JOHN POLKINGHORNE AND THE TASK OF ADDRESSING A "MESSY" WORLD

by Ann Pederson and Lou Ann Trost

Abstract.   As a physicist-theologian, John Polkinghorne has done a great service for the community of scholars engaged in the theology-and-science dialogue as well as for a broader audience of interested persons. We examine Polkinghorne's theological method to see what it suggests about his understanding of the function of systematic theology and his philosophy of science. His strong emphasis on rationality in theology corresponds to his epistemological discussions. Polkinghorne links his methodology to "thinking," so "experience" seems relegated to the minds, and not the lives, of the believers. Consequently, his theology does not easily engage ethical, political, and cultural landscapes where the concrete contexts of particular people's lives engage their faith. The challenge for those of us in religion-and-science is to come to grips with this messy, complicated world.

Keywords: doctrine of God; epistemology; experience; faith; interdisciplinary work; natural theology; Wolfhart Pannenberg; rationality; theological method.

As a physicist-theologian, John Polkinghorne has done a great service for the community of scholars engaged in the theology-and-science dialogue, as well as for a broader audience of interested persons. His books have for many years offered the student and general audience alike an entree into the world of physics, a world not easily accessed by those unschooled in its language. The following comments are made in the spirit of "charitable encouragement," that which Polkinghorne has said he wishes to extend to theologians in our forays into science (Polkinghorne 2000, 957).

Ann Pederson is an Associate Professor of Religion at Augustana College, 29th and South Summit, Sioux Falls, SD 57197. Lou Ann Trost is the Program Director and Assistant Professor of Theology and Science in Residence at the Center for Theology and the Natural Sciences at the Graduate Theological Union, 2400 Ridge Road, Berkeley, CA 94709.

Polkinghorne is admittedly one of the few individuals in the current religion-and-science conversation who can cross boundaries between theology and science with proficiency in both fields. This fact alone raises questions about the nature of the conversation between religion and science. Must one be expert in both fields in order to make lasting contributions? The question of dual expertise raises the larger issue of whether interdisciplinary work requires one to be in a dialogue between disciplines rather than in a dialogue taking place within one's own research and one's self. If the latter case becomes the norm, it could endanger the dialogue. In a recent article in *The Christian Century,* Philip Hefner explains that the presence of "ordinary" theologians is necessary, "in order to assure that the theology-science conversation remains a dialogue between disciplines rather than a dialogue within individuals" (Hefner 1998, 535). A successful conversation takes at least two individuals for the exchange.

Polkinghorne would agree that interdisciplinary work requires a certain degree of intellectual fortitude. He observes: "We must attempt a bit of intellectual daring and, above all, we have to be prepared to listen and learn from each other, showing mutual tolerance and acceptance in doing so. I do not yet see a dialogue of this kind taking place between mainstream theologians and mainstream scientists, but I fervently hope it will be one of the leading developments of the next few years" (Polkinghorne 1998a, 83). If we heed these words, the religion-and-science dialogue will necessarily change. Who will share the ownership of the dialogue? Which sciences and which religions will participate? The dialogue is changing: this is no longer a conversation owned by the natural sciences (primarily physics and cosmology) and Christian theology. The boundaries are fluid and changing. The dialogue must now embrace and even seek out with rigor a greater diversity of voices among the sciences and from the broad spectrum of religious traditions and spiritual communities.

In "The Life and Works of a Bottom-Up Thinker," Polkinghorne outlines his theological method. We would like to examine what this suggests about his understanding of the function of systematic theology and his philosophy of science. Although, generally speaking, he is right in saying that "theology is not a cumulative subject," he allows for but pays only lip service to the changing interpretations that theology offers in each age (Polkinghorne 2000, 957). And, in a restricted sense, theology *is* cumulative. Theology's interpretations in each age must take into account the accumulation of cultural, historical, political, and psychological data of the various times. Theology is not static, and a doctoral student in theology can no more go back to look for the fullest possible understanding for our time in the writings of Aquinas than a doctoral student in the sciences can go back to Aristotle. At the same time, Polkinghorne overlooks the fact that science is not merely cumulative either. Although he may not be happy with the idea of "paradigm change," he must admit that some knowl-

edge is overturned in order to make way for the new. Polkinghorne's work could be classified as a kind of new apologetic natural theology. He develops a natural theology with the conviction that theism "offers the 'best explanation' of the many-leveled character of human encounter with reality" (1998a, xii). He claims that this effort is not to prove the existence of God from the scientific data but to offer the most intelligible understanding of God in a scientific world. Similarly, he joins with other theologians and scientists to invoke the anthropic principle or the argument from intelligent design (ID) to create a contemporary natural theology. The obvious critique of natural theology that Ian Barbour and many others have made is that the argument from design may lead to a designer but not necessarily to the God of the Christian faith. Barbour explains: "Moreover, few persons have actually acquired their religious beliefs by such arguments. Natural theology can show that the existence of God is a plausible hypothesis, but this kind of reasoning seems far removed from the actual life of a religious community" (Barbour, 1997,100). We agree with Barbour.

Here we find Hefner's methodological starting point of myth and ritual very helpful. Hefner explains:

Concepts have the merit of clarity, precision, and rationality, while they are accessible generally only to the philosophically oriented elite and may be somewhat removed from behavior—indeed, discussion of behavior may not even be admitted as legitimate. . . . Myth and ritual are concrete, highly motivating, residents where "people really live." (Hefner 1993, 217)

So the challenge for a theologian is to create a meaningful world that engages the place where "people really live." Polkinghorne's natural theology places a stricture on the data for theological reflection.

Polkinghorne's strong emphasis upon rationality here corresponds to his epistemological discussions. It is the underlying premise of Polkinghorne's reflections on "What happened to the human mind?" that there exists a ditch between science and the life of the mind. Is there really such an "ugly big ditch yawning between scientific accounts of the firings of neural networks" and the mental experience of "perceiving a patch of pink"? (Polkinghorne 1998b, 53). Is it not merely a split second in time between neural firing and perception, although we do not have awareness of the neural firings? Is not our perception of the physical world the same world described by science? Is not "mental" experience merely the way that human beings describe what happens when neurons fire and work in conjunction with the optic nerve and the apparatus of the eye to create vision? For those of us who have thought long and hard about embodiment and the embodied mind, the ditch is an illusion, a leftover of a period enchanted by the tremendous achievements of a thing called rationality, as if it were an active agent in the world.

What some philosophers of mind call "folk psychology" (Polkinghorne 1998b, 55), ascribing truth to accounts of mental experience, others might

call metaphorical narrative and the complexities of language. Saying this, we need not go so far as Daniel Dennett does in regarding the awareness of self as a useful fiction. If, along with Dennett, we see the self as a "centre of narrative gravity" (Polkinghorne 1998b, 61), we merely acknowledge that language is metaphorical, and *metaphor conveys truth*. There is not a gap between brain function and perception, but rather this function of language represents the creative construction of a perceived world—as it is perceived, as best our ability of perception can describe. If the physical aspects of neural activity combine with a "mental" sense of awe at the resulting human experience, this often leads to poetry. Does poetry belong to the physical world? It may not appear so, but poetry certainly depends on the brain's ability to describe the world or express impressions of the world or oneself in the form of language, a cultural production dependent on our evolutionary history.

The discussion of self and narrative reflects Polkinghorne's attempt to find a middle way through the dilemma of modern foundationalism and postmodern relativism. He refers to Colin Gunton's description of it as the dilemma between the many and the one: "'The quest must therefore be for non-foundationalist foundations: to find the moments of truth in both of the contentions, namely that particularity and universality each have their place in a reasoned approach to the truth.' The end of that quest," Polkinghorne concludes, "I believe, is critical theological realism" (Polkinghorne 1998a, 123). Polkinghorne's theological work does not reflect enough use of the ideas of myth, metaphor, and symbol. He has not seriously taken into account the postmodern critiques including discussions of how language functions and of the power of metaphor. A telling statement is this: "The scientist and the theologian both work by faith, a realist trust in the rational reliability of our understanding of experience" (1998a, 124). Faith is defined as trust in a real world explained through reason and understanding of experience. What happens when our reason leads us to question the rationality of experience? What happens when nothing makes sense in terms of logical analysis anymore? What happens when faith is "hope in things not seen" (Hebrews 11:1) (and presumably not explained)? Faith must be more than reasoned trust; faith must have somewhere to go in the face of radical evil and suffering when the world is not simply wonderful and beautiful.

In his theologically substantive work on divine action, Polkinghorne seeks a "causal joint by which providential action occurs" (Polkinghorne 2000, 961), and he seeks it in an ontological interpretation of the indeterminacy principle of quantum physics and the unpredictabilities of chaos theory. In answer to his critics, Polkinghorne has suggested that it may not be a theological blunder to reduce God to a cause among causes, using the idea of "divine condescension involved in the kenotic creative act of allowing the truly other to be" (2000, 961). Yet it seems that this account

betrays a rather weak doctrine of creation or, rather, a weak doctrine of God. It is part of God's love to create, not merely allow the other—the universe—to be. This is exactly the expression of God's power, to create in a continuing fashion a world in which God is everywhere active, even while transcending it. This is not an interventionist God. God does not need to intervene in a creation that everywhere and always expresses God's creative power.

Of course, such an account of God in creation requires that the evils within the world also be taken seriously and that there be some accountability for the suffering in a world of God's creation. As Wolfhart Pannenberg has written, this is precisely what God's Incarnation does. God has not humbled Godself to become a cause among other causes but rather to become subject to death, as the creatures of God's creation are. This is not to say that consideration of chaos and complexity will not be fruitful for theology. But the entire doctrine of God needs to be thought through carefully in this regard.

In his article "Wolfhart Pannenberg's Engagement with the Natural Sciences" (1999), Polkinghorne begins with a general appreciation for the theological work of Pannenberg. He refers to a statement that Pannenberg makes regarding belief in the God of the Bible as the creator of the universe. Quoting Pannenberg, "If . . . nature can be appropriately understood without reference to the God of the Bible, then that God cannot be the creator of the universe" (in Polkinghorne 1999, 152). Polkinghorne comments that some care would be needed in evaluating what such a claim about the processes of nature could actually amount to. What Polkinghorne does not appreciate is the weight that Pannenberg would place on the qualifier in the phrase "appropriately understood." For Pannenberg, understanding does not mean merely a rational physical explanation of particular phenomena, not merely physical causation, but would include ideas of source and ground and purpose.

Polkinghorne then refers to twentieth-century theological thinking about the kenotic character of the creative act of God. "A letting-be by divine love of the truly other, allowed by God to be itself, carries with it the implication of a degree of due independence granted to creatures" (1999, 152). While Pannenberg would agree that God gives creatures independence, expressions such as "allowing" or "letting-be" may be misleading. For Pannenberg, God by love creates a world for freedom. Thus, creation is not such that God "allows" a somewhat self-sufficient world to be itself. Rather, God as the world's all-determinative source *creates* the universe to be itself.

Some of the differences between Polkinghorne and Pannenberg may be better understood in direct reference to the doctrine of God. For Polkinghorne the idea of God is closely related with rationality, and although he does not want to reduce God to Cosmic Mind, if one had to characterize

Polkinghorne's idea of God it would be "God as Mind." This can be seen in the emphasis that he places on the intelligibility of the world as reason for belief in God, on the importance of the detection of patterns in nature, and on information. Pannenberg also values the rational ground for belief, but he maintains the importance of the biblical idea of God as personal, not merely rational. For Pannenberg, personhood is found in God as the power of the future, and for human persons this entails a proleptic participation in Christ and the reign of God.

Polkinghorne is correct in saying that Pannenberg's treatment of specific areas of the human sciences has been more extensive than his treatment of specific natural sciences. Considering the areas of Pannenberg's work on topics in physics, Polkinghorne focuses on those to which Pannenberg gives the most weight: the concept of field, contingency, and the future. Pannenberg focuses on early conceptions of field, especially that of Michael Faraday. As many outside (and within) theology assume that one can jump back into history and draw upon past concepts, so Pannenberg assumes the right to do so with scientific theories. To treat field theory adequately, one should deal with contemporary understandings, including quantum field, as Polkinghorne suggests.

As to Pannenberg's use of *field*, he is trying to express the notion of extended relationality, as Polkinghorne states—that matter and energy are somehow in relationship with each other. In field theory Pannenberg sees the way to go beyond the common-sense notion that most people have of matter's existing apart from the space that surrounds it, as if in a void. In this common-sense notion we are fooled by the normal process of perception and interpretation of perceptual data. In this limited sense, Pannenberg is right in heralding the concept of field for its explanation of matter as related to the space that surrounds it.

Here again, differing ideas of God come into play. Polkinghorne's definition of God influences his choice of the best theory for use in understanding God and the relationship between God and the world. Pattern forming, orderly structures, and rationality describe God. And Polkinghorne does this beautifully and convincingly—but at what price theologically? Polkinghorne is right that chaos and complexity offer fruitful ideas for theology. The aspects that he chooses reflect his definition of God and of the spiritual.

We raise the same concerns about rationality in Polkinghorne's doctrine of God as we do with his methodological reflections on the nature of faith. Polkinghorne's methodology begins with "bottom-up thinking," meaning that he seeks to move from "experience to understanding" (Polkinghorne 2000, 958). At first glance, this methodology has much in common with other contemporary theological movements that begin from below. However, Polkinghorne again links his methodology to "thinking," so "experience" seems relegated to the minds of the believers and not their lives.

Consequently, his theology does not easily engage ethical, political, and cultural landscapes where the concrete contexts of particular people's lives engage their Christian faith. He admits (1998a, 115) that reason is embodied in practice, and "insight is gained only through participation," yet he does not provide adequate data from the insights gained by women and others whose voices in certain institutions have been systematically ignored.

Polkinghorne's understanding of faith seems driven by a concern for right thinking. He claims that his own theological conservatism is "not a fearful clinging to the past, but it is rooted in the value to be found there. My orthodoxy arises precisely from believing that this is the right way to think" (Polkinghorne 2000, 958). Right thinking is equated with faith. Polkinghorne does not seem to emphasize faith as a way of life or as trust in the relationship with God. Thus, his theological agenda seems to leave out the concerns of praxis, of everyday life, of the practice of the faith in Word and Sacrament. We want to be careful not to suggest that he completely ignores the practice of the faith, but we could surely challenge him to open his notion of faith beyond thinking alone.

Feminist and liberation theology would challenge Polkinghorne to ask from whose experience and from what kind of experience he is beginning. The positive approach of his method is his incorporation of the natural world, but one cannot make that move without a corresponding link to human life. The two are not disengaged, and he may oddly enough disengage the human being from nature by his approach in his natural theology. Christian theology claims that God came into the world not as an idea but as a person in the flesh and blood of Jesus the Christ. We are embodied selves, fleshed out in a messy and complicated world. Our theological categories need to be able to reflect that messiness. God's incarnation challenges us when we think that we can make neat separations. We have entered into a world in which boundaries we once thought firm are now eroding. The challenge for those of us in religion-and-science is to come to grips with this messy, complicated world in which we live.

REFERENCES

Barbour, Ian. 1997. *Religion and Science: Historical and Contemporary Issues*. San Francisco: HarperSanFrancisco.
Hefner, Philip. 1993. *The Human Factor: Evolution, Culture, and Religion*. Minneapolis: Fortress Press.
———. 1998. "Confessions of a Scientist-Theologian." *The Christian Century* 115 (May 20–27): 533–39.
Polkinghorne, John. 1998a. *Belief in God in an Age of Science*. New Haven and London: Yale Univ. Press.
———. 1998b. "What Happened to the Human Mind?" In *Beyond Science: The Wider Human Context*, chap. 5. Cambridge: Cambridge Univ. Press.
———. 1999. "Wolfhart Pannenberg's Engagement with the Natural Sciences." *Zygon: Journal of Religion and Science* 34 (March): 151–58.
———. 2000. "The Life and Works of a Bottom-Up Thinker." *Zygon: Journal of Religion and Science* 35 (December): 955–62.