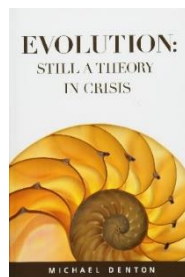

Evolution: Still a Theory in Crisis

Michael Denton

Discovery Institute Press, 2016

Review by David Secombe

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It is 3 am. Unable to sleep, I arose to continue reading Michael Denton's *Evolution: Still a Theory in Crisis* (2016). To my surprise I turned a page and found it was the last. Some authors have a lot of footnotes!

Sadly, I have never studied biology, so am unable to assess much of the evidence and argumentation, except in a superficial common sense way. I wish someone better equipped than I would help us here. Having said that, the book reinforces my own growing conviction that the Darwinian model of evolution is too simple by far, and fails to bring us to a right understanding of what one of my childhood books on evolution called 'the miracle of life'.

Denton does not declare himself as a believer or even a theist; Wikipedia calls him an agnostic. His faith position generally remains hidden. He approaches Darwinism (and Neo-Darwinism) as a molecular biologist and an evolutionist, assessing its evidential basis, finding it lacking, and reaching out for an alternative mechanism for the bewildering variety of life forms.

Variation and adaptation he fully accepts, along with the notion of natural selection. However, he observes that there are many big structures imbedded in nature—he calls them types or homologues—which are the foundations on which this variation operates, and which cannot themselves be accounted for as gradual modifications of an original simple life-form. Examples he explores in detail are the pentadactyl limb (one bone plus two bones plus five digits) 'conserved in all tetrapods for 400 million years'; also the feather, hair, the insect body plan, the flower, the amniotic membrane, the insect wing ('every detail of the developmental program is an enigma in terms of adaptive gradualism'; p. 95), the enucleate red blood cell of all mammals (this is Denton's speciality; he did his Ph. D. on the red blood cell), and the cell itself. The ground-plan of the cell, 'the basic unit of all life on earth' is unchanged in 4000 million years (p. 120). He has many more examples; Denton speaks of 'a universe of non-adaptive forms' (p. 76). At one point he mentions a million 'taxon-defining homologues' (p. 45).

These homologues have no apparent antecedent structure in the fossil record, nor any theoretical pathway by which they might have arisen by small adaptive steps. Writing on the cell, and the developments in biology in the thirty years since he wrote *Evolution: A Theory in Crisis* (1985) Denton says, 'Despite a vast increase in knowledge of supra-molecular chemistry and of cell and molecular

biology; the unexpected discovery of ribozymes; and an enormous effort, both experimental and hypothetical, devoted to providing a gradualistic functionalist account of the origins of life in terms of a long series of less complex functional replicating systems ... leading from chemistry to the cell, no one has provided even the vaguest outlines of a feasible scenario, let alone a convincing one.' (p. 121) This should be read along with his mind-blowing description of the cell in the 1985 book: pp. 328-330.

In 1989 I read Denton's first book. It left me in wonder at the complexity of life and life forms—especially the cell—and a growing scepticism regarding the evolutionary model I had grown up with. Mistakenly, I thought Denton was challenging the whole macro-evolutionary paradigm. Reading his latest work makes it clear that he is not. His challenge is to the Darwinian and Neo-Darwinian paradigm. His quest is for an alternative. Recently I re-read, *Evolution, A Theory in Crisis*. I see now why it impacted on me so powerfully in 1989. As a student in the 60s I accepted Darwin's notion that the whole of life evolved as a result of small changes, natural selection, and the survival of the fittest. I accommodated it easily to my new faith, reasoning that God's providence could have guided the whole process to his intended conclusion. I could not see how a structure as complicated as the eye could have arisen without some guidance; age has added to that conviction. However, doubts over Darwin arose when I was still a student. In 1959 Everyman's Library published a centenary edition of *The Origin of Species*. The introduction was by a leading Canadian biologist. He summarized the theory and then inquired whether the evidence of one hundred years supported it. He found it did not, and lamented the amount of biological research which was wasted on building imaginary evolutionary trees. From then until 1989 I was an evolution 'agnostic'. *A Theory in Crisis* (1985) reviews the evidence for grand evolution and concludes that it not only does not support Darwin's idea, but conflicts with it at many levels. Denton's argument is so strong, especially in his own area of molecular biology, that, with my Christian spectacles, I read it as an outright refutation of grand evolution—which it is not.

This becomes clear in his later book, *Evolution: Still a Theory in Crisis* (2016). Denton thinks the world is old, and that the various forms of life evolved. The question is how. He finds Darwin's solution unworkable and seeks an alternative in what he calls 'structuralism'. In this he is going back to some of the great biologists of the nineteenth century, in particular Richard Owen, founder of the Museum of Natural History in London. There are deeply imbedded biological structures, which appear to be part of the nature of things in the physical world. In the inorganic world crystals form under certain conditions, constrained by the forces of nature; so, structures 'emerge' in the biological world as a result of physical constraints. Denton illustrates this from an

amount of recent research. It was an eye-opener to me that the 20th century notion that everything is determined by what is encoded in our DNA, is being abandoned in the 21st. The shape of the human body, for example, does not seem to be determined genetically, nor does the language ability of humans (which Denton identifies as another 'homologue'). DNA is not all there is to it! Some other explanation is required, and he finds this in 'epigenetic' forces (analogous to crystallization) which emerge in extraordinarily complex protein systems. Admitting that this might be a factor in biological development, I baulk at it as an explanation of, for instance, the pentadactyl limb-structure. It clearly does not work as an explanation of the cell itself, where Denton has himself ruled out intermediate forms.

In his last chapter Denton explores the implications of his work for teleology (he avoids bringing God into the discussion) where he favours the view that the basic forms of life are 'no less built into nature than the properties of water' (p. 278). 'There is the deep hint—arising from the cosmological discovery of the fitness of nature for life—that the life forms on earth may be after all, *an integral part of the cosmic order.*' (p. 278f. Denton's italics.) For those who know God, this has evident interest. This latest book should be read and discussed, though the first is foundational, and is an easier read. Evangelicals who for a long time now have accorded Darwinism almost the status of a doctrine should take note of this authoritative scientific refutation of Darwin's grand scheme and review their thinking.