LITERATURE REVIEWS

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THE GREAT TWENTIETH-CENTURY MYTH

EVOLUTION: A THEORY IN CRISIS. 1985. Michael Denton. London: Burnett Books, The Hutchinson Publishing Group. 368 p.

Reviewed by R.H. Brown, Geoscience Research Institute

Among the recent spate of books dealing with evolution/creation issues, *Evolution: A Theory in Crisis* is unique. The author is a Ph.D. molecular biologist who is active in research at the Prince of Wales Hospital in New South Wales, Australia. The book is of the sort that interested readers will want to underline, annotate, and retain for frequent future reference.

Many readers will eagerly press on, if not look ahead, to discover what explanation Dr. Denton offers for the origin of life after demolishing Darwinism. He offers no alternative and lightly dismisses creationism as an ancient myth. His book is an honest and competent effort to let the facts fall where they may. His sympathetic treatment of Charles Darwin will increase the respect of many readers for Darwin as a man and as a scientist. The early chapters display a lucid style that provides delightful reading. In succeeding chapters, as technical and philosophical depth increases, there is a tendency for sentences sometimes to become highly involved and difficult to understand. Typographical errors appear more frequently than is normally expected in publications of the quality represented by this book. Occasionally these errors interfere with reader comprehension (e.g., 100 in place of 10 in line 4 on p 312). In the hope of stimulating a wider readership of this book, I will offer some chapter-by-chapter comments and selections.

Chapter 1 provides a valuable historical summary of the transition from a literalist biblical view of the natural world to the Darwinian view.

Chapter 2 traces materialistic evolutionary concepts back to the early Greeks and outlines the development of Charles Darwin's concept of evolution by random variation coupled with natural selection. Discussing the social impact of Darwinism, Denton says:

> *Despite the attempt by liberal theology to disguise the point, the fact is that no biblically derived religion can really be*

> *compromised with the fundamental assertion of Darwinian theory* (p 66).
>
> *It was because Darwinian theory broke man's link with God and set him adrift in a cosmos without purpose or end that its impact was so fundamenta. No other intellectual revolution in modern times ... so profoundly affected the way men viewed themselves and their place in the universe* (p 67).

Chapter 3 traces the phenomenal success of Darwinism as a development from highly speculative hypothesis to dogma within 20 years after the first publication of *The Origin of Species* in 1859. The author points out that "Once a theory has become petrified into a metaphysical dogma it always holds enormous explanatory power for the community of belief" (p 76).

Reviewing the evidence for the development of new species by natural selection (special theory of evolution) (chapter 4), Denton observes that:

> *The validation of Darwin's special theory, which has been one of the major achievements of twentieth-century biology, has inevitably had the effect of enormously enhancing the credibility of his general theory of evolution* (p 86).

However,

> *The German zoologist, Bernhard Rensch [1959], was able to provide a long list of leading authorities who have been inclined to the view that macroevolution cannot be explained in terms of microevolutionary processes, or any other currently known mechanisms. These dissenters cannot be dismissed as cranks, creationists, or vitalists, for among their ranks are many first-rate biologists* (p 86).

The contrast between classical typology and the evolutionary concept is elaborated in chapter 5:

> *The fact that so many of the founders of modern biology, those who discovered all the basic facts of comparative morphology upon which modern evolutionary biology is based, held nature to be fundamentally a discontinuum of isolated and unique types unbridged by transitional varieties, a position absolutely at odds with evolutionary [sic] ideas, is obviously very difficult to reconcile with the popular notion that all the facts of biology irrefutably support an evolutionary interpretation* (p 100).

The presumption that for these scientists the "typological model of nature was derived not from the facts of nature but from religious and meta-

physical preconceptions ... has persisted as one of the great myths of twentieth-century biology" (p 100). Further,

> *... in the seventeenth and eighteenth centuries, many biologists and philosophers, influenced by the doctrine of the plentitude of creation and its corollary, the concept of the great chain of being, saw in theology a demand for continuity just as absolute as that demanded by modern evolutionary biology* (p 101).

In chapter 6 the author reviews biological classification (the *Systema Naturae*) from Aristotle to modern cladistics. His viewpoint is expressed in the following quotation:

> *The fact that all the individual species must be stationed at the extreme periphery of ... logic trees merely emphasized the fact that the order of nature betrays no hint of natural evolutionary sequential arrangements, revealing species to be related as sisters or cousins but never as ancestors and descendents as is required by evolution* (p 132).

According to chapter 7, from Darwin's time up to the present, homology has been the mainstay of the argument for evolution. "Without the phenomenon of homology — the modification of similar structures to different ends — there would be little need for a theory of descent with modification" (p 154). Denton points out that homologous organs and structures may develop by radically different embryogenic routes, and that "the evolutionary basis of homology is perhaps even more severely damaged by the discovery that apparently homologous structures are specified by quite different genes in different species" (p 149).

Chapter 8 discusses what the author considers the major flaw in the argument for macroevolution, the lack of intermediate forms, and contains a detailed discussion of the few fossils that have been claimed to be transitional forms. The adequacy of the fossil record for conclusive evidence is supported by the observation that 79.1% of the living families of terrestrial vertebrates have been found as fossils (87.8% if birds are excluded).

Chapter 9 is devoted to the possibility of hypothetical evolutionary pathways across the gaps that are the subject of the preceding chapter. Denton affirms that:

> *Evolution by natural selection would be established today beyond any reasonable doubt, even without empirical evidence of intermediates, if it had been shown that all the great divisions of nature could at least theoretically have been crossed by inventing a really convincing series of hypothetical*

> *and fully functional transitional forms. However ... this has never been achieved* (p 200-201).

He then provides an impressive collection of Wonders of Nature — examples of both structure and behavior that could not be bridged by any conceivable series of transitional steps. He elaborates on the hypothetical evolution of reptilian scales into avian flight feathers, the basic vertebrate "in and out" flow type of lung into the avian unidirectional flow lung, and of the amphibian egg into the amniotic egg.

After an introduction to molecular biology in chapter 10, Dr. Denton proceeds in chapter 11 to a discussion of the chemical evolution necessary for a naturalistic origin of life. In his opinion, "the existence of a definite discontinuity" between life and the inorganic world "was only finally established after the revolutionary discoveries of molecular biology in the early 1950s" (p 249). He affirms that there is absolutely no positive evidence for the existence of the "prebiotic soup" in which life presumably originated (p 261), and that "the most difficult aspect of the origin of life problem lies not in the origin of the soup but in the stages leading from the soup to the cell" (p 263). If the primeval atmosphere had contained oxygen, any organic molecules that might have developed would have been destroyed by oxidation. If the primeval atmosphere did not contain oxygen, there would have been no ozone screen to prevent ultraviolet radiation from destroying any organic molecules that might have formed.

Chapter 12 contains what is probably the most significant contribution of this book to the literature on evolution: the author's insights on comparative biochemistry. Rather than seeing biochemical similarities (e.g., between man and ape) as evidence for an evolutionary ancestry, he sees biochemical differences as one of the strongest categories of evidence against Darwinian evolution:

> *It is now well established that the pattern of diversity at a molecular level conforms to a highly ordered hierarchic system. Each class at a molecular level is unique, isolated and unlinked by intermediates. Thus molecules, like fossils*[,] *have failed to provide the elusive intermediates long sought by evolutionary biology.... At a molecular level, no organism is 'ancestral' or 'primitive' or 'advanced' compared with its relatives* (p 290).

Regarding the biochemical data,. Dr. Denton affirms that evidence for evolution is only such when viewed with the eye of faith (p 292).

Regarding the molecular clock hypothesis, according to which a constant rate of mutation is presumed to provide a time interval between the appearance of two sequentially related genes, Dr. Denton concludes that:

> *Rather than being a true explanation, the hypothesis of the molecular clock is really a tautology, no more than a restatement of the fact that at a molecular level the representatives of any one class are equally isolated from the representatives of another class* (p 296).

Chapter 12 is entitled "A Biochemical Echo of Typology" and concludes with this paragraph:

> *What has been revealed as a result of the sequential comparisons of homologous proteins is an order as emphatic as that of the periodic table. Yet in the face of this extraordinary discovery the biological community seems content to offer explanations which are no more than apologetic tautologies* (p 306).

Many readers will wish that some portions of this chapter had been written with greater clarity and more detailed explanation.

In chapter 13 Dr. Denton gives a fresh approach to the probability for random evolution of a functioning protein. From a comparison with complex computer programs he says:

> *The fact that systems in every way analogous to living organisms cannot undergo evolution by pure trial and error and that their functional distribution invariably conforms to an improbable discontinuum comes, in my opinion, very close to a formal disproof of the whole Darwinian paradigm of nature* (p 315-316).

The apparent design at the molecular level of the biotic world is developed further in chapter 14. According to one of the striking illustrations given in this chapter, if one atom representation were put in place every minute, 50 million years would be required to construct an exact model of a typical cell. If the model were to a scale on which each atom would be the size of a tennis ball, the complete model would have a diameter of about 20 kilometers. Probability models as often used against evolution are fraught with problems, especially when exact figures are sought. Yet there is little doubt that mathematical probability estimates are a major problem for naturalistic evolution.

The following representative excerpts are taken from the final chapter:

> *Since 1859, a vast amount of evidence has accumulated which has thoroughly substantiated Darwin's views as far as*

microevolutionary phenomena are concerned.... it is beyond any reasonable doubt that new reproductively isolated populations — species — do in fact arise from pre-existing species (p 344).

The very success of the Darwinian model at a micro-evolutionary level ... only serves to highlight its failure at a macroevolutionary level.

Neither of the two fundamental axioms of Darwin's macroevolutionary theory — the concept of the continuity of nature, that is[,] the idea of a functional continuum of all life forms linking all species together and ultimately leading back to a primeval cell, and the belief that all the adaptive design of life has resulted from a blind random process — have been validated by one single empirical discovery or scientific advance since 1859 (p 344-345).

The cultural importance of evolution theory is... immeasurable, forming as it does the centerpiece, the crowning achievement, of the naturalistic view of the world, the final triumph of the secular thesis which since the end of the middle ages has displaced the old naive cosmology of Genesis from the western mind (p 357-358).

Ultimately the Darwinian theory of evolution is no more nor less than the great cosmogenic myth of the twentieth century (p 358).

Not all scientists will accept Dr. Denton's principal conclusions. Some will disagree here and there with a detail of interpretation on which his conclusions are based. But everyone, evolutionist or creationist, who is concerned with the scientific witness concerning the origin of life should be familiar with the content of his book.