a critical review of modern life

kategoria

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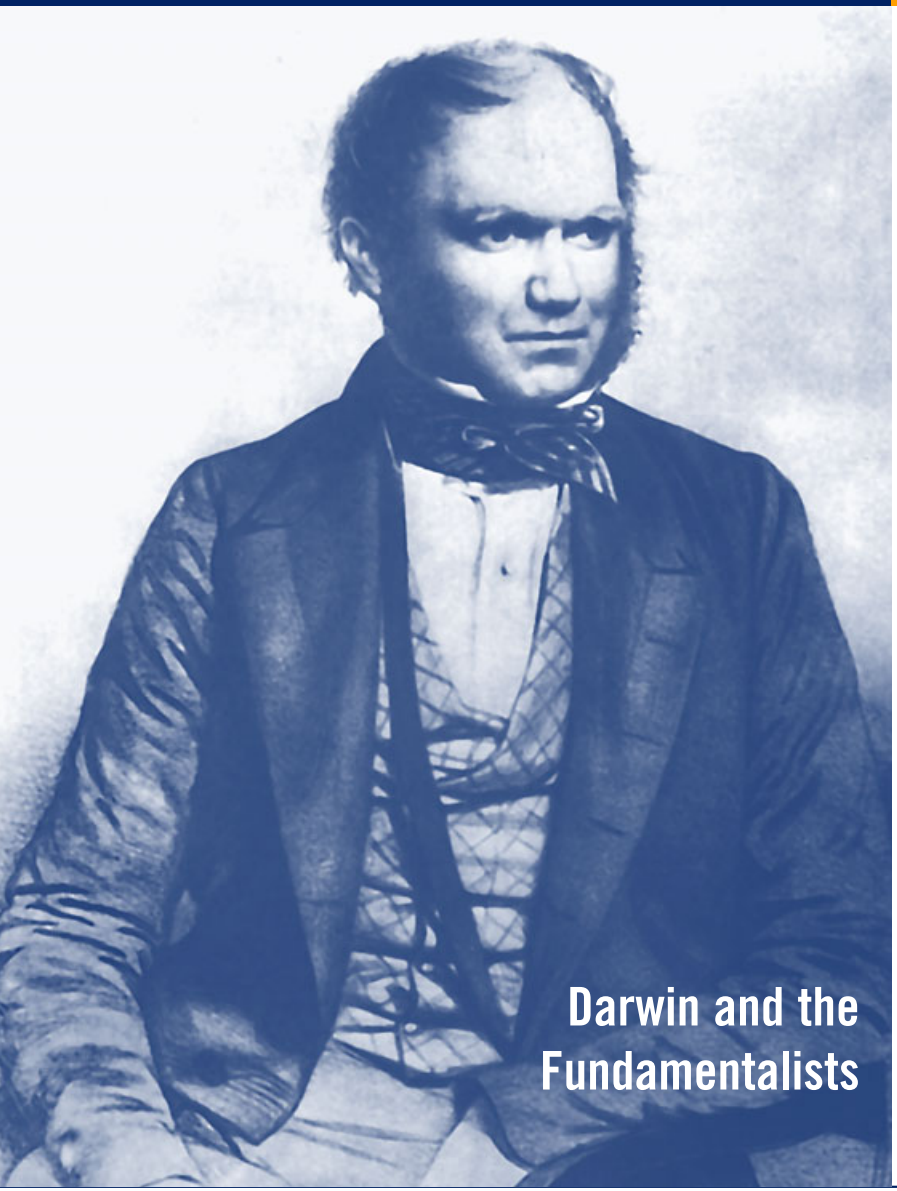

Darwin and the Fundamentalists

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Heretics and Samoans

PSYCHO-ANALYSIS AND RELIGION

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a critical review of modern life

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Articles are welcome which critique some aspect of modern life or belief. Articles are to be around 5000 words length, footnoted according to the style demonstrated in this journal. Reviews of recent books or intellectual events are also welcome. Please contact the editor before sending a review.

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editorial

Overwhelmed with the success of *kategoria* number 1, we now turn to issue number 2 with increased confidence in the place of such a journal. The words of encouragement from readers have strengthened our conviction that many people are ready for a critique of the ideas of modern life and the assumptions behind them. Issue number 1 has proved far more popular than we even dreamed. The article on Galileo has turned out to be fortuitously topical, with a new version of Brecht's play *Galileo* playing at the Sydney Opera House (and prompting some radio coverage for *kategoria*).

Issue number 2 begins to tackle evolution, that much discussed and potentially very divisive subject. Those familiar with popular literature on this subject might be relieved to know that this is not yet another argument about the theory itself. Evolution is a much misunderstood topic, and the fiery rhetoric that usually accompanies popular discussion of it does not help clear understanding. The facts, in this case, do not speak for themselves, when the biological mainstream, the general education system and the Christian community are all so very tense about the status of evolutionary theory. There is much emotion associated with this topic. Well before this journal was launched, I was receiving unsolicited manuscripts about evolution, requests that we discuss the issue, and criticism about which side the articles were going to take—before they were even written!

This tension arises largely, I believe, from the way in which evolutionary theory is used—quite illegitimately—as a weapon against Christianity. "Evolution is true, and therefore God is dead" would probably sum up much of modern thinking. Statements along these lines are certainly heard in many a university lecture and popular book on science. God, the great explanatory principle, is no longer needed and therefore must no longer exist. Far from being recognised as rather shaky logic, this argument is embedded in an historical mythology which suggests that 'the church' fell apart when Darwinism made atheism intellectually respectable.

We have chosen, therefore, to approach the topic from a different angle, with a research article about how some of the earlier theologians responded to Darwinism. Some very lucid discussion and analysis of Darwinism was presented in this earlier period, and we can benefit from reading these considered responses from a time removed from our modern tensions. Doing so also breaks a few modern stereotypes. This is a starting point: in future issues of *kategoria* we hope to present some other angles on the evolution debate.

Evolution, however, is not the only topic in modern life; we also present some comments on intellectual leadership in general, as sparked by David Williamson's recent very successful play *Heretic* and the public profile Williamson has generated as a commentator on intellectual life. It is clear that our society is experiencing changes in the mode of its education and the philosophical norms that govern universities. We raise some issues about what should be expected of intellectual leaders. Is there such a thing as an ivory tower? What is the place of intellectual inquiry in our society anyway? I will be interested to hear feedback about whether readers enjoy this style of comment to supplement the longer research articles.

Starting the journal was easy. Now the real work begins, as we aim to continue to challenge and inform, and provide a review of modern life.

Kirsten Birkett
Editor

kategoria 1996 *number 2* pp. 9-22

Margaret Mead,

Derek Freeman and intellectual leadership

Phillip D. Jensen[1]

David Williamson's new play, *Heretic*, is a play about ideas: in particular, the anthropological controversy between Margaret Mead and Derek Freeman. Margaret Mead's research on the islands of Samoa launched her into international fame as an anthropologist in the 1920s; in the 1990s, the play has publicised the fact that Australian anthropologist Derek Freeman thinks her work was almost entirely wrong. The play has itself been controversial, with disagreements between the playwright and the director providing much newsprint. Because of Williamson's views about intellectual life, which he has openly discussed, it has also brought to public attention issues of academic integrity and intellectual leadership.

The play has transformed an academic debate into public entertainment. In fact, the debate was already fairly public. In 1983 Derek Freeman launched a book not just into academic halls, but into the general media, especially in

1 With thanks to K. Birkett for her editorial and research assistance.

America. The publicity surrounding the launch basically claimed that the book would completely destroy Margaret Mead's credibility. Freeman did not just criticise Mead's theory; he insisted that her research was so poor that her evidence was virtually non-existent. It made marvellous media conflict, for Mead had been tremendously influential for years, and members of the public could legitimately consider themselves stakeholders in the debate. Although the media might have loved Freeman, the anthropological community rejected him, and defended its heroine. It appears, in the eyes of several commentators at least, that more was at stake than just the evidence each of them cited.

This is not the place to analyse in detail the politics of the Mead-Freeman debate.[2] It is still difficult to determine who 'won', though Williamson's play comes out fairly firmly in favour of Freeman. In the meantime, however, with the play and Williamson's comments about intellectual life so much in public view, we can throw a few ideas about intellectual leadership into the melting pot .

Mead and Freeman: the play and real life

David Williamson's plays have grown in popularity and significance in Australia, and he is usually regarded as Australia's leading playwright. He has remained on the cutting edge of the community's thinking and moodshifts, and presented complex ideas in a popularly acceptable form. *Heretic,* which opened in early 1996 at the Sydney Opera House, is a well researched and entertaining attempt to present a controversy that has been at work in anthropological circles for many years now.

Derek Freeman, the emeritus professor of anthropology at the Australian National University, is the heretic of Williamson's play. It is an appropriate title, for in one sense Freeman is formally a heretic; in Chicago, in November

2 One book which attempts to analyse the debate is James E. Côté, *Adolescent Storm and Stress: An Evaluation of the Mead-Freeman Controversy*, Lawrence Erlbaum Associates, Publishers, Hillsdale, New Jersey, 1994.

1983, the American Anthropological Association passed a motion denouncing his work as "unscientific". Williamson also puts Freeman in the broader context, as one who stood against the anthropologists' credo of cultural relativism. Derek Freeman took sides on the nature/nurture debate and argued for nature, against the overwhelming tide of anthropological opinion which was in favour of nurture.

Margaret Mead was one of the champions of the nurture argument. Her research in Samoa in the 1920s is presented in the play as a critical demonstration of the teachings of Mead's mentor, Franz Boas. Boas, who wrote the forward to her book, *Coming of Age in Samoa*,[3] argued for cultural relativism rather than the absolutes of nature. In particular, Boas and Mead challenged the view that the 'storm and stress' of adolescent development is an inevitable part of growing up—simply part of human 'nature'. By examining a society largely unaffected by our Western culture and nurturing—one which, in Mead's view, showed no signs of the stress of adolescent development—Mead sought to demonstrate that adolescent turmoil is not a function of our nature, but our nurture. In Boas' forward we read:

> In our own civilisation the individual is beset with difficulties which we are likely to ascribe to fundamental human traits. When we speak about the difficulties of childhood and of adolescence, we are thinking of them as unavoidable periods of adjustment through which everyone has to pass. The whole psycho-analytic approach is largely based on this supposition.
>
> The anthropologist doubts the correctness of these views, but up to this time hardly anyone has taken the pains to identify himself sufficiently with a primitive population to obtain an insight into these problems. We feel, therefore, grateful to Miss Mead for having undertaken to identify herself so com-

3 Margaret Mead, *Coming of Age in Samoa: A Study of Adolescence and Sex in Primitive Societies*, Penguin Books, Harmondsworth, 1928.

> pletely with Samoan youth that she gives us a lucid and clear picture of the joys and difficulties encountered by the young individual in a culture so entirely different from our own. The results of her painstaking investigation confirm the suspicion long held by anthropologists, that much of what we ascribe to human nature is no more than a reaction to the restraints put upon us by our civilisation.[4]

This book became the anthropological best seller of the century. In it Mead claimed to have found such difference in culture between Samoa and the west that it would explain fundamental differences in adolescent experience. Nature, she hoped to have demonstrated, is not the determinant of our behaviour; we are products of cultural nurturing.

Derek Freeman, on the other hand, did not accept that nurture is so overwhelmingly important. In his view, Mead's theory was the end result of philosophical presuppositions that go back to the British philosopher John Locke. It is a commitment to the idea that humans are born with minds that are "tabula rasa"; that is, "…empty tablets capable of receiving all sorts of imprints but having none stamped on them by nature".[5] In other words, Freeman considered that social anthropologists were working not out of evolutionary scientific understanding, but out of a philosophical commitment to this egalitarian ideology, in seeking to establish the importance of nurture over nature. He argued that their conclusions did not arise from observational data; rather, anthropologists were confirmed in their presuppositions by Mead's Samoan study.

Freeman was not totally opposed to the concept of nurture as determinative. He acknowledged that nurture and culture both have some part to play in governing the direction of human behaviour. He wanted, however, to argue for the existence of natural determinants of behaviour. Freeman

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4 Franz Boas, Forward, in *ibid*., p. 6.

5 Derek Freeman, *Paradigms in Collision*, Research School of Pacific Studies, ANU, 1992, pp. 3-4.

insisted upon an interactionist model of human behaviour, with nature and nurture affecting each other as humans make choices: "Heredity and environment interact and modify behaviour at every stage of development".[6] We are not empty tablets as John Locke expected, and Mead's "extreme environmentalist conclusions of 1928 cannot conceivably be correct".[7] For Derek Freeman, "the making of choices is…one of the crucially significant biologically-given capacities of members of the human species, and so becomes a quite fundamental element in any interactionist paradigm."[8]

Most of Derek Freeman's adult life is portrayed in David Williamson's play as directed against the predominant 'nurture' paradigm of his professional colleagues. The point of conflict was his study of Samoa and controversy with Margaret Mead. Hers was the flagship of anthropological cultural relativism. Hers was the work that he studied and from his own experience found inadequate. While he challenged her in writing and in person, it wasn't until 1983 that he produced his major work on the subject.[9] Here he exposed the empirical inadequacies of Mead's work in Samoa. Here also the controversy came down upon his head, for while the media and many scholars came to accept his critique, if not demolition, of Margaret Mead's studies, the anthropological community of North America gathered in her defence and attacked Derek Freeman critically and personally.

The controversy continued through the 1980s with one significant point of advance in 1987. Fa'apua'a Fa'amu, the Samoan woman on whose testimony Mead had based some of her conclusions about Samoan culture, came forward in 1987 and testified that, as a game, she and a friend tricked

6 *Ibid*., p. 16.
7 *Ibid*.
8 *Ibid*., p. 17.
9 Derek Freeman, *Margaret Mead and Samoa; the Making and Unmaking of an Anthropological Myth*, Harvard University Press, Cambridge, Mass., 1983.

Mead back in 1925 and 1926. The two girls were apparently telling Mead lies that fitted in with the kinds of questions she was asking. Fa'apua'a Fa'amu was by that time an elderly woman who gave testimony on television and whose testimony has since been given in sworn deposition.

While to Freeman and many in the world this testimony was the clinching piece of evidence, the debate has continued to this day, with people casting doubts even on the evidence of Fa'apua'a Fa'amu.[10] However, Williamson's play reaches its climax with the testimony of Fa'apua'a Fa'amu and accepts that Freeman got it right.

For a play to be written on such an abstract debate requires a focus on the personalities and conflict between the two major characters. Even though Mead and Freeman rarely met, Williamson still manages to present the play as a story about people. Mead is presented as more than a research scientist writing reports; she is a personality, a networker, a media persona, an advocate of ideas for change within the American society based on her research into primitive cultures. Freeman is a personality who studies and struggles, with a well publicised breakdown in mid-life which gives rise to questions as to why he wanted to take on the academic establishment. Williamson as playwright works out the controversy between these two personalities, particularly in relationship to their lifestyle, contrasting Mead's high profile frequent marriage and sexual promiscuity with Freeman's struggling, monogamous relationship.

This may seem to be artistic license; a playwright creating personal tension in order to convey abstract ideas in conflict, for an audience that can only grasp the concrete realities of people in conflict. However, Williamson's portrayal has a basis in fact. The Mead-Freeman controversy indeed was one that went beyond ideas into the very people involved in

10 Côté, *op. cit.*, p. 28; also see Nicole J. Grant, 'From Margaret Mead's field notes: what counted as "sex" in Samoa?', *American Anthropologist*, 1995, *97*, 678-682, p. 681.

them. Margaret Mead was a 'larger than life' personality, who purposely wrote up her research for popular reception and openly entered into public debate. Freeman's controversy with her did point to the inadequacies of Mead the person, and not just of the research of Samoa. He wrote in a forceful, and what many found abrasive, style. Consequently, in the book by James E. Côté which analyses the debate, the personalities of the two combatants form a key part of the discussion and evaluation of their controversy.

The Sydney production of this play was given a further controversial edge by a public falling out between the director and the playwright. The director introduced elements into the production which displayed Margaret Mead as Marilyn Monroe, introduced 1960s music and dance in which she was seen to be 'the mother of us all', and presented Fa'apua'a Fa'amu in a grotesque, inhuman and unreal puppet head. Williamson objected strongly to these elements which it seems he thought trivialised his work, even misrepresenting it.[11]

It can only be a subjective evaluation, but on the evening which I attended the play it seemed to me that both playwright and director were correct. The audience came to life at the very elements that the director had introduced to the play. It lifted the performance from a serious and intellectual debate into a lively and commercially exciting presentation. However, it did seriously undermine the point of the play. The audience was not really left open to listen to the weight of Freeman's critique of Mead's gospel of sexual liberation. Instead of history and data demonstrating Freeman's thesis in the testimony of a real historical person, strange, humorous stagecraft gave final verdict. The curtain call was a joyous tribute to 60s sexual liberation. Without the director's trappings, the evening's experience would have been a more serious and powerful controversy of world views, but would no doubt

11 See 'Ungodly row over Heretic', and 'Question of belief as writer, director split over Heretic', *Sydney Morning Herald*, 2/4/96; 'Fighting white males', *Sydney Morning Herald*, 6/4/96; 'Some like it hot…but I don't', and 'Heretic brawl, Act 2: the plot thickens', *Sydney Morning Herald*, 9/4/96. A summary is in 'Whose play is it anyway?', *Good Weekend*, 6/7/96.

have been far less entertaining. The audience response itself showed how much the members of the audience were the children of the Margaret Mead generation and philosophy; how influential Mead's views were and continue to be.

Mead, Freeman and intellectual leadership

The play was enjoyable, its plot tensions interesting. As Williamson has pointed out, however, the issue is more than just a dramatic controversy between public characters. "Derek's life has been the battle to establish the primacy of truth", Williamson commented at one point.[12] The play and its presentation express a certain disquiet that is beginning to be felt about the intellectual leadership given to our societies by the academic community. Leadership *is* provided by the academic community. Despite the indulgent portrayal of the ivory-tower professor, who is divorced from the 'real' world, the public pays a great deal of respect to academic opinion. "University tests prove" that anyone in a white coat can add considerable credibility to anything from washing powder to face cream.

Within the academic world that people rely upon, however, things are often not so clear-cut. It is common to speak of scientific 'paradigms'. This word, popularised in the philosophy of science by Thomas Kuhn, though it has proved extremely difficult to define,[13] is a useful short-hand for the general over-arching theory under which a community of scientists works. It is the general assumption behind most of the work of scientists in that community. As long as a paradigm is strong, minor discrepancies in specific experiments or case-studies can be explained away. For a paradigm to break down requires the scientists to be convinced of major

12 'Sex, lies and anthropology', *Good Weekend*, 9/3/96.

13 Thomas Kuhn, *The Structure of Scientific Revolutions*, The University of Chicago Press, Chicago, 1962, second edition enlarged 1970. Kuhn's work created a great deal of discussion—partly because he did not himself define 'paradigm' strictly enough—and it has become obvious that real life does not fit into neat paradigms, one succeeding the other. Nevertheless, the word remains useful as a general term for the framework of assumptions that lie behind a person's specific work.

errors in their work; and humans, being the stubborn creatures that they are, sometimes hold onto cherished assumptions unreasonably. Freeman considers that his fight with Mead and her supporters is a matter of paradigms in conflict.

Margaret Mead was a—possibly the—leading anthropologist of her time. One anthropologist described her as "the preeminent leader of our field for decades".[14] The anthropological community, and indeed the academic community at large, relied upon her scholarship, and the paradigm she supported consequently became very strong. The academic backlash against Derek Freeman is a demonstration of the community's commitment to Mead's paradigm. For example, James Côté rejects the evidence of Fa'apua'a Fa'amu on the grounds of "mental acrobatics". He sees her as a Christian woman defending her own honour, who had not realised that her private confessions to an anthropologist about premarital sex would be broadcast across the world.[15] Also Freeman, in Côté's opinion, is motivated by his position as a *matai* rather than any intellectual pursuit of truth.[16]

Mead was a great advocate and populariser of her own ideas. She took her message directly to the public. She wrote her major book on the Samoan culture in such a fashion that the public at large could understand it. She encouraged the world to learn from her discoveries in Samoa and apply those lessons to other cultures. Hers was not the quiet intellectual debate advancing our understanding while recognising the severe limitations of our inquiries. She publicly preached and proclaimed cultural relativism with a subtext "anthropological tests prove…".

It is easy to see in popular culture that this paradigm of the pre-eminence of nurture, and cultural relativism, still finds acceptance at popular levels. A demonstration of its influence can be found in the movie *Circle of Friends*, based

14 Theodore Schwartz, 'Anthropology: a quaint science', in Ivan Brady (ed) 'Speaking in the name of the real: Freeman and Mead on Samoa', *American Anthropologist*, 1983, *85*, 908-947, p. 920.

15 Côté, *op. cit.*, p. 28.

16 A *matai* is a titled family head, or chief. *Ibid.*, pp. 5-6.

on the novel by Maeve Binchy. The movie is set in Ireland in the late 1950s, when three young women attend their first year at university. During this year, their Irish Catholic world view is to be shaken by their experiences and their classroom anthropological studies. Their handsome professor, a striking contrast with their hook-nosed and ugly Catholic priest, seeks to broaden their frame of reference by telling of the Trobrian Islanders in the works of Bronislaw Malinowski; a study parallel to Mead's work in Samoa. These anthropology lectures do not appear in the novel; they are inserted as a subtext to explain what is taking place as the women go through their first sexual encounters. The lecturer assures them that there is complete freedom of access between the sexes in the Trobrian Islands, from puberty to adolescence, and the people are "very happy and contented people". He speaks of the ways in which societies regulate the behaviour and conduct of their members by the use of the law, shame, guilt and fear. These 'vices' are amply illustrated, of course, in the portrayal of the Irish Catholic church. The film ends with the heroine writing a paper comparing the Irish Catholic mating rights with those of the Trobrian Islanders, and implying that she has entered into a premarital sexual relationship with her boyfriend (again in contrast to the novel) with a voiceover ending the film, "Bless me, Father, for I have sinned".

Why was this anthropological background inserted into the story? It could be argued that the late 1950s experience of university life was dominated by such anthropological teaching to young men and women, who were struggling with their own sexual discoveries. Yet it can also be argued that its inclusion in the 1990s film—without comment, criticism or even implied challenge to these ideas—is an endeavour to perpetuate a particular ideological commitment.[17]

17 That this is common is the argument of Michael Medved in his study *Hollywood vs America*, Harper Perennial, New York, 1992. Medved argues that the film-makers of Hollywood have not been motivated by art, integrity or even money but by a desire to attack traditional values of family life in American culture. From his perspective, the inclusion of the anthropological debate within the film *Circle of Friends* would be typical of the use of films to promote an anti-family, sexually libertarian philosophy of life.

This movie also demonstrates what is easily observable in Western culture: that this particular scientific paradigm was not a neutral intellectual matter. It had direct consequences for society and the decisions of individuals. The academic world clearly provided leadership which indicated that this paradigm was correct. If Mead's actual research was wrong, as Derek Freeman has suggested, then the critical judgement of the scholarly consensus needs to be called into question. How and why have so many people of high academic standing been duped? Mead's study on Samoa is a world-wide best-selling book, and possibly the most famous piece of anthropological research ever done. Why has it found such ready acceptance and been held up as a model for others to follow if, as Freeman suggests, it is so profoundly and fundamentally flawed?

The academic anthropological community has shown some prevarication—quick to defend itself and jump to Margaret Mead's aid, even while admitting privately that Mead was wrong. Professor Lowell Holmes, described by James Côté as the most qualified anthropologist to consult in this case,[18] said personally to Freeman that, "I think it is quite true that Margaret finds pretty much what she wants to find…While I was quite critical of many of her ideas and observations…I was forced by my faculty adviser to soften my criticisms". He added "the only tragedy about Margaret is that she still refuses to accept the idea that she might have been wrong on her first field trip".[19] Yet Lowell Holmes wrote (at the time of Freeman's attack) in immediate defence of Margaret with titles such as, "South Seas squall; Derek Freeman's long nurtured, ill-natured attack on Margaret Mead."[20]

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18 Côté, *op. cit.*, p. 48. Holmes has also studied Samoan culture firsthand.

19 Quoted by Derek Freeman, '"O Rose thou art sick!": a rejoinder to Weiner, Schwartz, Holmes, Shore, and Silverman', *American Anthropologist*, 1984, *86*, p. 404.

20 *The Sciences* , 1983, *23*, pp. 14-18.

Perhaps an anthropological study on anthropologists is due. Under what cultural norms are they operating, whereby they think that moving majority motions in society meetings is a method of establishing the truth or error, the scientific value or lack of scientific value, of the published work of fellow academics?[21] At this point questions must be raised about the wider political factors involved in decision making.[22] Why did the anthropological community believe Margaret Mead's Samoan story? Was it because it confirmed their paradigm of cultural relativism? Did it reinforce their 'nurture' view of the debate which gave legitimacy to their own discipline? Of course, this assumes that Mead was wrong. Many commentators have raised similar questions about Freeman and his motives and political agenda. Was he trying to score points by bringing down the tallest poppy in the land? Was he defending a traditional Samoan society because of his political status within that culture? Was his use of Freudian psychiatry to help him in his personal problems, a biasing factor against the anti-Freudian views of Boas and Mead?

What is the social responsibility of academic leaders? Obviously there is a degree to which scientists cannot be blamed for holding inaccurate theories, if they are merely taking the most plausible explanation for the evidence available. Mead did far more than that, however. She set about popularising her views and agitating for social change on the basis of them. It is this that has made the attack on her work such a public matter. This is no internal

21 Freeman's work was judged "unscientific". While a society could possibly have decided, on evidence, that he was wrong, the fact that he presented arguments based on researched data hardly qualifies for the perjorative "unscientific".

22 Such questions are asked in the philosophy and social studies of science. (Editor's note: introductory books in this area are Alan Chalmers, *What is this thing called science?*, University of Queensland Press, St Lucia, 1976 and *Science and its Fabrication*, Open University Press, Milton Keynes, 1990.) The Mead-Freeman controversy is certainly worthy of a case-study.

debate of scientists over competing theories; the general public, who believed Mead, has become involved. The anthropological community has been very annoyed at the way in which Freeman made his attack. Certain anthropologists have complained that it was unacademic, and overly sensationalist, for Harvard University Press to play up the popular conflict and debate the issue in the newspapers before it had a chance to reach the anthropological journals.[23] Nevertheless, the popularising Mead did herself could be taken to justify Freeman's public attack. Although academic protocol may have been breached, it was a larger population than just the academic community who were concerned in the truth or otherwise of her conclusions.

The main concern is that Freeman has thrown into severe doubt whether Mead's theories were based on good evidence at all. This is the crucial point. If Freeman's criticisms are correct, then the Mead-Freeman debate raises more than just questions of changing paradigms; it raises questions of academic integrity. The evidence on which an academic leader bases major theories should be sound, and the method for gathering that evidence beyond reproach.

It is worth pointing out that the Christian understanding has always asserted the inevitability of bias. As creatures in rebellion against our creator, we are not impartial beings, and especially we do not have moral autonomy. Belief in the value of investigation and the reality of the external world has always, in the Christian world-view, been tempered by a knowledge of our immense capacity for self-deception. Intellectual life is not the bastion of objectivity and detachment that our positivist heritage would like to think. Our bias is, moreover, most likely to show itself in the human sciences, for at this

23 Lowell Holmes wrote at the time "The Harvard University Press promotion of this book involved virtually every shoddy trick known", adding that if this is the way to present a scientific study he is glad his work remained unnoticed on archive shelves rather than becoming a bestseller. 'A tale of two studies', in Ivan Brady (ed.) 'Speaking in the name of the real: Freeman and Mead on Samoa', *American Anthropologist*, 1983, *85*, 908-947, p. 934.

point we most want to justify our own moral systems.

It comes as no surprise to a Christian viewpoint, therefore, that Mead's discoveries have come under such questioning. Commentators who wish to throw doubt on Fu'apua'a Fa'amu's testimony, or on Freeman's conclusions, because of their personal social position, must equally take into account Mead's own sexual promiscuity. It may well be no coincidence that the theory she developed was one which justified sexual license, and declared the moral restrictions of her western society to be unnecessarily harsh human constructs.

If Mead was wrong, we have been sold a personally and socially damaging lie. We trusted, and were encouraged to trust, views which were based on highly questionable data, which should not have taken several decades and a public attack to uncover.[24] Mead's openly promoted views should have been subjected to a scrutiny proportional to the public emphasis she gave them, and we can ask questions about the self-justificatory nature of the academic community that did not do so. At the end of the day, academic discourse cannot hold itself completely aloof from responsibility to the people who are affected by it.

Phillip D. Jensen is a chaplain at the University of New South Wales.

24 Freeman's ideas continue to be criticised in anthropological journals even though it is acknowledged that he had valid points to make against Mead. For instance, one writer in an article critising Freeman's way of presenting his argument makes the comment "…Freeman's rhetorial overkill detracts from the valid criticisms he does make about Mead's Samoan research." Mac Marshall, 'The wizard of Oz meets the wicked witch of the East: Freeman, Mead, and ethnographic authority', *American Ethnologist*, 1993, *20*, 604-17, p. 612.

B. B. Warfield

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Darwin and the fundamentalists

K. R. Birkett

> "The theory of evolution by natural selection is seriously discredited in the biological world."
>
> Vernon L. Kellog, leading biologist[1]

> "[I am] a Darwinian of the purest water."
>
> B. B. Warfield, fundamentalist theologian[2]

Readers might be forgiven for thinking that the names attached to the above quotations have been inadvertently switched around. Indeed, so surprising is it these days to consider that two men from their respective camps ever made such statements, we must wonder if somewhere along the line our understanding of history has become severely distorted. It would never occur to most people that one of

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1 Vernon L. Kellog, *Darwinism Today: A Discussion of Present-Day Scientific Criticism of the Darwinian Selection Theories, Together with a Brief Account of the Principal Other Proposed Auxiliary and Alternative Theories of Species-Forming*, George Bell and Sons, London, Henry Holt and Company, New York, 1907, p. 5.

2 Quoted in Mark A. Noll and David Livingstone (eds), *Charles Hodge: What is Darwinism? And Other Writings on Science and Religion*, Baker Books, Grand Rapids, 1994, p. 42. This is how Warfield described himself as an undergraduate.

the founding fundamentalists could describe himself in this way—or that, at one point, he could find himself defending aspects of Darwinism against atheist biologists. It is worth our time, then, to examine what actually was the response of Bible-believing (and defending) Christian thinkers to Darwinian evolution during its early influence.

It is worth our time particularly because there is a popular perception that evolution has proved that Christianity is untrue. The legend might run like this: Darwin came along and the church fell, for there was no reason for God any more. The story usually includes mention of at least two 'crucial' battles. The first is the debate between Huxley and Wilberforce at Oxford in 1860. 'Soapy Sam' Wilberforce, the stereotypical English clergyman, was defeated by the witty intelligence of the scientist Thomas Huxley, and the creaking institution of the church was pushed aside by the new man of science. Many years later, in 1925, the Scopes Trial turned the issue of whether evolution could be taught in American schools into national news. Those who held to biblical truth—the fundamentalists—became a national laughing stock, stripped of intellectual credibility. These two debates typify the stock picture of science-church relationships; the church coming out as weak and ineffectual, and ridiculously anti-intellectual.

Fundamentalists did indeed defend the Bible; but most people have very little idea of what this means. 'Fundamentalists' are caricatured as unthinking, unreflective dogmatists, and if they are the Bible's supporters, it is often concluded that the Bible is not worth defending. Many now use the word 'fundamentalism' as a generic term for anti-progressive dogmatism, knowing nothing of the actual movement in America which started with a series of books called *The Fundamentals*.[3] Most people do not realise, moreover, that the series was strongly influenced by one of the most respectable

3 This series was published between 1910 and 1915, and sent free of charge to a wide range of Christian leaders, in order to defend what were considered the 'fundamentals' of Christian faith.

intellectual institutions in America at the time—Princeton Theological Seminary—and that the authors included internationally famous thinkers. The consequence of such ignorance of history is that, in today's intellectual atmosphere, to believe the Bible at all means being labelled 'fundamentalist', which automatically means anti-intellectual. Indeed, now that the word has become connected politically with the right-wing, sociologically with bigotry and reactionism, and has even been applied to militant terrorist branches of other religions, one need only say 'fundamentalist' to end any consideration of what such a person says. We have reached the point where believing the Bible is linked by association with the worst kind of anti-progressive anti-intellectualism. Religious discussion can be rejected by the modern intellectual without even being considered; it is simply labelled and rejected. However, this label is being applied with no understanding of history or of what the fundamentalist movement was created to protect.[4]

It is important, therefore, that the reality behind the label is understood; that the history is not allowed to be distorted along with the word. It is worthwhile to attempt to refresh our collective memory about what did happen when Darwin's theory became widely known, and how real theologians reacted. This essay simply presents a few counter-examples to the received view. We are going to look at three prominent theologians who wrote responses to Darwin in the decades following his theory. They were all biblical defenders. One was an immensely influential theologian in the Princeton tradition which shaped the religious life of America for nearly a century, and which stood firmly for biblical authority. The other two, slightly later, were amongst the founding fathers of fundamentalism, as

4 There is a considerable literature about 'Fundamentalism' as a phenomenon. It is analysed sociologically, politically and philosophically, and frequently written about almost entirely independently of its historical religious background. This essay is not a comment on this modern literature, which is far removed from the practice of using 'fundamentalist' as merely a label for anti-intellectualism.

authors of *The Fundamentals*. Those committed to the Bible who reacted to Darwinism were not the blinkered philistines of modern caricatures. They were thoughtful commentators who saw the difference between scientific inquiry and naturalistic philosophy, and were quite prepared to listen to the available evidence. In studying what these commentators wrote, we are simply attempting to gain access to real history, without falling into the traps of polemic and propagandist caricatures.

The three men considered here were intellectual leaders in the late nineteenth and early twentieth century; two from America and one from Scotland. Charles Hodge (1797-1878) and B. B. Warfield (1851-1921) were professors of theology at Princeton Seminary; James Orr (1844-1913) was a professor of apologetics and systematic theology in Glasgow. This essay is not a complete history of the origins of fundamentalism, nor can it give a complete study of the evolutionary thought of these men.[5] Certain writings have been selected to give a cross-section of their discussion of different aspects of evolutionary theory: its

5 There is still much work to be done in this field. More primary sources can be found in Mark A. Noll (ed.), *The Princeton Theology 1812-1921: Scripture, Science, and Theological Method from Archibald Alexander to Benjamin Breckinridge Warfield*, Baker Book House, Grand Rapids, 1983. A closer analysis of Hodge's work can be found in Jonathon Wells, *Charles Hodge's Critique of Darwinism. An Historical-Critical Analysis of Concepts Basic to the 19th Century Debate*, The Edwin Mellen Press, Lewiston, 1988. For discussion of science and religion in America see Jon H. Roberts, *Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900*, University of Wisconsin Press, Madison, 1988 and David N. Livingstone, *Darwin's Forgotten Defenders*, William B. Eerdmans and Scottish Academic Press, 1987. The general literature on Darwin and reactions to his ideas is immense, and the footnotes here mention only a few easily accessible and well known works. Other references which provide a starting point to research are: Alvar Ellegard, *Darwin and the General Reader: The Reception of Darwin's Theory of Evolution in the British Periodical Press, 1859-1872*, The University of Chicago Press, Chicago and London, 1958-1990 and David Hull, *Darwin and His Critics: The Reception of Darwin's Theory of Evolution by the Scientific Community*, Harvard University Press, Cambridge, Mass., 1973. One of the best biographies of Darwin is Adrian Desmond and James Moore, *Darwin*, Michael Joseph, London, 1991.

naturalism, its relationship to the interpretation of the early chapters of Genesis, its relationship to theological issues such as sin, and the scientific coherence of the theory itself.

Charles Hodge: Princeton theologian

Charles Hodge was one of the major forces in the intellectual tradition that defended the Bible and promoted biblical Christianity in America. Princeton Theological Seminary was among the most influential institutions in the United States from the time of its founding in 1812 until its reorganization in 1929.[6] During this time four professors of theology—Archibald Alexander, Charles Hodge, his son Archibald Alexander Hodge and Benjamin Breckinridge Warfield (see later in this essay)—built up a strong tradition of biblical conservatism. Part of this tradition was an emphasis on the responsibilities of intellectual leaders in society, especially the responsibilities of those who provided leadership in spiritual and ethical matters. As one of the most influential of the Princeton theologians, Hodge began the fight against liberalism which his successors A. A. Hodge and B. B. Warfield were to take on more fully. What is more, he wrote one of the earlier theological responses to Darwinism, in a book which was immensely popular, and provided one of the few early critiques (whether Christian or not) which understood Darwin's theory in scientific terms and discussed its implications.

Hodge taught at Princeton from 1822 until his death. He was committed to the reliability of Scripture and was fiercely Calvinist. He was a polemicist who strongly resisted efforts to move away from a strict biblical understanding of sin, salvation and Christian morality. He, as well as Warfield after him, believed that proper understanding of God and a thoroughly explored theology was necessary for society, and society tended to agree; intellectuals such as Hodge and

6 At this time the conservative tradition which made Princeton Seminary so influential moved with J. Gresham Machen to Westminster Theologial Seminary, which he helped found.

Warfield, and theologians at other universities, were consulted and listened to on ethical and intellectual issues. Hodge was also very well-informed in different scientific fields. As a man of the nineteenth century, his thoroughly Baconian view of science pervaded his understanding of the relationship between science and religion. That is, he saw science as ideally the strict and rational exercise of induction from the facts, and no more. Therefore science should only accept what has been proved by the facts; but what has been thus proved should be taken seriously.

> Science is not the opinions of man, but knowledge; and specially, according to use, the ascertained truths concerning the facts and laws of nature. To say, therefore, that the Bible contradicts science is to say that it contradicts facts, is to say that it teaches error, and to say that it teaches error is to say it is not the Word of God. The proposition that the Bible must be interpreted by science is all but self-evident. Nature is as truly a revelation of God as the Bible, and we only interpret the Word of God by the Word of God when we interpret the Bible by science.[7]

In Hodge's opinion, it was ridiculous, not to mention blasphemous, to make the Bible say something false. This meant that to admit that one had been wrong when demonstrated to be wrong—such as when it had been demonstrated that the sun did not move around the earth—was plain common sense. This did not mean twisting the Bible to say something it clearly did not. There was a two-fold evil: on the one hand being too ready to adopt the opinions of scientific men and "forced and unnatural interpretations of the Bible"; and on the other hand refusing to admit the opinions of men of science to have any voice in the interpretation of Scripture.

> Let Christians calmly wait until facts are indubitably established, so established that they command universal

7 A letter to the editors of the *New York Observer*, January 1863; reproduced in Noll and Livingstone *op. cit.*, pp. 53-56.

> consent among competent men, and then they will find that the Bible accords with those facts. In the meantime, men must be allowed to ascertain and authenticate scientific facts in their own way, just as Galileo determined the true theory of the heavens.[8]

Hodge's book-length comment on evolutionary theory, entitled *What is Darwinism*, was written in 1874, fifteen years after the publication of *The Origin of Species* and three years after *The Descent of Man*. Hodge entered the debate at a time when the scientific community in America was coming cautiously around to an acceptance of evolution—though not necessarily utilising Darwin's particular theory of natural selection[9]—and a theological response was needed. Hodge, mindful of his responsibility to society, provided one.

The most basic questions for humanity, he began, concern its origin and place in the universe. The Scriptural answer is creation by God, an assertion which rests on the authority of the word of God. It not only accounts for the origin of the universe, and everything the universe contains, especially the adaptation of organisms to surroundings; it is also not in conflict with any truth of reason or fact of experience, and it accounts for the spiritual nature of man. "The Bible has little charity for those who reject it. It pronounces them to be either derationalized or demoralized, or both."[10]

There had always been other theories to compete with

8 *Ibid*., p. 55.

9 In the United States in the decades after Darwin a group of 'Neo-Lamarckian' evolutionists were very influential (following the ideas of Lamarck, the famous French naturalist who postulated evolution through the inheritance of acquired characteristics). They were lead by Alpheus Hyatt (1838-1902), Alpheus S. Packard Jr (1839-1905) and Edward Drinker Cope (1840-1897), and included several other naturalists, botanists, geologists, and zoologists. To them, natural selection was merely one of a series of factors which make up a true evolution theory. See James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900*, Cambridge University Press, Cambridge, 1979, chapter 6.

10 Noll and Livingstone, *op. cit.*, p. 66.

the biblical one: pantheism, epicureanism, and lately, Darwinism. Darwin, not a philosopher, did not speculate on the origin of the universe, or the nature of matter or such things; he was a skilful naturalist and a careful observer, and asked only the question, "How are the fauna and flora of our earth to be accounted for?" His answer was simple. All organisms descended from the one primordial germ, accounted for by the operation of the laws of heredity, variation, over-production and the law of natural selection or survival of the fittest.

The heart of Darwin's system, as Hodge saw it, lay in the word 'natural'. Darwin used the word in two ways; as antithetical to 'artificial' and also as antithetical to 'supernatural'. The point was, natural selection is done neither by man nor by a supernatural power. There is no design or higher cause. It is not an intelligent process, even though 'selection' is an active word.

Hodge elaborated upon this point. Darwinism, he said, includes three distinct elements: evolution (the assumption that all organic forms have developed from one or a few primordial living germs), natural selection, and the assertion that natural selection is without design. Now the first two of these, Hodge insisted, do not constitute Darwinism—a statement which would surprise us now, for modern definitions of Darwinism usually consist of "evolution by natural selection". Yet Hodge had his reasons. First of all, evolution was not equivalent to Darwinism because several scientists before Darwin taught that all species are descended from other species; and some evolutionists rejected Darwin's theory. Neither did natural selection mean Darwinism, for the concept of natural selection had appeared (though unrefined) in earlier theories of evolu-

11 Hodge cites Darwin saying that Dr W. C. Wells in 1813 "distinctly recognises the principle of natural selection", and that Patrick Matthew in 1831 "gives precisely the same view of the origin of species as that propounded by Mr Wallace and myself". See *ibid.*, p. 91 and the editorial note. For an account of other earlier evolutionary theories, see D. R. Oldroyd, *Darwinian Impacts: An Introduction to the Darwinian Revolution*, New South Wales University Press, Kensington, 1980.

tion.[11] What was distinctive about Darwinism was its rejection of teleology, or final causes.

This requires a little explanation. Teleology in nature is the idea that organisms have a final end toward which they aim; and that the development of the organism can be explained in terms of its final form. This doctrine is immediately appealing when we look at the natural world, and still dominates the way in which most people speak about nature. Why do birds have hollow bones? So that they are light enough to be able to fly. Why do plants have flowers? So they can germinate. This kind of explanation, which has been commonly accepted since ancient Greek times, has traditionally been seen to fit nicely with Christian theology. Since plants need to germinate, it made sense that God would make them with flowers; and the efficient functioning of the flowers was taken to be evidence of God's wisdom in planning and designing nature.

Darwin, however, denied design, or the force of any intelligence or purpose behind the development of new organs and separate species. As Hodge put it,

> The point to be proved is that it is the distinctive doctrine of Mr. Darwin that species owe their origin, not to the original intention of the divine mind, not to special acts of creation calling new forms into existence at certain epochs, not to the constant and everywhere operative efficiency of God, guiding physical causes in the production of intended effects, but to the gradual accumulation of unintended variations of structure and instinct, securing some advantage to their subjects.[12]

It is interesting that Hodge had to go to some lengths to explain that Darwinism is ateleological. It was at that time not yet widely recognised how thoroughly Darwin's theory did away with final causes. Men who completely accepted

12 Noll and Livingstone, *op. cit.*, p. 92.

teleology, Hodge stated, talked favourably of Darwinism in the same breath, not recognising the conflict. So Hodge spent page after page demonstrating from numerous examples—from Darwin himself, from his supporters and from his critics—that his theory denies any end to which an organism is aiming.

At this point in his discussion, Hodge made a slight digression. Darwinism aside, he wished to discuss why it was that scientists and religious thinkers, as two classes, were so commonly perceived to be in conflict. It was not because science and religion were in conflict; as we have seen, in Hodge's opinion the two could not be in conflict because both revealed truth. Yet it was evident that, however misplaced it might be in his view, there was an antagonism between scientists as a class and religious believers as a class. Why?

Firstly, Hodge pointed out that the two groups adopt different rules of evidence. Scientific 'knowledge' was restricted to the facts of nature or the external world. Science, in common usage, was the ordered knowledge of the phenomena which we recognize through the senses. This means that a conviction resting on any other ground was not science. "Darwin admits that the contrivances in nature may be accounted for by assuming that they are due to design on the part of God. But, he says, that would not be science."[13]

This was all very well; but it was illegitimate to assume that therefore the only valid convictions are those based on sense data. Yet sadly, Hodge said, scientists often let themselves fall into this very trap:

> It is inevitable that minds addicted to scientific investigation should receive a strong bias to undervalue any other kind of evidence except that of the senses.…The tendency…of a mind addicted to the consideration of one kind of evidence to become more or less insensible to other kinds of proof is undeniable."[14]

13 *Ibid.*, p. 131.
14 *Ibid.*

As religion does not rest on the testimony of the senses, such people therefore ignore its evidence; even though the evidence is still there, and still just as reliable in its own sphere.

The second reason Hodge gave for why scientists fall into conflict with theologians was the failure to make the due distinction between *facts*, and the *explanation* of those facts or the theories deduced from them. Here Hodge again revealed his thoroughly Baconian view of science. Facts, in his view, were beyond question. They were revelation from God, 'pieces of truth' so to speak, and so Christians would and had changed their views when necessary before the facts (as they did when shown that the earth moved). However Hodge combined with this high opinion of fact a fairly cautious appraisal of human ability to infer correctly from fact. In other words, the willingness of Christians to change their views in face of the facts ought to satisfy scientific men, Hodge insisted; but instead, men of science want Christians to bow to their explanations and inferences too. "It is to be remembered that the facts are from God, the explanation from men; and the two are often as far apart as Heaven and its antipode."[15] The human explanations were not only without authority, but they were mutable. It is rather unreasonable, Hodge complained, that Christians are called upon to change their faith with every new scientific theory.

The third reason was a more sociological one; that is, conflict abides when scientists openly avow hostility to religion with an assumption of superiority and often a manifestation of contempt.

> Professor Huxley's advice to metaphysicians and theologians is to let science alone…but do he and his associates let metaphysics and religion alone? They tell the metaphysician that his vocation is gone, there is no such thing as mind, and of course no mental laws to be established…Professor Huxley tells the religious world that there is overwhelming and crushing evi-

15 *Ibid.*, p. 133.

> dence (scientific evidence, of course) that no event has ever occurred on this earth which was not the effect of natural courses.

At the same time, the metaphysicians thus attacked were not allowed any right of reply. "If any protest be made against such doctrines, we are told that scientific truth cannot be put down by denunciation."[16]

What then was to be the outcome of the specific relationship between Darwinism and Christianity? Hodge found the theory itself unconvincing. He found it frankly incredible to suggest that all the plants and animals on earth came from one germ, especially by chance; "Taking all these things into consideration, we think it may with moderation be said that a more absolutely incredible theory was never propounded for acceptance among men."[17] This aside, there was no pretence even amongst the strongest Darwinists that the theory could be proved. All Darwin himself claimed of his theory was that it is possible. Hodge also noted that when the theory of evolution had been published in *Vestiges of the Natural History of Creation* twenty years before Darwin, it was universally rejected.[18] Twenty years later, however, it was received with acclamation. Why? Hodge thought it was because the *Vestiges* did not expressly or effectually exclude design. That is, evolution, banished in 1844, was popular in 1866 because

16 *Ibid.* p. 135.

17 *Ibid.*, p. 140. Such an expression of utter astonishment was common in the early days of Darwinian theory. These days, such expressions are dismissed as the "argument from incredulity" by evolutionist writers such as Richard Dawkins. At this point Dawkins is precisely right; the fact that we cannot comprehend something is no argument for its untruth. Many bizarre things are true. Nevertheless, it is interesting to speculate whether the decrease in incredulity about Darwinism is due to increased confidence in the theory, or just familiarity with its astounding claims. An argument from credulity is no more valid than one from incredulity.

18 *Vestiges of the Natural History of Creation* was published anonymously by Robert Chambers in 1844. It must be taken into account that *Vestiges* was an amateur work with nothing like the solid scientific value of Darwin's book; nevertheless Hodge's point is a valid one and demonstrates his awareness of the way in which the acceptance of a scientific theory can be ideologically driven.

it suited a prevailing state of mind. It suited those who wished to reject the supernatural from the world.

Hodge's third criticism of the theory was specifically scientific. He pointed out that all the evidence of the fixedness of species was evidence against Darwinism. The absence of intermediate forms in the fossil record was a criticism Darwin was unable to answer, and the inability of humans to breed hybrids led even Thomas Huxley to declare Darwin's doctrine only an hypothesis, not worthy to be called a theory.[19]

In the end, however, it was not these scientific objections that led Hodge against Darwinism. What made it impossible for him to accept the theory was its naturalism. "The grand and fatal objection to Darwinism," he wrote, "is the exclusion of design." Even though Darwin believed in a Creator, or at least did when he published *The Origin of Species*, that creator merely called matter and a living germ into existence and then let life be controlled by chance and necessity. There was no design in nature, no intelligence behind the selection of characteristics. Hodge found this characterisation of nature simply flying in the face of reason. In numerous examples in the style of Paley, Hodge challenged the reader with the sheer unlikeliness that the beautifully balanced living world could happen without any guidance. "[I]n thus denying design in nature, these writers array against themselves the intuitive perceptions and irresistible convictions of all mankind—a

19 The fossil record does not reveal gradual transformations of structure; it shows species remaining much the same over time, to be replaced by new forms. Darwin's answer, and one still popular, is that the fossil record preserved only a tiny fraction of living animals, with the added hope that eventually transformational forms will be found.

Thomas Huxley, who earned the nickname "Darwin's bulldog" for his passionate defence of Darwinism, was nevertheless not convinced of the power of natural selection alone to create species, for there were no examples of mutually infertile new breeds created by artificial selection (dog breeders can produce big dogs or sleek dogs, but they are still dogs.) On the other hand, Darwin and other working naturalists considered the proof of natural selection to be in its predictive and explanatory power so did not find the question of breeding hybrids a problem. See Moore, *op. cit.*, pp. 176-77.

barrier which no man has ever been able to surmount."[20] Yet Darwin and his admirers preferred the operation of chance to the operation of God, and indeed "the most extreme of Mr Darwin's admirers adopt and laud his theory for the special reason that it banished God from the world".[21]

Darwin's theory denied design in nature, and in Hodge's opinion to deny design in nature was to deny God. Therefore, Darwinian evolution was atheistic. Hodge could not reconcile the two; but he did acknowledge that there were Christians who accepted evolution. What did he say of them? Any evolutionist who was also a Christian was, by definition, not a Darwinian. The concept of evolution was not the problem; a denial of God, was.

B. B. Warfield: a Darwinian of the purest water

Benjamin B. Warfield, who took the chair of theology at Princeton (previously Hodge's) in 1887, shared with Hodge the conviction that science and religion could not be at odds. He and Hodge were, in fact, from precisely the same theological tradition, and can be regarded as close allies in defense of biblical truth. It was on this very subject that Warfield wrote for *The Fundamentals*. Yet where Hodge concluded "Darwinism is atheism", Warfield described himself at one point in his career as "a Darwinian of the purest water".[22] How could these two, with such similar views about science, theology and the Bible, disagree so diametrically? One factor might have been the intervening years in which evolutionary theory had became stronger in the scientific community, and in which the theory had been modified to cope with some of its defects, which to some extent answered Hodge's criticisms. Warfield still perceived several problems with the theory; he was not blindly following where scientific leaders led. Yet for all the theory's defects, he considered it a plausible account of a

20 Noll and Livingstone, *op.cit.*, p. 153.
21 *Ibid.*, p. 155.
22 Quoted in *ibid.*, p. 42.

possible mechanism of biological development, and held that its strict naturalism (which repelled Hodge) was not necessary, and perhaps even detrimental, to the theory's explanatory power.

One of the ongoing points of tension between theology and the historical sciences has been the understanding of the early chapters of the book of Genesis. Warfield was quite aware of the issue. In the paper 'On the antiquity and the unity of the human race', 1911, Warfield presented a discussion of the relationship between scientific evidence concerning the origins of the human race and how it related to biblical evidence. The fundamental biblical assertion was, in Warfield's words, that man owes his being to God. Yet, he commented philosophically, subsidiary questions come and go, and lately the most important of these subsidiary questions had concerned the method of the divine procedure in creating man.

Warfield's opinion of evolutionary theory was immediately obvious.

> Discussion of this question became acute on the publication of Charles Darwin's treatise on the 'Origin of Species' in 1859, and can never sink again into rest until it is thoroughly understood in all quarters that 'evolution' cannot act as a substitute for creation, but at best can supply only a theory of the method of the divine providence.[23]

Warfield was happy to regard evolution as a possible mechanism used by God. Many 'theistic evolutionists' take the same position today, but the criticism usually lodged against them is how to reconcile the long periods of time in evolu-

23 B. B. Warfield, 'On the antiquity and unity of the human race', *Studies in Theology*, Oxford University Press, 1932; Baker Book House, Grand Rapids, 1981, pp. 235-258, p. 235. This paper was originally published in *The Princeton Theological Review*, 1911.

tionary theory with the chronology of the early chapters of the Bible. This question of time—the *antiquity* of the human race—was Warfield's concern here.

The question of the antiquity of man, Warfield stated, has no theological significance. It is to theology a matter of entire indifference how long man has existed on earth. It is only because of the contrast which has been drawn between the short period which seems to be allotted to human history in the biblical narrative, and the tremendously long period assigned to human life by certain schools of science, that theology has become interested in the topic. Yet, claimed Warfield, the Bible does not assign a brief span to human history; this is done only by a particular mode of interpreting the biblical data—a mode he disputed. Neither does science demand an inordinate period of life; this is only one school of thought. That was why, Warfield commented, the question had for the most part, at his time, disappeared from theological discussion.

Warfield acknowledged that a *prima facie* view of the biblical record makes the human race look recent. This, moreover, had been the usual supposition of simple Bible readers, and had become so fixed it was even printed in the Bible.[24] However, Warfield insisted, Ussher's dating is not reliable. His data rest largely on genealogies, from which it is precarious to draw chronology. For all we know, the periods of time encompassed before Abraham might have been of immense length. Genealogies in the Old Testament did not require a complete record of all the generations, but only an adequate indication of the particular line through which the descent in question comes. This is demonstrated in the genealogies of Jesus.

When we look at the early genealogies of Genesis, Warfield wrote, it is clear their purpose was not mere chronology. If that were the purpose, why is so much

24 Bishop James Ussher (1581-1656) had calculated a scriptural chronology and claimed that the creation had to be in 4004 BC. This date was later printed in the marginal notes of the Authorized Version of the Bible.

unnecessary information supplied? We only gain the impression of chronology from their sequence. It had been argued that the fact that the ages of individuals are included indicates that these lists constitute a chronology (for instance, when we are told how old people were when their children were born; see, for example, Genesis chapter 5). This, however, Warfield regarded as a specious argument. If it read "Adam was eight cubits in height and begat Seth; and Seth was seven cubits in height and begat Enosh" we would regard the remarks as purely parenthetical. The fact that we are told people's ages might mean only that we are to be impressed by their longevity. In other words, the Scriptural data leave us wholly without guidance in estimating the time which elapsed between the creation of the world and the deluge, and between the deluge and Abraham.

Therefore, the question of the antiquity of man was purely a scientific one, as far as Warfield was concerned. As an interested observer, however, the theologian could make two comments. The first was that science had no solid data for a definite estimate of the time during which the human race existed; the second was that the time estimates were coming down. The very long estimates of time were due to Darwin's particular type of gradualism, which asserted minute changes over immense periods of time that would gradually build up to changes in species. By Warfield's time, he observed, it was thought that these minute changes were not enough, and the theory of evolution was changing, and so the pressures on the time estimates were being relieved.[25]

These ideas were explored further in a careful review Warfield published in 1908 of a recent book called *Darwin-*

25 William Thomson (1824-1907) published physical arguments which placed radical constraints on the geologists' estimates of time. He argued that given known cooling rates, the earth was too warm to be millions of years old. Thomson thought the limited time was sufficient to disprove evolution by natural selection. Since then, radioactive material has been discovered which explains why the temperature of the earth is still so high; Thomson obviously could not have known about this extra source of energy.

ism Today, by Vernon Kellog.[26] Kellog, professor of entomology at Stanford, was an evolutionist and an open opposer of Christian thinking, who wrote to defend evolutionary theory against its critics. While openly acknowledging the weaknesses and disagreements within evolutionary biology, his conclusion was that evolution was solidly established, and he looked forward to a time when further research would solve all its problems of detail. The book gave an overview of evolutionary theories, explaining the problems in the theories and the methods proposed by different scientists to overcome them. In reviewing Kellog's book, Warfield was provided with the forum to explain his opinion of evolutionary theory, and more importantly to explain his attitude towards the scientific method of thinking of which Kellog was both representative and defender. For in the end, Warfield's opinion of the theory was little different from Kellog's own. The difference arose in the conclusions each drew, and the way in which (in Warfield's opinion) scientific thinking was biased by a rigid adherence to a naturalistic world-view.

By 1907, the year of publication of Kellog's book, evolutionists had, in Kellog's opinion, moved beyond the theory explained by Darwin. A significant number of biologists had revolted against the view that natural selection had the capacity for species-forming. Kellog himself held that natural selection had a very important function in species selection but denied its omnipotence. Warfield agreed with this analysis. The theory of evolution by natural selection in its most basic form, as far as he could tell, looked simple and convincing. As soon as it was transformed into the realm of fact, however, difficulties arose. Some of the objections that had been raised in Kellog's book were, in Warfield's view, *not* valid, and here we actually find Warfield defending Darwinism against unnecessary attacks. For instance, it had been claimed that the theory was inconsistent or incomplete as a

26 Kellog, *op. cit*. Warfield's review can be found in *Critical Reviews*, Oxford University Press, 1932; Baker Book House, Grand Rapids, 1981. This paper was originally published in *The Princeton Theological Review*, 1908.

logical construction. It was objected that it provided only for the survival of the fittest, not for the production of the fittest, leaving unexplained the whole matter of the cause of variation. Yet Warfield rejected this as missing the point.

> The Darwinian theory does not need to concern itself with the origin of the fittest, the cause of variation, the causes of the specific variations which occur or their opportuneness or consecution. It is logically complete in the simple postulates of variation, struggle for existence, the survival of the fittest.[27]

Logically speaking, the theory was quite plausible.

No, wrote Warfield, the problem with the theory of natural selection only arises when it is assumed that this process has actually taken place. What reason is there to believe that the struggle for existence in nature is severe enough to eliminate in each generation all but the fittest? What reason is there to suppose that the differences are great enough to be telling? What reason to suppose that, even if natural selection occurs, this process will result in any great modification rather than successive generations fluctuating around a centre? What reason is there to suppose that divergence could advance very far in the time at disposal—especially when you consider how very far it has to go? These were the problems, and Kellog had for the most part acknowledged them. Though technically plausible, "the formal completeness of the logical theory of Darwinism is fairly matched, therefore, by its almost ludicrous actual incompetence of the work asked of it."[28]

Such problems had been recognised in the scientific

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27 Warfield *ibid.*, p. 181. The cause of variation was one of the most cited problems with Darwin's theory. Whence does the variation come for natural selection to work on? For Darwin's theory to work, variations have to continue to appear without limit. Most of Darwin's colleagues believed that the extent of variation in every organism tends to be strictly limited. H. C. Jenkin, a mathematician, maintained on the basis of experimental evidence that each animal or plant is contained within a 'sphere of variation'. To answer his critics, Darwin allowed a degree of Larmarkianism. See Moore, *op. cit.*, chapter 5.

28 Warfield, *ibid.*, p. 183.

community of the time, to the extent that Kellog described strict Darwinism—differentiation by natural selection on small differences over a long time—as "seriously discredited in the biological world".[29] Why, then, was the theory still so popular? Because, answered Warfield, there was nothing to take its place.

> No one of these [alternative theories] will serve any better than Darwinism itself serves—possibly not even so well as Darwinism serves—as a complete 'causo-mechanical' explanation of the differentiation of organic forms…The problem still presses on us; a great variety of suggestions are being made to solve it; it remains as yet unsolved.[30]

Yet Kellog, who recognised the need for modification of the theory, dismissed out of hand any theory with any hint of a guiding principle (which Kellog named 'mysticism'). Here, Warfield made his major complaint against Kellog and the scientific community he represented. Despite the problems with evolutionary theory, here was a prominent scientist unwilling to consider a suggestion which might solve some

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29 *Ibid*., p. 184, quoting Kellog *op. cit*., p. 5. Kellog listed numerous scientific objections to Darwinism. The main ones were: problems of variation (its origin; whether variations are large enough to give any survival advantage; and the problem of useless characteristics); the problem of inheritance (that favourable variations would be lost through interbreeding; and the necessity for several structures to develop simultaneously); that geologic time was too short; and the linear nature of fluctuation (variations seem to accumulate along certain lines; and although selection explains adaptive change it does not necessarily explain diversity into species). Darwin had had answers to most of these problems, but large parts of the biological community were not convinced. However, there was no alternative of sufficient explanatory power to take the place of natural selection. Today, some of these problems have been solved by better understanding of genetics and mutation which causes variation.

30 Warfield, *ibid*, p. 184. The 'alternative theories' canvassed by Kellog were: Lamarckian inheritance of acquired characteristics; orthogenesis, which posited some guiding principle to evolution (whether internal or environmental); and heterogenesis, which postulated large evolutionary jumps through mutations. These theories could overlap, and some evolutionists took bits of each or combinations of these with natural selection.

of the problems. Even though a 'guiding principle' could take a number of forms, none were acceptable to Kellog. This Warfield could not approve, for it constituted in his opinion a rather polemic attitude towards teleology.

> This gives the disagreeable appearance to the trend of biological speculation—we do not say of biological investigation—that it is less interested in science for science's sake, that is, in the increase of knowledge, than it is in the validation of a naturalistic world-view; that it is dominated, in a word, by philosophical conceptions, not derived from science but imposed on science from without.[31]

Warfield was not against evolution; his point was that to deny all teleology, to insist on pure accidentalism, was not only unscientific but detrimental in practice to the theory. The initial strict form of Darwinism had been thoroughly anti-teleological, he agreed, but given the explanatory problems this strictness had created, surely it was time to move beyond that. It was not as if teleology were unscientific, or failed to deal with problems of causation.

> Some lack of general philosophical acumen must be suspected when it is not fully understood that teleology is in no way inconsistent with—is rather necessarily involved in—a complete system of natural causation. Every teleological system implies a complete 'causo-mechanical' explanation as its instrument.[32]

In the meantime, it seemed that scientific thought was under the control of anti-teleological prejudice; and it did not take much acumen to suggest that this was in fact an anti-theistic prejudice.

Warfield affirmed the logical plausibility of evolution, while maintaining firmly that the version of the theory currently accepted needed to undergo change. Warfield's un-

31 *Ibid.*, p. 189.
32 *Ibid.*

derstanding of these weaknesses in the theory made him not at all embarrassed to posit a guiding principle to evolution, not just to support his biblical understanding, but in response to some of the strictly scientific problems which the theory seemed unable to overcome on a naturalistic basis. He believed evolution could have happened, as a process guided by God. At this point, Hodge would presumably have insisted that Warfield was therefore not a Darwinian. In this sense he was not, for he rejected ateleological evolution. Yet it is interesting that in this case at least, he rejected it for its scientific problems—the very problems recognised by the scientific community itself—not because of his theological belief. Indeed, it could be said that his theological position left him open to a greater range of scientific theories, for he did not have the innate prejudice against teleology that in his opinion was hampering the biological community of the time.

James Orr: sin

Finally we turn to the Scot, James Orr, who with Warfield was one of the original fundamentalists. In fact, two of his four essays for *The Fundamentals* dealt with evolutionary issues—one on the relationship between science and religion, and evolution in particular, and another on the interpretation of the early chapters of Genesis.[33] Both were favourable towards evolution; but Orr is an interesting writer for another reason. Not only did he deal with the problem of evolutionary theory in relation to the Bible, or evolutionary theory and its internal scientific problems, he also dealt with the theological problem of sin. This is an issue not so often raised in the science and religion debate. It goes beyond interpretation of the early chapters of Genesis, and even beyond the general problem of design. If evolution is true, was

33 *The Fundamentals* also contained an essay 'The passing of evolution', by George Frederick Wright, which criticised the weak points of Darwinian evolution while remaining open to evolution as a general theory. This essay also rejected the atheism with which Darwinian evolution was associated.

there ever a morally uncorrupted state and an historical fall? When and how can a biblical mankind in the image of God, morally responsible and different from animals, fit into the story of evolutionary development?

In 1910 Orr published *Sin as a Problem of Today*, in which he presented the biblical problem of sin and, amongst other external considerations, discussed the relationship of this doctrine with evolutionary theory. The doctrine of sin, he realised, was under threat. This was a serious problem; for without the doctrine of sin, the Christian doctrine of redemption through Christ is meaningless. At this point, the theologian must comment on where science is taking humanity.

> The theologian may be to blame when he rashly or dogmatically intrudes into the domain of science; on the other hand, it is not his place to be silent when the scientists make bold inroads into *his* domain, and, in the name of science, would sweep away spiritual facts which stand on their own grounds of evidence as securely as any facts of external nature. Truths in nature and truths in the spiritual world, cannot, of course, be in real collision. But this requires to be made clear against unwarrantable assertion on either side.[34]

Orr did not consider himself an expert in science, claiming "no more than the right of every intelligent mind to consider theories of science as expounded by their best representatives in the light of their own evidence."[35] He did not wish to dispute evolution, merely to plead for its being kept within its scientific limits. His firm conviction was that very little that is truly scientific conflicts with Christian beliefs about man's nature, origin and sin.

First he had to present an evaluation of the current state

34 James Orr, *Sin as a Problem of Today*, Hodder and Stoughton, London, 1910, p. 130.
35 *Ibid.*, pp. 130-31.

of evolutionary theory, and here Orr differed little from Warfield in both his appreciation and his criticisms of the theory. Evolution in some form is an old idea, Orr wrote. Hegel was an evolutionist as truly as Darwin, but the forms their evolution took were very different. Darwin gave evolution scientific precision and connected it with a theory of the "how"; namely, natural selection. Orr stated it plainly: "The *fact* of evolution is now generally accepted: the *how*, it will be found, is still much in debate."[36] Like Warfield, Orr demanded some room for doubt: "Is 'natural selection', or any purely 'causal-mechanical' theory, an adequate account of evolution?"[37]

Darwinism, wrote Orr in a now familiar strain, is firstly characterised by its naturalism. Natural selection, acting on unguided variations, under the conditions of the struggle for existence, brings about the adaptation which people formerly supposed to imply the presence of mind. Theologians (and perhaps he was here thinking of Hodge) did not misrepresent Darwin in speaking of his theory as essentially opposed to theism. Many evolutionists modify this naturalism and so desert Darwin. However, the mainstream of evolutionary thought is unfavourable to a religious interpretation of nature. Nature can work out all her results without the aid of intelligence or purpose. Teleology is eliminated, and so God becomes a superfluous hypothesis. If the universe can be explained without intelligence—and Darwinism contends that the universe can be so explained—then why postulate intelligence? Man very slowly evolved, under forces of nature, by natural selection, until by degrees he attained civilisation.

It is clear, Orr went on, that this strikes deeply at the doctrine of sin. It is not just that the theory eliminates God; but the theory itself supposes man did not 'appear' at one time, but that there was an imperceptible gradation from apes to man. The concept of an historical fall must go, under this schema; man, instead of having fallen, has 'risen'.

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36 *Ibid.*, p. 133.
37 *Ibid.*

What is more, the very idea of sin is essentially altered. Sin is no longer "the voluntary defection of a creature who had the power to remain sinless."[38] On the contrary, sin becomes "a natural necessity of man's ascent".[39] The idea of guilt vanishes, as does the idea of a lost world needing redemption. What has been called hereditary sin is merely the "yet uneliminated brute inheritance."[40]

It is no solution, Orr urged, to try to rewrite the Old Testament and excise the doctrine of sin. The doctrine is there, clearly taught. The question is, can the early chapters of Genesis be accounted for in harmony with a Darwinian view of man? Many theologians say yes, arguing that at some point the developing man gained a moral sense, and then the moral crisis—the Fall—occurred. Orr did not consider this tenable. Existence as a miserable animal ruled by instinct can hardly be conceived of as a state of purity from which we fell. It was not within Orr's conception of the image of God to allow that a 'missing-link' ape-like being "whose nature is in violent turbulence, whose life is brutish, who has not even the glimmer of a right knowledge of God"[41] could be the original man described by Scripture. Naturalism does not even allow the free will to choose between good and evil. The developing being, a brute acting on impulse, cannot be found guilty since he is merely acting according to unreasoning nature.

Evolutionary theory, then, was opposed to the biblical idea of sin as voluntary departure from God's rule. "We seem thus to be brought to an *impasse*",[42] Orr wrote with delicate emphasis. Do we reject the biblical doctrine of sin, confirmed by the experience of ages, or the doctrine of evolution, which science has almost universally accepted as the truth? "Neither alternative", Orr insists, "can be entertained." Sin is real, and although evolution has not been strictly proved, its evidence

38 *Ibid.*, p. 139.
39 *Ibid.*
40 *Ibid.*
41 *Ibid.*, p. 144.
42 *Ibid.*, p. 148.

is very strong. "The proof for some form of organic evolution, within limits, is peculiarly cogent."[43] The solution, to Orr, lay in the way in which evolution is understood.

Evolutionary theory had changed from Darwin's time to the time Orr was writing, which we have already seen to some extent in the discussion of Warfield. Strict Darwinism was no longer followed, according to Orr, who wrote of the "remarkable, sometimes revolutionary, changes which have taken place on this subject".[44] The controversy was over the capacity for natural selection *alone* to account for organic life. The sufficiency of natural selection to account for the phenomena of nature was assumed, not proved; and what is more, assumed on the grounds that only natural causation can be admitted. "Religion," Orr wryly remarked, "plainly is not the only thing which makes a demand on faith."[45]

It was not disputed, and neither did Orr dispute, that "variability, struggle for existence, natural selection, and heredity, have much to do with the process of evolution".[46] What was questioned in scientific circles was the sufficiency of these causes. Newer evolutionary thought apparently looked to internal causes, which pointed to there being direction in evolution. That is, prominent evolutionists were now writing of abrupt and discontinuous mutations, that would make evolution proceed by leaps.[47] In this case, the effect of natural selection—environmental pressures acting on minute changes—would be less prominent, and the causality of evolution would come from within. A further problem noted by contemporary evolutionists was doubt about the strength of the struggle for existence; and the insufficiency of natural selection to carry out the enormous tasks assigned to it, when

43 *Ibid.*, p. 149.
44 *Ibid.*
45 *Ibid.* p. 152.
46 *Ibid.*
47 Huxley had always preferred the idea of evolution by leaps. He thought Darwin unnecessarily hampered himself by insisting on minute variations accumulating over a vast time; the main problem being, as seen before, the need for a continual supply of new variations.

natural selection was not a creative but an eliminative agency.

Such objections could be answered, Orr realised, more or less plausibly. Yet the cumulative effect of the problems was great enough to throw severe doubt on the naturalistic and ateleological form of the theory.

> Evolutionist writers claim large rights of scepticism for themselves. They must permit some right of scepticism to others when asking them to believe that a blind force of the kind supposed is really the main explanation of the beauty and adaptation with which the world is filled.[48]

There was pressure, then, to move back to teleology. Science, as well as theology, was giving testimony to the necessity for the concept of purpose in nature.

The outcome of this review of the current state of evolutionary theory was to leave Orr more optimistic about the implications of evolution. Sin is incompatible with the strict naturalism of Darwinism; but if evolution is guided—and not necessarily slow, but proceeding with sudden mutations which introduce new factors—then the problem is changed. It may not be possible to *prove* that original man was sinless, but there is now room for such an origin. It is possible that there might have been a sudden jump to man, a new kind of being. The question becomes one, not of theory, but of evidence.

It is no objection, wrote Orr, to insist that evolution, working through natural processes, cannot be compatible with creation by God. An explanation of mechanism does not *per se* exclude God, for God could have easily worked through a mechanism: "no one supposes that man is less a creature of God because he owes his existence, mediately, to a long line of ancestors".[49] From a theistic viewpoint it did not matter whether the creative power was latent in nature, only waiting the appropriate time for its manifestation, or whether fresh

48 Orr *op. cit.*, p. 159.
49 *Ibid.*, p. 168.

drafts of creative power were infused directly and periodically. This was no antithesis to evolution. What is more, there was evidence that man did arise in a leap; "The great gulf between man and lower forms stands still unbridged."[50]

On a metaphysical note, Orr observed that a supernaturally guided evolution was necessary to account for the existence of moral activity. Naturalistic evolutionary theory assumes that the same causes which are held adequate to explain the bodily development of man also explain the higher mental powers—but is this adequate? Most writers acknowledged a difference between the rationality of man and animals, particularly in the capacity for ethics:

> Selfhood, personality, moral freedom, the supreme value of moral ends, require a spiritual basis, and mean, not simply development, but the setting up of a new order of kingdom of being in the universe.[51]

Naturalistic evolution cannot explain this. "The conclusion is that, with every wish to give evolution its fullest rights, it cannot be pronounced adequate to explain the moral and spiritual dignity of man."[52] In other words, Orr was willing to accept evolution as true, but insufficient. It could not adequately explain humanity.

Orr's conclusion, far from being a defensive rearrangement of his Christian beliefs to fit in with evolution, was a generous concession to evolution despite its inadequacies. "In fine [in conclusion], it is not to be denied that evolutionary theory, great as may be its services, leaves us with the main problems as regards origins as yet unsolved…The time has clearly not yet come for dogmatically ruling out the Christian presuppositions of a doctrine of sin."[53]

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50 *Ibid.*, p. 175.
51 *Ibid.*, p. 182.
52 *Ibid.*, p. 183.
53 *Ibid.*, p. 194.

We have seen here examples of Christian reasoning about evolution. None of their arguments prove whether or not evolution is true, and individuals may be more or less convinced by any particular argument. Since then, further discoveries have been added to the scientific repertoire, such as a better understanding of genetics and the possibility of mutation.[54] At the same time, some of the criticisms these men made of evolution are still valid; for instance, the question of whether it proceeded by gradual change or sudden jumps remains, as many aspects of the fossil record appear better explained by the sudden appearance of new forms.[55]

Yet the particular arguments here advanced for or against evolution are not the point. The point is that these intelligent critiques of evolutionary theory, which take its scientific value seriously, are astonishing given modern caricatures of fundamentalism. Historically it is not true that fundamentalist Christianity, as that which is most committed to integrity and honest acceptance of the Bible, is necessarily anti-science. It is not true that the original fundamentalists were anti-intellectual, blinkered dogmatists. Neither is it true that evolution is proved beyond doubt and beyond question, or is in a fixed and final form. The evolutionary debate could do with a strong infusion of open-mindedness, honest acknowledgment of uncertainty, and preparedness to change ill-conceived prejudices. Hodge, Warfield and Orr were able to examine the question openly and present their point of view in such a spirit.

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54 See David J. Depew and Bruce H. Weber, *Darwinism Evolving: Systems Dynamics and the Genealogy of Natural Selection*, MIT Press, Cambridge, Mass., 1995.

55 For a modern defence of evolutionary theory, see D. R. Selkirk and F. J. Burrows (eds), *Confronting Creationism: Defending Darwin*, The New South Wales University Press, Kensington, 1987; Stephen Jay Gould has written numerous general essays, a good starting point being his *Ever Since Darwin: Reflections in Natural History*, Penguin Books, Harmondsworth, 1977. Modern critiques of the theory are found in Michael Denton, *Evolution: A Theory in Crisis*, Adler and Adler, Bethesda, 1985; and Phillip E. Johnson, *Darwin on Trial*, Intervarsity Press, Downers Grove, 1993.

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reviews

An Experiment in Imagination

Bruce Russell

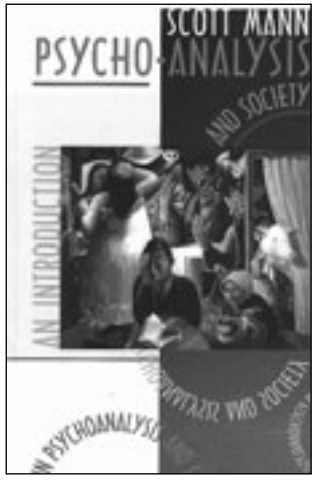
Psychoanalysis and Society
Scott Mann
UNSW Press,
Sydney, 1994

Psychoanalysis holds a strange fascination for many people. Alfred Hitchcock was certainly intrigued, basing a major film on it (*Spellbound*) in which he describes what psychoanalysis is:

> Our story deals with psychoanalysis, the method by which modern science treats the emotional problems of the sane. The analyst seeks only to induce the patient to talk about his hidden problems, to open the locked doors of his mind. Once the complexes that have been disturbing the patient are uncovered and interpreted, the illness and confusion disappear…and the devils of unreason are driven from the human soul.

The popular appeal of the movie, of course, had a lot to do with Hitchcock's unique touch—for one thing, in employing Salvador Dali to design Gregory Peck's bizarre and telling 'dream'. But there's more to it than that. Some strands in psychology—for instance, behaviourist B. F. Skinner's work—would inspire a comparatively feeble screenplay. Psychoanalysis, however, has a certain mystique that fires the imagination, and gets families analysing dreams together over the breakfast table.

Yet psychoanalysis, having begun as a clinical method for treating 'the problems of the sane', is commonly employed now to examine broader, social and historical issues. Of late we have seen both a move in mainstream psychology to distance itself from psychoanalysis (embracing instead the experimental cognitive paradigm), and a move within social criticism, for instance in sections of the feminist school, to anchor social theory in the psychoanalytic framework.



Psychoanalysis and Society tackles this question of how psychoanalysis is useful in discussions about society. The book is designed for use as a university text, and has two basic aims: to give an introduction to the basic concepts of psychoanalytic theory; and to show that, "when appropriately combined and integrated with other social explanatory theories, [psychoanalysis] has much to contribute to our understanding of human society and history" (p. 6).

The first half of the book is devoted to outlining the basic tenets of psychoanalytic theory. It is recognized from the outset of the book that there has always been a diversity of opinions on almost every topic in psychoanalytic theory. So Mann focuses on themes and ideas he considers common to all psychoanalytic schools (p. 5).

In the first section, Mann gives an introduction to probably the centre-piece of psychoanalytic theory, the unconscious. In the second section, 'Psychosexual Development and Personality', we see more of the work subsequent to Freud, in particular the work of Melanie Klein and Alice Miller. The aim is to show here that the findings of Miller and others exploring the psychological side of sexual and physical abuse of children bear important relationships with psychoanalytic theory.

Mann's scope broadens in the third section. Like Freud, Mann sets out to demonstrate how the analysis of individual psychopathology has profound implications for understanding social life. For Freud, that involved explaining the origins of society and religion, oppression and war. Mann devotes his third section to the examination of the

origins of patriarchy, the state and Christianity.

In all of this, Mann's objective is to write a textbook that will be helpful by virtue of its exposition, clarification and application combined with up-to-dateness, accessibility and relevance. Yet he also wants to interest the 'specialist' with integration of ideas from different specialities and novel suggestions about social and historical explanation.

Reviewing this book has its peculiar problems, because its scope is so wide-ranging. It tries to both delimit and diversify, to expound and explore. That project is as interesting as it is challenging. But in my view, Mann's attempt is a great disappointment, and an intellectual let-down.

Cognition and Psychoanalysis

To begin with, Mann's exposition of 'the unconscious' seems to suffer from a lack of integration and interdisciplinary awareness in just those areas it most requires it.

To understand 'the unconscious' we need to recognize a key distinction in Freud's thinking: the preconscious and the unconscious. The preconscious refers to those mental processes which actually are not consciously conceived, but are 'rational', for example, throwing a ball accurately (presumably in order to hit a target). These activities are not unconscious, but preconscious—while we do them without thinking, it is possible to figure out, by introspection and deliberation, why we do them.

The unconscious, by contrast, is not accessible in the same way. Unconscious mental states are thoughts and feelings which were once conscious but which have been purposely forgotten, or shut out. Nevertheless, these mental states, although not conscious, can still influence our behaviour. Indeed, according to Freud, these essentially irrational mental states are primary—they are the fundamental, primitive processes both in the history of the individual, and the human species as a whole.

This distinction, however, between rational and irrational non-conscious processes is questionable in the light of experimental psychology. Mann does point out that Freud's idea of the unconscious excludes those 'automatic' processes, like bodily movement, which are 'rational' but not conscious (p. 17). But just what do you say about these automatic processes in psychoanalytic theory?

The fact is, Mann is caught between a rock and a hard place here. On the one hand, many automatic processes are logical and rational, so cannot be included in the unconscious—for example, Hasher and Zacks have argued that in certain circumstances, people natu-

rally and automatically encode 'relative frequency information', (how often a certain event happens).[1] Processing this information is not at all enhanced by additional conscious effort. What is more, sometimes our automatic processes function more logically than our conscious, controlled processes. Tversky and Kahneman's work over a decade points to the fact that people by and large make decisions heuristically (by some general rule of thumb), and often consciously choose to go against the dictates of logic and probability.[2]

On the other hand, the suggestion that automatic processes are therefore preconscious is countered by other research findings. Nisbett and Wilson strongly challenge the assumption that we have access to the higher cognitive processes determining our thoughts and actions. People don't appear to have privileged introspective access to the actual cognitive processes at work in their decision making, and very often simply invent an explanation for why they made a certain choice.[3]

It is for reasons like these that the psychoanalytic scheme of the unconscious has faced serious questioning from psychologists, notably H. J. Eysenck,[4] and philosophers, such as Karl Popper and Thomas Kuhn.

Our criticism here is that Mann's claim to integration and up-to-dateness is only true within his selected paradigm. Psychological research suggests the theory of the unconscious distilled by Mann has problems, and in fact is a theory supported more by 'prophecy after the event' (retrodiction) than by genuinely scientific enquiry.

Indeed, the origins of psychoanalytic theory make for interesting consideration. According to psychoanalysis, in the individual and the human species, irrational primary processes are dominant and original. One would expect then that the theory of psychoanalysis itself could be explained in terms of irrational processes. Quite the contrary; Mann asks:

> …the question is…'what originally motivated the formulation of the theory? What was observed that could best be explained as an effect of an unconscious mind?' (p. 19).

Here the motivation of the theory is a question of observation and explana-

1 L. Hasher and R.T. Zacks, 'Automatic processing of fundamental information', *American Psychologist*, 1984, *39*, 1372-1388.

2 For example D. Kahneman, P. Slovic, and A. Tversky (eds) *Judgements under Uncertainty: Heuristics and Biases*, Cambridge University Press, Cambridge, 1982.

3 R.E. Nisbett and T.D. Wilson, 'Telling More than we can Know: Verbal Reports on Mental Processes', *Psychological Review*, 1977, *84*, 231-259.

4 H. Eysenck, *The Experimental Study of Freudian Theories*, Methuen and Co., London, 1973.

tion and effects. But one wonders why psychoanalytic defenders resort to rational defense. It would serve the cause of mental health better if the primary, unconscious and irrational basis for the theory were communicated, allowing all of us to be honest about the primitive creature within.

The philosophical backdrop to this theory is a progressive evolutionism. The claim that irrationality lies at the origin of our species history, as well as our individual development, betrays an historicist perspective—now intellectually out-of-date—that labels the past as primitive and underdeveloped. Indeed, Freudian explanations of religion as projection of a father-figure, like Marx's and Hume's alternative explanations, are classic examples of enlightenment reductionism and modernist elitism.[5]

This is an inauspicious opening to the book—unflagged philosophical assumptions and unaddressed challenges from psychologists render this attempt at exposition and clarification in desperate need of justification.

The Origins of Christianity

By far the greatest weakness of the book is Mann's account of the origins of Christianity. Mann begins his examination with the problem of evil—how could a good and all-powerful God allow the incredible misery, poverty, cruelty, exploitation, inequality and brutality of human life? Straw man depictions of two solutions—the mystery of God's will, and the free-will defense—are dismissed as things which, "needless to say…have seldom proved entirely convincing to the non-believer".[6] The question thus arises of "just what psychological mechanisms allow or encourage faith in such a being" (p. 214). Thence follows a string of reductionist threads in a loom that depicts the Old Testament world of "half-mad prophets whose dissociated states entail possession by…a violently aggressive (sky) father-god", and urges on us the Freudian theme of Christian belief as a product of unconscious processes due to childhood abuse.

This onslaught only serves to prepare us for the main event—psychoanalysing the life and work of Jesus himself.

5 Certainly the theory of emergent rationality is plausible, but there is no apparent reason for us to assume that in our evolution as a species, rationality emerged suddenly and in complete separation from irrationality.

6 Mann's crucial word 'entirely' demands a lot from an explanation—an argument that produces 'entire conviction' about life's deep mysteries is quite a request.

We now consider Mann's case, and his evidences. Mann's claim is that Jesus suffered abuse as the illegitimate child of a prostitute, and reacted against the brutal Judaistic religion of the violent Father-God and Solomonic child beating. Jesus' achievement was "the humanisation of God", projecting a father-God who was loving. In the process, this projection of a liberating father transferred into homosexual desire. Jesus' message of the kingdom was a message of hypnotic dissociation—hypnotic suggestion was his method of healing in a context where there was "an epidemic of psychosomatic illness". Thus Christians misconstrue Jesus—instead of humanising God and morality, they divinise Jesus to reinforce "neurotic guilt" and the illusion of perfection, an interpretation of the Christian message fostered by early abuse.

Mann is deliberately undertaking speculative reconstruction, but he needs evidence. Not only is the evidence he presents eccentric and often unduly speculative,[7] but the quality of his sources is dubious, to say the least. His account uses ideas taken mainly from Ian Wilson, J. Carmichael, R. Eisenmann and Bishop Spong. The only two of these for whom Mann offers references are authors who selectively review the secondary literature and do no original historical work. Mann's evidence is hardly reliable—second and often third hand information, from authors whose conclusions suit him.[8]

Of special concern is Mann's dependence on two scholars: Ian Wilson and Morton Smith. Wilson begins his book *Jesus: the Evidence* by signalling his distaste for the Nicene Creed, especially for the two-natures of Christ—divine and human. His book is a quest for the real, Jewish Jesus, to free Jesus from the misconstruction even the great Luther helped perpetrate. According to Wilson:

> In an age less fettered by dogma, we are…enlightened beneficiaries. Our knowledge of the life and times of Jesus has also been immensely enriched by recent discoveries from…chance manuscript discoveries…and, not least, from a greater understanding of human psychology (p. 11).

Wilson claims to make an "honest and fair-minded" attempt to investigate Je-

7 For example, Mann accepts Wilson's claim that "radical contradictions (and mythological elements) in the gospel acounts" mean we can dispute the idea that Jesus' parents thought him something special, and then claims that "given the unlikelihood of Jesus completely escaping the effects of the prevalent brutalised and brutalising ideology of child rearing *there are other possibilities to consider*" (p. 230, my italics). Having hinted at the suggestion that Jesus was abused, Mann later takes it to be a valid historical possibility.

8 Mann does not provide references for Carmichael, Eisenmann or the much-mentioned Smith; these he cites from Wilson.

sus, but begins by begging his own question. Jesus cannot be God, so Wilson fair-mindedly and unfettered by dogma embarks to find out—surprise, surprise!—that Jesus was a man.

Interestingly, Wilson shares with Mann the same enlightenment disdain of the past.[9] His confidence in human reason, however, leads to rather an anti-climax. The so-called "great advances of psychology" are nothing but hypnotism—and badly applied, at that. Hypnotism apparently explains Jesus' resurrection—his appearances to people were illusory symptoms of post-hypnotic suggestion. The water that Jesus turned into wine is easily explained—the guests were already drunk, and so "highly hypnotically suggestible".

Wilson's research is selective and biased, and frankly very poor.[10] Arius is misrepresented; Jesus is 'interested in nudity'—at least, maybe that's what the reference in 1 Colossians [sic] to 'completely stripping' means. Wilson's authorities (many of whom Mann absorbs) are described by one reviewer as "some of the least reliable and even zaniest writers in the field of religious studies".[11]

This book, deemed excellent by Mann (p. 219), is somewhat differently assessed by Omanson:

> This book is too eccentric to be recommended for serious study. The book does, however, contain many excellent black and white photos of contemporary scholars…[12]

Mann's other scholarly hero is Morton Smith. Smith reports finding a copy of a unique document purporting to be written by Clement, alluding to a secret edition of Mark's gospel. This document is only known of by this one find, and (i) it was copied out in the eighteenth century into the back of a book, and (ii) nobody else has seen this book; all we have are Smith's photos of the text. Nevertheless, quite a few scholars regard the text as authentically Clement. What is not established is the subject of the document, namely, its allusion to a secret text by Mark. Clement might have been duped by a fake. Even if it was by Mark, its date is not thought likely to be earlier than the canonical Mark.[13]

This single and dubious document, Smith implies (by much nudg-

9 Wink and Forster both mention his rationalism: P. Forster, 'Ian Wilson, *Jesus: the Evidence*', *Scottish Journal of Theology*, 1986, *39*, 126-128.

10 C. Tuckett, '"Jesus: the Evidence," Ian Wilson', *Theology*, 1985, *88*, 53-54.

11 W. Wink, 'Ian Wilson, *Jesus the Evidence*', *Quarterly Review*, 1987, *7*, 103-108.

12 R. L. Omanson, '*Jesus the Evidence* by Ian Wilson', *Review and Expositor*, 1985, *82*, 610-611.

13 See B. Witherington, *The Jesus Quest*, IVP, Downers Grove, 1995, pp. 80-81.

ing and winking), is evidence for Jesus' homosexuality. Smith believes Jesus was a schizophrenic magician, and by hypnotism and homosexual initiation rites conferred this 'spirit' on his disciples, who shared it around their community by a process of 'psychological contagion'—whatever that is.[14]

A look at reviewers suggests Smith is perhaps even more dubious than Wilson—his arguments are also "awash with speculation",[15] and deal arbitrarily and selectively with texts and authorities—Smith thinks the 2nd Century Carpocratians are more reliable witnesses than the New Testament texts, "even when their views must be speculatively reconstrued".[16] Smith's work is "pockmarked with irresponsible inferences".[17] James Reese argues that Smith at times "projects his own interpretations", and "pressures readers less well-informed than himself to accept a Jesus created in his image and likeness".[18] And after all that, the interpretation that Jesus spent a night with Lazarus homosexually teaching him 'the mystery of the kingdom' is not even accepted by Wilson.

Smith's characterisation of first century life is remarkably cavalier in two key aspects. Firstly, he argues strongly for Jesus' identity as a shaman or magician—this helps his cause, since shamans have a history of initiation rites involving homosexual practice. But the evidence of the first century suggests that mystery religions, dominated by Greek influences, were far more prominent, and that agrarian symbols of death and rising characterised their secret practices—not the kind of 'welcome to manhood' ceremonies Smith envisages.[19] Even then, the evidence of the New Testament documents places Jesus squarely in the Jewish rabbinical tradition, and not the mystery religions. Smith refuses to grant these documents any value, but the fact is that their historical reliability must be considerably understated in order to rule their evidence out of court.[20]

Secondly, Jesus is said to be schizophrenic—a 'spirit' that comes on him

14 M. Smith, *The Secret Gospel*, Harper and Row, London, 1973, pp. 117,119.
15 P. J. Achtemeier, '*Clement of Alexandria and a Secret Gospel of Mark* and *The Secret Gospel,* by Morton Smith', *Journal of Biblical Literature*, 1974, *93*, 625-628, p. 626.
16 *Ibid.*, p. 627.
17 R. J. Sider, 'Unfounded Secret', *Christianity Today*, 1973, *18*, p. 26.
18 J. M. Reese, 'Morton Smith, *Clement of Alexandria and a Secret Gospel of Mark* and *The Secret Gospel, The Catholic Biblical Quarterly,* 1974, *36*, pp. 434-435.
19 See for example K. Rudolph, 'Mystery religions', *Encyclopaedia of Religion*, M. Eliade (ed.), Macmillan, New York, 1987, Vol. 10.
20 See Witherington; also Achtemeier, *op. cit*.

when John baptised him. This schizophrenia is apparently spread around as (i) Jesus shares the 'spirit' with his disciples by hypnosis; and (ii) the disciples also adopt hypnotism to spread the mystery of the kingdom by 'psychological infection'.

This claim that a schizophreniform disease was shared around by hypnosis is profoundly ridiculous both in terms of the nature of schizophrenia and of hypnosis. Distinguishing schizophrenia from several other possibilities is often very difficult when you have a patient right in front of you. The fact that Smith, without psychological or medical training, diagnoses Jesus at a distance of two millenia is either deeply impressive, or off the wall, depending on whether or not you want to discredit Christianity. In fact, Smith betrays a popular, and inaccurate, concept of schizophrenia. Similarly, his notion of hypnosis seems to be along the lines of swinging fob-watches, intense gazing and 'you are getting sleeeeepy'.

Most bizarre of all is that this is the kind of work which Wilson brandishes as the triumph of modern man; while Mann seems to try to launder Smith's eccentricities through Wilson's comfortable reasonableness.

Conclusion

Mann, Smith and Wilson all share a common methodology. Mann prefers to call it "thought-experiment", or "experiment in the imagination" (p. 155). Achtemeier calls it "the 'one master stroke' school of the solution of historical problems"—perhaps we could call it the magic eye method. Collect some body of evidence (which you know will work for you), and stare at it with your eyes appropriately adjusted until you see the pattern emerging. This method apparently generates 'hypotheses' and not final results, but that does not stop them using phrases like "once I had got at the secret of Jesus' magical practice…"[21] The method would be as laughable as Omanson found it if it weren't so intellectually destructive.

Mann's work vandalises serious research into psychosexual trauma and child abuse. I could not read the second section seriously, given the quality of Mann's scholarship. But the subject of psychological management of abuse cases is far too serious and important to be thrown out with Mann's grubby bathwater. Mann's book, read intelligently by students, has the potential to do this area immeasurable harm, in a kind of guilt by association.

21 Smith, *op. cit.,* p. 115.

Read unintelligently by students, the book can wreak alternative forms of havoc. It models a method of special pleading with the glamour of postmodern freedom of thought and speech. Comfortable in its own reconstruction, there is no attempt to see Jesus from the alternative perspective of the New Testament, or to ground speculation in the context of serious history. It makes no claim to be final truth; but it appears Mann has little interest in what that final truth really might be, and is happy for his students to share this rather spurious academic approach.

Finally, it perpetuates the kind of intellectual double standard which demands "entirely convincing" proof from defenders of the Christian world view, but accepts what can only be called loopy speculation from anyone who wants to discredit it. In the case of this book, it excludes, *a priori*, any evidence which appears in favour of Christianity, and embraces even nonsense that works the other way, in a type of intellectual jelly wrestling.

Pascal's warning is an apt one:

> According to the doctrine of chance, you ought to put yourself to the trouble of searching for the truth; for if you die without worshipping the True Cause, you are lost.—"But," you say, "if He had wished me to worship him, He would have left me signs of His will."—He has done so; but you neglect them. Seek them, therefore; it is well worth it."[22]

Christianity makes claims which are too important to ignore, and too well attested to reject out of hand. Treating them with this kind of disdain and mockery, question begging and special pleading, is not only an academic embarrassment, but is, in the ultimate scheme of things, unnaturally reckless.

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22 Blaise Pascal, *Pensees*, London; J.M. Dent and Sons Ltd, 1932, p. 236.

kategoria 1996 *number 2* pp. 64-68

Nothing but blind, pitiless indifference

Peter J. Cook

In 1995 Microsoft's chief architect, Charles Simonyi, donated $2 million to fund a professorship in the public understanding of science at Oxford University. He specified that Richard Dawkins—previously a reader in the Department of Zoology at Oxford—be appointed to the tenured position.[1] *River out of Eden* is published in the Science Masters series; "a new international series in which leading scientists describe the current state of knowledge in their subject…aimed at the educated but non-specialist reader" (back cover). The book aims to explain how evolution works. It is a short introductory book so it does not contain a detailed presentation of the evidence, but presents clearly some of the basic ideas contained within the theory of evolution. It is also a persuasive argument meant to assure the reader of the truth of evolution. Here Dawkins proposes to demonstrate that science, and science alone, answers the question of why we exist.

River Out of Eden
Richard Dawkins
Weidenfeld and Nicolson,
London, 1995

This review is not concerned with whether or not evolution has occurred as Dawkins describes it.[2] What I wish to criticise is Dawkins' philosophical

1 Jocelyn Kaiser, 'Professor of Popular Science', *Science*, 1995, *269*, p. 637.

conclusions. He confidently asserts that atheism is true and that this is based on a scientific understanding of the world. Dawkins ridicules religion and is scathing about the credulity of religious believers as well as the naivety of their arguments. With such dismissive claims presented, it is appropriate that Dawkins' own metaphysics be subject to some critical review.

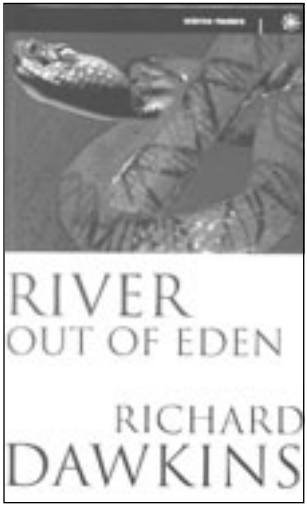
First of all, although Dawkins dismisses religion, many of his comments suggest a rather superficial understanding of the issues. For example, he writes at one point "Science shares with religion the claim that it answers deep questions about origins, the nature of life and the cosmos. But there the resemblance ends. Scientific beliefs are supported by evidence, and they get results. Myths and faiths are not and do not" (p. 33). This is simply false. There *is* evidence that Christianity is true. Countless books have been written on the subject. Dawkins' own university has Professor of the Philosophy of the Christian Religion, Richard Swinburne, who has published extensively on the evidence for the truth of Christianity. Swinburne has an excellent understanding of science and the evaluation of evidence, and his work is widely respected.[3]

Secondly, Dawkins claims to defeat Christianity, or theism in general, by refuting the teleological argument (the argument from design). One version of the teleological argument is that complex living organisms are evidence of an intelligent designer. This argument is refuted if evolution occurred as described by Dawkins, and he presents the case well. However, most modern defences of Christianity have already conceded this argument. He also disregards the fact that there are many reasons for thinking God exists apart from the existence of complex living organisms.

Dawkins' other significant argument is a version of the problem of evil. He examines the biological world, asking if it is reasonable to think of it as the creation of a loving God. His conclusion is that it is not, because of the existence of death and suffering. Dawkins also presents his alternative explanation; that the biological world is actually best understood as a place where the only aim—an unthinking,

2 For a rational criticism of the evidence for evolution see Phillip Johnson, *Darwin on Trial*, IVP, Illinois, 1993.

3 For a presentation of some of the evidence for the truth of Christianity see for example, Richard Swinburne *The Existence of God*, Clarendon Press, Oxford, 1991; F. F. Bruce, *The New Testament Documents: Are they Reliable?* IVP, Leicester, England, 1987; and Paul Barnett, *The Truth About Jesus*, Aquila, Sydney, 1994.



non-conscious one—is the survival of DNA. Here Dawkins uses a few terms that need explaining. He speaks of 'reverse engineering'—the attempt to work out what purpose an artefact is designed to achieve. If we reverse engineer a knife, we would work out from its sharp blade that it is meant to cut things. In this way, we find out what the 'utility function' of an object is—that is, the function which is given greatest priority, the activity which best describes what the object is 'for'. The utility function of a knife would be cutting.

Dawkins claims that if we reverse engineer living organisms, the utility function of life is DNA survival. In other words, all of what happens in the biological realm can be explained as maximising the survival of DNA. "The great universal utility function, the quantity that is being diligently maximised in every cranny of the living world is, in every case, the survival of the DNA responsible for the feature you are trying to explain" (p. 120).

This process inevitably leads to competition and suffering. The implication is that a loving, all-powerful God would not create animals with this utility function. He concludes

> The universe we observe has precisely the properties we should expect if there is at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference. As that unhappy poet A. E. Housman put it: For Nature, heartless, witless Nature will neither know nor care. DNA neither knows nor cares, DNA just is, And we dance to its music (p. 133).

That "the universe" has "precisely" these properties is a rather bold metaphysical claim that is not justified by the preceding discussion. All Dawkins has argued is that evolution explains the development of complex life from simple replicating structures. However, this is all he explains. There is a lot more to the universe than just complex life. It is worth pointing out that Professor Paul Davies, a physicist and not a Christian, has come to a completely different conclusion about "the universe". He concludes his book *The Mind of God* with:

> Through conscious beings the universe has generated self-awareness. This can be no trivial detail, no minor by-product of mindless, purposeless forces. We are truly meant to be here.[4]

A defendable conclusion which Dawkins could have made from his argument is that the biological realm has the properties concordant with no design, no purpose, no evil and no good. The argument would then be: the suffering of living organisms can be better explained by atheistic evolution than by theism.

The problem of evil is relevant to Christianity and this is a good version of the argument. It is a complex issue which cannot be adequately addressed in a brief review. However, it is not as if Christianity has never proposed answers. The issue has been discussed extensively in philosophical and theological literature.[5] We can offer speculations as to why God might have created the world in this way, and ultimately we don't know; but even if the suffering of animals appears more consistent with atheism than theism, this is only one small part of the relevant evidence. It is still rational to think God exists, because overall the arguments for theism are more compelling than those against. Moreover, this is metaphysics, not science. The impression given by *River out of Eden* is that it is a compelling scientific justification of atheism. Dawkins' only acknowledgment of the existence of challenges to this argument is "Theologians worry away at the 'problem of evil' and a related 'problem of suffering'" (p. 132) with a quotation from the *Sunday Telegraph* newspaper.

Another criticism of Dawkins' book arises from his general treatment of the basic explanation for our existence. Two questions science does not have answers to are: "why does the universe exist?" and "why are the most fundamental laws of nature as they are?" In this sense, science does not have a complete explanation of why we exist. Dawkins has another attempt at metaphysics which is rather unclear but seems to be trying to address this issue. He says "…the same temptation [asking 'why?'] is often positively relished when the topic is the origin of all things or the fundamental laws of physics, culminating in the vacuous existential question 'why is there something rather than nothing?'" (p. 97). His argument seems to be as follows: people see an object or process and like to ask

4 Paul Davies, *The Mind of God*, Simon and Schuster, New York, 1992, p. 232.

5 Swinburne discusses the suffering associated with evolution in *The Existence of God*, pp. 209-210. Most general books on the philosophy of religion will have a chapter on the problem of evil. Alternatively, see C. S. Lewis, *The Problem of Pain*, Collins Fount Paperbacks, Glasgow, 1983 (first published 1940) or D. A. Carson, *How Long O Lord?*, Baker Book House, Michigan, 1992.

"the 'why' question—the 'what is it for' question" (p. 96); but just because we can ask this question, does not mean we can necessarily find an answer. This is true but trivial. Of course we can't *necessarily* find an answer but we *might* be able to, so it is at least appropriate to look at the evidence and see what it suggests. Dawkins seems to be saying here not only that we do not know ultimately why we exist, but that we shouldn't even ask the question.

What Dawkins writes about evolution as a theory is rational and fairly convincing. However, even if we accept that evolution occurred as described by Dawkins, his assertions about religion are not justified. Firstly, the refutation of the teleological argument combined with the problem of evil is not a compelling case for atheism. Dawkins does not even acknowledge the existence of most of the evidence relevant to this issue. Secondly, atheism is not an item of scientific knowledge.

It can be helpful to have people crossing the boundaries between philosophy and science. They should, however, gain a reasonable understanding of the current state of knowledge in the discipline in which they are not trained before making firm conclusions. When the professor for the public understanding of science writes a popular book on evolution in a series "in which leading scientists describe the current state of knowledge in their subject", the layman should not be given a poorly argued case for atheism presented as if it were science.

This book will probably help to maintain the myth that science and Christianity are incompatible. I repeat Dawkins' conclusion: "the universe we observe has precisely the properties we should expect if there is at bottom, no design, no purpose, no evil and no good, nothing but blind pitiless indifference" (p. 133). Modern science is a great achievement of humanity. It is an unnecessary pity that it is widely perceived to support atheism. In achieving this, the atheists have won a significant victory in the ideological debate. It is worth challenging. If Christianity is not to become even further marginalised in our society it is important Christians understand science and give a rational account of those places where science and Christianity interact. To the extent that both science and Christianity give a true account of reality, there will be no conflict between them.

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The science of a creation myth

Shane Ahyong

Darwin on Trial
Phillip E. Johnson
Intervarsity Press,
Downers Grove,
1993

It is refreshing to read a critique that attempts to deal with Darwinism on its own terms.[1] Philip Johnson, Professor of Law at the University of California, Berkeley, displays a wide knowledge of the popular and semi-popular literature dealing with Darwinism. Being a professor of law, not of science, Johnson is able to draw attention to the rhetoric of evolution: "the ways that words are used in arguments" (p. 8). His thesis emerges from his opening chapter, in which he discusses the famous Scopes 'Monkey Trial' during the 1920s (when the right to teach evolution in Tennesee classrooms was contested). This raised issues of what is science, what is religion, and who gets to decide. "As a legal scholar, one point that attracted my attention in the Supreme Court case was the way terms like 'science' and 'religion' are used to imply conclusions that judges and educators might be unwilling to state explicitly" (p. 7). This tension between what is empirical science and what is effectively naturalistic religion forms a subtext to the entire book.

1 This second edition of *Darwin on Trial* differs from the first principally in a final chapter where Johnson responds to critics of the first edition. In particular, Stephen Jay Gould wrote a lengthy critique in *Scientific American*, which Johnson replies to; the editors of *Scientific American* refused to print his response or letters from readers.

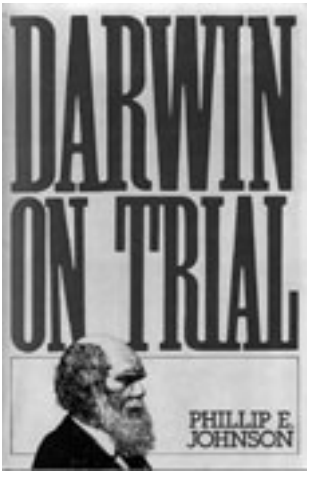
When Charles Darwin published *The Origin of Species* in 1859, he was the first to propose a theory of biological evolution that included a supporting mechanism—a fully *naturalistic* mechanism—in natural selection. Thus Darwin had both an overarching theory and a mechanism to explain the origins of the diversity of life. This century, the discovery of the structure of DNA revolutionised our understanding of genetics. Out of the merging of genetics and Darwin's theory came what is now known as Neo-Darwinism or the Synthetic Theory of Evolution. Ernst Mayr, Theodosius Dobzhansky and Richard Dawkins are well known proponents of Neo-Darwinism. In the western world, Darwinism was initially met with much opposition, but today is almost universally accepted as the explanation for the origins of life. To many Christians, Darwinism[2] is particularly controversial because it deals directly with origins.

Darwin on Trial may be broadly divided into two parts. The first half of the book deals with scientific issues concerned directly with evolutionary theory—natural selection, mutation, fossils and so forth. Here, Johnson attempts to debunk Darwinism systematically using scientific evidence. The second half of the book—and I believe this is where the strength of *Darwin on Trial* lies—deals with broader issues of scientific method, philosophy of science and how it relates to theism.

After more than a century, scientific evidence for Darwinism is lacking, Johnson claims. Whatever its logical plausibility, Johnson considers that natural selection simply has not been demonstrated to have the 'creative' power sufficient to account for macroevolution. Proponents of Darwinism nevertheless invoke natural selection to explain biological evolution. Contradictory or anomalous data are explained by *ad hoc* hypotheses. This is the main point of contention that Johnson has with evolutionary theory; that it is promoted with a certainty that far outweighs its evidence. Evolutionary theory has moved beyond falsification, according to Johnson, and has become the modern creation myth.

In other words, Johnson wishes to demonstrate that conclusions claimed to be empirical science are in fact assumptions of naturalistic philosophy. Much of the institutional opposition to six-day creation or other non-materialis-

2 Evolutionary theory is by no means limited to Neo-Darwinism. Characteristic of Neo-Darwinism is its reliance on natural selection acting on point mutations as the principal mechanism during evolutionary change. Neo-Darwinism is the dominant model and this is what Johnson is principally addressing when he refers to Darwinism, as I do in this review.



tic explanations (regardless of how valid or otherwise they may seem) is not the product of concern for truth, but is based on projecting "science as the only reliable source of knowledge" (p. 134). For instance, scientific naturalism tells us that life is without purpose. The mechanism of Darwinism, however, like any scientific hypothesis, obviously cannot make pronouncements on purpose. Yet "continual efforts to base a religion or ethical system upon evolution are not an aberration, and practically all the most prominent Darwinist writers have tried their hand at it. Darwinist evolution is an imaginative story about who we are and where we come from, which is to say it is a creation myth" (p. 133). For many, Darwinism frames their lives and shapes their world view—it is their religion. Darwinism, so conceived, is undoubtedly unscientific. This religious side of Darwinism, however, presents an attractive alternative to those who wish to ignore God—not because it offers anything superior, but because it allows them to continue in their rejection of God. Johnson does well to expose the fierce anti-theism that stands behind many proponents of Darwinism.

I would insert a word of caution here. As many biologists would be quick to point out, this is not reason enough to conclude that Darwinian evolution is necessarily unscientific. Although it is true that for many evolutionary biologists Darwinism is like a religion, we can still distinguish between the science and religion of Darwinism. Natural selection, genetic mutation and overproduction of offspring with differential survival are key aspects of the current theory, and these assumptions are testable. Either natural selection operates or it doesn't; either genetic mutation occurs or it doesn't. Of course it is impossible to revisit the past, and evolution in our history cannot be observed directly. Nevertheless, hypotheses can be proposed to explain the past based on processes that can be observed in the present. Criteria for rejecting historical theories, then, can come from their consistency and predictive ability.

Johnson's point is that science can become a kind of dogmatism when these scientific criteria are overstepped.

Even if natural selection, genetic mutation and overproduction of offspring occur, this does not prove that entire new species can evolve from an existing species; but evidence for microevolution is cited as if it proves macroevolution (pp. 68-69). Moreover, at the points at which macroevolution could be disproved—such as whether transitional forms are found in the fossil record—the theory is still insisted upon as true, and the problems with the fossil record explained away (p. 155). In practise, then, the theory is treated by many as more like dogma than a testable hypothesis. This happens, Johnson thinks, because there is at the moment no alternative hypothesis which does not have religious overtones—and so no alternative is acceptable.

Good science will not claim Darwinism to be unquestionable fact. If we had a theory that could explain all biological variation and predict all future outcomes, we would still only have a theory. We still could not be certain of what occurred in the past. While I have reservations about Johnson's implication that biological evolution is *necessarily* unfalsifiable, unscientific, and anti-theistic, I do agree with Johnson that we know much less about evolution than is usually claimed.

These comments aside, *Darwin on Trial* makes worthwhile reading. The desire for intellectual rigour underscores Johnson's text. His discussion of how empirical science and philosophical naturalism can unfortunately be associated is valuable, especially as discussed from a theistic viewpoint. Empirical science is a vast source of knowledge, but of course, it is not our only source. So long as we understand the limits of science, we should fear no conflict with revelation.

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Why are our universities failing?

Greg Clarke

The amalgamation of Australian universities and colleges in the late 1980s was the brainchild of the aggressive former Education Minister, John Dawkins. In a remarkably short time, Dawkins reduced the number of higher education institutions from 76 to 37, doubled the number of student enrolments and told the new university conglomerates to raise their own money. Education was thus linked with the business world, along with more formal connections, such as the newly created Department of Education, Employment and Training. A coalition government now seems poised to take the program of rationalization even further.

Not all have been happy with the new turn that higher education in Australia has taken. Ever since Dawkins' White Paper[1], the outcry has been heard that this economic rationalising of education undermines the idea of the university. Universities are places where people learn to think, to value knowledge and to enquire into the world and themselves, some educa-

The Soul of the American University: From Protestant Establishment to Established Nonbelief
George M. Marsden
Oxford University Press, Oxford, 1994

1 J.S. Dawkins, *Higher Education: A Policy Statement*, Canberra, Australian Government Publishing, 1988.

tors have retorted.[2] They are not degree factories on the way to the job queue. Dawkins disagreed, and convinced (coerced?) many Australian educators to side with him. Says one vice-chancellor: "It would be nice to sit in the senior common room of a Friday evening, having a drink, eating nuts and discussing the philosophy of commerce on campus, but we have to get out and earn a crust".[3] Says another vice-chancellor, Professor Gavin Brown, newly-appointed to the University of Sydney: "That is like training Buddhist monks to mug passing travellers."[4] Now that unis have to earn their crust, the higher ideals are taking a low priority.

Australians Geoffrey Maslen and Luke Slattery have argued this recently, in a book entitled *Why Our Universities are Failing*.[5] Along with overcrowding, under-funding and business affiliation, Maslen and Slattery cite other problems with our higher education system. The general public sees most academic work as irrelevant and wasteful. This isn't assisted by the obscure and inaccessible language which academics too often use in their publications. What's more, the most popular fields of study (such as English) are becoming the most obscure. The cream of Australia's educators are being lured overseas by better salaries and greater community status. And at the same time, we are churning out too many teachers, doctors, lawyers and accountants. The whole system is out of whack.

All this is to document that higher education in Australia is in a mess. In mid-1996, the likely introduction of higher student fees heightens the sense of crisis, in the eyes of some commentators. Maslen and Slattery are stimulating and relevant, if somewhat anecdotal and sweeping. The great value of this book is that, without the veils of official rhetoric, it points to the current problems facing tertiary education in Australia. As for explaining 'why', the authors don't dig deeply enough.

This brings us to American historian George M. Marsden, who begins to provide an explanation for this very problem. He claims that modern universities have lost their soul. In *The Soul of the American University*, Marsden chronicles the way Protestant-

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2 For example, Bruce Kaye, 'Universities and Society' in Jennifer Nevile (ed.), *The Silent University*, Institute for Values Research, New College, University of New South Wales, 1994, pp.5-11. Kaye writes: "The traditions to which the White Paper refers as obstacles to change—Freedom of enquiry and expression, intellectual rigour and a broad spectrum of teaching and research—are in fact the heart and soul of the institution in its changing role within the host society" (p.9).

3 G. Maslen & L. Slattery, *Why Our Universities Are Failing: Crisis in the Clever Country*, Wilkinson Books: Information Australia, Melbourne, 1994, p. 50.

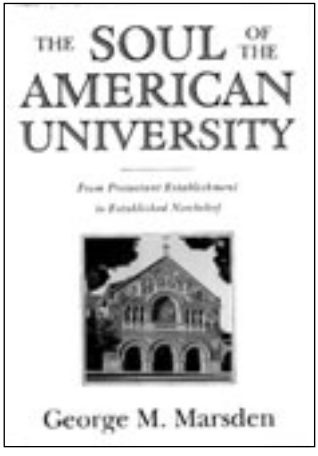
4 *Sydney Morning Herald*, 8/7/96, p. 10.

5. *Op. cit*.

ism has affected the intellectual life of the major American universities since the middle of the 19th century. He examines how many major U.S. higher education institutions began life with strongly evangelical founders and statements of intention, moved through a theological liberalism and now display a secular, if not distinctly anti-Christian, bloom. "Since it is nowhere written in stone", he writes, "that the highest sort of human intellectual activity must exclude religious perspectives, it is helpful, I think, to consider how it came to pass that so many academics believe that such exclusions are part of the definition of their task" (p.7). This is reminiscent of a theme eloquently expressed by Charles Malik, recipient of some fifty honorary doctorates from European, Canadian and American universities. Malik described modern universities as "swerving" from their foundation on and dedication to Jesus Christ.

> We know that the universities which set a pattern for all other universities were all founded on Jesus Christ, and we know that that foundation has now in practice become a relic of the past. A Christian critique of the university raises the question of why this has happened. [6]

6 C. Malik, *A Christian Critique of the University*, North Waterloo Academic Press, Ontario, 1987, pp.31-32.



Marsden's book carries out such a critique. It is largely an historical work of some detail, but he does offer a broad hypothesis as to why the universities seem to have turned their heritage on its head. In short, Christians were sold the enlightenment, and they renamed it as their own. They claimed that Christian doctrine, science and humanism could happily be mingled. Marsden suggests that they did not know where this would lead them:

> In the long run, however, the claims to ground the distinctive aspects of biblicist Christianity on science and a universal commonsense epistemology put traditional Protestantism in a most vulnerable position. While the evangelical Christians controlled much of the culture's intellectual life, they also confidently proclaimed that they would follow the scientific con-

> sensus wherever it would lead.... Once natural science took the step of operating without the implicit assumption of a creator, its findings would be as uncongenial to traditional Christianity as were its new premises...While in 1850 Mark Hopkins could make compelling statements about how scientific findings would always confirm biblical revelation, within a generation such claims would look like bravado (p.93).

Evangelical education was bamboozled by a novel, seemingly more promising ideology. Like an inverted prodigal son story, the scientists and humanists were invited 'home'. They moved in, rearranged the furniture of Christian belief and redirected the activities of the household. Gradually, as the differences between these ideologies were tested, science grew into prominence at the expense of traditional Christian doctrine.

Marsden's research is thorough and convincing. He examines individual campus histories, highlighting the spiritual progress of their leaders and changes in their official documents. For example, the 1924 mission statement of Duke University in North Carolina began: 'The aims of Duke University are to assert a faith in the eternal union of knowledge and religion set forth in the teachings and character of Jesus Christ, the Son of God" (p.422). In 1988, its statement read very differently, all mention of Christianity having been removed in favour of the ideals of "new knowledge", "the spirit of free inquiry", "diversity" and "mutual tolerance". The only mention of religion was this: "Duke cherishes its historic ties with the United Methodist Church and the religious faith of its founders, while remaining non-sectarian" (p.421). At Harvard in 1967, a church board insisted that the journal *The Christian Scholar* be replaced with a more appropriate, less exclusive publication, *Soundings: A Journal of Interdisciplinary Studies* (p.416). Marsden has many illustrations of this kind of progress towards secularism within many of America's leading academic institutions.

Marsden also documents the effects of American capitalism upon the spiritual progress of the universities. The University of Chicago makes an interesting study in the links between low-church Protestantism and the commercialising of modern learning. The founding of the University of Chicago arose, Marsden writes, out of Baptists feeling that they were falling behind in the academic race. With John D. Rockefeller's money and the pragmatic vision and energy of the first president, William Rainey Harper, the University of Chicago was founded. It led the way in linking university with commerce; it lacked tradition; it em-

phasized free enterprise; it tended to equate Christianity with democracy. In short, it was the embodiment of low-church Protestantism.

However, the pursuit of Harper's democratic program involved a shift away from the university's orthodox religious beginnings. Harper had quite a liberal view of the Scriptures. His program, to "place the Bible at the center of American cultural life" was successful, although ultimately it resulted in greater scepticism about theology and a kind of deconstructive backlash. What began as a way of tying education in with a strong Christian work ethos produced a campus which has turned loss of confidence in the Bible into a marketable product.[7] The University of Chicago is a Christian institution inasmuch as America is a Christian country; and inasmuch as the University of Chicago is American, it epitomizes the spirit of capitalism.[8]

The change in belief had direct consequences in the behaviour of students. The first half of this century saw campus life change dramatically. The prohibition in America lent a kind of glamour to drinking. Books such as F. Scott Fitzgerald's *This Side of Paradise* immortalized alcohol, fast cars and sexual liberty. Campus life could be closely compared with the atmosphere of a holiday camp. Religious agendas and behaviour were marginalized. As belief disappeared, so did Christian morality.[9]

Some would see this as a liberation of learning from religious dogma; but as certain commentators point out, universities have thereby lost something essential. Amidst all of its gains, the modern university has lost its soul. Historian Gertrude Himmelfarb summarizes the contemporary American tertiary scene in this way:

> [W]e are now confronted with a university...that has almost totally abandoned its original mission. It is now not merely a secular institution but a secularist one, propagating secularism as a creed, a creed that is not neutral as among religions but is hostile to all religions, indeed to religion itself. It is also a highly politicized institution; no longer subject to any religious authority, the university is at the mercy of the whims and wills of interest groups and ideologies. Finally, and most disastrously, the university, lib-

7 The University of Chicago Press publishes many of the most contemporary and progressive theologians.

8 See Marsden, *op.cit.*, ch. 14: 'The Low-Church Idea of a University'.

9 David Bebbington notes a similar change occuring in Britain somewhat earlier. See his 'The Secularization of British Universities since the Mid-Nineteenth Century' in G. Marsden & B. J. Longfield (eds), *The Secularization of the Academy*, Oxford University Press, New York, 1992.

> erated from religious dogma, has also become liberated from the traditional academic dogma, the belief in truth, knowledge, and objectivity.[10]

The object of true passion in the mind of the postmodern student has become the potential earning power of the letters after her name.

It needs to be admitted that any light shed upon the state of Australian tertiary education by these studies of the religious heritage of American universities will cast obscure shadows. But Marsden's history gives us at least a sense of something we lack. There are no church creeds buried in the archives of the University of New South Wales, or of Sydney, or of Melbourne. We did not have the church-based, Christ-centred, Bible-honouring scholarly beginnings which Marsden, Malik and Himmelfarb obituarize. If we were to attempt to turn back the clock, we wouldn't find even a lost hour of spiritual conviction.[11] Should our soul-less genesis lead us to despair of ever winning the universities to Christ? Or does it provide us with unique opportunities for a distinctive Christian renaissance of learning?

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10 G. Himmelfarb, 'The Christian University: A Call for Counterrevolution', *First Things*, January 1996, *Number 59*, p.18.

11 This point is supported by historical research from John Gascoigne, 'Godliness, Good Learning and Enlightenment Culture: The Origins of Australian Universities' and Ken Cable, 'Australia's Traditional Universities—A Religious Basis?' in *The Silent University*, *op. cit.* pp. 39-45 & 51-56. Whilst they suggest that there was something of a spiritual quality to early Australian university life, they recognise that it very rarely had any formalised expression.

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