

## A SOLID FOUNDATION FOR HUMAN ETHICS

by *Robert T. Hemphill*

The problems which have haunted the twentieth century and which darken the future of our species have their roots, according to many commentators, in the general dysfunction of our moral and religious traditions, our spiritual life. We have no real sense of obligation to the future, they say; we have lost our will to self-discipline; we do not have the flexibility to survive the avalanche of economic and political crises ahead.<sup>1</sup> This dysfunction is not commonly perceived directly; it more often appears as “a feeling of something missing,” “alienation,” “concern about the future.” Analyses of the host of problems it has caused fill many books, but the root itself rarely is analyzed perhaps because it seems secure against solution or because it is considered to be something belonging to the past without relevance in this rational age.

This brief sketch outlines the core ideas necessary for an effort to revitalize our spiritual life and reactivate our ethical sense. It claims to be a real, rational, democratic, objective, and simple solution. It is not all new, and it promises no rapid or easy social transformation; even unprecedented effort applied over many generations may have no positive effect since the human being has, in addition to his commanding wisdom, an ineradicable instinct for ignoring the plain and obvious.

As for the scope of the basic problem let us say, respecting the beliefs and practices of our predecessors, that our spiritual and moral contraption has failed to keep pace with rapidly advancing human knowledge and cannot deal effectively with the novel and amorphous degenerative forces which inhabit modern civilization. This is not to suggest that the various religious systems might be patched up and made to work again or that scientific beliefs can be translated and extended to cover the spiritual gap; both approaches have been tested and found inadequate. The insurmountable difficulty with Western religious traditions is the concept of “God,” the entity in which ethical authority resides; its qualities, its goals, and even its existence are disputable; it is abstruse and inaccessible; and it is no longer au-

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thoritative. Scientific thought, on the other hand, has left vast lacunae in its world model awaiting testable hypotheses, omitting everything not known in detail, leaving us at the mercy of overspecialized fragmentists; it has authority but no spiritual or comprehensive vision. Exacerbating the total situation are contagious trends in political, economic, and personal habits: irresponsible individualism coupled with consumptive materialism, supported by confrontational nationalism. The prevailing modes of life exhibit a quiet foreboding of general disaster.

Anyone hoping to help improve our general spiritual condition must address all of these problems directly, permitting understanding, debate, and modification as a normal social activity. Courageous and charismatic leadership is required but cannot replace an understanding of the problem in all its dimensions. Not only must any solution reflect an improved vision of the truth of our situation, it also must be so comprehensive and insightful as to convert the adherents of science and the established religions; it must attract a majority of the population with its simplicity and everyday utility, and it must be more an extension and perfection of the prevailing culture than a radical and disruptive alternative.

#### THE IDEA OF ORGANISM

The basis for a promising approach is now available. It includes a comprehensive conceptual understanding of the way the world works and a new ethical imperative which gives humans a vital role in that work. It springs from careful observation, not mysticism or revelation, and is predictive and verifiable.

It is a functional world model, describing the universe in terms of the processes of a developing organism. Nature is seen as an interdependent structure of organisms, each variety sustained by some more basic and supporting others more complex: Fundamental particles and basic physics emerged from some primal state, permitting atomic assemblages; stars built heavier elements leading to chemical expression; living systems emerged from chemical complexes and composed the evolving patterns from which mind and self-awareness recently have come. All parts mimic the whole, exploit its potential, and reveal its principle, which is self-transcendence.

This idea of organism is an extension of the work of Alfred North Whitehead, set out in his writings on the philosophy of science.<sup>2</sup> Whitehead was concerned with proper methods for investigating the order of nature, particularly with the prevailing method which emphasized a basic dualism (mind and matter) and with the "fallacy of

misplaced concreteness" which embodied that dualism in reality rather than treating it as a product of analysis.<sup>3</sup> To overcome this dualism he developed a method which emphasized that "nature is a structure of evolving processes" in which "the concrete enduring entities are organisms, so that the plan of the *whole* influences the very characters of the various subordinate organisms which enter into it."<sup>4</sup> The pattern of organization of the human organism, for example, permits the emergence of a new character, which is mind, from the basic matter of which it is composed. This theory of new characters emergent from patterns of established characters he called a "theory of organic mechanism."

We might object to calling nonliving, inorganic entities organisms because it implies that they are somehow living. Of course all living things are composed of nonliving things; however, maintaining the distinction too sharply obscures the similar processes which occur at different levels. We commonly discern organisms as individual complex structures in a less complex environment from which they extract energy for growth and reproduction; they are self-organizing and adaptable in the short term and over successive generations. Analogous processes occur at the chemical level; for example, the chemical elements of which we and the earth are made were assembled in stars from the basic stuff of the universe—hydrogen and helium—the simplest combinations of protons, neutrons, and electrons. They are assembled by mutual gravitational attraction and organized by their fundamental physical properties. The high temperature and density inside the star, resulting from gravitational attraction, is a simple but energy-rich environment which allows the formation of more complex arrangements of the fundamental particles. There are competing and interacting trends in the formation and dissolution of new arrangements, depending on their stability and tendency to accept additional particles. A preliminary stage is the assembly of more alpha particles (helium-4 with two protons and two neutrons) which then are joined to produce combinations of higher mass. The combination of two alpha particles (beryllium-8), which must exist for the formation of the three-alpha (carbon-12) and the four-alpha (oxygen-16) forms, is an unstable combination, coming apart within a fraction of a second after its formation. It exists naturally only within stars, where it can be formed continuously. The carbon and oxygen forms are among those which are stable; they can survive the transition to the energy-deficient outside environment when the star explodes or ejects them, ready for incorporation into another star or a planet.<sup>5</sup> Self-organization, growth, complexity emerging from simplicity, forms maintained by energy flow, adapta-

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tion to and selection by the environment, mutability of form—all of these qualities seen among living things also appear in the formation of the chemical elements. They were all basically living forms, some of which were also the enduring forms found in our more immediate environment.

Whitehead perceived the universe itself as an organism evolved from forms prior to itself:

We have to search whether nature does not in its very being show itself as self-explanatory. By this I mean, that the sheer statement, of what things are, may contain elements explanatory of why things are. Such elements may be expected to refer to depths beyond anything which we can grasp with a clear apprehension. In a sense, all explanation must end in ultimate arbitrariness. My demand is, that the ultimate arbitrariness of matter of fact from which our formulation starts should disclose the same general principles of reality, which we dimly discern as stretching away into regions beyond our explicit powers of discernment. Nature exhibits itself as exemplifying a philosophy of the evolution of organisms subject to determinate conditions. Examples of such conditions are the dimensions of space, the laws of nature, the determinate enduring entities, such as atoms and electrons, which exemplify those laws. But the very nature of these entities, the very nature of their spatiality and temporality, should exhibit the arbitrariness of these conditions as the outcome of a wider evolution beyond nature itself, and within which nature is but a limited mode.<sup>6</sup>

The reapplication of the fundamental intuition of unity leads to recognition of all emergent characters as aspects of the essential character of being and permits an ethical understanding firmly grounded in the world of facts.

### POSSIBILITIES OF A UNIFIED CHARACTER

Intuition of the unity of the universal character is supported by facts. We cannot estimate the probability of a universe which allows the development of the equivalent of human life, but in this universe life seems tightly bound to its basic operation and configuration. Some scientists have been fascinated by the values of certain physical constants which seem to have determined the permissible features of our universe but which seem to have no more fundamental explanation than that they are what they are. This is summarized in a recent review: "The basic features of galaxies, stars, planets and the everyday world are essentially determined by a few microphysical constants and by the effects of gravitation. Many interrelations between different scales that at first sight seem surprising are straightforward consequences of some simple physical arguments. But several aspects of our Universe—some of which seem to be prerequisites for the evolution of any form of life—depend rather delicately on apparent 'coinci-

dences' among the physical constants."<sup>7</sup> Other evidence accepted by researchers in biology and evolution indicates that the mechanisms which set the basic limits within which man evolved were developed and fixed in some of the earliest single-cell organisms long before they were expressed and subject to selection in more complex forms. The DNA double helix (and the closely related RNA form) is the basis of the only known genetic mechanism, the carrier of all existing form and function among living organisms, the initiator and regulator of change and adaptation; the four chemical units of all existing DNA might have been selected from a larger group rather early on; the code for production of the basic materials of all cells, with the amino acids, from DNA is universal, and because of its complexity we know that it must have reached its present form in a single, primitive cell from which all surviving life is descended.<sup>8</sup> The complex mechanisms of mutation, by which heredity is regulated and directed toward the long-term requirements of the organism, are seen now as the primary force of evolution, with selection operating from the inner workings of the nucleus to the whole life system.<sup>9</sup> Trends initiated at a very primitive level amplified themselves to set the limits and the possibilities within which we exist more than three billion years later. It is not correct to conclude from this and similar evidence that nature has some sort of "foresight," developing in the way required for human intelligence; many interpreters seeking a plan in evolution have made this mistake, that nature is a means to human ends. What the evidence does indicate is just the opposite: The development of the universe from its initial configuration to human beings is simply the expression of the possibilities and limits of a fundamental, unified character.

The outstanding, observable aspect of the universal character is the coordination of organisms in the process of self-transcendence; as we sense a "direction," or "trend," or "progress" in evolution we also can see a "goal."<sup>10</sup> Mind, arisen from social organisms, understands itself as self-awareness, memory, rationality, creativity, will, freedom; it is as distinct as all other emerged characters and just as dimly aware of the possibilities beyond itself. We are obviously not the pinnacle of creation, those for whom all else exist. We are the expression of a possibility and a necessity; we are primitive hand and brain, tools and catalysts in a process of self-modification. We perceive the goal of the universe in human terms: self-determination and self-transcendence, control of its own destiny and union with what is beyond it. Our existence will have meaning only as we participate in the life of the whole and contribute toward its goal.

With this understanding properly elaborated in cultural reality, freedom can regain its balance. It seems unlikely that we much longer

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can stumble about in the dark and expect civilization to remain intact. We must mature quickly, take up our responsibilities, and join the universal community of which we are only one small, essential part.

### NOTES

1. Robert L. Heilbroner, *An Inquiry into the Human Prospect* (New York: W. W. Norton & Co., 1974).
2. Alfred North Whitehead, *Science and the Modern World* (New York: Macmillan Co., 1925) and *Process and Reality* (New York: Macmillan Co., 1929).
3. By the fallacy of misplaced concreteness Whitehead means generally mistaking abstractions for concrete realities. The principal example he cites—and the one against which his argument is directed—is the notion of matter as an isolated event, a simple location in space and time, as developed mainly by Isaac Newton. Because this idea was successful in resolving problems of force, motion, and gravitation it rather dogmatically was extended and accepted as concrete fact, despite its deficiencies in accounting for the phenomena of living things; mental events were attributed to a separate abstraction, mind, establishing a basic dualism. In place of both matter and mind Whitehead puts the notion of organism, which he thinks points more directly to the actual processes of the world as the true concrete realities (see Whitehead, *Science and the Modern World*, chaps. 3-4).
4. *Ibid.*, pp. 106, 115.
5. D. C. Clayton, *Principles of Stellar Evolution and Nucleosynthesis* (New York: McGraw-Hill Book Co., 1968).
6. Whitehead, *Science and the Modern World*, p. 135.
7. B. J. Carr and M. J. Rees, "The Anthropic Principle and the Structure of the Physical World," *Nature* 278 (1979): 605.
8. Theodosius Dobzhansky et al., *Evolution* (San Francisco: W. H. Freeman & Co., 1977).
9. C. D. Darlington, "A Diagram of Evolution," *Nature* 276 (1978): 447.
10. E. Jantsch and C. H. Waddington, eds., *Evolution and Consciousness* (Reading, Mass.: Addison Wesley Publishing Co., 1976).