

## Book Review

- ✱ Connie Barlow (ed.), *Evolution extended: Biological debates on the meaning of life*. Cambridge, Mass.: MIT Press, 1994, 333 pp. (indexed). ISBN 0-262-02373-3 US\$ 24.95

Julian Huxley told us some time ago that biology has revealed humanity's place in nature. He had reasons. Pierre Teilhard de Chardin, Konrad Lorenz, Theodosius Dobzhansky, Jacques Monod, Peter Medawar, Robert Ardrey, Desmond Morris, E. O. Wilson, David Barash, and Richard Dawkins are biologists who have earned fame by teaching us what we are, where we came from, and where we are going. Biology takes over three of Kant's four basic questions of philosophy: what humankind is, what we may hope for, and even a good deal of what we should do. Teilhard and Julian Huxley derive ethics from the direction of evolution; Wilson and Barash derive values from our biological nature. Thus, even value theory becomes a branch of biology. Philosophy, despoiled and neglected, ekes a miserable living in marginal lands on the borders of oblivion.

What biology can do, it must be allowed to do. Connie Barlow's *Evolution extended* is an outstanding introduction to what I find the most interesting of contemporary intellectual adventures. It is outstanding for three reasons.

First, evolutionary theory is here outlined in the words of its creators. The book is a set of shafts of light from many human reflectors. It has the drama (still unexplained by biology) of a counterpoint of powerful and various personalities. Here are Charles Darwin, blending logic and observation in fascinating factual demonstrations; Julian Huxley, cultured and liberal, always saying just what one has thought oneself many times; Pierre Teilhard de Chardin, darting off into the wilderness and popping up unexpectedly with something that just might work; Jacques Monod, blustering out hypotheses under the name of most implacable certainties; E. O. Wilson, unexpectedly eloquent, a new Clarence Darrow in biology; and a crowd of others.

Second, these distinguished puppets appear in a fine pedagogical show of Barlow's own, presenting the trials and adaptations of evolutionary thought up to a present-day scene of relatively modest proposals.

Third, this intellectual discussion is beautified by an accompaniment of poems and pictures, artfully chosen to comment on the ideas and invest them with the feeling and dignity of human concerns. The editor is not entirely impartial, as when she illustrates Teilhard with the sunlike spirituality of William Blake, and Monod with Edvard Munch's "The Scream." But her choice has a startling, many-layered aptness that recalls evolution itself.

What aspects of evolutionary thought does the book cover, and what does it

not cover? The first topics are scientific, beginning with a survey of views on evolution's direction, followed by a panorama of the leading ideas of evolutionary process: Darwin on the struggle for existence, Dawkins on positive and negative feedback, Bateson on self-governing regulators, Margulis and others on symbiosis and co-operation, Bronowski on cosmic ratchets, Hardy on the organism's initiative.

Next come the philosophical extensions of evolutionary theory to humanity's place in the universe: Huxley's liberal stewardship, Teilhard's noogenesis to Omega, Monod's "ethic of knowledge," and a review presenting new ideas for transcending this classic tug of war.

Finally come the extensions to a religion based on scientific materialism, offered by Wilson and Huxley again. In this section transpires what I believe is the turning point of the book: Wilson's sentence, "The evolutionary epic is mythology in the sense that the laws it adduces here and now are believed but can never be definitely proved to form a cause-and-effect continuum from physics to the social sciences. . . and backward through time to the beginning of the universe" (p. 227). In other words, Wilson gives up trying to catch humanity in Huxley's established truths and Monod's implacable certainties. What evolution finally affords is not certainties but myths for us to live by – Gaia, the cosmic breath, etc.

Forty pages near the end of the book are spent on the current American struggle between creationism and evolution. I am not sure why, as the brand of creationism here discussed is not taken as a serious intellectual alternative. It is not the puzzle of the Big Bang, the Cambrian explosion, or the human creative explosion, but the same old chapter of Genesis. Is it a demonstration that humanity is not ready for scientific materialism? Or is it a space filler, because this book is not big enough for what really should come next?

What really should come next is the most ambitious evolutionary extension of all – the project of accounting for humanity as a product of biological evolution, from the modest attempt to explain something about us to the grand pretension to Explain Everything. From Darwin's *Descent of Man* through Lorenz's *On Aggression*, Ardrey's *Territorial Imperative* and *Hunting Hypothesis*, Morris's *Naked Ape*, Wilson's *Sociobiology* and *On Human Nature*, John A. Pfeiffer's *Creative Explosion*, John McCrone's *Ape That Spoke* and beyond, the spate is unbroken. Neither is the resistance on various grounds, from A. R. Wallace through Teilhard, Erwin Schrödinger, Stephen J. Gould, Richard Lewontin, Philip Kitcher, and others. A whole book would be needed to present this particular evolutionary epic, and we would be much wiser for it. Could Barlow be planning such a book? She has produced a previous anthology, *From Gaia to Selfish Genes*; and *Evolution Extended* leaves a vacancy just shaped for this project.

Wordsworth's sonnet "The world is too much with us" is attributed to Tennyson (p. 230). However, Barlow shows her ironic flair in placing this poem here. It reinforces Wilson's point, even while it mocks his reductionism.

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