

Editorial

Zygon is interested in weaving together the multicolored strands of ideas and practices of religious traditions and the contemporary sciences. This issue carries on this task by exploring the contemporary insights of systems theory for developing a tapestry that portrays human nature, society, and the rest of nature as a dynamic whole.

In view of this current exploration it is interesting to reflect briefly on two of the many ways in which human beings have tried to weave together different aspects of human experience, in order to feel more at home in the world and to exert some control over humans and the system of nature. The first is the ancient idea of "imitative magic," an offshoot of "sympathetic magic" made famous by Sir James G. Frazer. This understanding of how things are related makes intelligible such diverse phenomena of tribal religion as the technology of voodoo, in which, for example, an image of a person is manipulated to control the actual person, and the various rainmaking practices, in which, for example, boulders are rolled down hills to simulate thunder or blood is dripped on the ground to assist sympathetically the natural production of rain. Similarly Elisha instructed the king to shoot arrows out of a window and then to go to strike the ground with them, in order to insure victory over the enemy (2 Kings 13:14-19). One might even wonder if sympathetic magic serves as a hidden assumption behind the Christian Lord's Supper, in which by partaking of bread and wine one enters into union with (communion) the body and blood of Jesus as the Christ.

The second way, that of scientific inquiry, has severed the type of causal connection postulated by sympathetic and imitative magic. Nonetheless, the attempt to weave out of our experiences a sense of unity that leads to some human control or influence continues in the making of analogies and the building of models by taking images or concepts from one area of experience and applying them to another. The Bohr planetary model of the atom and the billiard ball model in the kinetic theory of gases are two common, historical examples. Various articles in *Zygon* have engaged in this analogizing process by transferring a fundamental idea, the Darwinian concept of evolution, from the area of biology into other areas of human experience, primarily that of human culture. Insofar as this transference helps elaborate a general model of human nature and society in the context of the planet earth and the universe as a whole, *Zygon* is at least partly successful in weaving a tapestry that is not just an interesting array of the threads of human life and thought but that presents a picture of the meaning, purpose, and wonder of existence.

However, the building of models by generalizing from one area of human experience to the universe as a whole is always problematic. This is seen in the traditional problem of the relationship between the material and the mental. On the one hand, materialistic philosophies generalize physical models, developed through attempts to understand mechanistically the nonhuman aspects of the universe, to living forms. On the other hand, philosophers such as Alfred North Whitehead generalize the introspective experience of the human mind as having both a "physical" and a "mental" pole to all of existence, even to the atoms and the stars. Much of the debate between material-

ism and idealism is a debate over how far one can analogize by generalizing a particular form of human experience and thought to all phenomena.

Systems theory is a type of thinking that does not seem to be limited by any particular area of human experience as defined by the various scientific and humanistic disciplines that have evolved over the last few centuries. While a systems approach seeks to model in terms of cybernetic mechanisms the various processes at all levels of existence, it does not seem to be limited to any one area of life. Hence it has been used effectively to analyze the *Nerves of Government* by Karl W. Deutsch, *The Mirages of Marriage* by William J. Lederer and Don D. Jackson, *The Biological Origin of Human Values* by George Edgin Pugh, and *The Self-Organizing Universe* by Erich Jantsch.

The papers in this *Zygon* issue represent some other applications of systems theory. Whether a systems approach in general and ecology in particular can provide a model of humanity in nature that is both scientifically intelligible and religiously satisfying is explored by James E. Huchingson. He argues not only that humans need to understand themselves in their world but also that they must be motivated to action. To motivate people some general, scientifically grounded concepts must acquire a mythological dimension. After exploring how such concepts become symbolic and mythical, Huchingson suggests that the earth itself, interpreted in terms of systems theory, should become a primary religious symbol of a cosmic naturalism.

Victor Ferkiss employs a systems approach in analyzing the interactions between nature, technology, and politics in a global context. He critically explores the capability of the general systems concepts of "equilibrium," "closed system," and "interdependence" for providing an empirical base for ethical and political decision-making. He then argues that we are moving toward a two-tiered world physically, culturally, and politically. Just as some of our environmental and human problems are truly global while others are more local, so we are beginning to see the emergence of a common system of values while at the same time there continue to be many more limited value subsystems. Similarly Ferkiss contends that the federal political model should be extended from the national to the international scene, so that truly global concerns can be addressed through a worldwide system of political processes while more limited problems can be handled nationally or locally.

With Ervin Laszlo's essay this *Zygon* issue moves from using a systems approach in analyzing human society in a global context to employing it in exploring the nature of persons in the context of an evolving universe. Laszlo attempts to resolve two types of dualism: the one between mind and body and the other between human beings and the rest of nature. By stressing the evolutionary continuity between humans and other species Laszlo argues that the body-mind problem is not solely a human problem. Instead, one can define mind as the introspectively felt correlate of the function of persistence in natural systems—a function that requires a system to monitor its own states. Then one can trace in evolutionary history the emergence of minds as internal, qualitative counterparts to external, quantifiable cybernetic systems.

In the concluding essay Kathleen Johnson Wu presents what can be considered to be an ancient version of systems philosophy. Her exposition suggests comparisons between Lao Tzu's concepts of Tao (the source and principle of existence) and Teh (the human virtue or capacity given by Tao) on the one hand and ideas from evolutionary theory, sociobiology, biogenetic structuralism, and humanistic psychology on the other. Even though the Taoist view is based on the dynamic interaction of opposites rather than on the cybernetic

mechanisms espoused by contemporary systems analysis, Wu's article, like the other essays, shows that the various threads of human existence in nature can be woven together into a picture of how humans can be at home in a complex, dynamic universe.

An underlying question running through this issue of *Zygon* is the relationship between human attempts to understand things in order to exercise some control or influence over them and the idea, from both evolutionary theory and religion, that we must recognize our dependence on a reality system that has brought us into being, that governs the universe in terms of its laws, and with which we must live harmoniously if we are to be successful and fulfilled. While Huchingson stresses the importance of religion for motivating people to act and Ferkiss seeks ways to model decision-making for political action in a global context, Wu emphasizes Lao Tzu's central point that fulfillment comes only by living out the human virtue or capacity (Teh) that is given by the ultimate way of heaven and earth (Tao). This tension between the more active and the more receptive strands of human existence is itself a manifestation of the Yang and Yin of ancient Chinese thought. It also reminds us of the tension between the employment of sympathetic magic, illustrated by Elisha, and the protest of Hebrew prophetic religion that we are not to use wonderful human powers for our own purposes but that the ultimate reality system, Yahweh, is to use or work through us.

A complete tapestry of the meaning and purpose of human life must portray the dynamic union between these two primary strands of human life in the context of the earth and the universe. This is accomplished at least in part by all the essays insofar as the kinds of action they contemplate are to the effect that we should live harmoniously in the context of the complex system of reality that has created and governs the universe including us, a system that often is revealed through both the sciences and religions.

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