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**B. B. Warfield,
the Theory of Evolution
and Early Fundamentalism**

The discussion as to whether Bible-believing Christians can accept the scientific hypothesis of biological evolution shows no signs of coming to an end. Dr. Livingstone, a research fellow in the Queen's University of Belfast, examines the thinking of B. B. Warfield and other modern evangelical theologians on this controverted issue.

In the popular mind, if indeed not in historical scholarship, fundamentalism is widely regarded as synonymous with an obscurantist attitude to culture in general and to science in particular. That these charges are not without foundation is evident from the sensationally reported 're-runs' of the 1925 Scopes 'monkey trial', first in California in 1981 and then the following year in Arkansas — spectacles presented as a kind of atavistic *deja-vu*.¹ Such exhibitions, indeed, have very successfully obscured the historical foundations of the movement which, when re-examined, reveal a far more pluralistic attitude to the theory of evolution than is presently advocated by its leading propagandists. It is for this reason, then, that I want to reconsider those treatments of the subject in the inaugural, twelve-volume manifesto of the movement — *The Fundamentals* — published between 1910 and 1915, and also to re-examine the scientific thinking of one of its chief theological architects, B. B. Warfield.

At heart, *The Fundamentals* was an 'interdenominational expression of the anti-modernist movement'² in theology in that it drew together a wide range of conservative writers whose aim was to reaffirm the traditional Christian doctrines about Christ and the Bible. Successively edited by A. C. Dixon, Louis Meyer, and R. A. Torrey and sponsored by two wealthy Californians,

¹ So, for example, Kenneth M. Pierce, 'Putting Darwin Back in the Dock', *Time Magazine*, 16 March, 1981, 50–52.

² George M. Marsden, *Fundamentalism and American Culture. The Shaping of Twentieth-Century Evangelicalism: 1870–1925* (New York and Oxford: Oxford University Press, 1980), 119.

some three million copies of the documents were eventually distributed to 'every pastor, evangelist, missionary, theological student, Sunday School superintendent, Y.M.C.A. and Y.W.C.A. secretary in the English-speaking world, so far as the addresses of these <could> be obtained'.³ Of course the fundamentalist movement insofar as it already existed, and certainly as it subsequently developed was a very complex social movement,⁴ and there is no sense in which *The Fundamentals* may be taken to represent the tradition. But the plurality of scientific views expressed by the contributors does throw into significant relief the subsequent evolution phobia which, in the 1920s, became the movement's *cause celebre*. Moreover, since present-day 'Scientific Creationists' frequently rest their doctrine of scripture on the theological convictions of such men as Warfield, it seems logical to ask how he, among others, responded to the then current debates in the sciences of biology, geology, and anthropology.

The most pointed consideration of Darwin's theory appeared in the seventh volume of the buff paper-back series. It was by the aging George Frederick Wright and was called 'The passing of evolution' — a title acknowledged by Wright himself as something of a misnomer. In a long and varied career, Wright had distinguished himself as a glacial geologist through the publication of *The Ice Age in North America and Its Bearings Upon the Antiquity of Man* (1889), *Man and the Glacial Period* (1892), and numerous articles in the leading geological journals, and had supplemented these scientific achievements with a 38-year editorship of *Bibliotheca Sacra*.⁵ As a long-standing Professor in Oberlin Theological Seminary teaching both theological and scientific subjects he was, in many ways, in an ideal position to consider the religious implications of Darwinism. Wright, in fact, had been interested in the theory of evolution since his student days in the late 1850s when he began to cultivate, by correspond-

³ *The Fundamentals* (Chicago: Testimony Publishing Company, 1910), Volume 1, 4.

⁴ In addition to Marsden's volume, the standard histories of Fundamentalism include L. Gaspar, *The Fundamentalist Movement* (Paris: Mouton & Co., 1963); Ernest Sandeen, *Toward a Historical Interpretation of the Origins of Fundamentalism* (Philadelphia: Fortress Press, 1968); Ernest Sandeen, *The Roots of Fundamentalism: British and American Millenarianism 1800-1930* (Chicago: Chicago University Press, 1970).

⁵ See William James Morrison, 'George Frederick Wright: In Defense of Darwinism and Fundamentalism 1838-1921' (Ph. D. thesis, Vanderbilt University, 1971). Wright also contributed an article to the second volume of *The Fundamentals* (pp.7-28) entitled 'The Testimony of the Monuments to the Truth of the Scriptures', and to the ninth volume (pp.5-21) 'The Mosaic Authorship of the Pentateuch'.

ence, a close friendship with the outstanding Harvard botanist Asa Gray. Sharing a common faith in Christ and a fascination with science, they entered into an alliance both to prevent the subversion of Darwinism by those materialists who urged that the new theory had discredited conventional Christianity, and to convey to the clergy their reconciliation of science and belief. For Wright, the heart of the matter was to reconstruct the argument from design in such a way as to make it compatible with recent scientific discoveries. As he wrote to Gray in 1875, 'The important thing to do, is to develop a right *evolutionary teleology*', and to present the argument for design from the exquisite adaptations in such a way as to make it tell on both sides.⁶ As Morrison, Wright's leading biographer, has put it:

Gray and Wright did not believe that Darwin had destroyed the possibility of a divinely planned creation which developed along the lines of purpose that God had staked out for it. Rather, Darwin's system was founded upon teleology, and did not exist apart from the guiding purpose of the divine hand.⁷

The burden of Wright's paper in *The Fundamentals* was to discriminate between evolution as a scientific theory of species transmutation and evolutionism as a metaphysical *Weltanschauung*. The word 'evolution' he noted, 'has come into much deserved disrepute by the injection into it of erroneous and harmful theological and philosophical implications. The widely current doctrine of evolution which we are now compelled to combat is one which practically eliminates God from the whole creative process and relegates mankind to the tender mercies of a mechanical universe the wheels of whose machinery are left to move on without any immediate Divine direction'.⁸ As this quotation makes plain, Wright's dissatisfaction with evolutionary theory centred less on exegetical questions about the early Genesis narratives than on the materialistic reductionism that had shorn evolutionary history of any teleological element. But Wright was quick to point out that 'Darwinism was not, in the mind of its author, a theory of universal evolution'⁹ and that Darwin, in fact, rarely used the term at all. Wright argued, moreover, that Darwin had rested his theory on the assumption that 'the Creator in the beginning breathed the forces of life into several forms of plants

⁶ *Ibid.*, 64.

⁷ *Ibid.*, 66.

⁸ George Frederick Wright, 'The Passing of Evolution', *The Fundamentals*, Volume VII, 5–20. Reference on p.5.

⁹ *Ibid.*, 5–6.

and animals¹⁰ — a suggestion that has led several subsequent historians of science to identify Darwin as an evolutionary deist, at least at the time of the first appearance of *The Origin of Species*.¹¹ Of course it must be admitted that in real terms this, for Darwin, amounted to a kind of methodological atheism inasmuch as, after the initial act of Creation, the evolutionary process proceeded according to the laws of nature. In point of fact it was his postulation of such a *modus operandi* that encouraged some critics to suggest that he had merely substituted Nature for God, natural selection for natural theology. But Wright was eager to use Darwin's tentative admission to prise open the theory just enough to squeeze in the old Paleyan Divine Watchmaker, and so he contended that 'by no stretch of legitimate reasoning can Darwinism be made to exclude design'.¹² It was a rather difficult path to tread; on the one hand he had to resist any identification of evolution with Providence, and on the other he wanted to see the purposive hand of God guiding the whole process. To support his own version of the argument from design Wright did not hesitate to solicit the scientific authority of such scholars as Agassiz, Owen, Mivart, Shaler, Dawson, Kelvin, Wallace, Virchow, and Cope who in different ways expressed dissatisfaction with the way in which Darwin's proposals had been formulated whether in terms of the statistical incredulities in the basic idea of random variation, the absence of crucial palaeontological corroboration, the new estimates of geological time, or the lack of a satisfactory mechanism for explaining inheritance. As the discussion makes plain, Wright was no scientific dilettante. He clearly understood the heart of Darwin's thesis and was deeply aware both of the internal evolutionary feuds between the Neo-Lamarckians and the Neo-Darwinians, personified in the Spencer-Weismann controversy, and also of post-Darwinian developments in the new science of heredity. But Wright's intention in summoning this not insubstantial body of opinion was not to reject the scientific validity of the theory; rather it was to urge that to posit an evolutionary history 'without the intervention of the Supreme

¹⁰ *Ibid.*, 8.

¹¹ Thus, for example, John C. Greene, *The Death of Adam* (Ames: Iowa State University Press, 1959); John C. Greene, 'Reflections on the Progress of Darwin Studies', *Journal of the History of Biology* 8, 1975, 246; Maurice Mandelbaum, 'Darwin's Religious Views', *Journal of the History of Ideas* 19, 1958, 363-78; Dov Ospovat, *The Development of Darwin's Theory. Natural History, Natural Theology, and Natural Selection, 1838-1859* (Cambridge University Press, 1981).

¹² Wright, *op. cit.*, 10.

Designing Mind is to commit logical “hara-kiri”’. Such chance combinations are beyond all possibility of rational belief.’¹³

Wright’s comparatively latitudinarian attitude to scientific evolutionism mirrored the somewhat earlier discussion of the theme by the Scottish theologian James Orr. A staunch and scholarly apologist for historic evangelicalism from the perspective of a modified Calvinism, Orr supplemented his book-length treatments of basic Christian doctrines and a critique of the dominant Ritschlian theology¹⁴ with some four contributions to *The Fundamentals*. In two of these, ‘Science and Christian Faith’ (volume iv) and ‘The Early Narratives of Genesis’ (volume vi), Orr discussed issues directly impinging on the evolution question. In the former he was at pains to highlight what he termed ‘the unwarrantable confusion or identification of evolution with Darwinism’.¹⁵ Thus while he was quite open to evolutionary explanations, on scientific grounds he itemized three areas where he believed the conventional Darwinian model had been found wanting. Firstly, he assured his readers that the fortuitous character of the variations which Darwinian natural selection presupposed was being rejected in favour of the view that they were ‘now felt to be along definite lines, and to be guided to definite ends’.¹⁶ Orr did not specify which particular scientific theories he had in mind, but there certainly were schools of opinion advocating that particular viewpoint. The Neo-Lamarckians, for instance, with their doctrine of the inheritance of acquired characteristics, reverted to Lamarck’s own idea of ‘tendance de la nature’ — the idea that there was an internal telos in the evolutionary process guiding it ever onward and upward. Dramatized by Herbert Spencer’s unflinching faith in inevitable progress, this idea soon gripped the imagination of social theorists.¹⁷ Then, especially among palaeontologists, there was the idea of orthogenesis — a term used by Wilhelm Haacke and Theodor Eimer to designate the process of evolution by ‘definitely

¹³ *Ibid.*, 16.

¹⁴ See Paul Helm, ‘Orr, James (1844–1913)’, in J. D. Douglas (ed.), *The New International Dictionary of the Christian Church* (Exeter: The Paternoster Press, 1974), 735.

¹⁵ James Orr, ‘Science and Christian Faith’, *The Fundamentals*, Volume IV, 91–104. Reference on p.102.

¹⁶ *Ibid.*, 102.

¹⁷ In his *Social Statics* of 1851 Spencer affirmed, for example: ‘Progress, therefore, is not an accident, but a necessity . . . and provided the human race continues, and the constitution of things remains the same, those modifications must end in completeness’ (p.80). See also J. D. Y. Peel, *Herbert Spencer: the Evolution of a Sociologist* (London: Heinemann, 1971).

directed variation'. In their conviction that evolutionary natural history exhibited orderly patterns of development, many advocates of orthogenesis found it impossible to reconcile their science with a materialist philosophy.¹⁸ Whether or not Orr was particularly familiar with these specific theories, he was certainly correct in saying that many scientists were unhappy with Darwin's pivotal conceptions of chance and random variation. Secondly, Orr questioned the all-sufficiency of natural selection to account for organic diversity. And again there were those among the scientific fraternity who balked at the monistic temper of Darwin's theory whether applied to organic or moral development. Both Darwinians like A. R. Wallace and Neo-Lamarckians like J. W. Powell wanted to supplement natural selection with other evolutionary processes while T. H. Huxley, for instance, urged in his celebrated Romanes lecture for 1893 on 'Evolution and ethics' that

the practice of what is ethically best — what we call goodness or virtue — involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence . . . Let us understand, once for all, that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it.¹⁹

Thirdly, Orr urged that the slow and insensible rate of the changes by which new species were supposed to be produced was being challenged by the new idea of 'mutations' — the belief that new species originated in rapid and sudden changes. Orr almost certainly had in mind the mutation theory of Hugo De Vries and Thomas Hunt Morgan who used Mendel's recently rediscovered formula to argue for the sudden appearance of new forms and to show that mutations were not necessarily retrogressive.²⁰ In effect then Orr, rather like Wright, was cataloguing those challenges to the *spirit* of Darwinism by evolutionists themselves in order to confirm his conclusion that "Evolution", in short, is coming to be recognized as but a new name for "creation", only that the creative power now works from *within*, instead of, as in the old conception, in an *external*, plastic

¹⁸ Peter J. Bowler, 'Theodor Eimer and Orthogenesis: Evolution by "Definitely Directed Variation"', *Journal of the History of Medicine and Allied Sciences* 34, 1979, 40-73.

¹⁹ T. H. Huxley, *Evolution and Ethics and Other Essays* (London: Macmillan and Co., 1898), 81-83.

²⁰ See, Peter J. Bowler, 'Hugo De Vries and Thomas Hunt Morgan: The Mutation Theory and the Spirit of Darwinism', *Annals of Science* 35, 1978, 55-73.

fashion.²¹ By thus advocating a sort of emergent evolutionism where radically new evolutionary departures — life, consciousness, rationality, and morality — illustrated the essential discontinuity of the process, he presented his own rapprochement between science and the Bible.

Orr pursued this reconciliation of science and scripture in his subsequent essay on the early narratives of Genesis published in the sixth volume of the series. Since Orr wanted to construct an evolutionary theory that was Providentialist in character and teleological in spirit, he affirmed the religious significance of the doctrine of creation in terms of the assurance it gave to belief in a purposeful universe under the control of a sovereign Creator. It is no surprise then, that in this essay he was prepared to reaffirm his conviction that the ‘Bible was never given us in order to anticipate or forestall the discoveries of modern twentieth century science’,²² to leave open such questions as how the six creative days should be exegeted, and to stress the popular culture-specific character of biblical language. What he objected to was the identification of evolution with what he took to be a materialistic Darwinism.

That Orr’s conception of evolutionary emergence was intended to retain the argument from design is plain from his discussion of the subject in *The Christian View of God and the World* first published in 1893. Here he affirmed that when ‘evolution results from development from within . . . the argument from design stands precisely where it did, except that the sphere of its application is enormously extended.’²³ By contrast, the acceptance of the natural selection mechanism as an all-sufficient explanation amounted to the proposition that ‘accident and fortuity have done the work of mind.’²⁴ Happily, however, Orr could tell his readers that the facts did not confirm the latter hypothesis, and to substantiate the point he included an appendix detailing the different schools of evolutionary thinking. He did not, of course, reject natural selection *in toto*. His objection, like that of the Neo-Lamarckians, was that it could originate nothing, but that it only came into operation as a secondary mechanism after new characters had been produced by other, more fundamental causes. Orr’s discussion reveals that he was very well informed about the current scientific literature on the subject, and, more

²¹ Orr, *op. cit.*, 103.

²² James Orr, ‘The Early Narratives of Genesis’, *The Fundamentals* Volume VI, 85–97. References on p.94.

²³ James Orr, *The Christian View of God and the World* (Edinburgh: Andrew Elliot, 10th edition, 1908), 99.

²⁴ *Ibid.*, 100.

importantly, that he found in the evolutionary alternatives grounds for an assurance that evolution 'in no way conflicts with design, but rather compels the acknowledgement of it.'²⁵

The fascination of both Wright and Orr with the question of design in the universe opens up an interesting side issue on evangelical thinking in the period. Plainly Darwin's theory had undermined the orthodox rehearsal of Paleyan natural theology for the heart of his treatise was that the myriad variations in creatures which adapted them to their environments could be explained in a plain naturalistic way without recourse to the direct interventions of a Divine Creator. Clearly for those Christians who found the scientific evidence for evolution sufficiently compelling, it was necessary to reinterpret the theory in a way not inconsistent with the argument from design and so the idea of, to use Wright's term, evolutionary teleology became more and more popular. That it was not entirely a theological rationalization is evident from the admission of some evolutionists that the evolutionary history of life on earth exhibits a certain goal-directedness sometimes referred to as 'teleonomy'.²⁶ Moreover it suggests the quite central place of natural theology in Calvinist thinking at the time for, as several historians of science have pointed out, Darwinism in some form was most readily adopted by those of Calvinist persuasion.²⁷

The qualified pro-evolution stances of Wright and Orr were matched by two decisively and aggressively anti-Darwin statements presented in the eighth collection of essays. In the 'Decadence of Darwinism', Rev. Henry H. Beach of Grand Junction, Colorado objected to the theory on the grounds that the organic world exhibited three distinct levels of being — vegetable life, animal life, and human life — and 'these three kinds of life touch each other, but never merge.'²⁸ Interestingly he also questioned the theory because of Darwin's idea of reversion — the idea that evolutionary history is sometimes retrogressive. To this Beach countered that there 'are no retreatings or abortions in the Divine

²⁵ *Ibid.*, 101.

²⁶ See the discussion in John Bowker, 'Did God Create this Universe?', in A. R. Peacock (ed.), *The Sciences and Theology in the Twentieth Century* (Henley and London: Oriel Press, 1981), 98–126.

²⁷ Thus, for example, Herbert W. Schneider, 'The Influence of Darwin and Spencer on American Philosophical Theology', *Journal of the History of Ideas* 6, 1945, 3–18; James 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: Cambridge University Press, 1979).

²⁸ Henry H. Beach, 'Decadence of Darwinism', *The Fundamentals* Volume VIII, 36–48. Reference on p.38.

economy, but God adjusts every feature to present and future conditions, and causes all to march regularly forward in the grand procession of eternal progress.²⁹ I say that this is interesting because, in fact, many evangelicals have objected to Darwinism precisely on the grounds of its supposedly *progressivist* philosophy implying human perfectibility . . . ‘moving upwards and working out the beast.’ Beach further bolstered his objections to the theory by his implicit accusation that it was bad science; that, according to Bonnier, Darwin had no idea of the experimental method, that he had presented a concept of selection without a selector, and, fundamentally, that evolution was merely an unproven, speculative hypothesis. And this tends to confirm Marsden’s argument that the ideals of an inductive Baconian science provided the conceptual parameters for both scientific and theological endeavour in the period. But Beach resorted to scientific authorities merely to confirm his moral distaste of the theory, a repugnance expressed with verbal affluence and dismissive zeal: Darwin’s theory degraded man and God; it was ‘ridiculous’; it was ‘immoral’; for it to ‘be true, black must be white, and wrong must be right, and God an Ivan the terrible.’³⁰

Beach’s pugnaciously anti-Darwin sentiments were more than matched in the parallel essay on ‘Evolutionism in the Pulpit’, an anonymous reprint from the November 1911 issue of the *Herald and Presbyterian* rivalling Beach’s language only in the exuberance of its rhetoric. This full frontal attack both on the theory of evolution and on those Christians who accepted it was untempered and frank. Darwinism contradicted the plain reading of Scripture, and those who salved their consciences by saying that the Bible was not intended to teach science were perpetuating a half-truth ‘more misleading than a downright untruth.’³¹ It has to be pointed out, however, that the author’s own citation of scholarly authorities was not beyond reproach; his referencing was, at best, undisciplined, at worst deceptive and dishonest. He cited, for instance, Dr. Shaler of Harvard as affirming that the Darwinian theory had not a single fact to confirm it. But Shaler in fact was deeply committed to the Neo-Lamarckian version of the theory and while he was not prepared to extend the natural selection mechanism to human social development, he still felt it had great

²⁹ *Ibid.*, 40.

³⁰ *Ibid.*, 44.

³¹ ‘Evolutionism in the Pulpit’, *The Fundamentals*, Volume VIII, 27–35. Reference on p.28.

explanatory power.³² Again the extract by Virchow affirming the failure of anthropologists to find palaeontological confirmation of a link between ‘man and monkey’ likewise neatly served to obscure Virchow’s long standing commitment to Lamarckian evolution.³³ But in the last analysis scholarly authority was immaterial to the author’s purpose. The problem was that Darwinism, as he understood it, contradicted the Bible, and those Christian ministers who accepted any form of a theory ‘conceived in agnosticism, and born and nurtured in infidelity’³⁴ (including presumably fellow contributors to *The Fundamentals*) were for various reasons dismissed as ‘cowardly’, ‘grossly inconsistent with their Christian profession’, and of ‘low moral quality’.³⁵ ‘Far better would it be for all concerned’, he concluded, ‘if these ministers had the courage of their convictions, and sense of honour enough to compel them to leave the Christian Church.’³⁶

The same year, 1911, also brought the publication of an essay on the subject by another *Fundamentals* contributor, an article quite different in sentiment and wholly scholarly in intent. It was by B. B. Warfield and, although it appeared in *The Princeton Theological Review*, I think it is important to consider it in the present context for several reasons. On the one hand Warfield did contribute an article on ‘The Deity of Christ’ to the first issue of *The Fundamentals*, and on the other, his writings on scripture are widely regarded as constituting the paradigmatic formulation of the classical doctrine of biblical inerrancy. These facts notwithstanding, Warfield had been a keen advocate of evolutionary theory at least since his student days at Princeton when a thorough reading of Darwin’s *Origin* had persuaded him of the theory’s value even before the arrival of the Darwinian James McCosh as Princeton’s President.³⁷ And it is for this reason that I want to resort temporarily to an article Warfield authored in 1888 for the *Presbyterian Review* on ‘Charles Darwin’s religious life’ before turning directly to his 1911 statement.

The article, subtitled ‘A sketch in spiritual biography’, was in

³² See David N. Livingstone, *Nature, Man and God in the Geography of Nathaniel S. Shaler* (Ph. D. thesis, The Queen’s University of Belfast, 1982).

³³ See F. B. Churchill, ‘Rudolf Virchow and the Pathologist’s Criteria for the Inheritance of Acquired Characteristics’, *Journal of the History of Medicine and Allied Sciences* 31, 1976, 117–48.

³⁴ *Op. cit.*, 31.

³⁵ *Ibid.*, 33.

³⁶ *Ibid.*, 33–34.

³⁷ See Samuel G. Craig, ‘Benjamin B. Warfield’, in Benjamin Breckinridge Warfield, *Biblical and Theological Studies* (Philadelphia: Presbyterian and Reformed Publishing Company, 1968), xi–xlvi.

essence an essay review of the three-volume *Life and Letters of Charles Darwin* compiled by his son.³⁸ As the title suggests, Warfield focussed on what has come to be known as Darwin's 'affective decline',³⁹ that is, his progressive distaste for art, music, literature and religion. In fact this aesthetic atrophy, as Warfield described it, called forth from John C. Greene the observation that 'having doubted the reality of spirit, he suffered from the spiritual consequences of his doubt.'⁴⁰ Warfield certainly lamented the spiritually disruptive effects of the theory of evolution on its chief advocate, and expressed his annoyance at Darwin's absolutist claims for his natural selection mechanism; but this must not be allowed to conceal the fact that Warfield remained enthusiastic about the theory as a natural law operating under the control of Providence — an interpretation supported in various ways, he noted, by such scientists as Carpenter, Dallinger, and Gray. 'We raise no question', he affirmed, 'as to the compatibility of the Darwinian form of the hypothesis of evolution with Christianity; Mr. Darwin himself says that "science" (and in speaking of "science" he has "evolution" in mind) "has nothing to do with Christ, except in so far as the habit of scientific research makes a man cautious in admitting evidence."' ⁴¹ To Warfield, Darwin's spiritual disaffection could be traced on the one side to an inability to conceive of God as immanent in the universe which issued in a misapprehension of the doctrine of Providence, and on the other to an unsophisticated understanding of teleology. It was Warfield's concern, therefore, to articulate a theological apologia for the Divine design and Providential government of the world.

The 1911 article, to which I have already referred, was entitled 'On the Antiquity and the Unity of the Human Race', and it constituted one of the most scientifically literate reflections on the religious implications of the subject by a theologian. Dismissing as indefensible the genealogical method of dating the antiquity of the human race and stating that, in any case, it was a purely scientific matter that did not concern the theologian, Warfield turned to the question of mankind's unity as an issue of

³⁸ Benjamin B. Warfield, 'Charles Darwin's Religious Life. A Sketch in Spiritual Biography', *The Presbyterian Review* 9, 1888, 569–601. It was reprinted in Warfield's *Studies in Theology* (New York: Oxford University Press, 1932), 541–82, and it is to this printing that I refer.

³⁹ John Angus Campbell, 'Nature, Religion and Emotional Response: A Reconsideration of Darwin's Affective Decline', *Victorian Studies* 18, 1974, 159–174.

⁴⁰ John C. Greene, *Darwin and the Modern World View* (New York: The New American Library, 1963), 116.

⁴¹ Warfield, *op. cit.*, 548.

indubitable theological importance. In actual fact this was a topic of burning interest rivalling in ideological significance the more conventional talking point on the origin of mankind. Wright, for instance, had alluded to it in passing in his *Fundamentals* article, affirming that the theory of evolution had vindicated the traditional biblical doctrine of human descent from a single ancestry. To fully appreciate the import of Warfield's rather fuller contribution, however, his discussion needs to be set in the context of the long-standing feud between the monogenists and the polygenists, a debate ante-dating the Darwinian revolution by several decades.

The chief scientific point at issue was whether mankind as a species was of single or multiple origin; but this apparently innocuous question took on a more sinister social dimension when overlain with the suspicion that the different human races were in reality totally different biological species. The plainly monogenetic implications of biblical anthropology were first challenged by S. G. Morton and J. C. Nott whose pre-Darwinian writings set the style for American polygenism.⁴² Convinced that certain races were inherently inferior, their scientific 'findings' were interpreted by many as a scholarly defence for the institution of slavery.⁴³ Indeed some Christian ministers, like Rev. Alexander McCauley,⁴⁴ were prepared to defend slavery on biblical grounds, while scientific polygenists like Agassiz went so far as to declare that the different races were the separate, special creations of God.⁴⁵ Despite its implications of a common ancestry, Darwin's theory did not immediately dispel the polygenist tradition which, as Stocking has documented, persisted in anthropology until well after the appearance of the *Origin*, particularly in North America, perhaps because of fears arising from mass immigration.⁴⁶ Indeed the codification of American racism in Madison Grant's *The Passing of the Great Race* as late as 1916 reveals that the issue was not, even then, finally laid to rest.

⁴² I discuss this in 'Science and Society: Nathaniel S. Shaler and Racial Ideology', *Transactions of the Institute of British Geographers*, in press.

⁴³ This was, however, far from universal as William Stanton points out in *The Leopard's Spots. Scientific Attitudes Toward Race in America 1815-59* (Chicago: The University of Chicago Press, 1960).

⁴⁴ This is discussed in Richard Perkins, 'Minority-Majority Relations' in Stephen A. Grunlan and Milton Reimer (eds) *Christian Perspectives on Sociology* (Grand Rapids: Zondervan, 1982), 290-310.

⁴⁵ See Edward Lurie, 'Louis Agassiz and the Races of Man', *Isis* 45, 1954, 227-42. A potent review of Agassiz's racism is by Stephen Jay Gould, 'Flaws in a Victorian Veil', *New Scientist* 31st August 1978, 632-33.

⁴⁶ George W. Stocking Jr., *Race, Culture, and Evolution. Essays in the History of Anthropology* (New York: The Free Press, 1968), chapter 3.

Directly confronting this question, and ably reviewing the relevant scientific literature, Warfield pointed out that the strong tendency to deny the unity of mankind sprang from a deep-seated racial pride. For him the unity and common origin of the human race was a direct, necessary corollary of the theory of evolution, and he affirmed that, on this issue, science and scripture corroborated each other. 'The prevalence of the evolutionary hypotheses', he wrote, 'has removed all motive for denying a common origin to the human race, and rendered it natural to look upon the differences which exist among the various types of man as differentiations of a common stock.'⁴⁷ Warfield's discussion, then, serves to illustrate not only his adoption of an evolutionary model for explaining aspects of human development, but also his uncompromising conviction that the whole doctrinal structure of the biblical account of redemption was rooted in the assumption that 'the race of man is one organic whole.' The evolutionary basis of Warfield's proposals, I would suggest, need to be remembered today when some evangelical anti-evolutionists urge that evolutionism has fostered a racist mentality. Thus Schaeffer's comment that evolutionary 'concepts opened the door for racism' is as dangerous a half-truth as E. H. Andrews's emotive note that the 'Nazi regime exploited evolutionary ideas to "justify" their mass murder of the Jews.'⁴⁸

Warfield's 1915 article for the *Princeton Theological Review* on 'Calvin's Doctrine of the Creation' can be regarded as a kind of theological supplement to these earlier reflections. From the outset he made it clear that Calvin's discussion was 'devoted rather to the nature of the created universe than to the mode of Divine activity in creating it',⁴⁹ but suggested that while Calvin naturally understood the six days of creation in a literal sense, he did believe that Moses, 'writing to meet the needs of men at large, accommodated himself to their grade of intellectual preparation',⁵⁰ and that the Mosaic record was nothing like an exhaustive account of the whole process. He also stressed the fact that Calvin

⁴⁷ Benjamin B. Warfield, 'On the Antiquity and the Unity of the Human Race', *The Princeton Theological Review* 9, 1911, 1–25. It was reprinted in Warfield's *Biblical and Theological Studies* (Philadelphia: Presbyterian and Reformed Publishing Company, 1968), 238–261. Again I refer to the reprint. The present reference is on p.255.

⁴⁸ Francis A. Schaeffer, *How Should We Then Live?* (Old Tappan, N.J.: Fleming H. Revell, 1976), 151; E. H. Andrews, *Is Evolution Scientific?* (Herts: Evangelical Press, 1977), 6.

⁴⁹ Benjamin B. Warfield, 'Calvin's Doctrine of the Creation', *The Princeton Theological Review* 13, 1915, 190–255. Reference on p.190.

⁵⁰ *Ibid.*, 196.

wanted to reserve the word 'creation' for the initial creative act and not for subsequent 'creations' during the succeeding five days as these were not, strictly speaking, creations out of nothing. This indeed even applied to the human physical form, although Warfield was careful to point out that the soul was in a different category. The following extract, I think, usefully encapsulates Warfield's resume of Calvin's thinking:

It is important further that we should not suppose that Calvin removed the production of the human soul out of the category of immediate creation, in the strictest sense of that term. When he insists that the works of the days subsequent to the first, when 'in the beginning God created the heavens, and the earth', were not strictly speaking 'creations', because they were not productions *ex nihilo*, he is thinking only of the lower creation, inclusive, no doubt of the human body; all this is made out of that primal 'indigested mass' which sprang into being at the initial command of God. The soul is a different matter; and not only in the first instance, but in every succeeding instance, throughout the whole course of human propagation, is an immediate creation *ex nihilo*.⁵¹

It is no surprise then, given this interpretation, to find Warfield describing Calvin's doctrine of creation as 'a very pure evolutionary scheme'⁵² in that the primeval 'indigested mass', created by divine fiat, included within it the 'promise and potency' of all that was yet to be. 'But all that has come into being since — except the souls of men alone — has arisen', Warfield said, 'as a modification of this original world-stuff by means of the interaction of its intrinsic forces.'⁵³ Of course the subsequent modifications took place directly under the governing hand of God, but this did not prevent Warfield from assuring his readers that 'they find their account proximately in "secondary causes"; and this is not only evolutionism but pure evolutionism.'⁵⁴ Warfield pointed out, of course, that Calvin never dilated on the factors of the evolutionary process nor on the nature of the secondary causes involved in the history of life. But he was convinced that, to retain the spirit of Calvin's doctrine of creation, 'it was requisite that these six days should be lengthened out into six periods, — six ages of the growth of the world. Had that been done', he continued, 'Calvin would have been a precursor of the modern evolutionary theorists . . . *<for>* he teaches, as they teach,

⁵¹ *Ibid.*, 207.

⁵² *Ibid.*, 209.

⁵³ *Ibid.*, 208.

⁵⁴ *Ibid.*, 208.

the modification of the original world-stuff into the varied forms which constitute the ordered world, by the instrumentality of secondary causes, — or as a modern would put it, of its intrinsic forces.⁵⁵

Any doubts as to the accuracy of Warfield's interpretation, or suspicions that he was indulging in the old Whig heresy of 'writing history backwards' to justify his own position, is quite irrelevant to the point I want to make. My argument is, quite simply, that Warfield's scientific philosophy was thoroughly infused with evolutionary concepts, that his unease about the theory, where it existed, was almost exclusively over its anti-teleological implications, that his revisionist model was intended to accommodate the argument from design, and most of all, that he saw no incompatibility between these scientific convictions and his doctrine of biblical inspiration.

Aldous Huxley once observed: 'That men do not learn very much from the lessons of history is the most important of all lessons that history has to teach.' In the hope that his adage is ill-founded I want to suggest that there are at least three lessons to be learned from this brief historical sketch. First, the presence of no fewer than three contributors to the *Fundamentals* with not unfavourable attitudes to the theory of evolution has a symbolic value which overrides any suggestion of editorial malpractice or historical aberration and displays a pluralism among early Fundamentalists singularly lacking after 1920. Second, the fascination by Christian thinkers with the doctrine of design in the universe implies that this was a more important focal point of confrontation between evolutionist and anti-evolutionist than questions of inerrancy and exegesis. And finally, the considered and supportive testimony of Warfield to the theory of evolution can no longer be suppressed or subverted by those who want to wield a Warfieldian view of scripture in the cause of a 'creationist' crusade.

⁵⁵ *Ibid.*, 209–10. Warfield's interpretation was later supported by John Murray in 'Calvin's Doctrine of Creation', *Westminster Theological Journal* 17, 1954, 21–43.