

ZYGON

or determines the outcomes at all three levels of evolution and what is the relation of "natural selection" to the ultimate character of the cosmos.

One might conclude by noting that, while Dobzhansky feels that Teilhard "remains a consistent evolutionist throughout," when Teilhard suggests that all evolution moves toward the ultimate coming of Christ, it "is evidently the inspiration of a mystic, not a process of inference from scientific data" (p. 137).

Thus Dobzhansky remains faithful to the scientific caution set forth in his Preface: "Speculations in the realms of philosophy and religion . . . are often regarded, among scientists, as regrettable foibles or even as professional misdemeanors. They are as often as not kept secret, for being caught at them is liable to damage a scientist's professional reputation. Let me, then, try to make clear the nature of my enterprise. This is not an attempt to derive a philosophy from biology, but rather to include biology in a *Weltanschauung*" (p. 2).

I would suggest, however, that evolutionary theory, which is now intimately tied into the whole range of scientific theories from astrophysics to the "science of the soul" (psychology) is already a "philosophy" of whose implications for religion Dobzhansky has become a primary prophet through his combination of religious sensitivity, scientific range, and intellectual integrity. Perhaps in the future he and other leading scientists can be less timid in making contributions to man's understanding of his ultimate concerns, and carry further Dobzhansky's conviction that science has come of age for positive theological relevance.

But theologians can already find in this book solid grounds for integrating with the sciences a theology attuned to a single or monist trans-human source of history which provides a direction, purpose, hope, and meaning for man transcending the limits of death; a meaning for the risks of freedom, chance, evil, sacrifice, and death as the way toward creation of higher levels of life that is supported if not guaranteed by an ordering or anti-chance judge; and perhaps a doctrine of the church (or the meaning and purpose of religion) as a necessary ingredient of human culture indorsed if not ordained by the ultimate judge of human viability.

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In The Periodicals

One of the focal points in discussions of issues between science and religion has to do with the mind-body problem. Six different solutions are usually enumerated in elementary textbooks of philosophy, but recent literature indicates the problem is receiving new attention. Brand Blanshard and B. F. Skinner meet head on in their discussion of behaviorism in "The Problem of

Consciousness—a Debate," *Philosophy and Phenomenological Research* (March, 1967), pp. 314–37. Says Skinner: "I continue to argue the behaviorist position because I believe it has vast implications" (p. 332). But Blanshard replies: "[Humanists] feel threatened by a rising wave of computerized philistinism, which seems bent on liquidating the world they live in. They are coming to learn with bewilderment that the new science of mind rules out as antiquated delusion the entire realm of mind once occupied by the humanities" (p. 336). Related to this issue is the article by Charles Taylor, "Mind, Body Identity, a Side Issue," *Philosophical Review* (April, 1967), pp. 201–13, in which he discusses interactionism and materialism. Plainly, if matter in motion is all there is, it is difficult to see how an ethical or religious view of life could be maintained. If mental states and physical states are aspects of one underlying reality, the problem is different, as is indicated by Robert Hoffman in "Malcolm and Smart on Brain-Body Identity," *Philosophy, the Journal of the Royal Institute of Philosophy* (April, 1967), pp. 128–36.

However, a strong defense of realism and materialism against subjectivism is brilliantly attempted by Donald Cary Williams in *Principles of Empirical Realism* (Springfield, Ill.: Charles C Thomas, 1966), this book being reviewed by Harry Ruja in *Philosophy and Phenomenological Research* (March, 1967), pp. 421–28. Says Ruja, echoing Williams, "The electron's position and velocity cannot at present simultaneously be observed. That fact does not support subjectivism—which would deny the independent existence of electrons with or without position and velocity. On the contrary it supports realism" (p. 424). What about ethics? Williams is of the opinion that the good life may plausibly be described as rooted in reality and that goodness may be inherent in "the very grain of being . . . as thoroughly founded and cosmically significant as anyone could clearly conceive it to be" (p. 437). Ruja summarizes Williams' *magnum opus* in these challenging remarks: "Which shall we choose: obscurantism, agnosticism, mysticism, linguisticism, or realism? We confront a challenge to our loyalty to philosophy and thus to knowledge and to life. How we respond may very well determine the future not only of philosophy but of all mankind itself" (p. 428). And yet, Williams is not devoid of a religious sense, for I distinctly remember when, wearing a ministerial gown, he preached a sermon at Appleton Chapel, Harvard University, in 1950 on the sense of eternity in Spinoza. And he began his course on philosophy of religion with Otto's *mysterium tremendum*. I would call him a mystical materialist!

More modest is the article by Harry Blum, "A New Model of Global Brain Function," *Perspectives in Biology and Medicine* (Spring, 1967), pp. 381–408. Blum states: "Our knowledge of mind and brain consists of a large number of disparate facts from many disciplines." Yet "we are missing a central cohering insight and are abysmally ignorant of the holistic operations of intellect." He claims that in his new brain model, "The character of man as seen by the humanities and the clinical sciences is apparent" (p. 407).

A relation between science and the humanities is also presented by J. Bronowski in "The Reach of Imagination," *American Scholar* (Spring, 1967), pp. 193–201. He discusses the place of imagination in both science and literature and refers specifically to Newton's discovery of gravitation and the

flight of his imagination from the famous apple. Bronowski concludes: "In that telling figure, the imagination that day closed with nature and made a harmony. We shall hear an echo of that harmony on the day when we land on the moon because it will be not a technical but an imaginative triumph that reaches back to the beginning of modern science and literature both. All great acts of imagination are like this, in the arts, in science, and convince us because they fill reality with a deeper sense of rightness. We start with the simplest vocabulary of images, with *left* and *right* and *one*, *two*, *three*, and before we know how it happened the words and the numbers have conspired to make a match with nature: we catch in them the pattern of mind and matter as one" (p. 201). It is interesting, in these days of existential estrangement, to find reference to man's harmony with nature in Anthony Herbold's "Nature as Concept and Technique in the Poetry of James Very," *New England Quarterly* (June, 1967), pp. 244-59. His "essentially Calvinistic view of nature, though modified by the Arianism of Channing and contradicted by [his] second view, gained ascendancy as the years went by." The second view was romantic and transcendental and inspired by Wordsworth and Emerson and calls to man to "re-establish his lost harmony with nature."

Romantic views of nature, however, call to mind the theory of evolution allied with Process philosophy and the many problems of biological and cultural evolution and the meaning of man's life in present historical confrontations. The *Christian Century* is publishing a series of articles on the general theme of evolution and its relation to religion and human values. The first article appeared on January 18, 1967—William T. Keeton's "Evolution: Basic to Biology," in which he discusses genetics and evolutionary theory and makes a strong plea for "regulating the size of human populations" and for this and other questions being "at one and the same time biological, economic, political and moral" (p. 76). Another article is Julian H. Steward's "Cultural Evolution Today" (February 15, 1967), pp. 203-7, in which he makes the significant statement: "Instead of passing judgment according to traditional, moral standards, science and religion (especially within the ecumenical movement) alike attempt to understand evolving behavior patterns and value systems" (p. 204). Langdon Gilkey, in "Evolutionary Science and the Dilemma of Freedom and Determinism" (March 15, 1967), pp. 339-43, concludes rather negatively that "a scientific age which has added enormously to our understanding and to our powers, has not made us more virtuous" (p. 343). Philip Hefner, in "The Churches and Evolution," *Christian Century* (May 17, 1967), pp. 651-56, is much more positive: "When the churches listen obediently to the gospel of man's freedom in Christ under the Lord of history and change, they are participating Christianity in the processes of life evolution in which all men share. They are not distancing themselves from the cultural evolutionary process; rather, they are demonstrating that to be a Christian today is to share in the ultimate destiny of humankind which is relevant for all men living in that process" (p. 656). Karl H. Hertz, in "What Man Can Make of Man," *Christian Century* (June 21, 1967), pp. 807-10, raises the issue of the possibility of genetic programming and warns that "the basic moral affirmations needed to shape the ethical

codes for the employment of our biological knowledge will need . . . validation [and] here the affirmations of faith must count; and the kinds of communities of faith men belong to may be decisive" (p. 810). Theodosius Dobzhansky, that dean of American biologists, in "Evolution: Implications for Religion," *Christian Century* (July 19, 1967), pp. 936-41, makes a basic affirmation which may be elementary to men of science but is only now being appreciated by men of religion: "Creation is not an act but a process; it did not happen five or six thousand years ago but is going on before our eyes. Man is not compelled to be a mere spectator; he may become an assistant, a collaborator, a partner in the process of creation" (p. 937). Rejecting the theories of finalism, orthogenesis, aristogenesis, nomogenesis, etc., the author offers other directions of thought than those implying predestination, though he has some favorable remarks to make on his friend Teilhard de Chardin. While rejecting philosophical theories of emergence, he defends his conception of "evolutionary transcendences" by stating: "Transcendence is an elaboration of the novel patterns of phenomena of underlying levels, not an addition of novel immanent qualities" (p. 940). In his attitude to life he recalls Bronowski's poetic imagery referred to above: "It [life] is a *creative* experiment in the same sense that a poem is the poet's and a painting the painter's creative experiment." Dobzhansky, however, is reticent as to proposals for genetic breeding proposed by H. J. Muller and Sir Julian Huxley, for he concludes by stating: "I believe that what is needed is a frank recognition that the problem of human evolution is far wider than genetics or biology or than science as a whole. . . . It is a religious challenge" (p. 941). And he agrees with Tillich that "religion is the substance of culture, culture is the form of religion."

John Nuveen, in "The Facts of Life," *Christian Century* (August 10, 1966), affirms, "In a world that has discovered that Thomas Malthus was right, birth control is urgent." A note of urgency is also sounded by George M. Schurr in "Reflections on Biological Engineering," *Christian Century* (October 26, 1966): "The sad truth is that, since the 18th century, the debate between 'science' and 'theology' has been almost entirely a clash of dogmas at the level of engineer and curate. The underlying programmatic issues reside in the domains of theoretical science and constructive theology" (p. 1302).

Does this concern for evolution on the part of men of science and religion imply a return to the old argument from design? This is suggested by James P. Carse in "The Argument from Design: A Suggested Reconstruction," *Christian Scholar* (Fall, 1966), pp. 189-205. He admits that the cosmological and the ontological arguments have been demolished by the criticisms of Hume and Kant and attempts to reformulate an argument from design free from the philosophical presuppositions of medieval theology and based squarely on current Reformation theology in which "the cross" is God's design. The argument from design is thus redesigned so as to have no reference to cosmic processes!

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