

Confessions of a scientist-theologian

by [Philip Hefner](#) in the [May 20, 1998](#) issue

*By John Polkinghorne, Belief in God in an Age of Science. (Yale University Press, 160 pp.)*

I was living in Cambridge, England, in 1978-79 when the acclaimed physicist John Polkinghorne, a fellow of the Royal Academy, decided to leave the research lab and become an Anglican priest. Given the longstanding notion that there is a war between religion and science, journalists were eager for a story about a leader of one side crossing over to the other. Polkinghorne's decision was front-page news.

On the whole, journalists are more interested in scientists who speak of faith, spirituality and God than in theologians who speak in a conciliatory way about science. The "man bites dog" headline is that a scientist has something friendly to say about religion. And since scientists have little to gain from such a turn--it can even represent a loss of cultural status--the move cannot be considered a matter of self-interest.

In the current flourishing market for books by scientists who are friendly toward religion, Polkinghorne stands out as perhaps the most celebrated scientist of his generation to have taken holy orders. His scientific credentials, his intellectual brilliance, his writing and speaking--both lucid and prolific--and his identification with the core elements of Christian belief and practice have enabled him to embody in his own person one of the most important cultural shifts in the last 50 years--the rapprochement between religion and science.

This volume, based on the Terry Lectures at Yale (Paul Tillich's *Courage to Be* is among several well-known works that originated as Terry Lectures), presents serious arguments on a dozen important issues and expresses Polkinghorne's personal opinion, without much argument, on two dozen more. This style renders the book difficult to assess, and the difficulty is compounded by the frequently offered advice to consult the author's other writings for a fuller discussion. Of the six chapters, the book devotes one chapter to natural theology, one to divine action in the world, one to dialogue between science and religion, and three to methodological issues:

commonalities of method in science and religion, critical realism, and the importance of mathematics.

The difficulty in placing the book is illustrated by the dominant notes of each of the first three chapters. Chapter one insists that it has “forsworn false attempts at demonstration and instead relies on the persuasiveness of an intellectually satisfying insight.” It is a “generous” reading of the physical world “as containing rumors of divine purpose.” This chapter is a natural theology based on insights concerning “rational beauty, finely-tuned fruitfulness, a value-laden world, and human hopeful defiance in the face of mortality.”

The second chapter includes a substantial discussion of Christology that argues vigorously for the author’s interpretation of what Christology, including the resurrection, has meant in the past and what it might mean today, with a fair share of polemics against alternative theological views. Chapter three sets forth Polkinghorne’s trademark proposal that God’s action in the world be modeled on the concept of human and divine agency through “holistic causal principles of a pattern-forming kind,” summarized in the term “active information.” He aggressively argues that theories of “chaotic indeterminism,” “top-down causality” and “information” support a belief in a God who acts.

What we have in these chapters, in turn, is an almost gentle presentation of natural theology, a Christian theological proposal that is argued vigorously against alternative views, and a straightforward apologetic for a certain physics-based conception of God’s action in the world. The first chapter is appealing for its accessible and persuasive style; the second will be intelligible only to those who have studied the history of theology (and to them it will appear tendentious); the third defends a version of the faith in scientific argumentation that is difficult for nonscientists to grasp.

This ambiguity of purpose and style diffuses the impact of the book. More important is what this ambiguity tells us about the field of religion and science. Without wishing for a moment to denigrate the brilliant intellectual substance of Polkinghorne’s work or his intention to advance toward a cogent statement of truth, I would characterize his work (in this book and in much of his other work) and that of other scientist-theologians as a form of confession. Scientist-theologians do something very important when they confess--with the same brilliance that they exhibit in their scientific work--that their religious faith, the sense of the divine

meaningfulness of life, and their moral resolve within a religious worldview are not weakened but rather flourish when brought into connection with their scientific commitment. As confession, their work tells us how a scientist looks at the world and how a scientist can appropriate traditional Christian faith.

Such a confession shows that the image of warfare between science and religions is misconstrued. It also shows that scientific modes of thought do not necessarily erode traditional religious belief. It suggests that even if we do not fully understand how religious and scientific responses to the world ought to be related, we do know that reality does not come to us divided in two parts, along the religion-science divide. The person and work of these notable scientists who have become theologians constitute a confession that we are living and thinking within a new paradigm of sensibility and rationality, even if we cannot clearly define what that paradigm is. This witness is especially significant since our culture possesses no publicly acknowledged alternative to the warfare hypothesis. There are many alternative voices to be heard today in the conversation between religion and science, but none is publicly authorized.

Given the situation I have just described, it is not surprising that Polkinghorne assumes a variety of genres in his writing: one moment appealing to natural knowledge of God, in another vigorously defending his personal theological vision, and in still another arguing about the possibilities for interpreting theories of chaos and information as openings for God's action in the world. It is even less surprising that half of his book is devoted to exploring the way his methods for doing science and theology are not fundamentally different. In any case, I think we miss Polkinghorne's cultural significance and intellectual-theological impact if we don't see that his confession is more important than, say, the adequacy of his esoteric theory of God's causality within the structures of "active information" or the cogency of his notion of how the resurrection is a reconstitution of our physical bodies.

The scientist-theologians may be quite unhappy with my assessment. After all, as scientists they do not aim at having cultural significance; they aim to give true descriptions of the world. They work on the realist assumption that their theories do not simply account for natural phenomena but provide "a more adequate (versimilitudinous) account of the nature of the world. It is the desire for ontological knowledge, and not functional success, which motivates the labor of scientists."

Polkinghorne himself seems to equate ontological knowledge with his hypotheses that locate God's action in the world "in domains where there is flexible process," associated with the concept of the "strange attractor" of chaos theory. His notion of the resurrection of Jesus and of every believer as the act of God's remembering the "information-bearing pattern" of our psychosomatic unity and "reconstituting" it at some point beyond the "cosmic death" of the universe may also be counted as a fragment of ontological truth. Other scientist-theologians propose comparable hypotheses of how God's action in the world can be conceptualized at the level of quantum indeterminacy or in the processes of so-called "top-down" causality. All these thinkers emphasize the relation of the human mind to a "real" world that exists apart from the knower.

Though these proposals are brilliant and even useful, they do not constitute the most important locus of ontological truth in the work of these scientists-become-theologians. What is most important is what I have called their confession--their conviction that reality makes itself available under the conditions of an integrated scientific and theological probing, rather than one or the other.

In his recent book *God, Creation, and Contemporary Physics*, Mark Worthing calls attention to two kinds of thinkers in the world of religion and science: the scientist-theologians and the "ordinary" theologians who make no claim to scientific credentials. He considers the latter group to be an endangered species. Their presence is necessary, however, in order to assure that the theology-science conversation remains a dialogue between disciplines rather than a dialogue within individuals.

Polkinghorne also makes a plea for "ordinary" theologians to give more attention to the challenges and possibilities offered by science. But it would take a theologian with a strong ego to respond to Polkinghorne's challenge, for he sharply, even scornfully criticizes some theologians who take science seriously. Although he names Thomas Torrance, Jürgen Moltmann and Wolfhart Pannenberg as "honorable exceptions to the policy of keeping theology at a distance from science," he really has nothing else positive to say about them. Torrance is taken to task for not engaging post-Einsteinian quantum physics, Moltmann for ignoring theories of relativity. He scorns Pannenberg for, among other things, his "old-fashioned concept of inertia." Strangely, Polkinghorne gives no attention whatsoever to the one school of theological thought that has given steady attention to science over the past 50 years--the process theology that rests on the philosophy of Alfred North Whitehead.

Polkinghorne's unfavorable view of ordinary theologians may be linked to the understanding of ontological truth that I described earlier. Most ordinary theologians today are impressed with the metaphorical, symbolic and mythical character of our language and our concepts. Whereas for ordinary theologians this character does not weaken the truth claims we make but deepens and enriches them, most scientist-theologians are skeptical of talk about myth and metaphor. While ordinary theologians cannot conceive that ontological truth would be accessible in forms other than metaphor, myth and symbol, scientist-theologians tend to be dissatisfied with anything less than relatively straightforward concepts that can claim truth. Theologians such as Friedrich Schleiermacher, Paul Tillich and Langdon Gilkey have given considerable attention to the sciences while clarifying the symbolic nature of language and concepts. This difference in perspective accounts for the fact that although most theologians are likely to pay utmost respect to Polkinghorne's theories, they are unlikely to honor the kinds of realist claims that he and other scientist-theologians make for their theories.

An example of this difference in perspective is the differing approaches Polkinghorne and Pannenberg take to the resurrection. (Unfortunately, Polkinghorne does not engage Pannenberg at this point.) In his major work, *Jesus--God and Man* (1968), Pannenberg argues (more earnestly than almost any other contemporary mainline Protestant theologian) for the historical factuality of the resurrection. It really happened. He has, however, a complex and sophisticated notion of what it means to say that an event in history "happened" and how such events are verified by historians. Furthermore, he recognizes that the term "resurrected" must, by the very nature of its referent, be a metaphor and participate in the worldview-shaping character of myth.

Pannenberg goes on to describe the meaning of the resurrection claim in the first-century Jewish world in which it happened. He refers to its apocalyptic character, which means that it is a cosmic statement--it speaks of the beginning of the end of the world, it validates Jesus' life and preaching, and it establishes Jesus as a reliable revelation of God. He includes a brief discussion of the significance of quantum theory for assessing the possibility of singular events.

Polkinghorne's discussion of the resurrection focuses, in contrast, on general philosophical arguments to the effect that "in order to confirm . . . the claim that the integrity of personal experience itself, based as it is in the significance and value of individual men and women and the ultimate and total intelligibility of the universe,

requires that there be an eternal ground of hope who is the giver and preserver of human individuality and the eternally faithful Carer for creation." The fact of the resurrection is consequently equated with a theory of the reconstitution of our psychosomatic nature in an eternity after the demise of the universe.

Whereas for Pannenberg the meaning of the resurrection is inseparable from the kind of claim it makes and the language which is appropriate to that claim, as well as inextricably rooted in the texts of the New Testament and in the Jewish world of the early first century, for Polkinghorne the resurrection is a conclusion that is required by logic and enabled by a theory of physical matter. To Polkinghorne and many scientist-theologians, Pannenberg's presentation seems unnecessarily tortured and muddy. Conversely, many ordinary theologians look upon Polkinghorne's proposals as unpersuasively speculative and narrowly pertaining to the future of physical reality.

Three important conclusions may be drawn from this discussion. (1) The older paradigms that view knowledge and reality as split along the lines of difference between science and religion are being called into question. The life and work of scientist-theologians like Polkinghorne embodies the fact that the times call for a grand paradigm shift. (2) The dialogue between theology and science must be more than a dialogue within the individual minds of brilliant scientist-theologians; it must be a genuine engagement between theology and science. (3) Alongside the relative ignorance of ordinary theologians about science and their lack of will to engage science is a problem of perspective: theologians and scientist-theologians differ on what constitutes truth, including ontological truth. Genuine engagement between theology and science must heed this difference and attempt to take measure of both perspectives.

There is more at stake in the religion-science dialogue, and in books like this one, than dialogue within individuals and between disciplines. All sectors of our culture must come to see the importance of the confession of Polkinghorne and his colleagues. The internal debates within the theology-and-science guild will finally be valuable only if they contribute to a realization throughout our culture that we are on the brink of new paradigms for understanding reality, and that those paradigms require the efforts of both scientists and theologians.