

'The Wretched Gorilla Damnification of Humanity':

THE 'BATTLE' BETWEEN SCIENCE AND RELIGION OVER EVOLUTION IN NINETEENTH-CENTURY NEW ZEALAND

IN 1881 J. G. S. Grant, ex-headmaster of the Dunedin Academy and now full-time lecturer and publicist, published a pamphlet entitled *Evolution the Blackest Form of Materialism*. It was hardly a temperate work. 'The reveries of Darwin, Huxley, Tyndall, and Bain are simply coarse distillations of the spirit of Epicureanism. . . . Their doctrines are debasing and demoralizing. It is a pig's creed. Eat, drink, laugh, and die.' The pamphlet was written in response to events at Otago University. Duncan MacGregor, established by the Presbyterian Synod in the chair of Moral Philosophy, had been openly teaching evolution to his students. Thomas Jeffery Parker, newly appointed Professor of Biology and self-styled disciple of T. H. Huxley, had clearly advocated a Darwinian schema in his inaugural lecture delivered on 2 May 1881. Grant was rabid. Darwin's *Origin*, he was convinced, 'gives the lie direct to the Bible, and cuts the throat of Christianity'. He concluded his jeremiad in appropriate style: 'Although we are not disappointed at the absolute failure of our university [in choosing Parker], yet we are . . . amazed at "the wretched gorilla damnification of humanity" exhibited in the inaugural address.'¹ The war between science and religion was raging furiously at the Antipodes.

The famous Huxley-Wilberforce confrontation at the 1860 meeting of the British Association at Oxford has epitomized for many the historical relations between religion and science in the nineteenth century.² Bishop

1 J. G. S. Grant, *Evolution The Blackest Form of Materialism*, Dunedin, 1881, Stout pamphlet collection, v.40, no.20, pp.1-3.

2 For a brief account of the Huxley-Wilberforce debate see Sheridan Gilley, 'The Huxley-Wilberforce debate: a reconsideration', in Keith Robbins, ed., *Studies in Church History*, XVII, Oxford, 1981, pp.325-41. Gilley argues that the 'official version' of the debate, on which all secondary accounts have been based, was penned long after the event by Huxley and Hooker, informed by Huxley's militant agnosticism, and has seriously distorted subsequent interpretations.

Wilberforce, 'Soapy Sam', primed with scientific information by the eminent comparative anatomist Richard Owen, concluded an attack on the *Origin* with the question whether it was on his grandmother's or grandfather's side that Huxley claimed descent from the ape. Huxley rose, coolly rebutted the Bishop's arguments, and ended with the observation that he would rather be descended from an honest ape than from a man who abused his talents and position in the service of falsehood and religious prejudice. Thus was launched the career of the nineteenth century's most eminent episcopophage.³

So it was that battle lines were drawn up. Contemporary commentators at least assumed that science and religion were at war. In 1874 appeared J. W. Draper's *A History of the Conflict Between Science and Religion*. It depicted 'the conflict of two contending powers, the expansive force of the human intellect on one side, and the compression arising from traditional faith and human interests on the other'.⁴ Christianity of course meant Rome — Draper was insistent that no attention need be paid to moderate or intermediate interests. As Owen Chadwick observes, the book made a powerful contribution to the intellectual atmosphere of the age.⁵ 1896 saw the publication of J. D. White's *A History of the Warfare Between Science and Theology in Christendom*, grounded in the assumption, as the title suggests, that science and theology were indeed at war.⁶

Examples of this kind could be multiplied almost indefinitely up to the present day. Rationalists, free-thinkers, historians of science and of ideas, and religious historians and apologists have almost all assumed that Darwinism caused some kind of violent and fundamental conflict between science and religion.⁷ Typical assumptions are apparent in a standard reference work like *The New Cambridge Modern History*. 'The furious tide of criticism and the scornful ridicule which greeted *The Origin of Species* are well known.' Not only was the religious response seen as vituperative, it was simplistic and obscurantist as well: 'For the

3 Episcopophage was a term coined by Huxley. It meant Bishop-eater.

4 J. W. Draper, *History of the Conflict between Science and Religion*, International Scientific Series, XIII, London, 1875, p.vi.

5 O. Chadwick, *The Victorian Church. An Ecclesiastical History of England*, New York, 1966–70, II, p.14.

6 A. D. White, *A History of the Warfare of Science with Theology in Christendom*, London, 1896.

7 For example, William Coleman, historian of science, in 1971 writes that 'evolution . . . provided a prominent battleground for the ongoing contention between science and religion for the allegiance of the European mind'. *Biology in the Nineteenth Century: Problems of Form, Function, and Transformation*, New York, 1971, p.12; John C. Greene endeavours to place the debate 'in the broad perspective of the historical conflict between science and religion' in 'Darwin and Religion', in W. Warren Wagar, ed., *European Intellectual History since Darwin and Marx: Selected Essays*, New York, 1967, p.12. For a full discussion, giving numerous examples, see J. 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, 1979, pp.40–9.

mass of Darwin's opponents who followed the leadership of Bishop Wilberforce it was the light which was reflected by his ideas upon the literal interpretation of scripture and the intricate metaphysical problems of the human soul which was most obnoxious.' The conclusion is inevitable: 'The shock of the conflict between science and religion was profound, and it was the authority of religion, rather than science, that emerged weakened from it . . . the simple piety of men like Faraday was to become increasingly uncommon in men of science.'⁸

Implicit in this conflict-oriented historiography is the assumption that the forces were polarized. Ranged up on one side were the scientists, hardheaded empiricists and, like their general Huxley, resolutely agnostic in matters religious. On the other side were the religious, badly-informed if not deliberately obscurantist on the scientific issues, desperately clinging to the remnants of a faith which science was undermining. There was, needless to say, a vast no-man's-land in between. The hostility between the two camps was intense. So intractable and deep-rooted were the divisions between them that an irenical strategy was scarcely considered feasible.

The New Zealand historiography, though embryonic, has clearly assimilated the imported assumptions. Implicit even in isolated comments is the idea that science and religion were at war in the nineteenth century, and that science emerged victorious. The *Oxford History* contains one pertinent sentence in Erik Olssen's 'Towards a New Society'. Olssen argues that the changing treatment of the mentally-ill 'clearly demonstrated the challenge to the moral-religious values of the nineteenth century posed by the rational-scientific attitudes of the twentieth'.⁹ Garry Tee in his article 'Charles Darwin's Correspondents in New Zealand' asserts that New Zealand was probably the only country in the second half of the nineteenth century where every significant scientist was a public supporter of Darwin and his work on evolution.¹⁰ Scientists here, it would seem, were in the vanguard of the 'church scientific', to borrow Huxley's phrase.

Gordon Parsonson absorbs the polarization/conflict assumptions in his paper 'The Darwinian Debate in Otago'. Some sort of debate was inevitable in the Otago Institute by 1877, he argues, given the fact that Dunedin was a 'fundamentalist stronghold'. The term fundamentalist in this context is, of course, a misleading anachronism serving only to reinforce the religious stereotype. The military metaphor soon appears, the

8 A. R. Hall, 'The Scientific Movement and its Influence on Thought and Material Development', in J. P. T. Bury, ed., *The New Cambridge Modern History*, X, Cambridge, 1967, p.71.

9 E. Olssen, 'Towards a New Society' in W. H. Oliver with B. R. Williams, eds., *The Oxford History of New Zealand*, Wellington, 1981, p.262.

10 G. J. Tee, 'Charles Darwin's Correspondents in New Zealand', *University of Auckland News*, X, March, 1980, p.2.

'final explosion' being touched off by Ernst Haeckel's avowedly materialistic evolutionism in *The History of Creation* (1868). The outcome of the debate was of course complete polarization: 'one was either for Darwin or against him, or as his critics preferred to put it, for or against God, and for most the choice was not difficult to make'. There was no question about the victor: 'The age of innocence when intelligent men might expect to dabble in science without risk to their spiritual convictions was at an end; after 1876 and certainly after 1880 with the appointment of T. J. Parker to Hutton's chair, the prevailing ethos of the Otago Institute was essentially Darwinian'.¹¹ We seem to be well on the way to a positivist analysis, in which Darwinian science caused the colonial intelligentsia to jettison religion and metaphysics.

The historical reality, however, flatly contradicts such an analysis. There was no polarization into scientific and religious camps. The leading scientists were and remained religious believers. The leading churchmen, far from being the reactionary monolith of legend, were very open to modern science in general, including evolutionary theory, were active and prominent in the leading scientific institutions, and eagerly sought rapprochement between their Christian faith and evolution. The relations between the two groups were marked by deliberate irenicism. In full confidence that any conflict was apparent rather than real, they worked together to de-escalate any interim conflict.

This approach to the debate develops some aspects of J. R. Moore's work on Protestant responses to Darwin in Great Britain and America 1870–1900. Moore suggests that the dominant historiographical tradition, which sees the relations between religion and science over evolution polarized by what he calls the 'military metaphor', is seriously distorting. Instead he offers a non-violent interpretation, going as far as to suggest that the Darwinian theory could be accepted in substance only by those whose theology was distinctly orthodox.¹² Initially sceptical of Moore's thesis, and still convinced that he has overstated his case, I am compelled by the sheer weight of the evidence to offer a broadly similar interpretation for New Zealand.

At first sight, however, there is plenty of evidence to support the traditional view, not only from the outrage of believers like J. G. S. Grant, but also from the views of leading scientists. F. W. Hutton, destined to become the colony's leading geologist, wrote reviews of the *Origin* in 1860 and 1861, just five years before emigrating to New Zealand. Summarizing the Darwinian theory he reviewed the difficulties against it, concluding that it explained nearly all the facts of biological science, and that it must be looked on as a more probable hypothesis than any other

11 G. S. Parsonson, 'The Darwinian Debate in Otago 1876', TS., University of Otago, pp.3, 10, 20.

12 See the introduction in Moore, pp.1–19.

yet put forward.¹³ So, too, he had some plain words concerning what he called the 'gross ironical misrepresentations' and 'inflated pomposities' of clerical opponents of Darwin. He rejected the creation hypothesis out of hand as an evasion of the question and a cloak for ignorance.¹⁴ The review elicited a delighted and congratulatory response from Darwin.¹⁵

Hutton looked for all the world as if he were going to become an antipodean Huxley; he was a convinced evolutionist and an outspoken opponent of clerical revilers of Darwin. Further reading, however, suggests that a positivist picture of the New Zealand scientific community will not do. Early in the article Hutton castigated those believers who attacked new opinions on the 'old and ridiculous grounds' of their antagonism to Holy Scripture, 'as if the Word was not based on the sure foundations of truth'. Here Hutton is speaking as a believer and the conflict is clearly between co-religionists. Later in the article he argued for the compatibility of evolution and divine providence: 'Why, indeed, may we not look around us and believe in the universal bowing of all nature hourly, daily, unceasingly to the unerring laws and sustaining power of God? Why should we not see in every change His Presence and His will?'¹⁶ Mr. Tee's idea that New Zealand scientists perspicaciously seized upon the Darwinian theory receives a blow toward the end of the review. Ascribing modifications of species not to chance but to the direct will of God, Hutton argued that 'it seems difficult to conceive how a being totally ignorant of its own structure or conditions of living should so commence modifying its structure, form, or habits, as to adapt not [only] itself, but successively its progeny, to new forms and conditions of life'.¹⁷ So impressed was Hutton by the intricate and marvellous adaptations of organisms to their environment that neither a Darwinian explanation emphasizing the completely impersonal selection of random variations, nor a Lamarckian explanation emphasizing an individual's power of self-transformation, seemed adequate. It must be noted that ascribing the evolution of species to the direct will of God did not in the least obstruct the search for the empirical mechanisms by which God worked.

Hutton was by no means eccentric in being both scientist and religious believer. Julius Haast's address to the inaugural dinner of the Philosophical Institute of Canterbury provides evidence that others had as little difficulty combining the two. On the future of science in Canterbury Haast asserted that 'there is not the least doubt that we shall see good results, if true love for science, one of the purest and holiest feel-

13 *Some Remarks on Mr. Darwin's Theory*, London, 1861, pp.3-5, 6-11.

14 Abridged version of the review, from which these references are taken, in D. L. Hull, ed., *Darwin and his Critics. The Reception of Darwin's Theory of Evolution by the Scientific Community*, Cambridge, Mass., 1973, pp.293-4.

15 *ibid.*, p.292.

16 *ibid.*, pp.293, 295.

17 *ibid.*, p.299.

ings which an all-wise Creator has planted in our hearts, be the guiding star of our union'. There is no sense here of enmity between religion and science, indeed the relationship is intimate and filial. He then ascended to a positively rhapsodic plane in a fascinating blend of scientific and religious metaphor: 'Is there a spot on earth, where naturalists have not willingly risked their lives, in the hope of making better known to us, the indescribably perfect and beautiful works of the Creator? . . . can we find anywhere in the world's history, instances of greater heroism than has been shown by the soldiers of science?' Passing from martyrs of the faith, Haast summarized the *Origin*. This is revealing: '[organic] forms only live through the "struggle for existence", which under the operation of a law termed natural selection, *have best adapted themselves* to the circumstances of climate etc. by which they have been surrounded, and which have, in obedience to that law, gradually risen higher and higher in the scale of organic life [italics mine]'.¹⁸ Like Hutton, it is not at all clear that Haast was any more of a Darwinian than he was a Lamarckian, though he had quite clearly abandoned any idea of fixity of species.

Haast was by no means a minor figure in New Zealand, or for that matter international science. Awarded a Tübingen doctorate of philosophy in 1861, he became a Fellow of the Royal Society in 1865 and was the first New Zealander to receive the gold medal of the Royal Geographical Society. He was a popularizer of science, like Huxley, though unlike Huxley his lectures were never bereft of an orthodox religious perspective. In 1867 he undertook a course of three lectures on geology to the pupils of the Presbyterian Boys College in Christchurch founded by his friend the Reverend Charles Fraser. Emphasizing the harmony and progression of creation Haast insisted that, if he could not make scientific geologists of them, he should at least make them lovers of the Great Book of Nature.¹⁹

Like Haast, Hutton had a considerable international reputation: elected Fellow of the Geological Society in 1860 and Fellow of the Royal Society in 1892, he was professor of biology at Canterbury University 1880–92. His *magnum opus* was the *Index of the Fauna of New Zealand* (1904). In *The Lesson of Evolution* (1907) he summarized his life and thought. Not only were science and religion compatible, Hutton argued, but when the lesson of evolution was absorbed it would become one of the foundations of our theological beliefs. The course of evolution was directed by an originating mind outside nature who operated according to well-known natural laws. The only break in this continuity was the initial formation of living protoplasm. The development of man's moral nature was the highest purpose of evolution on earth, which in turn led to further evolution in a spiritual existence beyond the grave.²⁰

18 The address is printed in full in *The Canterbury Standard*, 9 October 1862.

19 Julius Haast, *Synopsis of Three Lectures on Geology to be delivered to the pupils of High School, Christchurch, Canterbury*, Christchurch, 1867.

20 F. W. Hutton, *The Lesson of Evolution*, London, 1907, pp.xxi, 260, 270.

James Hector also had a world-wide reputation. Fellow of the Geological, Royal Geographical, and Royal Societies, he had become director of the Government Geological Survey in 1865. He was much more the cautious empiricist than Haast or Hutton, very wary of anything smacking of speculation. However, he did refer to the debate in his inaugural address to the Australasian Association for the Advancement of Science in 1891. After referring to the controversy in his student days in the United States, he asserted that nowadays it was difficult to realize what all the fuss was about. The rising school of naturalists, Hector argued, were in the happy position of being able to 'steer clear of the many complicated and purely ideal systems which were formerly in vogue for explaining the intentions of the Creator. . . .' He concluded by referring to the way natural history, and especially biology, had attracted so many ardent workers, and produced such good results — due to the fact that energetic teachers like Hutton, Parker, and Thomas felt less restrained by fear of controversy over the subject in this colony.²¹ He pointed out to the Wellington Philosophical Society in the same year that there was nothing in evolutionary theory about first causes, and that the theory was a powerful aid to the working naturalist in unravelling and unfolding the various steps in the scheme of creation.²² Even if Hector's Creator had diminished to distant, almost deistic proportions, in contrast to Hutton and Haasts' full-blooded belief in providential power, Darwinism had clearly not turned Hector into a scientific materialist.

Walter Lawry Buller, son of the Methodist missionary James Buller, was another internationally recognized scientist. New Zealand's foremost ornithologist, he was a Fellow of the Linnaean, Geological, Royal Geographical, and Royal Societies. But he was by no means a hard-headed positivist, resolutely refusing to step outside his 'proper' domain. In an 1895 paper, 'Illustrations of Darwinism', he asserted that he was both a 'thorough disciple of Darwin' and 'a believer in the truths of revelation and in the spiritual destiny of man'. Indeed not only were the two compatible but the Darwinian theory lent 'decided support' to the doctrine of the spiritual nature of man. The body was developed from lower forms by natural selection, Buller argued, but the intellectual and moral faculties had their origin 'in the unseen universe of Spirit'.²³

Many other scientists found no problem at all reconciling scientific work with Christian commitment. Thomas Kirk, devoted botanist, Fellow of the Linnaean Society, several times president of the Wellington Philosophical Society and Governor of the New Zealand Institute, as well as writing 122 papers for the *Transactions* of the Institute, regularly

21 J. Hector, *Inaugural Address to the Australasian Association for the Advancement of Science*, N.Z. Pamphlets 5A, pp.15–16, Alexander Turnbull Library.

22 *Transactions and Proceedings of the New Zealand Institute* (TPNZI), XXIV (1891), p.694.

23 *ibid.*, XXVII (1894), p.103.

attended a Baptist church. He even became president of the Baptist Union in 1892.²⁴ G. M. Thomson, botanist, zoologist, Fellow of the Linnaean Society and thrice president of the New Zealand Institute, apparently found Darwinian evolution eminently compatible with devout Presbyterianism and eldership in Knox Church, Dunedin.²⁵

The New Zealand Institute, forum for colonial scientific research and discussion, sought harmony between religion and science from its inception. Sir George Bowen's inaugural address in 1868 as its first president is typical. One of the chief contributions of science, he said, was to reveal for our adoration the Divine ideas which are at the basis of all things. He concluded the address by citing *Genesis xxviii:12*, comparing knowledge with Jacob's ladder, 'the base of which rested on the primeval earth, while its crest was lost in the glory of Heaven'.²⁶ This was a revealing analogy. It would appear that the new knowledge was being subsumed into traditional religious categories. But science could be seen to offer far more: a means of bridging the gap between heaven and earth; a new way of salvation. As we shall see, some would opt for the former interpretation and the lesser view of science, and others for the latter.

T. B. Gillies, in his presidential address to the Auckland Institute in 1869 argued that beyond the practical benefits of science lay 'the higher pleasure, the nobler advantage of thereby bringing ourselves into nearer communication with the great Creator of all'.²⁷ Mr. Justice Gresson found a similar rationale for the pursuit of science in his presidential address to the Philosophical Institute of Canterbury in 1872. The earnest naturalist, he argued, was not tempted to 'sit at home dreaming over impossible scenes of pleasure, or to go for amusement to haunts of coarse excitement, if he have in every hedge, bank, woodland, and running stream, in every bird among the boughs, and every cloud above his head, stores of interest, which will enable him to forget awhile himself and man, and all the cares, even all the hopes of human life, and to be alone with the inexhaustible beauty and glory of nature and of God who made her'.²⁸ Natural science quite clearly continued to be a romantic, morally improving, and even spiritually delightful pursuit.

All was not sweetness and light, however. Some religious believers did react with hostility to the Darwinian theory, and this hostility could be violent. These extreme conservatives were united in their antagonism to what they took to be the moral and religious implications of evolution. It seemed to them that Darwin, in *The Descent of Man*, had made religion analogous to the feeling of a dog for its master, and had reduced the

24 G. H. Scholefield, ed., *Dictionary of New Zealand Biography*, Wellington, 1940, I, p.470.

25 ibid., II, p.382.

26 TPNZI, I (1868), p.15.

27 ibid., II (1869), p.410.

28 ibid., V (1872), p.463.

human mind, as Archdeacon Maunsell put it, to 'the development without a break of the dim sensations of a shellfish'.²⁹ Evolution, with its emphasis on progressive development, seemed to disprove the 'Fall' — a premise central to the Christian doctrine of redemption. Such believers retreated into a simple biblical literalism in their view of creation. Significantly, however, they tended to be isolated from mainstream opinion.

J. G. S. Grant was the most extreme exemplar of the group. Evolutionists, he argued, were a 'brood of vampire bats that attempt to suck the blood of religion and culture out of the veins of the sinful sons of men'. Descent with modification was condemned out of hand as a 'ridiculous and arbitrary hypothesis', and the immutability of species was asserted. Professor Parker, whose lecture caused this outburst, was a 'barbarous disciple of materialism'.³⁰ Here, it would seem, is the absurd proto-fundamentalism typical of the Christian response. Unfortunately for such an interpretation Grant was entirely heterodox, believing that Christianity was 'going down under the dashing waves of reason', and calling for a 'return to the rational adoration of the great God — "the unknown God"'.³¹ His ostensible orthodoxy was simply a posture designed to make his argument carry authority. To Grant's regret, however, few listened. The eccentricity of his views, together with his cultivated talent for personal abuse, led to his increasing isolation from his fellow Dunedin citizens. Often at loggerheads with the leading men of the province, once horsewhipped and several times imprisoned, he eventually died in poverty in 1902.³²

Josiah Clifton Firth, prominent Congregationalist layman, found it necessary to mention the names of Darwin and Huxley at morning prayers, asking that their theories be confounded and brought to nought.³³ This did not prevent his election to the Presidency of the Auckland Institute in 1875. In his annual address he argued that though the researches of Darwin and Tyndall were admirable, their theories were simply 'castles of the imagination' full of the 'strange, curious and grotesque assumptions which characterise the materialistic school of Philosophy'. Firth's fear was that if God was replaced in men's minds by a series of scientific laws then man would be relegated to the 'cheerless domains of a materialism as degrading to man as it is inimical to his true welfare'. This fear made him refuse to countenance the Darwinian theory.³⁴ The *Herald* the day after his address was gently and patronizingly dismissive of Firth's position: 'His religious convictions have

29 See below, p.14, n.37.

30 Grant, pp.2-3.

31 J. G. S. Grant, *The Stoic*, no.1, Dunedin, 1871, pp.3, 5.

32 A. G. Bagnall, *Bibliography of New Zealand Literature*, Wellington, 1980, I, p.405. See also *Dictionary of New Zealand Biography*, I, p.317.

33 Mona Gordon, *The Golden Age of Josiah Clifton Firth*, Christchurch, 1963, p.14.

34 TPNZI, VIII (1875), pp.420-21.

developed the credulous side of his nature; and faith in revelation supersedes scientific analysis. . . . It is in part constitutional, and in part also the result of early training.'³⁵

Dr. A. C. Barker was another conservative. In a paper read to the Philosophical Institute of Canterbury in 1871 entitled 'Continued Creation versus Darwinian Evolution', he argued that changes in the natural world were not due to the action of natural selection at all. Instead they were directly the work of a kindly creator who, becoming aware of certain errors he had committed, took steps to correct them.³⁶ The earnest scientists of the Institute were not amused. An animated discussion followed in which five members rose and declared their opposition to the principles enunciated in the paper. Significantly at least three of those five were religious believers: Julius Haast, Reverend James Wilson, and Reverend Charles Fraser.³⁷ Barker continued to read papers against Darwin to the Institute but they were not published in the *Proceedings*.

Anglican Archdeacon Robert Maunsell seemed to be bidding for the role of a colonial Wilberforce in his 1871 Auckland lecture 'Man and the Monkey'. He began by summarizing what he took to be the import of Darwin's recently published *Descent of Man*: 'An eminent naturalist has . . . announced that man is the child of an ape or monkey; that his mind, with all its power, is the development without a break of the dim sensations of a shellfish; and that his body betrays its origin.' As evidence against the theory, he argued that there was no reversion to the ancestral type: 'the wild man, the Australian, the native of Labrador, the Maori, even in their wildest stages are born with thin skins, unlike those of the ape or the monkey'. In the face of the Darwinian threat Maunsell felt bound to close racial ranks and emphasize the unity of mankind. The simplest and best theory, he concluded, was the special creation of man 'ready-made and full-grown into the world from the hands of his Creator'.³⁸

Reverend William Salmond, Professor of Divinity at Knox Theological Hall 1875–86, was a conservative over evolution. He made his views known during the 1877 debate in the Otago Institute. It was the implication for man that concerned Salmond, and on this issue he decided Darwinian theory and Catholic Apostolic Christianity were irreconcilable. Evolution maintained that man was the summit, physically, intellectually, and morally, of an ever-rising scale, Christianity that man was a fallen creature. In suggesting that the whole of creation was subject to the law of natural selection, Darwin contradicted belief in the deity of Christ, as well as Immortality. Even if evolution did explain an immense

³⁵ Gordon, p.232.

³⁶ C. C. Burdon, *Dr. A. C. Barker, 1819–1873, Photographer, Farmer, Physician*, Dunedin, 1972, p.54.

³⁷ TPNZI, IV (1871), p.404.

³⁸ *Man and the Monkey. A Lecture*, Auckland, 1871, pp.4, 5, 9.

number of facts, Salmond concluded, it ought to be limited to the lower forms of vegetable and animal life.³⁹

In Salmond's openness to a limited evolutionary schema we see a moderation of the extreme conservative position. Many churchmen were much more receptive to evolution than the conflict/polarization model would allow. It was this moderate group which was more characteristic of the churches than the extreme conservatives. They remained firmly anchored to credal orthodoxy, however, and while generally embracing modern science and evolution, they could never accept a naturalistic account of mind, morality, and religion as exhaustive.

Octavius Hadfield, Bishop of Wellington, warned his clergy in his Synod address of 1876 against 'being led away by shallow physical theories which are supposed to be repugnant to what we accept as Divine truth'.⁴⁰ Almost certainly directed at Haeckel's materialistic evolutionism in *The History of Creation*, his was cautious liberalism rather than reactionary conservatism. It was the supposition that the theories were necessarily antithetical to Divine truth that Hadfield was concerned about. Bishop Nevill of Dunedin was also initially cautious. In an 1878 Presidential Address to the Otago Institute he warned against the 'alluring snare' of over-systematizing in scientific matters, of deserting the principles of Baconian induction.⁴¹ But there was no doubt in his mind that far from being antithetical to religion, science actually verified it. Accepting a broad evolutionary schema, he argued that only direction by the Divine intelligence and will rendered it entirely rational and complete. He had no place for what he called 'the theory of the special creation of every species . . . of its immediate and independent production by an arbitrary fiat of omnipotence'.⁴² Archdeacon Harper began an 1882 address to the Timaru Debating Society by paying glowing tribute to Darwin as a naturalist. It was Haeckel's materialism which he cited as 'the eager prejudice of the untheological mind'. The gradual series of created forms, he asserted, was the gradual fulfilment of what was in the mind of the Creator.⁴³ The Reverend E. Whitehouse, a former lecturer for the Church Defence Society in England who had become curate of Patea, found evolution a well-sustained theory, bringing conceptions of the Creator's working into closer harmony with existing fact.⁴⁴ Many Anglicans, it would seem, were positively eager to reconcile science and Christian belief.

Professor Dunlop, Salmond's successor at Knox, found Christianity

39 Parsonson, pp.15, 16, 18.

40 Presidential Address, 30 October 1876, in Proceedings of Diocesan Synod, Wellington, 1876, p.16.

41 TPNZI, X (1977), pp.564-5.

42 S. T. Nevill, *Spiritual Philosophy*, London, 1908, pp.1, 3, 23.

43 H. W. Harper, *Evolution. An Address delivered to the Timaru Debating Society*, Stout pamphlet collection, v.39, no.8, pp.3-5.

44 *Freethought*, Auckland, 1885, p.17.

and evolution eminently compatible. The age of uncritical and instinctive faith was over, he argued, and what was necessary now was to elevate Christian belief 'to a higher and more stable plane of intelligence'. Even Huxley pointed out that evolution did not disprove a teleological view of nature, Dunlop argued, before proceeding to assert that the evolved order was simply the unfolding of the potential order originally laid in the essential properties of matter.⁴⁵ James Macgregor, ex-Professor of Systematic Theology in New College, Edinburgh, and minister of Columba Church Oamaru, agreed with Dunlop. In a paper read to the Otago Institute in 1885 this evangelical Presbyterian rejected both materialism and what he called the 'supranaturalistic doctrine of creation'. Calling for a 'true rational science' and a 'true rational theology', he opted instead for what he called 'mediate creation': the creation of species by purely natural processes and laws. There were breaks in the succession of natural processes, however. Evolution could not explain the transition from inorganic to organic forms, nor the transition from the 'brute' to reason, conscience, and worship.⁴⁶ In the same year Presbyterians attending the Otago Synod were told by the Moderator, Reverend D. M. Ross, that 'the tendency of ripened Science' was 'to confirm and illustrate Scripture truth'. Mature science, which had once seemed dark and threatening, had now become 'bright and luminous, irradiating the page of inspiration'.⁴⁷

A. R. Fitchett, a prominent Wesleyan minister who was later to become a Dean in the Anglican church, argued along Dunlop's lines in a Dunedin lecture entitled 'The Ethics of Evolution'. Evolution, he saw, was essentially theistic, and entirely compatible with the Genesis account, which of course was an idealized and figurative history. Rejecting what he called the 'popular craving for creation by fiat', he warned his audience that atheistic German evolutionists like Haeckel were guilty of 'a flagrant departure from the true scientific spirit'. He concluded that evolution would help rather than hinder theology.⁴⁸ Admittedly Fitchett was asked to leave the Dunedin Y.M.C.A. in 1876 because of his views on evolution, but it was precisely this sort of action on the part of the Y.M.C.A. that, according to the *New Zealand Presbyterian*, led to its decline.⁴⁹

In 1884 the *New Zealand Methodist* printed a sermon by the Reverend W. H. Dallinger, Fellow of the Royal Society, eminent English scientist and Methodist. He began with an exhortation to 'follow modern science without fear' since the vast majority of men agreed that the universe had

⁴⁵ J. Dunlop, *Religious Certainty: Vindication of Some Fundamental Religious Beliefs*, Dunedin, 1896, pp.4, 5, 37, 38.

⁴⁶ *Regarding Evolution. The Previous Question of Science Considered*, Oamaru, 1885?, pp.7-8.

⁴⁷ *N.Z. Presbyterian*, 2 February 1885.

⁴⁸ *The Ethics of Evolution*, pp.7, 9, 11, 17. Stout pamphlet collection, v.31, no.7.

⁴⁹ *Freethought Review*, 2, 13 October 1884, p.5.

its origin in an infinitely powerful Creator. This Creator was not a slave of his own laws, however. Citing Clerk Maxwell on atoms as 'manufactured articles', he argued that the construction of atoms was the first of the Creator's miraculous interventions in the uniform course of nature. The second miracle occurred in the transition from inorganic matter to organic life. Although God might have produced man 'from the dust of the earth' by purely natural evolutionary processes, this could not account for the creation of the soul, which was the third miracle. He concluded with an apposite quotation from Genesis: 'And God breathed into his nostrils the breath of lives, and man became a living soul.' This concept, he argued, was no departure from strict science.⁵⁰ The following year the *Methodist* again felt bound to address the science and religion question. This time it was in answer to the attacks of 'certain peripatetic vendors of infidelity, under the guise of Freethought' who deliberately assumed a 'fundamental and irreconcilable antagonism' between science and religion. While admitting the fact that some Christians frowned upon science, he argued that this was 'in opposition to the direct incentives furnished in God's Word to the reverent study of God's handiwork in the material universe'. It remained a 'manifest absurdity' to set forth science and religion as antagonistic. Men like Faraday, Herschel, Agassiz, Maxwell, Thomson, and Dallinger rebuked the 'insolent assumption' that the highest scientific attainments were incompatible with the strongest belief in Christianity. The material realm was science's province to explore and as such it had 'magnificent claims' upon the thoughtful regard of humanity. But for all that only religion revealed man's noblest capacities and indicated his loftiest destiny.⁵¹

Even Catholics could adopt a liberal position. Dr. R. H. Bakewell, member of the Wellington Philosophical Society and contributor of a number of important articles on colonial health to the *Transactions of the New Zealand Institute*, wrote an article for the *Tablet* on the science and religion question. A Catholic need not be worried over the difficulties in the first chapter of Genesis, the deluge, or the sun standing still, he maintained, as the Church had not yet authoritatively declared what was the right interpretation. Geological questions were therefore open questions, and need not trouble the pious Catholic, who of course had an immense advantage in this over a Protestant. In view of the *Quanta Cura* with its syllabus of errors and *Pastor Aeternus*, it was an extremely conciliatory stance. Citing Tyndall on the inadequacy of accounting for consciousness by natural law, he argued that therefore the supernatural must be admitted, on which the whole argument of the Roman Catholic faith was founded. This was a racy piece of theological sleight-of-hand, no doubt effective enough for all that.⁵²

50 *New Zealand Methodist*, 20 December 1884.

51 *ibid.*, 6 June 1885.

52 *Freethought Review*, 2, 17 February 1885, p.4.

Lay Protestants were as eager as their clergymen to reconcile science and Christian belief. J. Aitken Connell, land agent and surveyor, and member of the Otago Institute, delivered a lecture to the Dunedin Y.M.C.A. in 1881, five years after Fitchett's expulsion. Adopting a catholic position to prevent any further rifts, he argued that it was perfectly consistent to be a Christian evolutionist, not only in the sense of asserting the pre-ordination of evolutionary development by natural law, but also in the sense that modifications of species were due to direct Divine agency. He did have some reservations about the theory nevertheless, citing the lack of intermediate forms, hybrid infertility, and the imperfection of the fossil record against it, and personally plumped for the immutability of species except within narrow limits.⁵³ This presumably satisfied the conservatives in the Y.M.C.A.

No such reservations were shown by J. S. Webb as President of the Otago Institute in 1876. In his annual address he referred to 'the great biological theories now passing into general acceptance'. He went on to deal with what he called the 'alleged conflict' between religion and science: 'I need not contend before such an audience as I speak to tonight, that there is no conflict between science and religion.' The real conflict, Webb argued, was between religious knowledge and religious ignorance. He reserved his harshest words for co-religionists who took it upon themselves to oppose evolution, 'Prophets of the Baal of ignorance loftily criticizing and condemning a philosophy whose foundations are utterly unknown to them, whose facts they misapprehend, whose arguments they misunderstand or misapply, whose conclusions even they have not taken the pains properly to acquaint themselves with'.⁵⁴

In 1877 Robert Gillies, elder of Knox Presbyterian Church, was elected President of the Otago Institute. Early in the year he read a paper to the Institute on Haeckel's *History of Creation*, and it was this paper, according to Parsonson, which had initiated the 'final explosion' of the debate. In his retiring Presidential Address, Gillies painted a very different picture. In his view the most kindly feeling and courteous consideration was shown by everyone, with a single exception. That of course was Salmond, who had affected contempt for the subject as beneath the notice of theologians. Significantly it was a co-religionist whom Gillies singled out for rebuke. He noted that the same courteous consideration characterized the discussion at all meetings. Even allowing for the fact that Gillies may be attempting to play down controversy, this is still a far cry from the pitched battles of the orthodox historiography. For the high tone and gentlemanly feeling during the discussions, he argued, the Institute was indebted to Hutton and especially to Bishop Nevill, who refused to see his opponents as anything other than 'humble, sincere, and God-fearing lovers of truth, however mistaken in their views'. This was

53 *The Difficulties of Evolution*, Dunedin, 1881, pp.6, 26, 27, 40.

54 TPNZI, IX (1876), pp.652-3.

deliberate latitudinarian irenicism on Nevill's part, clearly designed to mollify passions and to contain the debate within the parameters of orthodoxy. Gillies went on to argue that the view which had been attempted to be forced on the Dunedin community, that evolution and Christianity were absolutely contradictory, was an extreme one, and not that of the best and wisest theologians at home. His conclusion: 'Such plain speaking is needed in a community where our Christian young men have been led to think and act on the idea, that Evolutionary theories and Christianity are totally incompatible with each other.'⁵⁵ Here we have a leading Presbyterian layman supporting an Anglican Bishop in insisting on the compatibility of science and religion. Scientist Gillies (he was to become a Fellow of the Linnaean Society) was prepared to fall out with professional theologian and fellow Presbyterian Salmond over the issue. Probably Salmond was sensing the eclipse of the Scottish theological élite in the colony by the new breed of professional scientists who carried in their coterie men like Stout who, with their Spencerian gospel of science, threatened to usurp the theologian's function of moral and spiritual direction as well.

These then were the moderates. Firmly within the historic Christian tradition, some of them leading figures within their own denominations, some like Macgregor strongly evangelical, they had a very positive attitude toward modern science in general, and evolution in particular. They shaded imperceptibly into a third group, the radicals. These men were characterized, like the moderates, by a positive attitude toward science, and were all convinced and ardent evolutionists. But they had much more difficulty reconciling science and Christianity, and usually did so at the expense, to varying degrees, of the latter. They ranged from those like Samuel Edger whose attachment to credal orthodoxy was loosening, through those like John Macmillan Brown whose Christianity had become vestigial, to those like Robert Stout who had abandoned orthodoxy outright for freethought.

Samuel Edger came from a Baptist background to serve as a non-denominational minister in the Albertland Settlement, and later moved to Auckland and preached in a variety of halls and churches as an independent minister. In a lecture delivered to the Auckland Institute on 5 September 1881 he saw no harm to religion in the evolution of a man out of a monkey. Indeed even the great spiritual conceptions and the religious conscience might have taken their present shape by a quite gradual process. He was a strong-minded liberal and had some plain words in one of his lectures for both sides: 'We decline allowing the evolutionist — the scientific Pope — to force upon us conclusions that cover more ground than the facts he can produce justify. We decline allowing the religious bigot to tie us down to his way of reading the Bible,

55 ibid., pp.657-8.

when God, through scientific discoveries, would lift us a little higher.'⁵⁶ The evolution of the conscience, he argued, must have been exclusively God's work, for nine out of ten people were very anxious that it should not grow. For Edger, evolution meant much more than it did for the moderate group. It tended to assume the characteristics of an alternative, indeed a superior religious faith, with the potential to supplant Christianity: 'Intellectually, morally, it may at last appear that what has seemed uncredible or unintelligible in our religious belief, has been so only to a nature not yet evolved or developed; and so by evolution, the clouds of misconception and doubt will have melted away in the steady upward march of man, till he reaches altitudes where clouds never gather, so finding his native home where what we call miracles and prodigies shall be the common material of everyday life.'⁵⁷ For an independent minister without an entrenched position in a major denomination to protect, an exciting and fashionable mixture of Christianity and evolution must have been one way of attracting a congregation.

C. W. Richmond was the son of a Unitarian barrister, attended a Unitarian school in Brighton, and emigrated to Auckland in 1853. Colonial Secretary and Treasurer under Stafford in 1856, Minister of Native Affairs from 1858–60, he was appointed a judge of the Supreme Court in 1862. Unitarians, thoroughly rationalistic on theological questions, accepted evolution with facility: Richmond described the Darwinian theory as a brilliant induction and 'well established on the solid basis of experience'. In 1869 he delivered a lecture at Nelson entitled 'The Modern Aspect of Natural Theology'. He took a rather ironic view of the historical relations between orthodox Christianity and science: 'the Australasian colonist is amused to learn, that by the Christian Father Lactantius, the Antipodes were held to be impossible; by St. Augustine contrary to Scripture; by Saint Boniface of Mentz beyond the latitude of salvation.'⁵⁸ Despite his reservations about orthodoxy, theism remained secure for Richmond: science could investigate the method by which the universe had come into being, but not the cause. Admittedly evolution had not unsettled his religious position, and this itself is evidence against the idea of schismatic impact. It is the combination of ready acceptance of Darwinism, distance from orthodoxy, and eminence in colonial affairs that is significant and fits Richmond into the radical category.

Samuel Butler had the most extraordinary career. Son of a canon and grandson of a Bishop, he had been intended for the church. However he gave up baptismal regeneration, left the Church of England, and emigrated to New Zealand, arriving in October 1859. Comparative study of the Gospels, begun at Cambridge and continued on Mesopotamia, destroyed his faith in the Resurrection and Ascension of Christ, and he

⁵⁶ *Autobiographical Notes and Lectures*, London, 1886, p.251.

⁵⁷ *ibid.*, p.257.

⁵⁸ TPNZI, II, (1869), p.281.

soon abandoned supernaturalism entirely. At the same time he read the *Origin*, at once becoming an enthusiastic admirer of Darwin's. Late in 1862 he published a 'Dialogue' in *The Press* in which he gave a succinct and perceptive outline of the Darwinian theory, and asserted its ultimate compatibility with Christianity, without indicating how. It provoked a reply from an anonymous correspondent (Butler was sure it was Bishop Abraham of Wellington) who argued that the *Origin* was merely a rehash of the evolutionary speculations of men like Giordano Bruno and Erasmus Darwin that everyone was so familiar with. It was clear from the tone of the article that Abraham was mildly irritated rather than stridently anxious. Arguing that scientific questions really had nothing to do with religious ones, he concluded with the kind of *reductio ad absurdum* worthy of Bishop Wilberforce: 'were it not for their supposed effect upon religion, no-one would waste his time in reading about the possibility of Polar bears swimming about and catching flies so long that they at last get the fins they wish for'. Butler, provoked, charged Abraham with misrepresenting Darwin in a 'scandalously slovenly manner'. The correspondence continued in a more circumspect tone, eventually petering out in June 1863.⁵⁹ Butler had two further articles on evolution published in *The Press*, including 'Darwin among the Machines', which was the genesis of *Erewhon*. If he seemed to be heading towards anticlericalism and scientific naturalism in the colony, however, his return to England saw a gradual about-face. He wrote a number of books on evolution including *Life and Habit* (1877), *Evolution Old and New* (1879), *Unconscious Memory* (1880), and *Luck or Cunning* (1885), in which he disputed Darwin's originality in the historical development of evolutionary theory, rejected the primacy of natural selection, and instead proposed a theory based on the conscious will and unconscious memory of organisms. Darwin rejected Butler's attempt to rechristen Erasmus Darwin's and Lamarck's theories, and ignored Butler's accusations of personal treachery. Butler concluded that natural science too was an oppressive religion with Darwin and Huxley as its high priests, and became a sworn opponent of all establishments, ecclesiastical or scientific. He completed a rather circuitous pilgrimage by actually preferring the church.⁶⁰

George Hogben, the son of a Congregational minister, arrived in New Zealand in 1881 as science master at Christchurch Boys High School and eventually became Inspector-General of Schools from 1899 to 1915. He also became an authority on seismology and a fellow of the Geological Society. He had been an immediate convert to Darwinism, but never abandoned Christianity, and once even offered himself to the London

⁵⁹ The correspondence is reprinted in full in R. A. Streatfield, ed., *A First Year in Canterbury Settlement with Other Early Essays*, London, 1914, pp.149-79.

⁶⁰ For Butler's views on evolution, and a comparison with Darwin's see Basil Willey, *Darwin and Butler: Two Versions of Evolution*, London, 1960, especially Lecture III. For Butler's eventual preference for the church ecclesiastical over the church scientific, p.80.

Missionary Society for service in China. It was, however, a Christianity that was beginning to slip its orthodox doctrinal moorings. Science caused him to reject miracles, and his creed was summed up in a lecture on Thomas Carlyle read before the Canterbury College Dialectical Society in 1882. The three keys to the regeneration of individuals and society were: an earnest sincerity of purpose and performance; a complete renunciation of Self, and a reverent attitude towards Nature, towards whatever is higher than ourselves; faithful and worthy work.⁶¹ This belief was little more than inspired moralism.

Walter Travers was typical of this radical group. His interests were multifarious: he commenced a law practice in Nelson in 1849, became M.H.R. for Nelson, Christchurch City, and Wellington City successively, and somehow found the time to develop an expert interest in botany and ornithology. He was a Fellow of the Linnaean Society, founder and governor for life of the New Zealand Institute, and contributed many papers to the Wellington Philosophical Society, chiefly on botanical subjects. A convinced Darwinian, he outlined his views on the relations between religion and science in a lecture delivered at the Colonial Museum in 1869. He charged anti-evolutionists who assumed a posture of superior piety with a lack of Christian humility and charity. True religion and sound science could never be at variance. They might be if religion meant 'belief in certain dogmas and adherence to ritualistic forms, but if the exercise of religion consists in the search after truth and devotion to the Great Author of all then there can be no conflict'.⁶² This was a far cry from credal orthodoxy, typical of the floating and inchoate religious consciousness of this radical group.

John Macmillan Brown underwent a similar evolution. From a Scottish Presbyterian background, steeped in the Bible, he described evolution and in particular the *Descent of Man* as 'spiritual dynamite', breaking many of his friends loose from orthodoxy. It had a similar effect on Macmillan Brown, who was appointed inaugural Professor of Classics and English at Canterbury College in 1878. His Christianity could only be described as residual: 'Imagination is the faculty chiefly concerned with religion. When reason is called in to deal with it, its work is rather destructive than constructive; it questions the basis of any system and generally finds flaws in its origins and history.'⁶³ He had a wide variety of friends, scientists, politicians, and clergymen, including Robert Stout ('a kindred spirit'), John Ballance, Bickerton, Haast, Hector, and Robert Gillies.

Robert Stout was arguably the most extreme of this radical group. Repelled by his father's exploitative landlordism, he had also abandoned his Presbyterian legacy for Darwinism while a youth in the Shetland

61 H. O. Roth, *George Hogben. A Biography*, Wellington, 1952, p.25.

62 TPNZI, II (1869), p.300.

63 J. Macmillan Brown, *The Memoirs of John Macmillan Brown*, Christchurch, 1974, p.168.

Islands.⁶⁴ However John Macmillan Brown's warning to freethinker John Ballance could apply equally well to Stout. He was in danger of turning his anti-religion into a religion.⁶⁵ *The Future*, a lecture delivered in Dunedin in 1875, was a typical example: '[Evolution] teaches us to look to the future with hope, with a belief that progress is the law of existence, and that, though reforms come slowly, they come surely.' He concluded with the kind of exhortation appropriate to such evangelical evolutionism: we must 'aim to make the world better than we found it, and strive for a future time more glorious than the golden past. This I conceived I could do best by exalting evolution. It is this which gives the fullest play to a man's faculties. It is this which clothes as with divinity a man.'⁶⁶ The audience must surely have expected an altar call. Evolution provided Stout with a radical religious faith to accompany his political radicalism. Attacking entrenched economic interests in the House, he could also attack the theology of the dominant religion with a positivist epistemology. In a lecture delivered to the Hawkes Bay Philosophical Institute he insisted that religious statements must be dismissed as either unverifiable or else opposed to observation and experience.⁶⁷ Extrapolating from evolution the doctrine of inevitable progress, he had an ostensibly scientific surrogate for the Christian millennial hope. Confounding his audiences with lofty Spencerian metaphysics, he was able to acquire a certain priestly mystique.

Other radical figures could easily be identified: John Ballance, Duncan Macgregor, Edward Tregear, William Pember Reeves. What united them was an ardent commitment to evolution and a religious consciousness more or less adrift from orthodox Christian moorings, finding in an evolutionary outlook some form of substitute. They played a prominent, indeed a formative role, in New Zealand science, education, and politics.

The simple polarization/conflict model of the relations between science and religion in the nineteenth century needs to be abandoned in the New Zealand context. There was no polarization. The leading scientists were and remained orthodox religious believers, in contrast to the militant agnostics among believing British scientists like Huxley and Tyndall. The leading churchmen, whilst firmly rejecting the materialistic evolutionism of Haeckel, eagerly sought rapprochement between Christianity and modern science, certain that evolution and Christian belief were compatible. The aggressive Christian anti-evolutionists, closer to the traditional picture, probably got a hearing in the smaller Protestant denominations less exposed to contemporary intellectual culture. But it is clear, from the fate of J. G. S. Grant and the decline of the Dunedin Y.M.C.A.,

64 D. A. Hamer, 'The Law and the Prophet. A Political Biography of Sir Robert Stout', M.A. thesis, University of Auckland, 1960, pp.1-2, 6-7.

65 Macmillan Brown, *Memoirs*, p.122.

66 R. Stout, *The Future*, Dunedin, 1875, Stout pamphlet collection, v.31, no.4, pp.7, 8.

67 R. Stout, *Evolution and the Origin of Life*, Napier, 1914, p.2.

that mainstream opinion swept past them. The relations between scientists and churchmen, far from being hostile and antagonistic, were characterized by consensus, forbearance, and irenicism. The scientific and religious leaders of a youthful society determined to achieve social integration and cohesion were quick to defuse a potentially explosive issue by insisting on its compatibility with moral and religious orthodoxy.

It would be misleading, however, to conclude that the debate was a phantom. For if scientists and churchmen found it quite possible to reconcile evolution and Christian belief, the radicals did not. It was they who led New Zealand into the twentieth century. What needs further exploration is why, if evolutionary science did not point scientists and churchmen away from Christianity, it was so much more decisive for the radicals.

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