

‘Visible incarnations of the unseen’: Henry Drummond and the practice of typological exegesis

ANNE SCOTT*

Abstract. Although Henry Drummond’s *Natural Law in the Spiritual World* (1883) is frequently cited by historians in relation to the impact of evolutionary theories on the Victorian churches, attention has not been paid to the audiences of working-class men in Glasgow for whom the papers were originally constructed. By drawing upon the notebook in which the author sketched out the series of addresses, in addition to materials relating to the interpretative habits of these audiences; I am able to consider the text as a work of practical apologetics rather than as a contribution to elite intellectual debate. This paper promises to open up new lines of enquiry with regard to the materials with which working-class audiences attempted to construct their own interpretations of contemporary scientific and religious issues. It also highlights Drummond’s hitherto unrecognized use of specific practices of biblical exegesis and his debt to the work of the anatomist Richard Owen which, by keeping different forms of life distinct, and explaining organization as the effect of life already present, allowed the author to visualize the process of descent in terms of an inherent tendency to change in line with the unfolding of a pre-existing plan.

Within a year of publication, *Natural Law in the Spiritual World* (1883) was selling one thousand copies each month and was still selling at a phenomenal rate twenty years later, after Hodder and Stoughton issued a sixpenny paperbound edition in 1902.¹ Matthew Arnold wrote of it that the

best public, perhaps, does not much care for it; but the second best, all the religious world, and even the more serious portion of the aristocratical world, have accepted the book as a godsend,

* Centre for History & Cultural Studies of Science, Rutherford College, University of Kent, Canterbury, Kent, UK.

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1 Henry Drummond, *Natural Law in the Spiritual World*, London, 1883. Subsequent references will be to the 17th edition, London, 1885. Sales figures cited by James Moore, ‘Evangelicals and evolution: Henry Drummond, Herbert Spencer, and the naturalisation of the spiritual world’, *Scottish Journal of Theology* (1985), 38, 383–417, 385–6.

and are saying to themselves that here at last is safety and scientific shelter for the orthodox supernaturalism which seemed menaced with total defeat.²

The majority of contemporary reviewers focused overwhelmingly on the Introduction, where the principle of continuity is offered as a priori argument that the same laws may be found to operate in the natural and spiritual worlds.³ In more recent years James R. Moore has read Drummond's arguments for the naturalness of the spiritual world as an attempt to transform the Darwinian theory with the metaphysics of providence and progress, by using Spencer's more Lamarckian evolutionary writings to secure the doctrines of traditional Christianity on an evolutionary basis.⁴

It is clear from Drummond's unpublished notebook dating from 1880–1 that both the Introduction and the title of the book *Natural Law* were added for publication to a wider audience and that, as he acknowledged in a later Preface referable to the year 1890, they obscure our understanding of how the chapters functioned for their original audiences at the Renfield Mission Station in Glasgow.⁵ Drummond defended his work by asking that it be considered in the context of its original audience and purpose: 'It was spoken to working men, and for a simple practical purpose ... it was written to reduce to some order the vagrant spiritual experiences and aspirations of those among whom I worked, and to offer to plain minds a working basis for their religious life.' Having been prepared for publication and sold several thousand copies, he felt it had subsequently 'been judged as a philosophical treatise', a standard against which, he admitted, it had no adequate armament and could not hold its own.⁶

Of central importance to my study of the contexts in which the addresses were initially produced and consumed are instruction books written by and for sabbath-school teachers working in Glasgow at this time which demonstrate the interpretative habits taught to and expected from individuals.⁷ These texts show the continuing relevance of emblems, parables and types in the instruction of adults and children alike. Rereading the *Natural Law* addresses in this light leads to a reassessment of certain aspects of the evolutionary theory expressed by the author and reveals a hitherto unrecognized debt to

2 Matthew Arnold to M. Fontano, 18 July 1885, Drummond papers, National Library of Scotland, Acc. 5890, Box 2.

3 For contemporary reviews see the volume of press cuttings, 1883–7, related to *Natural Law* in Drummond Papers, op. cit. (2), Box 12.

4 Moore, op. cit. (1). For the most recent writings on Drummond see also Thomas E. Corts (ed.), *Henry Drummond: A Perpetual Benediction*, Edinburgh, 1999; Anne Scott, 'Practices of witnessing in Victorian science and religion: the heresy trial of William Robertson Smith and the development of Henry Drummond's evolutionary scientific theology', unpublished Ph.D. thesis, University of Kent, 2002.

5 Drummond, notebook, 'New Analogy, Themes, References to Books', in Edinburgh University (Department of Manuscripts and Rare Books), Dk.3.33.

6 Drummond, op. cit. (1), 42. See also James Young Simpson, *Henry Drummond*, Edinburgh and London, 1901, 123; 'Interviews by post – Professor Henry Drummond on "Natural Law in the Spiritual World"', *British Weekly*, 7 and 14 January 1887.

7 On working-class interpretative habits more generally see Jonathan Rose, 'Rereading the English common reader: a preface to the history of audiences', *Journal for the History of Ideas* (1992), 53, 47–69; *idem*, *The Intellectual Life of the British Working Classes*, New Haven, 2001. On book history in relation to the history of science and religion see James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation*, Chicago, 2000.

earlier, pre-Darwinian discourses that related successive biological types or species as a progressive revelation of a unified pattern in the mind of God. Such an interpretation is corroborated by analysis of the training Drummond engaged in as a divinity student at New College in Edinburgh. My focus on the practical nature of the text ultimately reveals a complex evolutionary system underpinning his analysis of the unfolding of Christian consciousness within the individual and society, one that lent itself to his personal mission to use his passion for natural science to construct a way of living, travelling and working as lecturer, evangelist and ‘pseudo-biological pulpiteer’.⁸

Disarming priestly professionalism

Shortly after taking up his post as lecturer in natural science at the Free Church College in Glasgow, Drummond started sabbath-school work at Renfield Mission Station, where the Free Church minister Marcus Dods required immediate assistance in a broad programme of spiritual, moral and social regeneration. The Possilpark district, a northern suburb of around six thousand working-class families, had suddenly become a focus for missionary endeavour following the collapse of the City of Glasgow Bank in the autumn of 1878 when hundreds of its clerks and office staff were cast out of work. The mission was part of a larger scheme of church extension by which each middle-class congregation would develop an evangelization association where working-class worshippers were encouraged to strive for financial independence and full congregational status, before embarking upon their own programme of evangelization.⁹

Drummond had gained considerable experience in this field, having taken time away from his studies at New College to assist the American evangelist Dwight L. Moody following his arrival in Edinburgh in November 1873 at an early stage of a two-year tour of Britain and Ireland. Moody’s style of address, supported by Ira Sankey’s lively and controversial musical accompaniment, succeeded in bridging the gap between the church preacher and the hearer.¹⁰ Drummond drew upon the course he had been pursuing concurrently at the University of Edinburgh (with a view to qualifying as a doctor of science) to develop a unique style of addressing young men in language that was both accessible and contemporary.¹¹ He later recalled how this experience had confirmed his anxieties about traditional images of the clergy as sectarian servants and purveyors of a faceless God of dogma and coercion and suggested an alternative career to that for which he had been preparing.¹² Commanding audiences of up to twenty thousand

8 F. A. Bather, ‘Pseudo-biology’, *Natural Science* (1894), V, 449–54, 449.

9 George Adam Smith, *Life of Henry Drummond*, Edinburgh, 1899, 109–28, 134–5.

10 John Coffey, ‘Democracy and popular religion: Moody and Sankey’s mission to Britain, 1873–1875’, in *Citizenship and Community: Liberals, Radicals and Collective Identities in the British Isles, 1865–1931* (ed. F. Biagini), Cambridge, 1996, 93–119, 93–9; Smith, *op. cit.* (9), 55–100.

11 Cuthbert Lennox [i.e. J. H. Napier], *Henry Drummond*, London, 1899, 8–10.

12 Smith, *op. cit.* (9), 126; see also Drummond, ‘A talk about books’, *Melbourne University Review* (August 1890), 3, 101–5. After passing control of the family firm, William Drummond and Son seedsmen and nurserymen of Stirling and Dublin, to Henry’s eldest brother James, Henry senior became a dominant figure in the public life of Stirling, teaching in a sabbath school and serving as a Justice of the Peace, President of the YMCA, elder of the Free North Church and chairman or director of most local philanthropic institutions. See

people, the Great Mission, as it became known, made the life of a settled minister appear restrictive in terms of target audiences and the appropriate forms in which to address them.¹³ This is reflected in a request made by Drummond in March 1877 to his friends Mr and Mrs Stuart, that they must make it clear to others that although he now worked at the college and was attached to Renfield Church, he had ‘not bowed down and worshipped Mrs G[rundy]’, adding, ‘If you ever write Mr. Moody I wish you would tell him that. He too thinks I have fallen’.¹⁴ In 1884 the rapid success of *Natural Law* issued in invitations to preach across America, but also led, ironically, to Drummond’s ordination when James Stevenson (chairman of the Livingstonia Central Africa Company, for whom Drummond had been carrying out a geological survey in east central Africa) made funds available to raise his lectureship to a permanent chair. On this occasion (4 November 1884) a student observed that Drummond was ‘dressed like a country squire ... proclaiming to fathers and brethren and to all the world that he was not going to allow ordination to play havoc with his chosen career’.¹⁵ According to his colleague and biographer George Adam Smith, Drummond always denied that he had ever been ordained,¹⁶ striving instead to disarm the professionalism associated with the cloth by cultivating a reputation for sartorial and literary elegance.¹⁷

The Possilpark context

In his role as college lecturer Drummond attempted to overturn the perception on the part of students that the practices and conclusions of science stood ‘independent of opinion, prejudice, self-interest, or tradition’.¹⁸ One objective of his teaching was to impart to future church ministers a habit of self-reliance that would enable each to find his own divine revelation free from the trammels of the remote past or the reports of other people.¹⁹ A common vision of the universe permeated his lectures and addresses from this period: he wished to exhibit in nature a view of God consistent with the conception of a character or personal father suggested by the ‘high faculties and deep affection and ... flexible will’ with which he felt himself to have been endowed. He therefore insisted that ‘natural’ laws must be defined as the constant working of a creative will; to describe such a God in the language of matter and mechanics would, he noted, be like confining one’s idea of Gladstone to his labours in felling trees. A reference in Drummond’s notebook suggests he understood ‘natural law’ to mean something

the obituary of Henry Drummond senior in the *Stirling Observer*, in Drummond Papers, op. cit. (2), Box 17. Henry’s uncle, Peter Drummond, was also an active member of the Free Church and achieved notoriety as founder of the Stirling Tract Enterprise started in August 1848. See M. J. Cormack, *The Stirling Tract Enterprise and the Drummonds*, Stirling, 1984.

13 James F. Findlay Jr., *Dwight L. Moody, American Evangelist, 1837–1899*, Chicago and London, 1969, 153.

14 Smith, op. cit. (9), 246–7.

15 Lennox [Napier], op. cit. (11), 16, 52–3.

16 Smith, op. cit. (9), 247.

17 John Watson, ‘Henry Drummond’, *North American Review* (May 1897), 164, 521–2.

18 H. Drummond, ‘The contribution of science to Christianity’, *Expositor* (1885), 1, 28–51, reprinted in *idem, The New Evangelism and Other Papers*, London, 1899, 153–87, 156.

19 Drummond, op. cit. (12), 103.

similar to the 'Law in general' which in the Anglican theologian Richard Hooker's *Of the Laws of Ecclesiastical Polity* (1594–7) operated above all cosmic or earthly laws as 'the Law whereby the Eternal himself doth work', and could be considered to be both voluntary and reasonable. This was a God who was above nature and whose freedom was not bounded by the laws of His creation, a God who could make and remake laws and intervene in answer to Christian prayer.²⁰

Drummond explained in the Preface to *Natural Law* how he was drawn by his weekday role to address his Sunday evening audiences with Christian evidences drawn from the constitution and course of nature.²¹ He communicated via detailed analogies, employing them as he had learnt to do as a divinity student, as 'a sort of rational imagery', by which the nature and relations of things 'seen and temporal' are made to symbolize those which are 'unseen and eternal'.²² Instruction books for sabbath-school teachers, including those working at Renfield at this time, indicate that it was commonplace to attempt to inculcate such interpretative habits among congregations. Expounding upon passages in the New Testament where Christ describes his relation to humanity in terms of symbols taken from the natural world, Marcus Dods and other Glasgow ministers such as William Arnot and Thomas Guthrie emphasized the central role of emblems and parables in the instruction of children and adults alike. Although it was believed that such methods had originally been designed to accommodate truth to humanity's post-lapsarian faculties, in all events in life the individual was encouraged to reflect on the natural and spiritual meaning of Christ's description of himself as the bread of life, the light of the world, the true vine, the good shepherd, the resurrection and the life, and the living water and so on.²³

Drummond's 'New Analogy', the title he gave the notebook in which he planned his series of addresses, shared a common framework with Joseph Butler's *Analogy of Religion* (1736), in which the faculties of all creatures demonstrate 'that they are capable of naturally becoming qualified for states of life for which they were once wholly unqualified' through 'acquirements of experience and habits'.²⁴ Both Butler and Drummond drew analogies between processes that could be witnessed in nature and in human experience, rather than simply the appearance or form of phenomena. Butler's illustrations for a natural basis of belief in immortality had been the growth and

20 Drummond, *op. cit.* (5), 211.

21 Drummond, *op. cit.* (1), p. vii.

22 James Buchanan, *Analogy, Considered as a Guide to Truth, and Applied as an Aid to Faith*, Edinburgh, 1864, 124. Buchanan held the chair of systematic theology at New College from 1847 to 1868.

23 William Arnot, *Sabbath School Teaching, in its Principles and Practice*, Montreal, 1845; *idem*, *Laws of Heaven for Life on Earth: Illustrations of the Book of Proverbs*, London, 1857; *idem*, *Lessons in Life: A Series of Books for the Young*, 6 vols., London, 1884; Thomas Guthrie, *The Parables Read in the Light of the Present Day*, London, 1866; John Cairns, *Dr Guthrie as an Evangelist*, Edinburgh, 1873. Sermons delivered at Renfield Free Church formed the substance of Dods's popular volumes, *The Parables of Our Lord: First Series, Matthew*, Edinburgh, 1883, and *The Parables of our Lord: Second Series, Luke*, Edinburgh, 1885. Dods was also a prolific contributor to T. and T. Clark's 'Handbook for Bible Classes' series, Hodder and Stoughton's 'Expositor's Bible' series, the *Theological Educator*, and the *British Weekly*.

24 Joseph Butler, *The Analogy of Religion, Natural and Revealed, to the Constitution and Course of Nature (with Dissertations: 'Of Personal Identity', 'Of the Nature of Virtue')*, with Introduction by R. Bayne, London, 1906; Drummond, *op. cit.* (1), 16.

metamorphosis of insects. Drummond's addresses on 'Biogenesis', 'Degeneration', 'Growth', 'Death', 'Mortification', 'Eternal Life', 'Environment', 'Conformity to Type', 'Semi-Parasitism', 'Parasitism' and 'Classification' used case studies of growth and decay taken from the writings of Herbert Spencer and the zoologist E. Ray Lankester to construct a series of parables illustrating the consequences for each individual if he or she neglects to care for their soul. It was in Lankester's explanation of any loss in the functionality of faculties as a contingent process arising from a lessening of environmental stimuli and the inherited effects of disuse that Drummond found the principle of utility used in a way that could support the notion of a conscience in the life of the universe.²⁵

The *Shorter Catechism* in scientific dress

In the Preface to *Natural Law* Drummond claimed to have reconstructed his spiritual world without the presuppositions of his theology,²⁶ but to many contemporary critics his analysis of the textuality of nature supported the moral doctrines of the sternest Calvinism. The agnostic critic and scientific popularizer Samuel Laing found in *Natural Law* nothing less than the *Shorter Catechism* in scientific dress.²⁷ Choosing words and metaphors that were recognizably borrowed from members of the scientific community, Drummond extended the image of nature as an arena of competitive struggle to support a 'grim distinction', as he himself called it, between 'Living and Dead, Lost and Saved'.²⁸ In his notebook he wrote, 'Nature is on the side of quality ... Natural Selection. Quality versus Quantity ... Waste in nature and Election.'²⁹ In the vocabulary of theology, election refers to the act of the divine will exercising itself on individuals, among whom it chooses some in preference to others. Throughout the series of papers creatures both wild and domestic were invested with intelligence, volition and even responsibility, before being charged with having degenerated through self-neglect, thus illustrating Drummond's theological argument that degeneration of human faculties follows not only active wrongdoing, but also a lack of strenuous effort. In the address 'Degeneration' Drummond drew upon Lankester's observation that any 'principle which secures food to the individual without the expenditure of work is injurious, and accompanied by the degeneration and loss of parts'.³⁰ This degenerative principle served as a naturalistic metaphor for the Pauline doctrine of sin as a power that has become lodged in the individual, enslaving and paralysing his or her will. 'Instead of aspiring to Conversion to a higher Type', Drummond explained, 'he submits by a law

25 E. Ray Lankester, *Degeneration: A Chapter in Darwinism*, London, 1880, 33. Drummond, op. cit. (1), 97–101, 105.

26 Drummond, op. cit. (1), pp. xi, xvii.

27 Samuel Laing, *Modern Science and Modern Thought*, 4th edn, London, 1887, 362.

28 Drummond, op. cit. (1), 83. Volume of press cuttings in Drummond Papers, op. cit. (2), Box 12. See especially Charles A. Row's review in the *Contemporary Review* (January 1884). See also 'Almoni Peloni', 'Biogenesis and Degeneration', *Expositor* (January 1884), 7, 18–43.

29 Drummond, op. cit. (5), 119. Drummond, op. cit. (1), 411–12.

30 Lankester, op. cit. (25), 58; quoted by Drummond, op. cit. (1), 349.

of his nature to Reversion to a lower'.³¹ One disgruntled critic referred to this 'law of Death' as Drummond's 'pet law', one he applied indiscriminately to mean any lack of activity, whether in the context of inertia, imperfection, numbness, unconsciousness or disease.³² With such 'universal principles staring us in the face', he reminded his listeners, it would be dangerous to ignore God's message indefinitely. Lankester's work on parasitism formed the basis of an attack on mere churchgoing and prayer in place of active belief and Christian work. Asserting the value of personal commitment and a changed life when the gospel is received, he explained how any activity which relieved the individual of responsibility for his or her own redemption through overcoming sin might be seen to result in 'a cheap life, ... a comfortable, credulous rest upon authority, not a hard-earned self-obtained personal possession'.³³ The papers on 'Biogenesis' and 'Conformity to Type' outlined the only hope of deliverance; the former begins with accounts of experiments conducted by Huxley and Tyndall to prove that organisms could not be spontaneously generated from dead matter, thereby reinforcing Drummond's argument that the spiritual individual, 'a new Creation born from above', was exclusively the product of 'the germ of the Christ-Life'.³⁴

These analogies were framed within the notion that nature is wasteful, embodying the universal consequences of the Fall, which reduced both human beings and the natural order from a state of perfection to one of sin. Such a view was based upon the comparison drawn by St Paul between the creation narrative found in Genesis and the later potential creation of a new life within each individual via the death of Christ. In such a scheme, Adam is seen to represent human nature and the sons of Adam to represent the two seeds – flesh and spirit – that have grown by nature and by grace respectively. Henceforth the natural and the spiritual are two competing motives within each individual; the natural ignores sin and seeks to make life easier, thereby thwarting the purposes of Providence, whilst the spiritual confesses sin, by a sacrifice which involves the death of the fallen creature and a changed life. Crucially, in this providential view the liberty of the individual as a moral agent is preserved and the physical world is considered to be specially adapted to guide and restrain humanity's fallen nature.³⁵

Much contemporary criticism of the published addresses echoed that of Moody's earlier preaching.³⁶ Moody had been perceived as radical in terms of the scale of his operations and his tactical deployment of the phraseology and 'bank-clerk' image of his earlier days in commerce.³⁷ His message was essentially a conservative one, however, in which the devils and fires of an earlier age were replaced with lessons of obedience lavishly illustrated with the severing of filial relationships. More perceptive critics such as A. B. Bruce recognized that the tenets of Drummond's 'scientific theology' were

31 Drummond, *op. cit.* (1), 101.

32 Robert A. Watson, 'Professor Drummond's new "scientific" Gospel', *Contemporary Review* (March 1885), 47, 392–404, 399, 401.

33 Drummond, *op. cit.* (1), 361 and *passim*.

34 Drummond, *op. cit.* (1), 99–100, 61–3, 65, 69.

35 W. Fields, 'The translation of Biblical live and dead metaphors and similes and other idioms', *Grace Theological Journal* (1981), 2, 191–204.

36 See the volume of press cuttings in Drummond Papers, *op. cit.* (2), Box 12.

37 Findlay, *op. cit.* (13), 178, 180–1.

largely shaped by a tendency to base the facts of religious experience narrowly on those associated with the beginning of the religious life with which he was familiar from his revivalist work.³⁸ Both Moody and Drummond aimed to persuade audiences that what they required was cataclysmic change, not a process of growth in which the Spirit of the 'new life' gradually overcame the resistance of the old.³⁹

In his later writings, Drummond promoted evolutionary thought as a naturalistic foundation for altruistic ethics, using Spencer's doctrine of the 'survival of the fittest' to argue that the purpose of suffering was to arouse sympathy in others.⁴⁰ At the time of delivering the *Natural Law* addresses he retained the ideals of paternalism, social hierarchy, prudence, patience, hard work and simplicity of lifestyle, as the means by which working-class worshippers could improve their lives. Although Drummond employed organic analogies to support a Calvinist distinction between the natural and spiritual individual, he did also assert the moral ability of men and women to cooperate with God's grace, suggesting he understood election as a free human response. There are indications of this more optimistic view in the chapter of *Natural Law* on 'Growth', where, in an echo of Matthew's parable of the leaven and Mark's parable of the seed growing secretly by its own dynamic, he stressed that 'Growth is the work of time' and compared the gradual development of character to the automatic and effortless growth of seedlings in his father's garden nursery.⁴¹ To the reviewer of *Natural Law* writing in the *Dundee Adventurer* (July 1883) the central message of Drummond's chapter on 'Degeneration' was the active potential of each individual to exercise a measure of control over the influences to which they were exposed, 'by the tone of society, by the company he keeps, by his occupation, by the books he reads, by Nature, by all, in short, that constitutes the habitual atmosphere of his thoughts and the little world of his daily choice'.⁴² Drummond's position seems to be close to that of the biblical critic Richard Rothe, who held that every individual could be saved on condition they 'converted themselves', and the conditionalists Lyman Abbott and Henry Ward Beecher, who held that as men approached in moral likeness to God their actions tended to immortalize them.⁴³

The principle of conformity to type

In his scientific study of the growth of grace within the individual believer and within social groups, Drummond analysed the Christian in biological terms as a member of a new type or divergent species characterized by an enlarged capacity for faith. He considered the processes of the 'new birth' as witnessed on the mission trail to justify a

38 A. B. Bruce, *Apologetics; or, Christianity Defensively Stated*, London, 1892, 227, 229.

39 John Kent, *Holding the Fort: Studies in Victorian Revivalism*, London, 1978, 171, 202–3.

40 H. Drummond, *The Ascent of Man*, London, 1894.

41 Drummond, op. cit. (1), 123–40.

42 *Dundee Adventurer* (July 1883), in volume of press cuttings in Drummond Papers, op. cit. (2), Box 12.

43 On Rothe see Geoffrey Rowell, *Hell and the Victorians: A Study of Nineteenth-Century Theological Controversies Concerning Eternal Punishment and the Future Life*, Oxford, 1974, 186. On Abbott and Beecher see Paul F. Boller, *American Thought in Transition: The Impact of Evolutionary Naturalism, 1865–1900*, Chicago, 1969.

biological reading of New Testament language which describes the regenerate soul as a new creature transformed by a new life, and fused this notion with the principle of conformity to type to explain the unfolding of the 'Christ-Type' within the individual believer. Drummond began by questioning how all living things begin as an initial indistinct germ regardless of whether they will 'creep or fly ... think or vegetate', and then follow different well-established patterns of development to form distinct species. Each species, he argued, was the work of an Artist who worked according to the 'law' of conformity to type to reproduce himself. The theological inference was that as 'the bird-life builds up a bird the image of itself, so a Christ-life builds up a Christ the image of Himself, in the inward nature of man.'⁴⁴

In his notebook, Drummond described the principle of conformity to type as both the 'Law of the Ideal' and the scientific equivalent of the doctrine of the Incarnation: whereas the animal in following the ideal or type is blind, human beings have the conscious power of choice and can choose to follow the example of the Christ-Type. 'Now the Christian is the incarnation of Christ-life', Drummond explained, 'That is the form of life which enters into the Christian, obeying the law of Conformity to Type, builds itself up into the form of Christ. The life reproduces itself; assimilates the materials of character, bringing all into the obedience of Christ "Until Christ be formed in it".' The Christian, he suggested, may be viewed as the incarnation of 'Him who is the Founder and Type of the Spiritual Kingdom', to be studied using the same analytical tools of form and function as are routinely applied in the case of biological species.⁴⁵

Drummond's language of 'reversion' to natural type and 'conversion' to spiritual type related to a specific tradition of scriptural interpretation, known as typological symbolism, in which Christ is regarded as the 'centre of Heaven's plan'. On such a basis, divinity students engaged in tracing links between the Old and New Testaments were accustomed to analyse the laws, events, people and prophecies of the Old Testament in terms of rough drafts from which more accurate models were subsequently made, and deliberate prefigurations of Christ's atonement for human sin. Once the type and antitype had been identified, detailed analogies could be drawn to reinforce the link whilst highlighting the slightly imperfect nature of the type, and showing the movement to the antitype to be a movement to something more spiritual.⁴⁶ Drummond's theological and exegetical training involved detailed study of *The Typology of Scripture* (1845–7), the definitive text on the subject penned by Patrick Fairbairn, then Principal of the Free Church College at Glasgow.⁴⁷

Such an interpretation of the meanings with which Drummond invested biological and religious type is suggested by consideration of the lengthy quotation from *In Memoriam* (1850) that prefaced the published version of 'Conformity to Type'. In the

44 Drummond, op. cit. (1), 288–93.

45 Drummond, op. cit. (5), 67, 260–1; *idem*, op. cit. (1), 292–3, 304–6, 403; 2 Cor. 5: 17, quoted in *idem*, op. cit. (1), 295; *idem*, 'Notes for Sermons 1878–92, with some scraps preached during the Possilpark Mission, 1880', in Drummond Papers, op. cit. (2), Box 9.

46 On the pervasive influence of this exegetical mode see George P. Landow, *Victorian Types, Victorian Shadows: Biblical Typology in Victorian Literature, Art and Thought*, Boston, London and Henley, 1980.

47 Patrick Fairbairn, *The Typology of Scripture*, 2 vols., Edinburgh, 1845–7. Subsequent references will be to the 4th edition, Edinburgh, 1864.

passage quoted, Tennyson, confronted by evidence of nature's wastefulness, questioned the purpose of the individual's noble aspirations in a world which seemed to care no more for humankind than for thousands of other species already 'cast as rubbish to the void'. He closed the poem with the promise that his dead friend Arthur Hallam was 'but seed' of what in a higher realm 'is flower and fruit', where the biological type has been replaced by a dual type 'Betwixt us and the crowning race ... No longer half akin to brute':

the man, that with me trod
This planet, was a noble type
Appearing ere the times were ripe,
That friend of mine who lives in God.

Like Tennyson, Drummond resolved this apparent conflict between an anthropocentric God and 'Nature, red in tooth and claw' by arguing that to 'work this Type in us is the whole purpose of God'. At the close of the chapter Drummond quoted from *In Memoriam* once more:

So careful of the type?' but no
From scarpèd cliff and quarried stone
She cries, 'A thousand types are gone;
I care for nothing, all shall go.'

All shall not go, Drummond affirmed, 'one Type remains – the Spiritual type'. In *Natural Law*, as in *In Memoriam*, faith revealed that God's eternal plan included purposeful biological development – 'The end of Salvation is perfection, the Christ-like mind, character and life.'⁴⁸ Comparing the status and meaning of 'the idea of the Kingdom' in natural history and the biblical narratives, Drummond detected comparable historical processes, manifestations of invisible forces of progressive, evolutionary growth working towards a mysterious end, with organisms 'gravitating towards a nobler order of things [and] kingdom ... seen to be rising above kingdom', carrying the world to the state of 'high and perfect development' described in the final pages of *Natural Law*.⁴⁹

The relations between the three kingdoms

Drummond's 'higher biology', as he sometimes referred to his project, rested upon a classification of provinces of nature in terms of kingdoms, as described in the first book of Genesis. The basis for the idea of the kingdom of God is laid in the creation history, in the Almighty's absolute power over all things inanimate (translatable into Drummond's first kingdom) and animate (or second kingdom), bringing unlimited dominion in nature and providence. We are told that the production of a higher ethical kingdom in humanity – a realm of free, personal spirits, yielding voluntary obedience to the

⁴⁸ Drummond, op. cit. (1), 286, 296, 314, 128–9.

⁴⁹ Drummond, op. cit. (1), 412–14. See also *idem*, 'The Third Kingdom', in *idem*, op. cit. (18), 89–117, 92, 94.

known will of their Creator – was God's aim from the first. However, the subsequent fallen condition of humanity meant that if God was to have a moral kingdom in the world this must be produced through redemption and regeneration as the result of a divine economy of salvation. Using Herbert Spencer's definition of life as the 'continuous adjustment of internal relations to external relations', Drummond's scale of ascent through the three kingdoms showed a progression in terms of the ability of each organism to adjust to changes in the surrounding environment.⁵⁰ He pictured the cosmos as a series of concentric circles representing each environment and imposing a limit on the richness of experience available to the things and beings fitted to survive there.⁵¹ The scale of complexity in the second kingdom culminated in the human mind, with its 'lightning-like response even to influences the most impalpable and subtle'. Being possessed of two sets of correspondences, the spiritual individual could dwell in the second kingdom and aspire to reach the third kingdom, where the environment is defined as perfect correspondence with the will of God. To develop the latter, contact with the former must cease; the organism must become dead to the organic world, alive only to the spiritual.

Drummond explicitly avoided using traditional Christian argument and contemporary evidence as to the physiological and philosophical possibility or impossibility of humans being either naturally or potentially immortal, focusing instead on explaining the moral conditions of their endowment with immortality and indicating its goal. He adopted Spencer's theoretical definition of eternal life as 'uninterrupted correspondence with a Perfect Environment': 'Perfect correspondence would be perfect life. Were there no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be eternal existence and eternal knowledge.' Drummond linked this abstraction with the Christian view that eternal life might be interpreted as perfect knowledge of God, interpreting this knowledge as correspondence or communion with a divine environment via adjustment or internal change. The highest and most complex organism would have added a 'correspondence which organic death is powerless to arrest ... a region where the Environment corresponded with is itself Eternal ... the Environment of the Spiritual World'.⁵²

By sketching out the cosmos in terms of the progressive revelation of 'an ever-widening environment', Drummond could effectively naturalize the spiritual world by describing it as 'simply the outermost segment, circle, or circles, of the natural world'.⁵³ A central strand of his strategy was to attribute the apparent impossibility of gaining knowledge of the third kingdom to the relations between the three kingdoms, from which the observer could only survey that to which he belonged and all those beneath. To the appropriate corresponding organism that could freely communicate with the outer circles, the spiritual would become the outer circle of the natural.⁵⁴ Materialism

50 Herbert Spencer, *Principles of Biology*, 2 vols., London, 1864, i, 74, cited in Drummond, op. cit. (1), 147.

51 The sketch is to be found in Drummond, op. cit. (5), 43.

52 Drummond, op. cit. (1), 301, 248, 225–7, 203, 212–13.

53 Drummond, op. cit. (1), 156–7.

54 Drummond, op. cit. (5), 242.

could thus be seen as an unscientific distortion arising from viewing the animal kingdom from the standpoint of the mineral, interpreting cells in terms of atoms. It was in this sense that Drummond attributed Spencer's 'cardinal error' (his agnosticism) to the deliberate way 'he unkingdoms himself'.⁵⁵ To theologians these circles would perhaps have been resonant of St Augustine's description of the nature of God as a circle, of which the centre was everywhere and the circumference nowhere. For Drummond, as for Emerson, to draw a new circle meant abandoning the needs of the self until eventually, in the final stages of human progress, nature disappeared and the series of expanding circles entailed the world. 'More and more, with every thought', Emerson had written, 'does his kingdom stretch over things, until the world becomes, at last, only a realized will, – the double of the man.'⁵⁶

Although in Drummond's three-kingdom cosmology humankind was striving to approximate the archetypal Christ-like character by striving to dwell in and adjust to an ever more refined environment in which individual character could develop, all progressive development proceeded in an orderly way that was driven from above, not from below. The differences between natural and spiritual beings were attributed to something *ab extra*, a mysterious gift, the germ of the Christ-life that could not be accounted for but once bestowed must unfold according to its type.⁵⁷ It was in this sense that the agnostic Samuel Laing read Drummond's doctrine of conformity to type as analogous to the Calvinist doctrine of predestination, the divine decree according to which certain persons are infallibly guided to eternal salvation.⁵⁸ From the standpoint of Christianity, the natural individual is regarded as spiritually lifeless, unable to develop faculties by which those who are regenerated are said to see the kingdom of God.⁵⁹

The distinction Drummond made between the natural and spiritual was underpinned by the principle of biogenesis that, as the authors of *The Unseen Universe* (1875) had explained, dictated that 'a conditioned living thing proceeds only from a conditioned living thing'.⁶⁰ This ensured that the passages between successive kingdoms were 'hermetically sealed': 'No organic change, no modification of environment, no mental energy, no moral effort, no evolution of character, no progress of civilisation can endow any single human soul with the attribute of spiritual life.' Drummond rejected the

55 H. Drummond, 'The naturalness of revelation' (n.d.), Drummond Papers, op. cit. (2), Box 8, 56, 81.

56 Ralph Waldo Emerson, 'Circles', in *idem*, *The Complete Prose Works*, London n.d., 75–81. Drummond's concept of the archetype is similar to Goethe's in the sense that it represents not simply a plan but also a potent essence, the precise expression of which depends partly on the conditions of existence. For an illuminating analysis of Goethe's *Urpflanze* and *Urphänomen* in relation to the Romantic postulate of the relationship between underlying reality and surface appearance in terms of expression, or realization, see Vernon Pratt and Isis Brook, 'Goethe's *Archetype* and the Romantic concept of the self', *Studies in the History and Philosophy of Science* (1996), 27, 351–65.

57 Drummond, op. cit. (1), 67–74, 129.

58 Laing, op. cit. (27), 362.

59 Drummond, op. cit. (1), 73.

60 [P. G. Tait and Balfour Stewart], *The Unseen Universe, or Physical Speculations on a Future State*, London, 1875, 177.

notion that a capacity to reach the higher levels of spirituality could be arrived at 'by the evolution of character in the laboratory of common life' as the mistaken promise of a self-help culture that threatened a proper understanding of mankind's absolute dependence on the will of God. 'The whole process ... transcends us', he explained; 'we do not work, we are taken in hand'. When explaining his hierarchical cosmology Drummond ascribed the difference of phenomena in the second and third kingdoms – the difference, for example, between morality and spirituality – to a difference in the quality of energy to be found in each: 'the Third Kingdom alone possesses the true ideal, and alone contains the energies effectually to overpower those forces of sin', he wrote. Any attempt to perfect character independently of the regenerative power of the Spirit he likened to an attempt to manufacture energy for oneself, or to discover perpetual motion, when the principle of persistence of force showed that energy could only be transferred or transformed, not created or destroyed.⁶¹

Typologies of scripture and nature in the Free Church of Scotland

As presented in *Natural Law*, Drummond's visualization of the unfolding 'Christ-life' as the preordained culmination of organic evolution reflects certain strands of his training at New College, where Owen's concept of the vertebrate archetype as a single plan on which all forms had been modelled with variations provided many Free Church theologians with a foundation for a reading of evolutionary processes in terms of idealist rational plans and special creations. The notion of a unity of plan had previously been tainted by association with Geoffroy St Hilaire but, having read Owen's works, James McCosh anticipated that the theory of a 'general homology' would be found to be as useful to natural theology as that of special adaptation of parts.⁶² In Owen's theory a 'homologue' was an organ which could be detected in different animals, under different modifications of form and function, such as the pectoral fins of a fish, the wings of a bird, the forelegs of a mammal, and the arms and hands of the human body. Serial homology described the 'harmonized series' of segments (vertebra) repeated under various modifications throughout the skeleton.⁶³ In Owen's earlier scheme the archetype represented the most basic conception of the vertebrate and 'Man, whose organization is regarded as the highest, departs most from the vertebrate archetype'.⁶⁴ From the late 1840s he began to reinterpret it as a Platonic model for

61 Drummond, op. cit. (1), 71, 65, 135; *idem*, op. cit. (49), 98, 96.

62 [James McCosh], 'Typical forms: Goethe, Professor Owen, Mr Fairbairn', *North British Review* (August 1851), 15, 389–418, 402. McCosh placed considerable emphasis on the practice of reading the beauty of botanical forms as a religious and intrinsically moral act, asserting that when 'the commonwealth of taste is properly constituted ... those who form spherical yews and conical laurels, should themselves be subjected to a similar pruning process'. 'Let us be thankful', he went on, 'that no such enormities are committed in the works of God' (*ibid.*, 394–5). McCosh had studied under William Hamilton and Thomas Chalmers at the University of Edinburgh. His *The Method of Divine Government*, Edinburgh, 1850, secured his reputation as a natural theologian and the chair of logic and metaphysics at Queen's College, Belfast the following year. He declined appointment to the chair of apologetics at the Free Church's College in Glasgow in 1856, and was elected to the presidency of Princeton College in 1868.

63 [McCosh], op. cit. (62), 402, 404–5.

64 Nicolaas A. Rupke, 'Richard Owen's vertebrate archetype', *Isis* (1993), 84, 231–51, 243.

creation and referred to it as representing a ‘predetermined pattern’ or ‘that ideal original or fundamental pattern on which a natural group of animals or system of organs has been constructed, and to modifications of which the various forms of such animals or organs may be referred’.⁶⁵ In such a form it could easily be integrated into theistic arguments. Indeed Nicolaas Rupke has suggested that Owen made this volte face to avoid the imputation of having strayed from the design argument following his instigation in 1847 of the translation into English of Lorenz Oken’s *Lehrbuch der Naturphilosophie* (*Elements of Physiophilosophy*). Oken, whom Sedgwick referred to as ‘the great hierophant of transmutation’, had sparked controversy with his argument that the brain is a vertebrate column, but was also deeply suspect owing to his transcendental methods.⁶⁶

The Free Church and its colleges were shaped in the divisive circumstances that followed the Disruption of 1843, when it was expected that the Church of Scotland would enforce religious Tests and so drive Free Church members from university posts. New College in Edinburgh was initially planned as a ‘free university’ that would offer a range of arts subjects in addition to providing theological training for Free Church ministers.⁶⁷ The first mention of the chair of natural science can be found in a letter penned by its first incumbent, John Fleming, then Professor of Natural Philosophy at King’s College, Aberdeen, writing to Thomas Chalmers, ‘Father-figure and organising genius of the emergent Free Church’.⁶⁸ He explained how it would be a useful way of extending the Church’s influence; a course in natural theology ‘would give a certain amount of authority, as you are well aware, to a parish minister [or] a missionary’, furnishing a wealth of pulpit illustration to the multitudes ‘not qualified to read the book of nature ... [or] to philosophise safely’.⁶⁹ In a lecture delivered at the inauguration of the New College building in 1851, Fleming made particular mention of the anonymous Lamarckian *Vestiges of the Natural History of Creation* (1844) and of Oken’s work, which he described as ‘from beginning to end ... a piece of visionary and loathsome materialism’.⁷⁰

In this context Owen’s demonstration of the prevalence of model forms furnished a new analogy between ‘typical’ systems of natural and revealed religion. It was claimed that by deciphering connections between the vertebrate animals Owen had unconsciously illuminated a new and exciting dimension to God’s methods of

65 [Richard Owen], ‘Archetype’, in *A Dictionary of Science, Literature and Art* (ed. W. T. Brande and G. W. Cox), 3 vols., London, 1856, i, 146, quoted in Rupke, op. cit. (64), 235.

66 Rupke, op. cit. (64), 243–8.

67 David F. Wright and Gary D. Badcock (eds.), *Disruption to Diversity: Edinburgh Divinity 1846–1996*, Edinburgh, 1996, 29.

68 A. C. Cheyne, ‘Thomas Chalmers’, in *Dictionary of Scottish Church History and Theology* (ed. Nigel M. de S. Cameron), Edinburgh, 1993, 158.

69 John Fleming to Thomas Chalmers, ‘King’s College, August 18, 1843’, reproduced in John Duns, *The Lithology of Edinburgh, including Memoir of John Fleming*, Edinburgh, 1859, pp. lxxxiii–lxxxvi.

70 Fleming, ‘Natural Science’, *Inauguration of New College*, Edinburgh, 1851, 222, 217. See also James Bannerman, *The Prevalent Forms of Unbelief: An Introductory Lecture Addressed to Students in the First Year of their Theology Course at the Commencement of the Session of New College, 1849*, Edinburgh, 1851, 18. See also Secord, op. cit. (7), 276–84.

communication, for the very abundance of archetypes suggested they were designed to be observed and interpreted by intelligent beings. Making reference to Fairbairn's 'evangelical and judicious' analysis of biblical types, McCosh set about extending scripture typology into the province of natural theology, using the recent discovery of homologies in comparative anatomy and morphological botany to show that there is more in nature than a mere adaptation of means to immediate ends. Once purged of the suggestion of natural causes, the apparent Baconian orthodoxy of Owen's argument for the vertebrate archetype fitted well with the needs of the new church to build up 'her argument of the deity from the constitution of the material world'.⁷¹ Furthermore, as McCosh noted, this 'appearance and reappearance of like forms' was well suited to the 'common-sense' view that the human mind delivers immediate knowledge, obtained by 'sense-perception, self-consciousness and other forms of intuition', to the 'faculty of comparison, or of perceiving resemblances'.⁷²

McCosh took pains to point out, however, that such applications of typology must be carefully controlled, particularly since the very structure of this exegetical mode could prompt practitioners to ask further questions as to whether there may be an archetype running throughout the entire series of animal structures and geological epochs.⁷³ In later editions of *The Typology of Scripture* Fairbairn explained how in the parallel drawn by McCosh between 'typical systems of Nature and Revelation' he found 'brought to light evidences, not previously observed, of a striking unity of plan' which would supplement those 'evidences of design in nature which show a specific direction towards a final cause'. He began to supplement his interpretation of the religion and history of the Old Testament as a revelation of types, with proofs 'derived from the existence of typical forms in physical nature, coupled with the evidences of a progression in the divine mode of realizing them'. He claimed that God's 'Second Book', like the Bible, was arranged according to the principles of progressive revelation:

It has been found by a wide and satisfactory induction, that the human is here the pattern-form – the archetype of the vertebrate division of animated being ... For, as geology has now learned to read with sufficient accuracy the stony records of the past, to be able to tell of successive creations of vertebrate animals, from fish, the first and lowest, up to man, the last and highest; so here we also have a kind of typical history – the less perfect animal productions of nature having throughout those earlier geological periods borne a prospective reference to man, as the complete and ultimate form of animal existence. In the language of theology, they were the type, and he is the antitype, in the mundane system ...⁷⁴

Examples cited by Fairbairn included the observation that 'every segment, and almost every bone, present in the human hand and arm, exist also in the fin of the whale'. This was seen to reaffirm that 'Man appears as the final and foreseen product of the one

71 Chalmers, 'Report on the curriculum' (Spring 1846), *Proceedings of the General Assembly of the Free Church of Scotland*, 219.

72 [McCosh], op. cit. (62), 410–11. See also McCosh's extended version of this argument, co-authored by George Dickie, *Typical Forms and Special Ends*, Edinburgh, 1856. Dickie was then Professor of Botany at Queen's College, Belfast.

73 [McCosh], op. cit. (62), 407.

74 Fairbairn, op. cit. (47) i, 48, 104–6.

mighty plan', because the five-part structure of the whale's fin, 'though apparently not required for the movement of this unflexible paddle, and the specific uses for which it is designed', was considered to be critical to the later development of the distinguishing functional features of the human hand.⁷⁵ McCosh observed that this gave the true meaning to facts that the author of *Vestiges* had 'woven into his plausible, yet exceedingly superficial work', but gave no credence to the theory he had based upon them. 'That there has been an order and a progression in the animal creation, should be admitted by all geologists', he concluded, 'But it is an order, not in the nature of things, but in the plan of the Creator. It is not that one species has run into a higher by physical laws, but it is that the higher species is constructed after the same type as the lower.'⁷⁶ By referring all to Christ as the centre of mankind's relationship to God, it was possible to promote a view of progressive development that nevertheless denied mankind was merely 'the sum total of all animals', as Oken had claimed. 'As the veil slowly rises a new significancy seems attached to all creation', Miller wrote,

The creator in the first ages of his workings appears to have been associated with what he wrought simply as the producer or author of all things; but even in these ages ... there were strange typical indications ... to the effect that the Creator was, in the future, to be more intimately connected with his material works ... through a glorious creature made in his own image and likeness ... [But] no sooner had the first Adam appeared and fallen, than a new school of prophecy began, in which type and symbol were mingled with what had now its first existence on earth; and all pointed to the second Adam, 'the Lord from Heaven'.⁷⁷

During Drummond's time at New College, the natural science chair was held by John Duns, initially appointed as temporary lecturer in 1861 following strong recommendations from Owen and Sedgwick.⁷⁸ Duns restructured the course to provide students with a thorough grounding in the Bible as a textbook of accurate scientific information and a repertoire of examples of design evident in utilitarian adaptation and unity of plan, with minor 'alterations and modifications ... introduced in order to meet current phases of unbelief'.⁷⁹ To this end students were directed to his two-volume guide to the Bible as a storehouse of Christian evidences, entitled *Biblical Natural Science, Being the Explanation of all References in Holy Scripture to Geology, Botany, Zoology, and Physical Geography* (1863–8). In *Science and Christian Thought* (1866) he extended the scope of typological readings of nature with a chapter devoted to 'atmospheric adaptations'.⁸⁰ With regard to evolutionary hypotheses, Duns conceded that statements in the Bible that the beasts were created 'after their kind' left room

75 [McCosh], op. cit. (62), 405, quoted in Fairbairn, op. cit. (47), i, 104–5. When demonstrating the Christian credentials of Owen's theory of the vertebrate archetype McCosh and Fairbairn cited the same passage: 'all the parts and organs of man had been sketched out in anticipation, so to speak, in the inferior animals; and the recognition of an ideal exemplar in the vertebrated animals proves, that the knowledge of such a being as man must have existed before man appeared'. Quoted in [McCosh], op. cit. (62), 417, and Fairbairn, op. cit. (47), i, 106.

76 [McCosh], op. cit. (62), 407–8.

77 Quoted in McCosh and Dickie, op. cit. (72), 517.

78 *Proceedings of the General Assembly of the Free Church of Scotland*, Edinburgh, 1859, 170–1, 176.

79 J. Duns, *Christianity and Science: The Introductory Lecture*, Edinburgh, 1860.

80 J. Duns, *Science and Christian Thought*, London, 1866, 156–75; *idem*, *Biblical Natural Science*, 2 vols., London, Glasgow and Edinburgh, 1863–8.

for naturalists to show what distinct species are, but felt that Darwin's chosen mechanism of natural selection threatened to substitute the 'theory of design' with 'mere blind force and unconscious, unthinking energy'. He adhered to a theory of 'special creations' in which living beings 'were at first formed in a mature state, and, by creative gift, like produced like through natural processes of reproduction and growth'.⁸¹

Duns rejected Darwin's theory on grounds similar to those cited by Owen, who objected to the notion of chance phenomena and preferred to visualize the process as a saltational rather than a progressively transmutational one.⁸² Crucially, Duns was unable to tolerate the analogy between variation under domestication, where human intelligence guided and selected modifications, and variation under nature, where he felt Darwin's evidence confirmed that nature had the power to select but not the self-creative energies to provide distinguishing features. For this reason he believed that evolution by natural selection was not a theory of the origin of species, but of the origin of 'special adaptations', by which he meant 'such fitnesses between means and ends, structure and function, as at least suggest to the observer the likelihood, that intelligent Personality exists above and behind them'. Echoing the argument put forward by McCosh, Duns expressed a preference for Owen's doctrine of archetypal plans, in the evolution of which, he explained, 'under the four great types – vertebrata, articulata, mollusca, and radiata – we find the basis for the doctrine of final causes which Mr. Darwin has no favour for, but apart from the recognition of which all nature would be a scene of confusion'.⁸³ In a review of 'Professor Owen's Works', published in the *North British Review*, Duns concluded that there was 'somewhere a great archetype, according to which the lowest of the vertebrates, equally with the highest, have been formed' and that every 'step in the realisation is taken after the ideal exemplar, first formed in his own mind'.⁸⁴

The sciences of energy and influence

Like earlier Free Church apologists, Drummond saw the fusion of Owen's archetypal schema with older practices in scriptural typology as a way of relying on evidence drawn exclusively from the visible realm. Here vital clues as to the nature and purposes of God could be discovered by traditional design arguments being communicated through natural laws and physical forms that were felt to be educative in their implications of ascent. The assumption of an idealist conception of design behind the appearance of new species formed the basis of Drummond's speculations as to how individuals might gain knowledge of God's ultimate purposes, for if the universe is the

81 J. Duns, 'Prayer and natural law', in *Christianity and Recent Speculations: Six Lectures by Ministers of the Free Church* (ed. Robert S. Candlish), Edinburgh, 1866, 128–9.

82 On Owen's objections see Rupke, *op. cit.* (64).

83 [J. Duns], 'The *Origin of Species*', *North British Review* (May 1860), 64, 455–86, 473, 465, 481, 461. As Alfred Russel Wallace pointed out, in such theories of special creation it was not only the variations created by the florist or the pigeon fancier that would have to be 'determined at the right time and place by the will of the Creator', but also those resulting from the more trivial and debasing needs of the ratcatcher, huntsman, or slave-trader. A. R. Wallace, 'Creation by law', *Quarterly Journal of Science* (October 1867), 471–88, 485.

84 [J. Duns], 'Professor Owen's works', *North British Review* (May 1858), 56, 313–45, 345.

outward expression of the laws of the Kingdom of God and evidence of the Creator's purposes can be detected in the appearance of new animal types, the same might be claimed for the spiritual or Christian type. McCosh had hinted at something like this in his 'Religious Aspects of the Doctrine of Development' (1874), where he said, 'just as in the prehistoric ages there had appeared a plant life, and an animal life, and an intellectual life, and a moral life, so now we have a spiritual life – it is the dispensation of the Spirit'.⁸⁵ Much earlier, in his essay on 'Typical Forms', he suggested that just as the simplest organism 'points by its structure upwards to man, and man's earthly frame points to his heavenly frame, and his heavenly frame points to Christ's glorious body ... we see that all animated things on earth point onward to His glorified humanity as the Grand Archetype of all that has life'.⁸⁶ By depicting Christ as the acme of creation both McCosh and Drummond were able to make God's revelation of a higher purpose for mankind continuous with their reading of processes in the natural realm.

In Emerson's *Nature* the relationship between type and antitype had been both temporal and psychological, eliminating the time between God and humanity and seeing all nature as 'a revelation proceeding each moment from the Divinity to the mind of the observer'. Drummond made a similar claim in an early sermon entitled 'Clairvoyance' (1879), where he referred to the temporal world as the husk of the eternal: 'Heaven lies behind earth ... We are to pass through it as clairvoyants, holding the whole temporal world as a vast transparency, through which the eternal shines'.⁸⁷ In his notebook he suggested this power of 'clairvoyance' was amongst those that distinguished the faculties of the spiritual individual. He referred to the theoretical illustration of 'the workings of the spirit in natural man' in a sermon by Henry Ward Beecher entitled 'The Power of the Spirit' (1868).⁸⁸ Here he found the difference between the natural and the spiritual individual explained as that between the disciples before and after the Spirit of God 'energized' them with new powers on the day of the Pentecost, bestowing amongst other gifts a 'pervading insight' which allowed them to behold the unseen world through their consciousness and to perceive and depict the finest gradations in character.⁸⁹ It follows that a profound reading of scripture or a sympathetic hearing of a vivid sermon could occasion this enhanced vision and help the devout to see beyond the symbols of God's first and second books to the essence of the divine mind. Hence Beecher declared that it is 'this Holy Ghost power which distinguishes Church teaching from that of mere lectureships ... The practical power of a Christian man depends upon his spiritual force. The real influence of man is the region of his spiritual influence'.⁹⁰

85 J. McCosh, 'Religious Aspects of the Doctrine of Development', in *History, Essays, Orations, and Other Documents of the Sixth General Conference of the Evangelical Alliance* (ed. Philip Shaff and S. Irenaeus Prime), New York, 1874, 264–71, quoted in David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought*, Edinburgh, 1987, 110.

86 [McCosh], op. cit. (62), 418.

87 H. Drummond, 'Clairvoyance', in *idem, The Ideal Life and Other Unpublished Addresses*, London, 1903, 127–43, 131.

88 Drummond, op. cit. (5), 41.

89 Henry Ward Beecher, *The Power of the Spirit*, London, 1868, 4–8.

90 Henry Ward Beecher, op. cit. (89), 14. Quoted in Drummond, op. cit. (5), 1.

In a work entitled *Ecce Christianus, or, Christ's Idea of the Christian Life* (1879), from which Drummond quoted in the opening pages of his notebook, William David Ground, Anglican curate in Newburn, Northumberland, used the principle of the conservation of energy to underpin an argument for the reality of an 'energising power of faith' in virtue of which faith performs works both visible and invisible.⁹¹ Whilst making it apparent that the spiritual cause of the faithful is Christ, Ground referred to Abraham as the 'human originating cause', 'a great spiritual capitalist, in whose faith and devotion were virtually contained all the energies of believing men and women, which would be called into existence by [his] influence'.⁹² Such a view held obvious appeal to Drummond, whom James R. Moore has referred to as a 'scientific evangelist', applying his communicating power scientifically to obtain conversions.⁹³ In a paper read before the New College Theological Society (November 1873) he brought his own experiences to bear upon 'Spiritual diagnosis: an argument for placing the study of the soul on a scientific basis'. Is there 'a science of spirituality?', he asked, before explaining that just as atoms work upon the universe via the next atom, 'man must act upon him at his side'.⁹⁴ A great man of faith, Ground had argued, would potentially be the originating cause of like faith in others: 'One man made something like Christ would serve as an example and stimulus to others and probably, in the next generation, cause thousands of such men to spring into being ... and quickly set up Christ's kingdom in the earth.'⁹⁵ It is perhaps in this context that we should understand Drummond's refusal to stand for Parliament in 1886, convinced that 'by working in the fixed walk of life which seems assigned to me, and which refuses, in spite of private struggles and the persuasion of wisest friends, to release me for this special service, I can do more for every cause of truth and righteousness'.⁹⁶

Conclusion: 'witnessing for God's complete, consummate, undivided work'

By considering *Natural Law* as a contribution to practical apologetics I have been able to take our view beyond the intellectual debate that took place in the national press over the claims made in the theoretical Introduction. Instead I have focused on recovering some understanding of how Drummond intended his work to be read by his initial local audiences of working-class men. I have drawn attention to a number of aspects of his use of a range of contemporary scientific accounts to construct a kind of rational imagery by which evidences drawn from experience of nature could be used for moral instruction. Drummond's 'scientific theology', which was for the most part an old-fashioned, Calvinist one in which naturalistic analogies supported a view of development arising from something imparted from above, not through radical reform or

91 W. D. Ground, *Ecce Christianus; or, Christ's Idea of the Christian Life. An Attempt to Ascertain the Stature and Power, Mental, Moral, Spiritual, of a Man Formed as Christ Intended*, London, 1879, 75.

92 Ground, *op. cit.* (91), 64–5, 57–66, cited in Drummond, *op. cit.* (5), 1–3. Added emphasis.

93 Moore, *op. cit.* (1), 393.

94 H. Drummond, 'Spiritual diagnosis: an argument for placing the study of the soul on scientific basis' in *idem.*, *op. cit.* (18), 191–210, 193.

95 Ground, *op. cit.* (91), 76.

96 Smith, *op. cit.* (9), 265–6.

manufacture of individual character or social institutions, was linked inextricably to his experience as a revivalist. Drummond's method of tracing analogies from the natural realm to the spiritual presupposed the conviction expressed by Fairbairn that the 'type' communicates 'divine truth on a lower stage, exhibited by means of outward relations and terrestrial interests', while the antitype presents a higher truth which possesses 'a more heavenly aspect'.⁹⁷ Drummond's addresses demonstrate that such a method continued to offer a coherent way of linking the natural and spiritual spheres that proved reasonable to a range of believers well into the 1880s. According to such a theory the individual did not have to rely on mere belief in God; he or she could trust experience, observation and intuition to construct an adequate idea of the formal essence of things. By reference to any one of a number of biblical and biological types and emblems Drummond could instantly situate his listeners within an orderly progressive universe, elevating each to the role of 'witnessing for God's Complete, consummate, undivided work', as Elizabeth Barrett Browning had said of the artist attempting to depict truth in a twofold world.⁹⁸ My study therefore adds to the body of recent writing on evangelicals, their natural theologies and theologies of nature, which have emphasized that many evangelicals shared values with other religious and secular groups, including the prominent place in religious belief of reason and experience as opposed to ecclesiastical authority.⁹⁹ It also raises further questions about the practices by which late nineteenth-century audiences arrived at their own positions on scientific, religious and theological matters.

97 Fairbairn, op. cit. (47), i, 158.

98 Elizabeth Barrett Browning, *Aurora Leigh*, London, 1856, Seventh Book, lines 838–9. See also Eighth Book, lines 517–618, quoted by Drummond, op. cit. (1), p. vii.

99 See, for example, D. W. Bebbington, 'Revival and enlightenment in eighteenth-century England', in *Modern Christian Revivals* (ed. Edith L. Blumhofer and Randall Balmer), Urbana, IL, 1993, 17–41; Livingstone, op. cit. (85); David N. Livingstone, D. G. Hart and Mark A. Noll (eds.), *Evangelicals and Science in Historical Perspective*, Oxford, 1999.