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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

The nature of the human person is an important issue for Christians interested in the science-faith interface. Whether we are interested in other intelligences (artificial, animal, or extra-terrestrial), palaeoanthropology, biomedical ethics, or in the cognitive and social sciences, the nature of the mind, how it operates, how it forms, whether anthropologically or individually, and its relation to the Biblical terms of body, soul and spirit, we need to think through these issues. There has been increasing reflection on these issues within ISCAST, evident in recent meetings in Victoria and at the last few ISCAST conferences. This issue of the Bulletin therefore contains an article and book review on the subject by our regular contributor Alan Gijbers. There will be more on the subject in the next issue.

For the first time, at least while I have been editor, the ISCAST Bulletin contains a short biography. Perhaps too often we can get caught up in the abstract issues of science and faith, forgetting that it is the individual stories of how people live and relate to their profession and to others – friends, family, colleagues and even enemies – that hold at times the biggest lessons. There is much we can learn from those who have gone before.

We also have two reviews on recent books, one from the UK and one from Australia that show that woolly thinking on the understanding of Genesis in the scientific age is still alive and well and, unfortunately, flourishing in circles that should know better.

Blessings

Jonathan Clarke

Science and Christian Belief

Journal of Christians in Science (UK). Two issues per year, containing many thoughtful articles. For subscription (Aust\$50 per annum) contact Helen Joynt, Administrative Secretary ISCAST(Victoria)

POSITION WANTED

Janine Baalbergen of New Zealand is looking for a job. She writes: "I have acquired a lot of skills over the years, including admin; website maintenance and a bit of design (especially lay-out and advertisements), and have lots of experience in newspaper/magazine production (pre-press). I have worked as coordinator for a women's centre, a parish secretary, gardener. I am a journalist by trade with a master of arts in communication studies from the Auckland University of Technology.

I have undergraduate degrees in journalism and religious studies. I have an interest in working with people, in environmental issues and science or education. Anyone need a multi-tasking, multi-skilled assistant or a communications officer/manager with a can-do attitude?"

Email Janine at tyde@clear.net.nz

Articles

What is the mind?

The recent Conference on Science and Christianity contained a number of workshops and a lecture on the relation between mind and brain. This article looks at a small aspect of that huge topic. In struggling to work out what mind activity consists of, the concept is often reduced to various mental functions like reason, consciousness, qualia or "intentionality." While each of these form parts of our mental function, there is a lot more that goes on. Insofar as the mind is a subjective phenomenon, a fuller account of the mind must therefore necessarily have an introspective component. Full justice to my mental function can only occur if I start to explore my darker corners. These are glimpsed only, for the full extent of my sub-conscious is too disturbing and too contradictory to explore fully! This essay also recognises the strong social element to mental functioning. Humans are not isolates; elements of our psyche (our soul) are shaped in community.

Our minds are bigger than our expressions of them. Our thoughts outstrip our description. We think in half-formed impressions, part words, part images. Different people think very differently. Some are very verbal, some are much more pictorial, or musical. We make leaps in our intuitive understanding; our logic plods a long way behind. Sometimes what we think makes no sense, even to us. There are things we know and feel that we cannot express; or else we express them in ways other

than words. Sometimes we express by gesture or act, and sometimes by just being there. A silence can speak, if we let it.

Sometimes we just feel. When we feel deeply, we cry or laugh or shout or exult. When we do speak, what we say and why we say it is often a mystery, even to ourselves, let alone others. We are only vaguely aware of the reasons why we behave and feel the way we do. We are deeper beings than the story we tell.

Our motivation shapes our thinking. We find it difficult to change our perception especially when challenged by perceived enemies. Our impressions change more readily at the gentle persuasion of our friends. Thus collegiality works better than confrontation. Our stories are therefore always incomplete, for our blind spots (wilful and unconscious) will never be fully filled. We are human with an incomplete story.

Yet we want to communicate this story to others. We long to engage with them at the depth we struggle ourselves to understand, struggling to fill in our blind spots and to extend our understanding where we perceive it is safe to do so. Whenever we do so, we try to use intelligible words, struggling to convey that meaning to our listeners. Often we feel we fail, but every now and then a deep resonance occurs. This connection only happens if the other wants to hear and truly listens, not only to the words, but also to the intent, to the heart behind the words. When we connect, mind and heart meet mind and heart. Then we begin to know each other.

With some the bridge is immediate, the resonance easy and instant. But there is a richer prize between people who begin by not hearing each other. This is the prize of bridging differences and misunderstandings, swallowing pride and fear and listening again. In this dialogue, the struggle to dictate has to be replaced by the struggle to understand. This is the struggle to remove the selective hearing which seeks to dominate, to correct; not out of care for the other but to establish pride's own position. This is the struggle to surrender power and arrogance. This can only happen if there is trust between the parties, because deep sharing means vulnerability, a hesitancy, a tentative exploration of views dimly perceived, badly expressed and easily misunderstood, both by ourselves and by the other. Yet that's what's involved in deep communication.

Even among those we find resonance with, with time the crusts of pride and defensiveness grow over the easy openness we used to enjoy. We are then called on to stop, listen deeply and carefully, and hear each other anew.

There are rules of communication. Some people require logic; others listen to both the spoken and unspoken and understand even though the logic is incomplete or even faulty. What the speaker seems to be looking for is a consonance with the hearer. You understand what I am thinking/feeling/experiencing/. You have had the same thoughts/feelings/experiences. Or else you have a good imagination and can picture yourself in my shoes. My baffling inner world is not so strange after all – you have been here too! That is resonance, fellowship, understanding, growth, correction and change. That is communication, relationship and love. That is the meeting of minds ... souls ... persons.

Dr Alan Gijsbers

Edward Francis Pigot SJ – a biography

There is much that we can learn from the experiences and examples provided to us by other Christians in science who have gone before. However biography rarely features in the ISCAST Bulletin. Following is a biography of one such person

Edward Francis Pigot SJ (1858 – 1929) was a medical doctor before joining the Society and worked mainly among the poor in Dublin. He volunteered for the China mission and wanted

to work there among the poor, but ill health forced him to take on a more sedentary life-style within the observatory at Zi-ka-wei. It was here that he began to find his third, and ultimate vocation. However, he again began to suffer ill health and came to Australia in 1908 where he had spent his regency¹ 22 years previously. It was at this time that he formulated more clearly the idea of a world-class observatory in collaboration with Manila and China. He quickly discovered that Sydney, being on the edge of the very active seismological zone of the South West Pacific and not within it as Manila was, made it ideally suited for the needs of seismology as well as for astronomy. So at St Ignatius College, Riverview he began his new work in seismology.²

Like Christopher Clavius before him, Pigot too had impeccable timing. Seismology was in its infancy internationally and he could therefore get in 'on the ground floor'. Pigot was not after the "sensational reporting in newspapers nor the mere recording of data, but the collaboration in seismological research internationally using equal equipment".³ Seismology is essentially an international science needing interaction between different countries. Pigot gradually developed this worldwide network of collaborators and friends who could share information and equipment as new developments were made.

Pigot possessed a unique power of persuasion in making friends and influencing people. He possessed an "intense and ardent spirit and inner determination, added to this was an outer demeanour of gentleness, courtesy and kindness which was singularly attractive".⁴ He cultivated a patience that was essential to the meticulous work of observation, recording and interpretation that this work required. Pigot possessed the ability of careful installation and manipulation of delicate instruments that gave

¹ Regency is a period in the Jesuit formation program between philosophical studies and theology, and for Pigot lasted for three years.

² D. Strong, *The Australian Dictionary of Jesuit Biography – 1848-1998*, (Rushcutters Bay, NSW: Halstead Press, 1999), 300-302. See also the yearbook for St Ignatius College, 1908.

³ F. J. Dennett, *Biography of Edward Pigot SJ*, (Archive of the Society of Jesus in Australia, unpublished).

⁴ F. J. Dennett, *Biography of Edward Pigot SJ*.

him a skill that few could match.⁵ With the hands of a surgeon and musician he was admirably suited to this life. While this does sound adulatory and biased, it also shows how Pigot was seen by his contemporaries to mix his life of religious commitment and scientific skill in a chosen mission.

His contribution to Australian science is largely underrated. Like Clavius he was highly respected in his own day but became a forgotten figure after his death as others took over the mantle of research. His Jesuit successors at the Riverview observatory, William O'Leary SJ and Daniel O'Connell SJ, excelled to the point of international acclaim (O'Connell being appointed to the position of director of the international Vatican Observatory for 18 years). Within Australia better observatories and more up-to-date equipment gradually superseded the role of Riverview, and Pigot's name diminished with it.

Pigot was a man of collaboration and innovation even outside his own specialty. After many years of thought, and with the help of Fr. Hagan at the Vatican, Pigot in 1917 performed in Sydney (the first successful attempt in the Southern Hemisphere) the Foucault pendulum experiment to demonstrate the rotation of the earth on its axis. "Not content with doing what others had done before him he determined to fix the vibrations of the pendulum on photographic paper" thus becoming the first to record for posterity the results of this experiment. "The instrument itself, called by Fr. Pigot a geogyrograph, was shown at an exhibition in Rome and is now, with one of the geographs, in the museum of the Vatican Observatory at Castel Gandolfo."⁶ He also worked in Geophysical research at Cobar to examine earth tide research and on the effects of the Burrinjuck Dam on the elasticity of the earth's crust with the encouragement of other scientists.

Doing this work as a Jesuit had a marked effect on people. The archives of the Australian province contain a vast quantity and quality of people that Pigot came in contact with and touched. To give but one example: Prince Galitzin, a leading authority in seismology, wanted Pigot to come to Russia but Jesuits were still at that time (1912) banned from

entering. Galitzin made a great row about it and had the ban lifted, but by the time the news reached Pigot he lay sick in Rome unable to travel.⁷ He knew and corresponded with the leading astronomers, geophysicists and other scientists in England, most European countries, in the USA and Canada, and throughout Asia.⁸ His influence is felt by these many people that he touched and inspired and helped in numerous ways.

For contemporary Jesuit scientists the name of Edward Pigot may mean very little, but like Clavius they all share the same understanding of the interaction of science and faith. Within the current post-modern climate of uncertainty and doubt, scientists today need to grapple more earnestly than did Pigot to justify the place of science in the church. Science needs to be seen as a vocation, as any other ministry in the church – it is a calling. Little is known anymore as to why Pigot was destined for work in science, whether he chose it for himself or went reluctantly at first, but the gifts of his work made it clear to the community that the call of God was being manifested.

Gregory Jacobs, SJ

Do you have a favourite Christian in science? Why not write their biography and submit it to the Bulletin? (Ed.)

⁵ F. J. Dennett, *Biography of Edward Pigot SJ*.

⁶ D. J. K. O'Connell, 'Father Edward Francis Pigot SJ – Part II', *Studies* (Sept and Dec 1952) 325-26.

⁷ D. J. K. O'Connell, 'Father Edward Francis Pigot SJ – Part I', *Studies* (June 1952) 196.

⁸ D. J. K. O'Connell, 'Fr. Pigot SJ – Part II', p. 330.

ESSAY REVIEW

A new history of science

John Gribbin, Science: a history 1543-2001
London: Allen Lane – an imprint of Penguin Books, 2002. Available in hard and soft cover.

The year 1543 was scientifically noteworthy as it saw the publication of seminal books on two very different kinds of bodies. One was Andreas Vesalius' *On the Structure of the Human Body* while the other was the better-known *On the Revolutions of Celestial Bodies* by Copernicus. These significant developments in human knowledge mark the beginning of John Gribbin's 647 page *Science: a history 1543-2001*. Gribbin, an astrophysicist at Cambridge University, and author of a number of books on the history of science, has written a fascinating account of modern western science that can be appreciated at two levels. At one level it provides a history of the main developments in modern science through a series of biographical accounts of the main players while, in another way, it provides the foundation for a philosophy of science which is based on an incremental, step-by-step approach — as distinct from the more revolutionary paradigm shift approach usually associated with philosopher of science, Thomas Kuhn. Gribbin argues that his own account favours a view that is more evolutionary than revolutionary. However, any attempt to use the biographies of the top 100 scientists to show the normal, gradual process of scientific development needs to take into account the fact that these people are the special ones. Their science probably resembles that of the average scientist in the way that Steve Waugh's batting resembles that of fourth drop in the Doncaster seconds. There are similarities but probably a few differences as well.

Gribbin begins with Vesalius, Copernicus, Tycho Brahe and Johannes Kepler, but none of these somewhat mystically minded observers of the natural world can be counted as 'the first scientist'. Of course, the definition of 'scientist' and 'science' is notoriously difficult, bound up as it is with historical and cultural shifts. For Gribbin the issue is who was first systematically to compare hypotheses with experiments and observation and routinely follow what subsequently became known as the recognized scientific approach. Gribbin nominates William Gilbert for this honour,

ahead of better-known competitors, particularly, Galileo Galilei because Gilbert's birth date (1544) and much of his work precedes that of his main rival by 20 years.

Gilbert (or Gilberd) was personal physician to Queen Elizabeth I and James I. Early on he switched his interest from alchemy — which he came to believe was a fantasy — to the study of electricity and magnetism and began systematically to disprove many old mystical beliefs about lodestone (a naturally occurring magnetic ore), such as the belief that it could be deactivated by rubbing with garlic. He formulated the laws of magnetic attraction and repulsion, studied static electricity, distinguished magnetism from electricity (indeed, he coined the word 'electricity') and discovered the positive and negative electric charge. His work stood without serious addition for three hundred years until the time of Michael Faraday.

The most important feature of his work was not *what* he discovered but *how* he did it. He wrote, 'In the discovery of secret things, and in the investigation of hidden causes, stronger reasons are obtained from sure experiments and demonstrated arguments than from probable conjectures and the opinions of philosophical speculators'. In the manner of many early scientists he did not feel restricted to a single area of study, he also suggested that the stars were at different distances from the earth (and not attached to a single crystal sphere) and might be sun-like bodies orbited by habitable planets of their own.

Gribbin allocates four pages to Gilbert and this is followed by thirty-two for Galileo, which illustrates the typical range, although many, many others are referred to more briefly. Up to the late nineteenth century approximately 84 scientists have significant space allocated to them. Progress in science can, to that time, be described in terms of the work of specific individuals but after that it becomes far more complicated and it is difficult for any but the rarest individual to dominate the field. Science becomes more dependent on the integrated work of numerous networks of scientists working in various contexts. Still, from that time on, another thirty or so scientists are explored in some depth and numerous others have some aspect of their contribution acknowledged.

A biographical approach to history may not be popular among professional historians as it tends to emphasize individual factors ahead of social, cultural and contextual issues but it does at least make for relatively easy and interesting reading. Gribbin's approach has the effect of placing scientists in the most positive possible light and it makes little reference to important factors that come to science from other areas of life, theology included. He also focuses intently upon western (even British) science rather than Greek, Chinese or Islamic contributions. Nonetheless, it is a very worthwhile book. One may wonder at the significance of some of the biographical material included but generally it is helpful and occasionally encouraging. Take Robert Boyle (1627-1691) for example. He was the son of Richard Boyle, the Earl of Cork, the richest man in the British Isles at the time and himself a remarkable man, as he was born neither an aristocrat nor wealthy. He created honour and wealth through a combination of luck and skill. Scientific interest, however, lies with his fourteenth child, Robert whose inherited wealth enabled him to run what we might call a very well funded private research institute. He had a profound influence on scientific *method*, collecting data and proceeding to explain the observations, rather than dreaming up some wonderful idea and then looking for facts to support it. He worked on the 'springiness' of air, that is, its compressibility and developed the barometer and the theory of gases (remember Boyles' law — "the volume of a gas is inversely proportional to the pressure on it"?). He also brought some science into alchemy, rejecting the idea of four 'elements' – air, earth, fire and water, and proposing a form of atomic hypothesis: 'I now mean by elements, certain primitive and simple bodies, which not being made of any other bodies or of one another, are the ingredients of which all those perfectly mixed bodies are immediately compounded and into which they are ultimately resolved'.

Despite his position, wealth and personal achievements he remained a devout and humble man. He was offered the Provostship of Eton, but turned it down, which is perhaps not surprising, but he also declined the peerage he was offered. Moreover, his esteem as a theologian was such that he was asked to take holy orders with the promise of being fast-tracked to a bishopric. But again he declined. In his absence he was elected President of the Royal Society but once again declined, noting that his religious beliefs prevented him from swearing the necessary oaths. He spread what

Gribbin calls his 'almost indecently large income' widely in charitable donations and then left most of his property to charity when he died.

The biographical approach allows one to see myriad intelligent deductions made by some based on evidence that was available to many. The conceptual leap to the belief that light travels at a finite speed is largely due to the work of the Dane Ole Romer who noticed irregularities in the records of the eclipses of Jupiter's moons. He noted a slight delay associated with the distance between Jupiter and the earth at the time of the eclipse, which he related to the extra time taken for the light to travel to earth. He predicted that an eclipse of Jupiter's innermost moon in 1679 would be seen *ten minutes* later than anticipated and, sensationally, was proved correct. He thereupon calculated the speed of light to be 225,000 kilometres per second (the current value is 299,792).

The wealth of detail in the book means that one is inevitably surprised. Although precisely what one finds surprising will depend on the area of one's expertise. Given that the speed of light was finite and that the more massive an object is, the faster you have to move to escape from its gravitational grip, John Mitchell predicted as early as 1783 that 'black holes' could exist. He reasoned that an object 500 times the diameter of the sun would have such gravity that it would not allow light to escape and even pointed out that this invisible object could be detected by the observation of the movement of other luminous bodies influenced by its gravity. Well done John! It might have taken nearly two hundred years to prove this right but it eventually happened.

The astronomers and physicists who know of Romer and Mitchell may not know of the work done at the other end of the scale in, for example, Robert Hooke's *Micrographia* (1665), the first substantial book on microscopy. With its detailed drawings of lice and other minute objects indistinguishable to the naked eye it was as significant in opening people's eyes to the small-scale world as Galileo's *The Starry Messenger* was for the heavens.

While the book is largely descriptive it is occasionally more reflective. Gribbin reflects on the most complicated things in the universe – people. We are, in cosmic scale, middle-sized. On a logarithmic scale increasing ten fold each time, people are halfway in size

between atoms and stars. The extremes share a certain simplicity while the middle range exhibits much higher levels of complexity. This is because at the atomic scale entities are comprised of a number of simple entities obeying simple laws. At the medium scale atoms can join to make many more, and increasingly complicated molecules, producing a huge variety of complex structures. At the large scale there is, despite the size, a return to simplicity as the complexity of molecules and life forms disappears. This is because there is a point at which molecules get crushed out of

existence by gravity. Once one is dealing with objects the size of large planets molecules are in trouble. But at the in-between level there is the complexity that leads to life. It is in the midst of this that humanity exists. The philosophy — and the theology — of science are, however, minimal. These are not his area of interest. The book will, however, be helpful to those interested in understanding them.

Brian Edgar

Reviews

Mistaken essence

Kirsten Birkett: The essence of Darwinism, St. Matthias Press, Sydney, 2003.

This is a very muddled book, full of misunderstandings and inaccuracies. It is also a potentially dangerous book because of its aura of reasonableness and the apparently immaculate stable from which it comes. The author says she should prefer it to be called “Introductory thoughts towards an initial exploration of Darwinism” (p8). That properly describes its contents.

Dr Birkett throughout confuses (and conflates) fact with interpretation. In terms of the book, the nature of the real world (creation) is assumed to be the same as the mechanism(s) of how it came into being together with the gaps (or mistakes, past and present) in our understanding of these mechanisms – or even worse, illegitimate extrapolations from this understanding. Dr Birkett begins with Lamarckianism which she says changes to Darwinism, even though she says (wrongly) that modern-day Darwinism bears little or no resemblance to nineteenth-century Darwinism. She believes “evolution ALWAYS [her capitals] has religious connotations” (p115), that evolution is “tenaciously atheist” (p67), whilst partially contradicting herself by noting “some prominent evolutionary theorists have seen their science within a theistic framework” (p89) – although she rapidly qualifies this (without explanation) by “although not a mainstream Christian one”. It is worth noting that R. A. Fischer, who is a major figure in Birkett’s story, used to preach regularly in the College Chapel when I was at Cambridge. This does not mean that he was necessarily a “mainstream Christian”, but it does imply both

acquaintance with and acceptance of the Christian “mainstream”.

As a matter of straight-forward history Dr Birkett misrepresents:

- Lamarck, who put forward his theory as a theological answer to the apparent gaps in the fossil record; she calls his theory “completely atheist” (p75). His ideas were largely ignored outside his native France they were not “until Darwin’s time the most plausible of evolutionary theories”. She ignores the much more significant Chambers.
- Paley’s relationship to Darwin: the latter owed much to Paley- Darwin did not “specifically challenge” Paley’s explanation (p86). What he did was (as Birkett says) “undercut Paley’s argument” (p86) which was excellent because it destroyed the prevalent deism. In the oft-quoted words of Aubrey Moore (not mentioned by Birkett), “Darwinism... under the guise of a foe, did the work of a friend... We must return to the Christian views of direct Divine agency, the immanence of Divine power in nature from end to end” (*Lux Mundi* 1889: 99-100).
- Wiseman, who did not deal an “almost-mortal blow” to evolutionary theory (p26), but merely to Lamarckianism – which was incorrect anyway.
- Fisher, who did not invent the idea of equilibrium in the 1920’s (p26); equilibrium is best attributed to Hardy and Weinberg in 1908. And Fisher certainly did not talk about “a natural tendency to move to a state of fitness” (p32); it is (ironically) natural selection which affects and changes fitness (which is merely a measure of reproductive success).

- The “Neo-Darwinian synthesis”, it did not show the inadequacy of Darwin’s ideas (p34), it is generally accepted as being led by Fisher, Haldane and Wright, and tied together by Julian Huxley (not Dobzhansky, Mayr and Simpson, p35), it did not “create a new science” (p36); the synthesis was (and the word properly describes it) a rapprochement between Darwin’s ideas and genetical ideas about the origin of variation (which were wrong for the first two decades of the 20th century). In many ways it vindicated – not changed – the thesis of *The Origin* (incidentally Darwin’s ideas were rapidly accepted because of the sense they made of biogeography, classification, and vestigial organs, not natural selection; they were also not the consequence of “deliberate propaganda”, as claimed by Birkett, p25).
- Steve Gould did not attempt to “dethrone Darwinism” (p55); his battle was with so-called “pan-selectionists”. Darwin himself wrote in *The Origin* that he did not suppose that selection was the only mechanism of evolution.
- J. B. S. Haldane is said to have been an “outspoken reductionist materialist – a view that there is no supernatural existence whatsoever” (p88). He wrote in direct contradiction to this in an essay ‘When I am dead’: “If death can be the end of me as a finite individual mind, it does not mean it will be the end of me altogether. It seems to me immensely unlikely that mind is a mere by-product of matter... It seems to me quite probable that (my mind) will lose its limitations and be merged with an infinite mind... which I suspect probably exists behind nature... When I think logically and scientifically and act morally my thoughts and actions cease to be characteristic of myself and are those of any intelligent or moral being in the same position; in fact I am already identifying my mind with an absolute or unconditional mind”. This is not orthodox Christianity, but certainly not arch-reductionist materialism. Incidentally, Haldane was not a “Cambridge geneticist” (p35), he read Greats at Oxford, and then taught himself biochemistry.
- Altruism did not become “a big problem for Darwinism in the 1940’s to 1960’s” (p45); it was specifically identified as a problem by Darwin himself in *The Origin of Man* (1871).

I could go on and on, but this list is already too tedious. One can argue that many of the errors are trivial but they are cumulative and give the message of doubt and confusion: “Evolution is not, and never has been, simply a scientific theory. It is a theory which has always been connected to fervent religious (usually ant-Christian) beliefs” (p9); “evolutionary biology is not ‘a fact’, but a wide-ranging collection of competitive theories” (p44); “Darwinism has never been examined outside a context of attacks on the political and intellectual status of the Christian church” (p87); “Is evolution true... The answer would be that, at present, it is hard to say. It is possible. Yet many questions remain, and there is a lot of data which is still effectively unexplained – or explained in a multitude of conflicting ways...” (p124). According to the book’s blurb, Birkett’s speciality is “the history and philosophy of science”. This is one reason why the book is so tendentious. She claims “there is no bibliography of books on evolutionary theory” (p9) which is odd because all the big text books have extensive bibliographies. For example the excellent 1064-page Open University text book has a very detailed set of references. This is not an obscure reference, and any moderately competent scholar would be aware of it, and others.

I am afraid that Kirtsen Birkett’s book is evangelicalism at its worst: apparently serious but horribly shallow; riddled with preconceptions; and dangerously negative. She cites some of Michael Ruse’s writings but not his *Mystery of Mysteries* Harvard UP, 1999) in which he examines in a systematic (and very readable) way the extent to which evolutionary theorists have been influenced by extra-scientific (including religious) pressures, or *Can a Darwinian Be a Christian* (Cambridge UP 2001). To be fair, this latter book, which is highly pertinent – but not helpful – to her argument may have appeared too recently for her own work. Her treatment of Scripture is almost non-existent (seven pages on “What about Genesis?”). She argues that it does not really matter for a Christian whether or not evolution is “really true” (p128). It certainly does not matter for salvation what one believes about evolution, but truth per se is essential for a robust faith. If we are unconcerned about truth, we are back in Eden arguing with the serpent’s tactics in Genesis 3.

The Essence of Darwinism is not only a bad book, but also a dangerous book. It would probably be taken seriously by a contact-type

person without a background of historical and scientific knowledge, and not realising the paucity of scriptural background. For me, it comes under the category of books that should not be circulated in Christian circles. If you want some good literature on the subject, I suggest Ernest Lucas *Can We Believe in Genesis Today?* (IVP 2001) or even better... R. J. Berry (2001) *God and Evolution* (Regent College Publishing).

R. J. Berry

A muddled beginning

Paul Blackham: Genesis. Authentic Lifestyle, Cumbria, UK, 2003, 65 p.

Paul Blackham of All Souls Langham Place has produced a series of video Bible studies called "Book by Book". The video and the accompanying booklet are, in words of the video blurb, "Intended for small groups Bible study, personal use, or teaching large groups..." They are intended to provide "a complete resource for accessible studies..." How well does the material live up to this claim?

It is certainly accessible. Attractively produced, easy to understand by a wide audience, the book of Genesis is covered in 10 chapters. The video consists of a 10 part, three-way discussion between Paul Blackham, Richard Bewes and Anne Graham-Lotz (curiously, it is Anne who appears on the cover of the video) who read a few verses from the overall passage in the section and comment on different aspects of the text. Richard acts as moderator, Anne provides the devotional and relational perspective on the passage and Paul a broader theological context, albeit one coloured by his unique understanding of the Trinity in the Old Testament. Anne's southern drawl and Richard's rather unctuous C of E tones might grate on some ears, but the discussion between the three certainly would encourage discussion in many small groups. The booklet, credited to Paul Blackham alone, contains a more complete coverage of each section of Genesis reviewed in the study. Each chapter of the booklet closes with questions for discussion and a week's readings. However, the claim to completeness as a resource is unsubstantiated. There are no guides to further reading, no exploration of alternative perspectives in areas of contention, no hint of the enormous volume of reflection on this book through the millennia.

The content of both video and booklet is, unfortunately, variable. The material's good points include the strong emphasis on the devotional and personal application aspects of the text, perspectives all too often lacking in much that is written but so important in small (and large) group study. The passionate commitment and enthusiasm of the three participants would be both encouraging and inspiring, especially to people for whom Genesis is an unfamiliar book. It was particularly encouraging to hear all three participants in the video discussion affirm that Genesis teaches the quality and partnership of men and women as the bearers of the image of God and the goodness of God's creation clearly stated. On balance, the theological stance of the video and the booklet are good, especially in the later chapters (from five onwards). In these sections God's unfolding covenant of grace is clearly taught and difficult issues such as election handled deftly, as are the squalid realities of the patriarch family lives.. Overall the later chapters are better than earlier.

Sadly, these good points are compromised by a number of deficiencies, some trivial, some serious, especially in the early chapters. They include careless errors, dubious linkages, eisegesis, and outright woolly thinking. Two examples of the first are Paul's statement in the first section of the video that Genesis 1 covers the creation of angels, a subject on which the passage is silent, and his assertion that only the Man is made from the earth, despite Genesis 2:19. A good example of dubious linkage is Paul Blackham's assertion in the second section of the video that "King of Tyre" in Ezekiel 28 and the "King of Babylon" of Isaiah 14 are references to Satan. While this is a widespread belief in folk theology, it is disturbing to see it uncritically repeated here. More serious, because of how they impact on a person's understanding of Old Testament theology, are the examples of eisegesis provided by Anne's paraphrase of Genesis 22 in the video and some of Paul's reading of the preincarnate Christ in almost every mention of God or the Angel of the LORD.

The uncritical acceptance of young earthism is the prime example of woolly thinking and the most serious defect of the first four chapters. This capitulation by the presenters to this non-evangelical approach to the early chapters of Genesis and their relationship to science is a serious departure, not only from 19th century evangelicals such as Warfield and early 20th century ones such as Orr, but from the mentors

of Bewes, Blackham, and Graham-Lotz, namely John Stott and Billy Graham. It is especially disappointing given the fact that Bewes has previously unequivocally supported historic evangelical approaches to these issues, specifically endorsing the work of Kidner, Stott and Berry in this area. The endorsement of young earthism by this new generation of leading evangelicals may encourage more to identify this non-evangelical position with mainstream evangelicalism, despite the fact that it has not been supported by any of the main evangelical writers on Genesis in the past 50 years, for example Blocher, Kidner, Wenham, Ramm, Kline, Thompson, Stek or Jensen.

It is disappointing that, through perpetrating these errors (discussed in more length in the following section), neither Paul Blackham nor Richard Bewes emerge as people with either the breadth of understanding or the depth of vision of John Stott. Given Richard's boast at the start of the video that All Souls is "the home of a great deal of church life here in London", this is a matter for concern and does not bode well for the future of evangelical thought in the UK. The scandal of the evangelical mind is sadly alive and growing.

In summary, while this book and video are not without value, they should not be used uncritically; this is especially true of the first four chapters. The audience who uses it must also be considered. Those unfamiliar with Genesis would need to be guided carefully past the rock of young earthism on one side and the whirlpool of eisegesis on the other. More mature and discerning audiences might find the material superficial. It is to be hoped that the other books and videos in the series are of better quality.

Jonathan Clarke

More on the Brain

Churchland PS. Brain-wise: studies in neurophilosophy. Bradford, MIT Cambridge Mass. 2002. pp 471.

In one way this is a valuable book, as it makes one of the leading lights of reductive physicalism available to the university student. The book is a textbook for neuroscience students but seeks to deal with the bigger philosophical issues raised by neuroscience. It is also a vehicle for propagating Churchland's staunch atheism and pragmatic naturalism. It is here that the book is disappointing.

The book is divided into three parts, metaphysics, epistemology and religion. In each section there are large tracts of neuroscience. Their relation to the large philosophical questions posed by Churchland seem to me to be somewhat obscure. The general point, however, that these philosophical issues should be informed by the results of neuroscientific experiments, seems to me to be inescapable. The other half of the thesis, that neuroscience will to a large part answer the philosophical questions, is a lot more contentious.

Churchland makes a lot of sense in her explanation of reductionism. For her, reductionism is a necessary tool to rid science of unnecessary models. In much the same way as the theory of heat abandoned the notion of caloric fluid in favour of kinetic molecular motion, so we need to abandon a separate metaphysical entity of the soul in favour of seeing the self as a neurobiological phenomenon. However that does not mean we need to abandon a notion of a real me, who deserves to have self-esteem. We still talk of temperature, even though it is molecular motion. Macroeffects are unlikely to be explained directly in terms of the lowest level.

Such a concession however is not made towards religion. Churchland regards the classic proofs for the existence of God as unconvincing. She regards the revelatory experiences that some people have as most likely due to temporal lobe neuronal activity. She dismisses faith as lacking in evidence and analysis and hence inadequate to prove her case. She finds no evidence for life after death but asserts that this does not lead to the abandonment of morality, for there is a naturalistic and evolutionary basis for morality. It is here that Churchland is at her most disappointing for the arguments against God and religion have ignored the growing area of the philosophy of religion and the work of the last 30 years in the area. If a person is going to tackle these issues, they should tackle the best proponents in this area. Her bibliography in this area is very dated.

Churchland makes a strong plea for a purely naturalistic and pragmatic epistemology in contrast to the idealists who, in her mind, suffer from a priori introspective approaches which are nowhere near as robust as her experimental approach. In that she fails to realise the a priori position an experimental approach takes. Where is the experimental proof for the experimental approach? Her

epistemology is almost as thin as her philosophy of religion.

This is thus a valuable book to understand Churchland's position, but her epistemology is a somewhat limited naturalism and does not deal adequately with the metaphysical assumptions underlying her experimental approach. No believer would use the proofs for

the existence of God that Churchland sets up to knock down. Churchland has not considered the life, death, resurrection and the teaching of Jesus as important data in the development of faith. That's the pity.

Alan Gijsbers

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

STOCKS MUST BE CLEARED!!!

Letters

Privacy and ISCAST

We live in an information age when rapid contact with interested people and dissemination of information between them is vital. This raises many issues and often confusion. The following letter addresses some of these that are relevant, not only for ISCAST, but a wide range of organizations

At COSAC 2003 at Avondale last July, a couple of questions about privacy were raised.

Why do we need the Privacy Legislation?

Why do the requirements have to be so draconian?

These are not the usual questions that ISCAST explores. We usually deal with the "important" questions like "When did God make the earth?", "What's the difference between the mind and the brain?" and so on.

And yet, if we cannot address questions such as this, who can?

The Need for the Legislation

Anyone who has seen the film "Enemy of the State" will know what the concern is about. For those who haven't, Will Smith plays the

part of a lawyer who receives evidence of a murder sanctioned by one of the US intelligence agencies.

The agency uses satellites, hidden cameras and microphones to monitor Smith and uses the data bases available to it to find out his spending habits, track his relationship with a girlfriend of some four years back and so on to discredit him, get him sacked from his job, ruin his marriage and basically not do him much good at all.

Putting aside the paranoia about what the technology can actually do (I still do not know of cameras that can see *around* objects), the tale is a cautionary one about what might happen if privacy is allowed to be sacrificed.

Less fanciful are the issues that the Australian Privacy Commissioner has had to deal with this year. They include:

- Accidentally mis-linking an account and divulging financial information to a family member.
- Disclosure of quashed conviction information.
- Unauthorised access to credit reports held by a credit reporting agency.

- Disputed consumer credit default listing.
- Unauthorised disclosure of credit worthiness information by a credit provider.
- Adequacy of audit trail in relation to access to personal information.
- Disclosure of sensitive personal information by a Commonwealth agency, where the complainant was employed, to another Commonwealth agency where the complainant had applied for a position.

Each of these cases had consequences for an individual brought about by personal information being inappropriately used. The details of these cases and the Commissioner's rulings can be found on www.privacy.gov.au/act/casenotes/index.html.

The point is that with technology in general and databases in particular being so powerful and pervasive, steps need to be taken to manage privacy appropriately and, where it fails to be protected, that a mechanism be provided to address the consequences that result.

Do the provisions need to be so draconian?

There seems to have been a major over-reaction in parts of the community to the privacy requirements. This has got to the point where some churches are reluctant to circulate prayer requests, publish people's names in church newsletters and feel that their whole community life is being undermined by the government's unreasonable demands.

In these cases, the short answer to this question about the provisions being draconian is "No, they don't!".

First, the law only applies to Government departments, organisations with a turnover of over \$3M per year, health service providers

and smaller companies that deal commercially in personal information. There are some other organisations to which the law applies (including those that choose to "opt in" to the framework provided by the legislation) but that's about it.

It certainly doesn't apply to organisations like ISCAST.

Second, the legislation is not a regulatory document specifying what is and what isn't allowed. It provides principles (ten of them...perhaps that's a coincidence!) and directs that organisations to which the legislation applies get their minds around how they will implement them.

In other words, what will be done about privacy is largely up to the organisation as long as it is within the principles laid out in the Act.

Third, the legislation is not punitive (allocating penalties to breaches). Its emphasis is on conciliation and establishing good practice and making good any damage that might have occurred. The Privacy Commissioner is empowered to investigate a complaint and make a ruling which may include compensation for the consequences of the breach of privacy. The Commissioner's role is essentially conciliation, rectifying a wrong, not allocating penalties.

My belief is that the principles in the legislation provide a benchmark for dealing with privacy. It is therefore good practice for an organisation like ISCAST to work through these principles and decide for itself what its privacy practices will be.

If nothing else it will ease the paranoia that Privacy is engendering whenever the issue arises.

Richard Gijsbers

The deadline for submissions for the next issue of the Bulletin is December 31 2003

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. Electronic submissions preferred.