will be conformed. It has variously been considered to relate both to the rational and moral characteristics of humanity, but **two aspects are considered paramount, those of relationship and dominion**. As God is relational (Trinitarian), so humanity is relational, both with regard to other humans (male and female in equality) and to the rest of creation, but in particular to God. Humanity is created capable of fellowship with God and charged with acting as God's steward. This does not imply however that humanity has a distinct and separate origin in the evolutionary process, nor that these relational characteristics may not be observed by rational and scientific study. The latter may therefore have some comment on the nature and origin of the "image" and of an interpretation of aspects of Scriptural revelation that relate to it. One also cannot imply from the text that the "image of God" is concerned with a part of humanity divorced from the body, or that it can be equated with a separate spiritual entity or soul. Although this view has been widely held, exegetes and theologians have repeatedly rejected it. Humanity in totality in relation to God is described as the image of God. The manifestations of humanity made in the image of God as a spiritual being, capable of relationship to God, may thus be observed scientifically both by the investigation of contemporary religious experience and in the cultural anthropological record.

It may well be asked "Is there any basis for the soul?". In both the Old and New Testaments humanity is presented in a holistic way, with body and soul expressed as a unity not, as is often suggested, in any dipartite or tripartite way. In the second creation story (Gen 2:4b–3) humanity is described as God-breathed dust. (Gen 2:7 "God breathed... became a living being"—*nephesh*). Humanity is of the earth—at one with nature, but is given life by God to become a **living being**. The picture is of a unity—given life by God, one whole person made in the image of God. "Soulness" represents the person the "me" the essential nature of humanity.

The New Testament concept of humanity does

not differ from the Hebrew whole person view of humanity. However it needs to be realised that the NT terminology often reflected Greek culture, which was Platonist, giving rise to a dipartite or tripartite model of humanity. Humanity was envisaged in Platonism as having both a spiritual and a somatic component. The spiritual component was eternal and survived, while the somatic was downplayed and evil. Body (*soma*), Soul (*psyche*), Spirit (*pneuma*), are often used singly or together in the NT to express the whole person. They can be considered as different **aspects** of one person, but not as different parts or substances. It is of interest to point out that in the NT the word *psyche* is most frequently translated "life" (37 times) with a number of other translations, such as heart, man, being, c.f. to soul (25 times), and the latter term, when used, is frequently equated with the whole person. Christian Immortality and hope does not reside in any intrinsic immortal soul, but in the resurrection of the whole person by a sovereign act of God (1 Cor 15). Paul's interpretation of immortality is always as resurrection of the whole person as a spiritual body not of a spirit or soul. This is of course the clear statement of the Creeds.

**What then can we conclude?** Biblical aspects of humanity, "theological humanity", are important in considering the uniqueness of humanity in creation. They may be expressed through biological humanity and are consistent with contemporary biological models of humanity. There may however be a need to **reassess the presuppositions** held by many Christians and non-Christians about what constitutes a Christian view of humanity

#### **Some relevant reading**

BROWN, W., S., MURPHY, N. and MALONEY, H., N., *Whatever Happened to the Soul*, (Fortress, Minneapolis, 1998)

JEEVES, M.A., *Human Nature at the Millennium*, (Baker, Grand Rapids, 1996)

Allan J. Day

#### **Death of Science?**

Some great minds in the eighteenth century pondered whether their European civilization would go down before a barbarian invasion, as the Roman empire had. They concluded that it would not, since the barbarians would have to become civilized, in order to invade

successfully, so the civilization would continue. They did not foresee the barbarians within the (European) gates, who in the twentieth century brought Europe nearly to destruction. This has some bearing on the future of the scientific enterprise. Its great success for the last four hundred years does not guarantee its continuance. I define "science" broadly here as the exploration of the natural world by observation and experiment, combined with rational thinking and theory. In the present discussion, I cannot draw a sharp line between science and technology. But one must ask, what circumstances led to the development of science in Europe? Do these circumstances still exist? Why did science start in some other civilizations, but come to a halt?

The Greek culture of over two thousand years ago made notable scientific advances of a theoretical kind. We do not know how far they got experimentally, because records of their technological achievement are scanty. Their impulse faded away in the early centuries AD. While we don't know why, some factors suggest themselves, namely a culture where enquiry became increasingly under suspicion, the cessation of support for institutions like the Alexandria Museum, and decreasing material prosperity. For some centuries, Islamic culture (though not all of Islamic religion and not all Arab) made major scientific advances in science (and technology). But this impulse also faded away, and there is no agreed explanation. Factors suggested include increasing mistrust (on religious grounds) of any new ideas, the destruction caused by the Mongol invasions, and decreasing prosperity.

More recently, Chinese mathematics, and Chinese maritime exploration of the world beyond China, were productive under the Ming dynasty, but this ceased when the new (Qing) rulers had no interest in such things.

What external factors were present, and seem to have been required, for the rise of European science in the sixteenth and seventeenth centuries? They included a climate of opinion which considered that the natural world might work in ways that might be understood (and thus not capricious or just random). There were (in north-western Europe) social conditions, namely the existence of some people with enough prosperity to undertake such enquiries, living in places where they did not always have to fear authority, or censorship, always looking over their shoulder. (These factors also obtained in ancient Greece, for a time.). There were economic conditions,

namely the existence of a mercantile society, where technological innovations were often welcomed and put to use (in contrast to many other societies where innovations are commonly prevented).

Some of these listed conditions are now (beginning of the twenty first century) under serious threat. Philosophies such as "post-modernism" assert that the world is not, in principle, comprehensible or open to rational enquiry. There are no longer individuals (with rare exceptions like Lovelock, of *Gaia* fame) who can make independent enquiries. Almost all science now depends on government or commercial support, and even the access to information is increasingly only via commercial databases, which only those in established institutions can reach. The direction of enquiry is largely (and increasingly) set by commercial criteria, often with the required results prescribed in advance. Large sections of public opinion now see science as threatening (even though they depend on technology for their lives), and may soon be able to ban large areas of research. And most of the "string and sealing wax" discoveries seem to have already been made.

These are a few science-related issues, where there are great dangers. Genetically modified plants are seen by many as the face of the devil (one manufacturer provoked this by a proposal that would have stopped farmers saving their own seed), and no conceivable evidence would now persuade most opponents of genetic modification otherwise. Nuclear energy has long been in similar difficulty (here largely because of involvement with cold war politics). It is unhelpfully true that science gets blamed for any pharmaceutical that goes wrong, often by people who have implicit faith in untested "alternative medicines". Often in lesser matters (but of much concern to ordinary people), scientific information is misrepresented, and goods are needlessly dangerous—and this (usually) without a word from any scientific source. Indeed, except for nuclear energy, there are few protests from scientists of standing that scientific discoveries are being misused.

The death of science is not inevitable, but the danger is serious. What might be done to avert it? While scientists must not appear to claim infallibility, and should usually avoid partisan politics, much more needs to be said publicly about science-related issues, especially the misuse and misrepresentation of scientific knowledge, and on areas of public concern

where the knowledge now exists, but is not being applied. Scientific leaders ought to seriously oppose the commercialisation of research, even at some risk to the funding of their institutions. (As a small example, the trend to monopolization of information could be stopped if grant-giving bodies gave credit to electronic publications, and not only publication in established journals.)

What might be done to encourage participation of young people in science? Can any encouragement be given to observation of nature (there might be a lot more than bird-watching that could interest young people)? And, with computers so popular, is there any

scope for computer simulation of things of some scientific concern, possibly ecological models of competing species, instead of mindless shoot-em-up games?

The scientific enterprise will not automatically continue, in our changed social climate. If it is to carry on, some scientific leaders may have to put as much effort into influencing public opinion, as they do in raising funding. Scientists must show their concern about the use, or often misuse, of their knowledge. And some imagination is needed, on how to interest the younger generation in science.

Bruce Craven

## Essay Review

### ***Would the Real Galileo Please Stand up?***

**Sobel D.** *Galileo's Daughter: a Drama of Science, Faith and Love.* Fourth Estate. London 1999.

**Koestler A.** *The Sleepwalkers.* Pelican, London. 1968.

It has taken me a while to get around to reading Sobel's book on Galileo<sup>i</sup>, but her book *Longitude*<sup>ii</sup> was so interesting that I looked forward to this one. Especially as the dust jacket described the book as "unputdownable". Sobel, however, spends a lot of time setting the scenes and she quotes original sources in such detail that the overall thread is a little difficult to follow. The picture of Galileo that emerges is of a brilliant old man, loved father of his religious daughter, a man who is often sick, frequently mis-understood and victimised by his enemies, but a man faithful to the church in which he was brought up and which he never left.

Koestler's work<sup>iii</sup>, not in the list of Sobel's sources, is a much more penetrating analysis of the Galileo controversy. Koestler is much less sympathetic to Galileo, but then, as he himself admits, if you are a defender of Johannes Kepler, as he is, you tend to be somewhat scathing of Galileo. Koestler argues that astronomy was not Galileo's forte, mechanics was. Galileo claimed far too many discoveries for himself, rather than acknowledging the work of others. Koestler claims that Galileo's antagonists in the church were better astronomers than he, and that the evidence for

Galileo's Copernican model was not strong enough at the time. Koestler argues that the Tychoan model (the planets revolve around the sun and the sun revolves around the earth in epicycles) could equally be supported by the evidence of the time.

According to Koestler, Galileo was a good debater, setting up the positions of his opponents, arguing their case more strongly than they themselves had, and then demolishing their case, often through ridicule. While this often won over an audience, it also succeeded in alienating those he had debated with. Galileo was not good at winning friends and influencing people, but he still loved an intellectual stoush and was particularly quick to get involved in verbal brawls to defend himself.

Alistair McGrath describes<sup>iv</sup> how we often unconsciously have a whiggish view of history. Here we interpret events in the light of subsequent developments, rather than in the light of the knowledge at the time. We know Galileo was on the right track, so we tend to side with him. However, he extrapolated well beyond the data that was known at the time, and his argument was deeply flawed. Thus he still accepted the circular motion of the planets and espoused the multiple epicycles embedded in Copernicus' model. Further he tried to argue that the tides helped to support the argument that the earth moved round the sun. In the light of what was known then, the church's more conservative interpretation of the data available was more right and more scientific than Galileo's interpretation.

Galileo's debating manner reminds me of personalities involved in current science-faith debates. There are those, like Galileo, who are brawlers, hoeing in, and arguing beyond the evidence known at present. They win the argument by oratorical skill and personality but lose their opponents because the opponents have not been respectfully treated, and the full force of the contrary opinion has not been acknowledged. Irenic conciliation is not a prominent feature of current science-faith debates in some quarters, but it does lead to some colourful interchanges!

What can we learn? The first lesson is that we are all groping somewhat in the dark with knowledge bigger than we can understand. In Koestler's terms, we are all sleepwalkers in our scientific understanding, and we need to be humble in what we know and clear about what we don't know. Koestler describes Galileo's open letter to the Grand Duchess Christina as containing, "...passages which are classics of didactic prose, superb formulations in defence of the freedom of thought, alternating with sophistry, evasion and plain dishonesty"<sup>v</sup>. This is often the case in scientific debates. We see in a glass darkly. There is usually a mixture of truth and error, correct conclusions and presumption. In the light of that, honesty and humility should be the greater watchword in the pursuit of truth.

Secondly we can see in the Galileo controversy that there are forces and personalities which push people into positions beyond the evidence. The scientific pursuit is riddled by hidden human motivations and is nowhere near the objective rational pursuit we would like it to be.

Thirdly it is tragic to use political power to promote one point of view over another. Political clout is not a good way of determining the truth or falsehood of a theory, whether that political clout is the authority of the hierarchy or the democratic might of the majority.

The final issue is more complex. Galileo is famous for arguing for the separation of science and Scripture. His famous quote, quoting the Vatican Librarian, Cesare Cardinal Baronio, "The Bible tells us how to go to heaven, not how the heavens go"<sup>vi</sup>, would imply that science and Scripture are two separate magisteria, to use Stephen Jay Gould's term<sup>vii</sup>. The reality is more complex. I

agree with Galileo that we cannot ask Scripture to give a scientific account of the heavens, but I cannot accept Abraham Kaplan's dictum that science should be allowed to be autonomous<sup>viii</sup>. The separation is not complete. There needs to be integration, dialogue and accountability of each discipline to the other. The extent of the interaction is widely debated. Different positions are held. In the debate I tend to sympathise with John Brooke's more fluid model<sup>ix</sup> than Ian Barbour's stylised four positions<sup>x xi xii</sup>. But whatever, an ongoing dialogue is inevitable if we believe all truth is God's truth.

Comparing Sobel and Koestler then leads to a much more rounded picture of a controversy that is still with us. We are still re-enacting that controversy, not so much in cosmology as in evolution and in the mind-brain debates.

<sup>i</sup>Sobel D. *Galileo's Daughter: a Drama of Science, Faith and Love*. Fourth Estate. London 1999.

<sup>ii</sup> Sobel D, Andrewes WJH. *The Illustrated Longitude: the True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*. Fourth estate. London. 1998.

<sup>iii</sup> Koestler A. *The Sleepwalkers*. Pelican, London. 1968.

<sup>iv</sup> McGrath AE. *The Foundations of Dialogue in Science and Religion*. Blackwell. Oxford. 1998:2.

<sup>v</sup> Koestler A. *op cit*. p. 445.

<sup>vi</sup> Sobel D. *op cit*. p 65.

<sup>vii</sup> Gould SJ. *Non-Overlapping Magisteria*. *Natural history*. 1997;106:16. Quoted by Pond J. "Independence: mutual humility in the relationship between science and Christian theology", Ch 2 in Carlson RF. (ed) *Science and Christianity: Four Views*. IVP Downers Grove IL. 2000:71.

<sup>viii</sup> Kaplan A. *The Conduct of Inquiry: Methodology for Behavioural Science*. Chandler, Scranton PA. 1964:3-6.

<sup>ix</sup> Brooke JH. *Science and Religion: Some Historical Perspectives*. Cambridge University Press. 1991:1-6.

<sup>x</sup> Barbour IG. *Religion and Science: Historical and Contemporary Issues*. SCM. London. 1998.

<sup>xi</sup> Barbour IG. *When Science Meets Religion: Enemies, Strangers or Partners?* Harper, San Francisco. 2000.

<sup>xii</sup> Carlson RF (ed) *op cit*.

Alan Gijsbers

### ***Science and Christian Belief***

The Journal of Christians in Science (UK). It comes out twice a year and contains many thoughtful articles.

Cost: Aust\$50 for one year's subscription, printed or electronic;  
Aust\$56 for *both* printed and electronic versions.

For subscription contact Helen Joynt, Administrative Secretary ISCAST (Victoria), stating the mode (*electronic, printed, or both*) in which you wish to receive the journal.

## **Reviews**

### **BOOKS ON THE NATURE OF THE PERSON**

#### ***Body and Soul?***

Moreland JP, Rae SB. *Body and Soul: Human Nature and the Crisis in Ethics*. IVP 2000. 384pp.

This book claims that we need to embrace Thomist dualism in order to have an adequate view of the value of human persons. By holding this position we will be able to combat clearly the radical ethics which devalue human beings at either end of life.

This book is a useful exposition of Thomist dualism but I am disappointed with it on a number of grounds. First because it trivializes the positions of committed Christians with whom the authors disagree. For instance, Moreland and Rae do not show an adequate understanding of the non-reductive physicalist position and they fail to engage with that position. This is disappointing, as a lack of engagement means protagonists are talking past each other rather than entering into dialogue. Simply waving a flag hardly constitutes meaningful debate, even if a whole set of likeminded Christians rally round the standard.

The second disappointment is that in an attempt to defend their theological and philosophical point of view the authors have started with the concept of immortality of the soul and read that idea back into the Bible rather than asking the more obvious question, "How does the Bible view human beings?"

The basic tenet of the book, that humans are valuable because they are immortal, is not a tenet of Scripture. Scripture talks far more of human beings in terms of the *Imago Dei*; of being people of the covenant; of being recipients of grace and of being members of the body of Christ. Further the Scriptures and the creeds talk about the resurrection of the body, not the immortality of the soul. When talking about the human condition, Paul talks about the flesh versus the spirit (neither of which are disembodied entities) more than a distinction between body and soul or even the possession of a soul. The authors err, not knowing the Scriptures. If they thought Biblically, their categories of thinking would be quite different. For a more detailed discussion of Biblical anthropology see my "Human Nature: Mind, Brain, Body, Soul and Spirit."

[www.zadok.org.au/papers/gijspers/gijspers9601.shtml](http://www.zadok.org.au/papers/gijspers/gijspers9601.shtml).

The position they take, "that human persons are identical to immaterial substances, namely, to souls" is Docetic. This devalues the embodied person and undervalues the physical creation God has made, the fact that our spirituality is in the body, not in some disembodied realm. The physical matters.

The authors attack their opponents, who are orthodox evangelicals, and people committed to science and Scripture, as suffering from scientism. This is a heavy charge, particularly as the people Moreland and Rae criticize have themselves warned us against scientism. Moreland and Rae, in turn, by elevating their philosophy (ideology) above the evidence of

science and Scripture, have abandoned the authority of truth (which may come from either science or Scripture) in favour of defending an inadequately justified position. The science/Scripture engagement requires reading the two books (nature and Scripture) as from God and a constant correction of each by the other, rather than a blinkered commitment to a mediaeval ideology.

It is just not true that the value of a human being lies in the immortality of the soul. It is just not true that this is an adequate justification for refusing to embark on IVF programs, foetal research, or to refuse abortions. The doctrine of the immortality of the soul is not sufficient to deal with issues like euthanasia or persistent vegetative states. The doctrine is not decisive either way. The value of persons, according to the Scriptures lies in their being made in God's Image, a rich enigmatic phrase which has been debated for centuries, but will bear the weight of ethical debate quite adequately. This image has been marred by sin but is subject to hope because the image of the invisible God has conquered death and is the forerunner of a new humanity.

This book has received rave reviews by American evangelicals but it sets back meaningful engagement with committed scientists who are Christians and who are at the frontiers of neurobiological and ethical research. It provides a useful summary of one viewpoint but not a fair range of different viewpoints. For the latter Christians will have to look elsewhere for intellectual leadership.

Alan Gijsbers

### ***Mind, Language and Society***

*Searle J. Mind, Language and Society: Philosophy in the Real World. Phoenix, London. 1999. 173pp.*

This book is a good, brief, but comprehensive summary of the mind-brain discussion by an eminent philosopher in the area. Searle starts his discussion debunking some of the philosophical excesses of his colleagues, and establishing what he calls "default positions" which any sensible person understands. For instance Searle accepts causation as one of his default positions, in spite of Hume's hyper-rationalism against causation. Searle also accepts the existence of a real world, that we have direct perceptual access to that real world, that our words have clear meanings, and that truth and falsehood can be accepted on the basis of whether a proposition corresponds to

the real world. In doing so Searle has a significant, if sweeping, swipe at post-modernists.

Searle describes the mind as an emergent biological phenomenon arising out of the brain. Here he identifies a clash between two conflicting default positions. The first recognises the reality of the mind, and the second the "obviousness" of materialism. His middle road between dualism and materialism admits the reality of the mind, but names it as an emergent biological property. He then centres on consciousness, which he describes as an inner, qualitative and subjective phenomenon, whose properties he describes in some detail.

Next, Searle describes consciousness in terms of intentionality. The term loses something in its translation from the German, where it has the general sense of "aboutness". This includes intention. Intentionality is meant to convey that our minds think about things in the real world. Mental function is not just abstract thinking, but perceiving, experiencing, thinking about, and changing that world. Such intentionality has about it certain 'conditions of satisfaction' which relate to how well the intentionality sits with the reality it is concerned about. Conditions of satisfaction is a broader term than truth, for intentionality deals also with desires, which strictly speaking do not fall into a truth/falsehood category.

Searle next identifies intentionality as a socially shared phenomenon. Hence intentionality has strong community and cultural elements. He thus identifies epistemically objective social and institutional realities like money, marriage, properties, languages, etc that are partially constituted by an ontologically subjective set of attitudes. The construction of institutional reality requires collective intentionality, the assignment of status functions and constitutive rules. By status functions Searle means that certain items acquire specific symbolic status which cannot be inferred from their basic structure. Nevertheless there is social agreement that the item has that function. He uses the example of a line of stones which forms the boundary of a village. Clearly the line is not a barrier, but it defines where the village ends.

Searle focuses his attention on the role of language in the development of institutional reality in the last chapter of his book. This chapter taxed me the most, as I am new to the philosophy of language. This is also the area

where Searle cut his philosophical teeth with his mentor, JL Austin. A whole lot of Searle's earlier ideas come together here, and require a revision of the book to recall the details of his argument so far. Language conveys multiple meanings – the semantic meaning, the intended meaning and the meaning it invokes in the mind of the hearer. These meanings cannot be gleaned from the physics of the sounds, but are conveyed by the speaker's mind to the hearer's mind in perfectly understandable ways. Language provides the dominant way in which status functions can be conferred on symbols of speech, and by which institutional realities can be accepted.

Thus Searle identifies emergent realities like institutional realities and language, which have arisen out of the physics and biology of the situation, without needing to invoke extra metaphysical entities like soul etc. He does however use the concept of the mind quite freely, and sees it as an emergent entity which in turn allows further linguistic and social entities to emerge. He makes a very plausible case.

I wonder whether, as a philosopher steeped in words, he sees words and language as the main way the mind works. In doing so, does he make the mind a far more logical, language dependent and structured entity than it actually is, and does he fail to see that there are other minds which might process thoughts spatially, pictorially and intuitively? For a more detailed discussion of this see my accompanying article on the mind.

I was disappointed when Searle observed that with the rise in science the world has become demystified. It is not that we have become atheists but that religion no longer matters in the public way. When pressed on atheism, he stands behind Bertrand Russell's famous remark when asked what will he do when he comes face to face with the Almighty. Russell intends to say, "You did not give us enough evidence." I can imagine the reply, "You never humbled yourself enough to listen to my Word".

Searle's final speculations about the relation between philosophy and science were intriguing. He suggests that philosophy raises questions whereas science answers them. He suggests that science has succeeded with the basic issues like physics, chemistry and biology, but has yet to crack the tough philosophical nuts of truth, justice, virtue and the good life. He uses the nature of life as an

example of where a philosophical question has become a scientific one. "This was once a philosophical problem, but it ceased to be so when advances in molecular biology enabled us to breakdown what seemed a large mystery into a series of smaller, manageable, specific biological questions and answers." In doing this one of the major defenders of emergence has just committed the sin of ontological reductionism! Such a comment is a source for a rich riposte, and the ISCAST (Vic) seminar on what is life might refute such a claim!

Searle suggests that philosophical investigation has three features: tackling questions for which there is not an agreed method of answering, tackling "framework" questions like what is the nature of causation, and dealing with broad conceptual issues. He believes thus that philosophy sets the groundwork, which will then be taken over by science, and he sees the issues of mind and consciousness starting to move from philosophy to science.

This book is a very worthwhile overview of a difficult area, and pays careful if critical study.

Alan Gijsbers

## WEB SITE REVIEW

### *Scibel web site*

<http://scibel.gospelcom.net>

This is an interesting UK-based web site on science and belief that contains many useful articles. Unfortunately the front page involves a number of fancy graphics which did not run on some browsers and I found the graphic rather annoying (but maybe that is because I am an old fogey). Once past this there are a number of useful articles by names familiar to ISCASTians. They include material by Sam Berry, Michael Roberts, Paul Marston, Rodney Holder, Ernest Lucas, Michael Poole and many others. A site well worth book marking.

Jonathan Clarke

### **Books on Science and Religion from the Australian Theological Fellowship**

*God, Life, Intelligence, & the Universe*. Edited by Terrance J Kelly and Hillary D. Regan. ATF Science and Theology Series: One, 2001. \$35.00

*Interdisciplinary Perspectives on Cosmology and Biological Evolution*. Edited by Hillary D. Regan and Mark Worthing. ATF Science and Theology Series: Two, 2001. \$25.00

*Habitats of Grace: Biology, Christianity, and the Global Environmental Crisis*. Carolyn M. King, ATF Science and Theology Series: Three, 2001. \$25.00

*These books can be ordered from the Australian Theological Forum,  
P.O. Box 504 Hindmarsh SA 5007*

## **Letters**

### **Two views on Birkett**

I am prompted to write after reading the last issue of the Bulletin (42). In particular the two heavy calibre salvos contained in your review of the All Souls Video and in the review by Sam Berry of Kirsten Birkett's book on Darwinism "made my day". It is high time we cleansed the current evangelical temple court of its muddled scientific thinking and raised a strong plea for a renewal of the "evangelical mind". My review of K Birkett's book published in Bulletin 36 was critical, but certainly nothing like as aggressive as Sam's. There is however a time to abandon the peace at any price approach and make a stand on important issues. I do however have some concern about the AG article on the mind in the Bulletin. The important science faith issues enunciated in your editorial, were disappointingly not addressed. While I cannot but agree with the points made about subjectivity, consciousness and spirituality, I feel that the approach taken moves the debate back to an "in house" discussion amongst Christians (important though that is) rather than addressing the significant science/faith issues raised by current neuro physiologists (and your editorial). These current neuro physiological findings have the same potential to question theological preconceptions about humanity in the 21st C. as Darwinism had

about biology and creation in the 19th C. and to promote a similar continuing division among Christians—unless they are appropriately addressed with a clear evangelical mind and with scientific clarity.

Allan J. Day

After reading Berry's review (*Bulletin 42*) of Birkett's book *The Essence of Darwinism*, I felt that I must read the book to discover why it was so terrible.

I have always found Birkett's writing to be specially enjoyable and clear. This book did not disappoint on this score. It is not, and does not set out to be, a "scholarly" book. It seeks to communicate with the vast number of people who are confused about evolution and Christianity and I believe it succeeds in doing this. Evolution remains a stumbling block and a source of confusion to many Christians. I have seen this first hand among the students I encounter. These students come from a variety of religious backgrounds and mostly are not biology majors. I believe that the book would be helpful to them.

The book starts by outlining the various scientific ideas about evolution, the evidences supporting them and some of their history.

Here Birkett is careful not to present her own ideas, being aware that this is not her field, and so quotes and references other sources. It is in this area that Berry is the most critical. Maybe he has chosen different sources. It is unfair of Berry to criticise Birkett for not mentioning certain figures in the history of evolution. She is not seeking to write a history but to make a point: for most of us it doesn't really matter whether evolution is true or not. It may be important to biology academics to know "the truth" but, unless it affects our relationship with God, it is not important to us.

It is important to understand that there are a variety of ideas today about evolution and that it is not a monolithic structure accepted by all academics. This helps the reader to achieve a different perspective on evolution than that generally held by the uneducated public. It is also helpful how she traces the historic conflict between such anti-Christian ideologues as T. H. Huxley and the Christian church. Much of the conflict which people perceive today between science and Christianity arises from well-known historical conflicts which were more about politics than philosophy.

The summary of the ideas of Dawkins (religion is the enemy), Wilson (religion is useful but not true) and Gould (science and religion belong in two different worlds or *magisteria*)

regarding the relationship of evolution to Christianity is also helpful as they contrast with an evangelical Christian view.

Although religion may not be uppermost in the mind of many evolutionary biologists, the mention of evolution in most other people's minds will bring forth ideas relating to religion. Berry would have written a different book – and in fact he has done so – but that does not mean that Birkett's book is "bad", "dangerous" or "woolly thinking" (as the Bulletin editor has implied). For the purpose that it was written it is commendable and does not deserve to be castigated in these ways.

I will go further. What is happening here brings into question what ISCAST is all about. Are we just a bunch of academics arguing about the finer points of Science and Christianity and holding in contempt any publication which would not make it into *Science and Christian Belief*? Or do we want to communicate the truth of the Christian gospel over against statements from science and the misconceptions of the public? Several people associated with this book could correctly be described as "ISCASTians". A house divided amongst itself ....

Robert Stening

**The deadline for submissions for the next issue of the Bulletin is**

Word limit for articles is 1,000 words; for letters, reflections and book reviews, 600 words. Exceptions may be made in exceptional cases.

Please submit to Jonathan Clarke at the address on the front page by the end of March. Electronic submissions preferred.