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Rich Reality: a response to the Boyle Lecture by Simon Conway Morris

Simon Conway Morris's Boyle Lecture delivers a rhetorically lively and intellectually provocative challenge to scientific fundamentalism and its assertively arid discourse. He rightly criticises the tone of the arguments presented by people such as Richard Dawkins and Daniel Dennett, pointing out that in relation to religious belief they treat serious issues 'with a bluntness and unsubtlety that in any normal discourse would be treated as juvenile'. There is indeed a deplorably 'know-nothing' character in some of the writings about science and religion that originate from the sceptics, in which the authors totally fail to engage with the intellectual integrity and truth-seeking character of theological thought. Conway Morris's response certainly does not suffer from the 'combination of nervousness and accommodation' that he – unfairly in my opinion – says characterises much of the religious participation in debate.

The lecturer believes that his own subject of organic evolution is the topic that is 'the most sensitive, in some ways the most vulnerable' in this dialogue. I would want to add to that the equally important discussion of the exchanges taking place across the frontier between neuroscience and theological anthropology, since they too impinge significantly on the question of the nature and significance of the human person. Yet no one could deny the importance of a temperate and truthful engagement between evolutionary insight and the doctrine of creation, so that a Boyle Lecture given by a distinguished palaeontologist who tackles these issues with frankness and discernment is greatly to be welcomed.

Conway Morris challenges the widespread view that evolution is 'an open-ended and indeterminate process', with the implied corollary that human beings are just accidental twigs on the burgeoning Darwinian bush, and so of no particular intrinsic significance. However, he is equally firm in rejecting the claims of the Intelligent Design movement to provide the appropriate counter-answer. Indeed, Conway Morris describes ID as having a 'false and misleading attraction'. This is not simply because of doubts about molecular irreducible complexity having actually been established, but also because he sees the programme as being theologically flawed. Its ideology is that of a neo-mechanical view of creation, as if the world arose as the result of the work of the divine Artificer. Conway Morris bluntly describes ID as 'surely the deist's option'; it is 'a theology for control freaks'.

Central to the Boyle Lecturer's argument is the need to recognise the actual richness of reality. This implies certain limitations on the degree of insight that contemporary scientific understanding is able to offer on its own. Even in physics our knowledge of the causal structure of the world is patchy, with the

relationship between different regimes (such as quantum physics and classical physics) still problematic and a number of critical issues requiring metaphysical decisions on matters that are constrained by science but not determined by it.¹ To an even greater degree, a realistic humility is called for in biology, since ‘satisfactory definitions of life elude us’. Conway Morris writes with passion and awe about the nature of life, in a style that reminded me of John Bowker’s recent emphasis on the intertwining of cognition and valuation in a truly rational approach to assessing experience.² In the human encounter with reality, no single perspective will do justice to the landscape surveyed. It would be a great mistake to neglect any available resource for gaining understanding. ‘A world picture that encompasses science but also the deep wisdom of theology may help us to explain how it is we can think, how we discover the extraordinary, but so too it may warn us of present dangers and future catastrophes.’³

An important corrective to the false view of evolution as being ‘meaninglessly’ open-ended, is provided by Conway Morris’s detailed professional investigations into the phenomenon of widespread evolutionary convergence.⁴ He writes in his Boyle Lecture that ‘The central point is that because organisms arrive repeatedly at the same biological solutions, the camera-eyes of vertebrates and cephalopods perhaps being the most famous example, this provides not only a degree of predictability but more intriguingly points to a deeper structure to life, a metaphorical landscape across which evolution must necessarily navigate.’ He goes on to suggest that human beings (presumably meaning entities of our self-conscious complexity, rather than literally *homo sapiens*) are ‘an evolutionary necessity’. The idea that homologies between species need not arise solely from sharing a common ancestor (as neo-Darwinian orthodoxy decrees), but they can also be the consequence of an intrinsic tendency in nature for certain specific types of structure to be generated through natural processes, is an idea that the complexity theorists have also been exploring.⁴

However, Conway Morris wishes to take his argument beyond the recurrence of simple similarity of anatomical form to include more profound kinds of congruence. In the lecture, he is bold enough to illustrate his concept of convergence by considering the emergence of complex intelligence and mentality, for he believes that ‘it is now clear that intelligence equivalent to the primates has evolved independently at least twice, that is in the dolphins and corvids (crows)’. In this case, the underlying neural structures differ in the species concerned, yet the same type of mind is said to have emerged. This suggests ‘startling’ conclusions. The mental must be seen to be more than an epiphenome-

1 Polkinghorne, J.C. *Exploring Reality*, London: SPCK/New Haven, Yale University Press (2005), ch. 2.

2 Bowker, J. *The Sacred Neuron*, London: I.B.Tauris (2005).

3 Conway Morris, C. *The Crucible of Creation*, Oxford University Press, 1998; *Life’s Solution*, Cambridge University Press (2003).

4 Kauffman, S. *The Origins of Order*, Oxford University Press (1993).

non of the brain, since if it were simply that, the similarity of what emerged in the case of these different neural structures would be unintelligible. Conway Morris then refers to an idea of Edward Oakes, who pointed out that a Martian observing the existence of birds' wings could from that alone deduce properties of the terrestrial atmosphere that had made such limbs useful. Perhaps the existence of brains indicates the existence of a corresponding 'mental air'?

An extremely important point is being made here, which is then explored in the lecture. Evolutionary explanation depends for its persuasiveness not only on getting the genetics right, but also upon getting right the environment in which the processes of evolution are understood to be operating. I have recently argued that the orthodox Darwinian belief that the context of the evolution of human persons is simply the physico-biological world described by the natural sciences, is not adequate to account for the actual richness and many-levelled character of human nature.⁵ Conway Morris makes the same point when he writes that 'evolutionary convergence hints at a prior "landscape" which pre-determines, albeit in an extraordinarily rich way, the outcomes of the process, not least human intelligence and by implication the inevitability of contact with a different sort of Mind, an encounter with God'. As his example to support this argument, he chooses music. (George Steiner once said that the matter of music is central to the question of metaphysics – in other words, no world view that failed to see more to music than vibrations in the air, could aspire to be an adequate account of reality.)

Similarities between human music and the music of animals are seen by Conway Morris as being 'a splendid example of convergence'. It is suggested that bird song is not just a means of territorial assertion, but it is a participation in what has been called 'Universal Music', a kind of platonic dimension of reality to which evolutionary development in a deep context has afforded access for a variety of creatures. Conway Morris goes on to make a somewhat similar suggestion in relation to the origin of language, whose great diversity today he believes reflects the contingent splintering of an original common source. One might have said something similarly platonic in relation to mathematics. Most mathematicians believe that their subject is concerned with the discovery of already-existing truths, rather than the whimsical contrivance of intellectual games. From the point of view of strict Darwinian orthodoxy, all the mathematics one might need for survival-advantage would be simple arithmetic and a little Euclidean geometry. How then arises the human ability to explore non-commutative algebras, prove Fermat's Last Theorem, and discover the Mandelbrot set? It is not credible to suppose that these remarkable powers are just happy accidents, fortuitous spin-offs from mundane survival necessity. However, if the human context includes a noetic dimension of mathematical reality, then our ancestors can be understood to have developed their 'mathe-

5 Polkinghorne, *op. cit.*, [1], ch. 3.

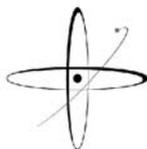
mathematical wings' as they were drawn by intellectual delight into the exploration of this 'mathematical air'.

I am deeply sympathetic to the central thesis of this lecture, that 'there are other realities orthogonal to everyday experience', that have a fundamental role that must be recognised in any adequate understanding of our nature and experience. The lecture concludes with a brief discussion of two further points. Appropriating scientific knowledge and technological power offers opportunities for both good and ill. Conway Morris rightly warns us of the dangers of an undiscerning acceptance of a 'Faustian compact' with science. 'If we ignore the theological dimension then we are heading for deep trouble. As long as we view the world as an accidental happenstance, to be treated as a utilitarian object, we not only lose sight of Creation, but also of ourselves and our place in it'.

Finally, the lecturer points us to the ultimate futility in which present cosmic process must eventually end. A kind of superficial evolutionary optimism is just a delusion. If the universe is truly a cosmos and not a chaos, then a credible eschatology is a necessary component in our world-view. There is not sufficient space left for Conway Morris to be able to develop this theme, but I strongly agree that this is an essential task.⁶

This is an exceptionally rich and thought-provoking Boyle Lecture, for which many readers will be grateful. I am sure that Robert Boyle would have been delighted by his 2005 lecturer.

6 Polkinghorne, J.C. *The God of Hope and the End of the World*, London: SPCK/New Haven, Yale University Press (2002).



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