

MICHAEL S. NORTHCOTT

Navigating the Deep Structure of Biological Hyperspace: Divine Providence in an Otherwise Lonely Universe

In a review essay of hundreds of scientific papers in the field of his primary expertise – metazoan fossils first uncovered in the Burgess Shale in British Columbia – Simon Conway Morris suggests that, although the detail of the fossil record has been substantially enhanced and many gaps filled through the study of the Burgess Shale and related finds in other parts of the world, nonetheless we still do not know what has driven the process of evolution to the point where it has produced hominid species capable of imagining the concept evolution.¹ While concurring with neo-Darwinians that ‘we’ are clearly the outcome of natural selection, Conway Morris suggests that the evidence shows that this outcome did not arrive through chaotic contingency but rather through an as yet unrecognised ‘deep structure’, a claim he goes on to exemplify in his recent book *Life’s Solution* and more briefly in the present article.

This is a delightful conclusion for a theologian to encounter at the end of a highly technical review article in palaeobiology. Conway Morris’s words are reminiscent of C. S. Lewis’s wonderful phrase ‘the deep magic from before the dawn of time’ with which Lewis analogises the traditional Christian account of natural law in his Narnia stories. Narnia has been subjected to a permanent winter by the deceitful and malign rule of the Snow Queen and only the dying and rising of Aslan can return the world to the true order of the seasons. For Lewis the story of a dying and rising God interacts providentially, as it does for St John the Divine and Irenaeus, with the structure of the world and its history so that both the earth, and human history, find a new beginning in the new being which is the risen God who has subjected himself to the conditions of matter and mortal life. In the Narnia stories, as in the New Testament, it is only when the cosmos and the history of its inhabitants are read through this story of the dying and rising God that they turn out providentially to be ordered toward the good that the creator intends for them. Looked at apart from this story, the true character of their structures, and the ends towards which they might be directed, are obscured, at least to (sinful) human observers.

The recognition that our understanding of the truth of the real is limited to

¹ The first part of my title uses phrases from the conclusion to the article: Simon Conway Morris, ‘The Cambrian “explosion” of metazoans and molecular biology: would Darwin be satisfied?’, *International Journal of Developmental Biology* (2003) 47, 505 – 515.

the extent of our participation in the mind of the creator, and that such participation as we are capable of is occluded by sin, is fundamental to Pauline and Augustinian Christianity, and carries with it the implication of epistemological humility. Augustine consequently commended humility to his fellow theologians when encountering the greater knowledge about the earth which 'even a non-Christian' may have access to through 'reason and experience' for 'it is a disgraceful and dangerous thing for an infidel to hear a Christian, presumably giving the meaning of Holy Scripture, talking nonsense on these topics; and we should take all means to prevent such an embarrassing situation, in which people show up vast ignorance in a Christian and laugh it to scorn.'² However it is equally a mistake to imagine that reason and experience, without divine assistance, can access the true meaning and ends of life on earth: thus the divine rebuke to Job's would-be wise comforters, 'Where were you when I laid the earth's foundations?' (Job 38: 4). In the face of unexplained suffering the biblical writers commended epistemological humility. Whereas for the Psalmist God 'sends rain on the just and the unjust' it is a peculiarly modern disposition to look for a material correspondence between individual agency and cosmic justice, and to hold that individual minds are capable of doing the necessary accounting.³

In the present article by Simon Conway Morris we find studied resistance to such modern dispositions combined with a genuine epistemological humility with regards to the capacity of science to obtain from its descriptions of data the mystery or meaning of life. Materialists are prepared to use scientific data to 'smuggle meaning' into their interpretations but this is so much 'window-dressing'. Unlike Dawkins or Dennet, Conway Morris is prepared to admit how little we actually know about life, or at least how little science is yet able to tell us from its study of surface appearances: 'We have no idea of what it is about life that although obviously made of atoms no different from those you find in a stone combines to form such a dynamic entity, culminating in the entirely surprising ability to become conscious' and this leaves us 'in the rather extraordinary position of describing things which at one level we hardly understand.' (p. 10)

Conway Morris not only sets out his stall against the materialist meanings some inscribe on the putative myriad possibilities of the evolutionary story. He also roundly rejects the efforts of many creationists, under the banner of Intelligent Design, to recover the pre-Darwinian claim that God created humans

2 Augustine, *St The Literal Meaning of Genesis*, 2 vols. Taylor J.H., SJ, (trans. & annot.), New York: Newman Press (1982), vol. 1, pp. 42 – 3. See also Van Till, H. 'Basil, Augustine and the Doctrine of Creation's Functional Integrity', *Science and Christian Belief* (1996) 8, 21 – 38.

3 K. Helmut Reich points out that it is the combination of the assumption of individual accounting of rewards and punishments (deriving of course from Calvin) with the view of the individual as also capable of judging God which explains why theodicy becomes a central issue for moderns like Leibniz in a way that it was not for medievals: Reich, 'The Dialogue Between Religion and Science: Which God?', *Zygon* (2000) 35, 99 – 113.

and other higher life forms by direct agential design. As Conway Morris suggests, Intelligent Design rests upon a theological error which is analogous to deism. Its advocates cannot imagine the complexity of the eye or the human brain emerging through the successive development of species: like William Paley they suggest instead that only by the direct work of the divine hand could these complex creatures have appeared. Hence they conceive of God as a lab-coated engineer, or a watchmaker, creating a machine which, except in its conception, exists entirely independent of its maker. Of course this conception of a divine engineer reflects not only a theological error but also the influence of theological error in the move toward the voluntarist and mechanistic cosmology which has dominated scientific description from Newton to Darwin and from Darwin to Dawkins,⁴ and which is exemplified in Darwin's analogy between the principle of natural selection and gravitational attraction.⁵ The theological motive that drives Darwin to construct a mechanistic account of the laws of nature which operate independently of divine agency or intention is because of what Darwin views as a natural order characterised by natural evil, suffering and waste. The belief that 'God would not have made the world this way', the problem of theodicy, was central to Darwin's enterprise as it was to the work of his contemporaries Malthus and Paley.⁶ Like them Darwin reconceived of life as mechanistic in order to distance a beneficent God from the seemingly endemic nature of pain and suffering to both human and other than human life. It is this desire to distance God from the mechanisms and laws of nature, and hence to banish ends, intentionality and purposes from natural theology, that explains Darwin's 'attribution of selective power to nature': as Nancy Murphey suggests it is not the data which necessitate this conclusion but rather that particular theological account of the relation of God to the world which came to dominate seventeenth century natural theology.⁷

Conway Morris clearly wishes to distance his own account of evolution from the theological assumptions built into the larger Darwinian enterprise. The idea that seemingly random suffering and waste are problems is precisely *theological* and it was in answer to this idea that the narrative of the accidental character of evolution was imposed on the data from Darwin onwards. And yet of course if the cosmos is meaningless and accidental, then there is no problem of natural evil, as Conway Morris indicates. But this theological problematic, which emerged out of a mistaken metaphysics of divine omnipotence, and the nominalist account of the uniqueness of individual instances of being, gives rise to the modern idea of a Godless and random evolutionary process.⁸ And

4 See further Funkenstein, A. *Theology and the Scientific Imagination*, Princeton, NJ: Princeton University Press (1986).

5 Robert Young draws attention to this analogy in *Darwin's Metaphor: Nature's Place in Victorian Culture*, Cambridge: Cambridge University Press (1985), p. 96.

6 On theodicy and Darwin see further Hunter, C. *Darwin's Proof: The Triumph of Religion Over Science* Grand Rapids, MI: Brazos Press (2003).

7 Murphey, N. 'Darwin, Social Theory and the Sociology of Knowledge', *Zygon*, (1999) 34, 573 – 600.

8 See Milbank, J. *Theology and Social Theory*, Oxford: Blackwell (1990), p. 9.

from the idea that the world is an accident it is not hard to discern a further move, as Conway Morris suggests, whereby it now falls to scientists, and frequently scientists employed by monopolistic corporations, to redesign life after human purposes and desires. Voluntarism and accidentalism are not just poor cosmology or bad metaphysics – they have malign consequences in the ‘darker side’ of the technoscientific enterprise. Just as life is narrated by moderns as accidental, so modern morality is narrated as voluntary – good or evil are not written in the stars or in the mind of God, there is no deep magic, there are no truly real ends towards which life is directed. In modern philosophy ‘good’ and ‘evil’ become linguistic descriptions of ends which reflect particular human sentiments arising from evolutionary processes, but not divine or created truth. It then falls to humans to impose the ends and sentiments they so choose by brain power and artifice. The path from the *idea* of accidental evolution to the practice of eugenics thus runs smooth. As C. S. Lewis observed in *The Abolition of Man*, the consequence of science masquerading as philosophy is the subjection of humanity to nature under the naturalistic claims to sovereignty of totalitarianism, chemical agriculture or eugenics, and beauty, goodness and truth are all dethroned.⁹

Against the cultural and theological damage of evolution as accident, Conway Morris interprets the fossil record as a Christian Neoplatonist: biological evolution manifests a powerful inner directedness which correlates to the providential ordering of a divine creator who intended that thirteen billion years of evolution should produce creatures capable of recognising the song of creation, and of discerning its analogy with the eternal music of the spheres. The clue to Conway Morris’s account is the extensive evidence of convergence towards certain key outcomes – predation, the complex eye, consciousness, tool making, language – at various independent points in the evolutionary record. Although the fossil record of evolution reveals many possible pathways down which life could have gone, and many cul-de-sacs, the evidence of biological convergence indicates that there could have been only one outcome, which was the emergence of conscious human life. Against Stephen Jay Gould, who uses his own and Conway Morris’s research on the Burgess Shale to claim that if the evolutionary tape was run again its randomness would necessitate an entirely different set of outcomes, Conway Morris holds that the occurrence at a number of independent points in the long history of evolution of related complex phenomena – he focuses in this paper on music and the brain – means that evolution is not random. That analogous brains emerged in terrestrial mammals (humans), oceanic mammals (dolphins), and avians (crows), indicates that this was no accident but rather that consciousness was always ‘waiting in the wings’. Similarly analogies between human and nonhuman music indicate that there is an ideal music which was already real and towards which all creaturely forms of music ultimately converge. Conway Morris’s conclusion – that

9 Lewis, C. S. *The Abolition of Man*, London: Geoffrey Bles (1943).

evolutionary convergence indicates a prior 'landscape' which predetermines the outcomes of its long process, and produces a being capable of recognising that it is 'embedded in a true Creation'— provides him with the opportunity to assert in a more profound way than other theological defenders of evolution a real convergence between the story of life as revealed in the fossils and the true myth of the Incarnate God who is risen from the dead.

In thus far reprising Morris's argument I have suggested a few complexifications along the way but no points of disagreement. I am rather left with a sense of admiration and of gratitude; here is a modern scientific account of the biophysical world which displays the medievals' *analogia entis* but with their evidently mistaken biological and physical descriptions replaced by ones which accord with current research. Furthermore this is a wonderfully orthodox paper; there are no liberal subjections of doctrine or scripture to scientism, and no conservative attempts to fit God into any gaps that may remain in the interpretation of the data.

Conway Morris concludes with an analogy between global warming and Christian eschatology that is very suggestive. To spell it out, the endless deferral by politicians and consumers of real responses to the problem of melting glaciers and rising oceans is analogous to those who, on St Paul's account, argued that the early Christians should 'eat, drink and be merry' because the Lord would not return. Amid his eschatological musings Conway Morris opens up the thorny question of what will happen to the physical constitution of the world at the end. Will all be consumed in a fire as some read the Book of Revelation as indicating? Conway Morris certainly hints at a 'Yes' to this question, for if the Creation was created *ex nihilo* then 'what can be brought out of nothing might be either returned to nothing or otherwise utterly transformed' (p. 20). But if he is right then why should creationist Christians worry about global warming, or about other causes of the present anthropogenic extinction of species? And is it not precisely creationists in America and elsewhere who have most strongly argued for the 'wise use' – by which they mean the consumption – of all the myriad gifts of created life that God has providentially set before us before the end comes?¹⁰

There is then a sting in the tail in this paper. Conway Morris is quite clearly an evolutionary creationist, and the most convincing I have yet encountered. But can creationists describe the biophysical world as if its present constitution, and not just its future transformation, ultimately matters to God? There are many in America who would presently answer 'No' to this question as the Bush administration uses creationist ideology to legitimate its emasculatation of the Environmental Protection Agency and of environmental laws such as the Clean Air Act and Endangered Species Act. Elsewhere I have argued that how

10 On links between creationism and the anti-environmental policies of the present Bush administration see Bill Moyers, 'Welcome to Doomsday', *New York Review of Books* 52 (March 24, 2005).

we read the evolutionary script after the Christ events depends on whether or not the risen body of the Incarnate Christ truly is *material* and not just spiritual, and hence whether or not it is an analogy of a new being whose presence is *already* emergent within the contingencies of evolved life since the Incarnation.¹¹ The affirmation that it is material resists the implications of an eschaton for the earth in which all is consumed in cosmic fire, or, as Conway Morris argues, returns to nothing. If the risen Christ truly inaugurates a 'new creation' (2 Cor. 5. 17) of which Christians are the first fruits then Conway Morris is far from orthodox when he suggests that just as the universe came from nothing it may become nothing again. In Christ material life is created anew, creation is 'recapitulated', as Irenaeus has it, and hence matter *matters* in a new way. Conway Morris is though wonderfully right when he suggests that our coming to hear the song of creation is central to our becoming fully and truly human. But if this is so then this means humans who aspire to be the new creation which is begun in the risen Christ, are called to *assist* creation in giving song, and this assisting is central to their participation in the cosmic priesthood of the great High Priest which is the means to their becoming 'like God'. To the extent that chemical agriculture and palm oil and soy bean plantations, to say nothing of global warming, are putting an end to the myriad birds who once melliflously sang in the forests of this and other lands, then such practices are the material effulgence of mechanistic scientism and are alien to the true calling of humans to *join*, and not just to claim as their own discovery, the song of creation.

Michael Northcott is Reader in Christian Ethics in the University of Edinburgh and his new book on the science and ethics of climate change is entitled *The Moral Climate* (Darton Longman and Todd 2006).

11 Northcott, M. S. *The Environment and Christian Ethics*, Cambridge: Cambridge University Press, (1996).

Science/Faith publications

The website of **Christians in Science** (www.cis.org.uk) includes a list of recommended book titles, along with brief descriptions of the content, and a note of any review which has appeared in this journal. Many can be ordered from CiS (for details see the advertisement for ***Can we be sure about anything?*** in this issue on p. 112). Among recent additions to the list are the following:

Designers of the future, D Gareth Jones, Monarch 2005, 256 pp, pb £8.99 (£10.00 incl p/p from CiS). ISBN 1854247085

Stem cell research, clones and cyborgs, designer babies, what is special about the human embryo, and the extent to which one should go in repairing and enhancing people are some of the topics addressed from a biblical viewpoint by Professor Gareth Jones in this book.

Caring for creation, Sarah Tillett (ed.), Bible Reading Fellowship 2005, £8.99 (£10.00 incl p/p from CiS). ISBN 1841014397

Compiled by the director of Tearfund UK and published in conjunction with the international Christian conservation organisation A Rocha, this book links the Bible and environmental issues. It includes a wide range of stories of environmental transformation around the world drawn from the work of A Rocha.