

# REVIEWS

## The Universe Revisited

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THE NEW CONSCIOUSNESS IN SCIENCE AND RELIGION

By Harold K. Schilling

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One of the most significant features of recent scientific discovery has been a basic change, yet again, in our view of the universe. But the question is not now one of vastness in space or time, or of our not being centrally located.

Concepts of void and stasis were still basic after the Copernican revolution; they remained strong well into the present century, although shaken by Hubble's discovery of the expansion of the universe. Now these assumptions have been thoroughly undermined by observations of quasars and pulsars, as well as a long list of other phenomena of which the general public is less aware. (And may the awareness never again come via the obscenity of a television or electric-toothbrush manufacturer's crass commercialization of an astronomer's word!)

Thus, not only is the space between the stars *not* empty, but a variety of interesting and important processes are taking place there, as we have discovered by learning ways to use radio waves and other tools to determine these processes. One particularly striking example is the discovery of organic molecules in gaseous nebulae such as the one in Orion. Ethyl alcohol and methylamine are only the latest in a list of molecules (including amino-acid precursors) that form in these great clouds of dust and gas.

And the planets, stars, and galaxies themselves can no longer be pictured as quiet or constant. We have seen volcanoes on Mars, and great flares on the Sun; we have heard with our radio antennas great outbursts of noise from Jupiter, and incredible galactic explosions; we have seen the deaths of stars, and signs of their births as well. Every part of the universe is now seen as continually moving, throbbing, changing.

Furthermore, the entire cosmos now presents itself as dynamically evolving. The poetic thought that this indescribably complex and changing entity called the universe acts almost as if it were alive means a great deal to the astronomer now also. For one of the classical approaches to the understanding of "life" in biology has been to point out that here "the whole is more than the sum of the parts." We are not just collections of molecules or cells, but the *relations* among the various entities are all-important. So now the physicist can also point out that a crystal of salt has remarkable properties that the individual atoms do not

possess except in potentiality, and the astronomer can marvel at how much more a galaxy is than a mere collection of stars.

All of this suggests an enrichment of our conceptions about our own place in this universe, about the importance of how we are related to other parts, both larger and smaller. May it cause in turn a further development of our apprehension of Divinity manifested in the richness of these relationships?

Professor Schilling directs our thoughts to such questions, and presents some positive answers of his own. His introductory chapters expound the possibility that qualitatively new consciousness and sensitivity are possible to modern man as he explores both scientific and religious questions. The great steps forward in modern science have been "not only additions to *what man knows* but changes in *the way he knows*, and in *the way he feels about . . . the known and unknown*" (p. 18).

The bulk of the book is divided into two parts. The first presents "Insights of the New Scientific Consciousness." Here a number of important basic scientific discoveries are discussed nonmathematically, and less for their own intrinsic interest than for their philosophical implications. The second part considers in this light "Insights of the New Religious Consciousness."

There is emphasis on "relationality," hierarchical structures of objects and phenomena, and the "depth dimension of reality." Dr. Schilling points out that this depth and structure are so rich that many physicists consider it not at all clear that nature is necessarily simple at the most basic level. Indeed, there may not even *be* any basic level; there may be no innermost nested box. The possibilities of matter, energy, life, mind, and spirit belonging to some sort of continuum are explored.

Many Adventists may find that they do not agree with all that Dr. Schilling says. But I hope that many others will enjoy the book as I have, for his thoughts are interesting and stimulating, and these are issues that need to be considered. It will add extra meaning for SPECTRUM readers to know that Dr. Schilling once taught for over a decade at Union College (Nebraska). Since that time he has been professor of physics and dean of the graduate school at Pennsylvania State University. He has continued to teach and lecture since 1968, when emeritus was added to his titles.

This book will not be fast and easy reading, but then that is not what one would want or expect when grappling with such issues. There is careful thought here by one who has been at it a long time and who is well qualified to understand both the scientific and philosophical implications. It is worth the time and effort to ponder and absorb slowly what Schilling has to say.