

HOW RELIGIOUS TRADITION SURVIVES IN THE
WORLD OF SCIENCE: JOHN POLKINGHORNE
AND NORBERT SAMUELSON

by James F. Moore

The Faith of a Physicist: Reflections of a Bottom-Up Thinker. The Gifford Lectures, 1993–1994. By JOHN POLKINGHORNE. Princeton, N.J.: Princeton Univ. Press, 1994. 211 pp. \$24.95.

Judaism and the Doctrine of Creation. By NORBERT SAMUELSON. New York: Cambridge Univ. Press, 1994. 362 pp. \$54.95.

Abstract. The interaction between religion and science has developed, not only as a curious dialogue with a fascinating history, but now as a full-fledged conversation with recognized scholars and a growing, unique body of literature marking both the growth of the dialogue and the nature of the field. At the same time, the academic world has incorporated a growing sense that scholarship is moving toward a postmodern period of thinking that, among other things, has meant a desire to retrieve and justify a whole set of traditional ways of thinking previously ignored or dismissed. We are fortunate to be able to see in recent work, such as that of John Polkinghorne and Norbert Samuelson, the confluence of these two developments, for these two scholars represent both the growing participants in the religion-science dialogue and the effort to give full justification to the rationality and the applicability of traditional theologies in a technological, scientific world. This article examines the efforts of these two scholars not only to assess the value of their contributions on both fronts but to use their thinking to gain yet another important insight into the future of the religion-science dialogue. The result is that we are amazed, again, at the plurality of possibilities that emerge as both science and theology are considered with respect both for their individual integrity and for the possibilities of dialogue when they are placed side by side.

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We are seeing the first fruits in theology of a decades-long dialogue between theologians and scientists. This dialogue has been engaged on several different levels of discussion—the academy, the church, privately funded programs, and government sponsored research—and the aims of the conversations have been equally diverse. Even so, we are now witnessing a growth industry in theologies that have either grown directly out of this dialogue or have been shaped by the developments of the dialogue. Several leading figures have set forth their visions for a new theology that is informed by the expanding, even mind-boggling developments in all fields of contemporary science—Ian Barbour, Arthur Peacocke, Philip Hefner, to name a few. We should now add two relatively new books to the growing list: John Polkinghorne's Gifford Lectures and Norbert Samuelson's exploration of a Jewish doctrine of creation.

Let me make a case, however, for thinking about these two books together and not just because they reached my shelf at the same time. Polkinghorne has long argued that theology has its own rationality that does not need the logic of science to give it legitimacy. His Gifford Lectures represent his effort to produce results on this claim. First and foremost they present a theology structured on the ancient confession of faith of the Church. The rationality of confession is the logic of theology and the framework of this book. Samuelson presents a doctrine of creation rooted in the Scriptures and in the massive interpretation of key biblical texts by the rabbinic tradition from the Midrash and Talmud through Jewish philosophy from the medieval to the modern world. The logic of a Jewish doctrine remains the flow of interpretation of the tradition in the Jewish community of scholars. As clearly distinct as these two texts are they share this quality: that the logic of religious belief and thought is rooted in "particular" traditions which then must and will confront the world of contemporary science. That the two books represent efforts from the perspective of two different religious traditions makes a comparison fascinating.

Moving from particular tradition to science is not the only way that the relation between science and theology can be understood or that a dialogue can be perceived and engaged. Many might suggest the opposite, claiming that we need to begin in science in order to give credibility to religious belief and thought. Indeed, there are some who honestly think that even that project is a lost cause, seeking rather to create a new religious vision out of the insight of modern science and rational thought. There are those who believe that the religious vision and the scientific viewpoint are incompatible as such, speaking to two different subjects and experiences. Indeed, the notion that we can work essentially from particular traditions to form intelligible theologies is a more recent development in these discussions not yet receiving a positive reception from all circles. Therefore, the work of Polkinghorne and Samuelson, like the previous volumes from Peacocke and Hefner, can become an interesting test case for this way of understanding the dialogue between theology and science.

Let me be clearer about just what this approach to the dialogue entails. If we begin by assuming the independent rationality of the religious/theological tradition, then we also begin by asserting that those ideas have a status in our claims about what is true about the world we live in. Perhaps the assertion of truth is a bit strong for some, and these would be more comfortable with the notion that the independent shaping of theologies provides a framework of meaning for our experiences of this world. Polkinghorne's and Samuelson's approach implies this stronger claim. What this means is that in a philosophical theology we need some way to independently test theological claims. To say that theologies have their own legitimate rationality is not a private but a public claim that there must be at least a fit between a scientific view of the world and the independent claims arising from religions. We will explore a way that "fit" can mean also a paradoxical fit; but essentially this approach assumes that religious views that produce religious claims must be consistent with other ways of knowing about these things, including science.

Since we assume that religion and science are not simply two sides of the same coin and that religious claims are not merely scientific claims in disguise, or vice versa, we also must assume that this interaction between theology and science approached as Polkinghorne and Samuelson do is a dialectical interaction. That is to say, science and religion produce two different views of things (worldviews) that can be set alongside each other in consonance because we assume from the outset that we live in one world. The relation between theology and science is on this level of worldview and requires that we are able to produce at least a fuzzy framework of such a view for both religion and science. Samuelson struggles with this issue in the later stages of his book, realizing as we all do that science does not pretend to form a worldview but probably assumes one anyway merely in the basic requirements for doing science at all. Thus, we seek a way of producing an interaction between a religious worldview (developed from a particular confessional tradition) and the presumed worldview that is necessary for doing the kind of science that is now being done.

Once again we are intrigued by the convergence of these two thinkers. Samuelson is trained as a philosopher, and this task of interacting worldviews seems to require some general notions of truth, meaning, and value as well as definitions of such key ideas as space and time. Polkinghorne is trained as a physicist (as his title implies) and brings the mind of a physicist to this task. That, too, seems apt for the kind of task we are suggesting must be done, since physics (especially cosmology) has for many years been working with fundamental questions of reality and doing so on the frontiers of knowledge, at the line between knowing and supposing. Not surprisingly, physicists are often the first to venture into the realm of philosophy of science. We have a good match in these two thinkers.

Despite their training, though, Samuelson and Polkinghorne aim to give us a theology. That is, their intent is not to give us either a metaphysic or a philosophy of science but rather to give us a credible religious view of things—Polkinghorne believes this emerges from the structure of the confession itself, and Samuelson is willing to bet that the rabbinic tradition of interpretation is still able to give us a credible Jewish theology. We want to decide first of all whether

they have pulled this off. Have they produced the necessary foundation for a legitimate interaction between science and religion, and have they given us a credible particular theology? There is a lot of fluidity in our judgments here, since what counts as legitimate and credible will always have a certain personal bias involved. Still, we ought to be able to make some kind of judgment about these two questions. Having done that, however, we need to ask, So what? That is, what have we done if we have produced a credible particular theology? That will be our concluding question to investigate and our most significant achievement if we can provide a useful answer.

INTERACTION: WHEN, WHERE, HOW?

Polkinghorne's book is a surprise to us, since despite all of his work in the arena of religion and science, he does very little in this volume to create an interaction between the two. The points in the book that draw on aspects of scientific work are instructive to us, since they are so few and show so obviously what Polkinghorne is really doing in this text. Two illustrations are useful for our purposes: (1) his reference to scientific realism as an addendum to chapter 2; and (2) his analogy with quantum theory at the end of chapter 3. Each of these references shows a separate insight into both the project that Polkinghorne engages and his conclusions about the interaction between theology and science.

What do we make of Polkinghorne's reference to scientific realism in chapter 2? His reference is to comments made by Bas van Fraassen and to the notion that science has potentially innumerable theories—alternative explanations—to choose from. Indeed, Polkinghorne questions this notion by offering an anecdotal remembrance of what is involved in researching any theoretical issue. Science, argues Polkinghorne, is not an inexhaustible supply of explanatory possibilities, and what we get is often the best possible explanation even if not fully adequate to the data. The fear that theologians might latch onto one theory only to discover in a brief time that science has moved to an alternative is overplayed.

What is more interesting is Polkinghorne's reaction to van Fraassen's rejection of intellectual fit—the notion that humans are intellectually inclined toward the best possible explanations. There is no empirical way that we could defend such a belief, but Polkinghorne is quick to argue that to reject the idea as irrational and insupportable is odd. He appeals to Alvin Plantinga's notion of the *imago Dei* and Plantinga's assertion that humans are innately endowed with insight into the divine reality. This is a curious connection for those who know Plantinga, especially since Plantinga is less enthralled with this notion now than he was at one time. Any who know the Reformed tradition in Christianity will also recognize this as a refurbished Calvinistic idea of the internal divine light. I am puzzled by the meaning of this reference and even more startled since Plantinga makes this argument in the context of his defense of the classic ontological argument for the existence of God.

I am not sure I can defend Polkinghorne's use of Plantinga, but I can see in this reference much of Polkinghorne's view of things. Polkinghorne believes quite thoroughly the Augustinian dictum "faith seeking understanding," the notion that knowledge of any sort must fit with belief if both are true. A rational belief based on revelation must be consonant with whatever scientific under-

standing we presently claim to be the best possible explanation. If this is the case, then we need not be overly concerned with developing just such a rational theology even independently from what is current scientific consensus, since both must be consonant, and we are led to conclude that our intellect is divinely fit to seek and discover the best explanations. Such a trust in human rationality is a bit distant from the long-standing Protestant tradition of sin, but Polkinghorne is convinced that this argument of the divine light is still valid despite the presence of sin (certainly closer to Calvin than Luther).

What this gives us is a two-edged sword. First, we have been handed a theological grounding for all intellectual inquiry. (Are there any specific limits and concerns about such a blanket support for science?) We do not need an empirical justification for science if we have this metaphysical/theological grounding. On the other hand, Polkinghorne gives a philosophical justification for an independent rational theology, that is, independent from any need to check theological claims for empirical adequacy. For those who join van Frassen's skepticism, Polkinghorne counters with a brief but emphatic *Why not?*

In one big swing Polkinghorne has denied a need for empirical falsification of theological claims, and this foundation for theological inquiry makes his second reference—an analogy with quantum physics—all the more interesting and perhaps understandable. In fact, this analogy is not at all surprising given the theme of this third chapter—divinity—which does include more reference to both science and other practitioners of the dialogue than we find in other chapters. The point for Polkinghorne is that the concept of God for theology is an encompassing idea both in the sense of infinite reality and in the sense of a composite of superlatives. I think now of an idea I heard first from John Albright and borrow for use here: the concept that God is a superlative, modeled by a global theory. So the question for Polkinghorne becomes, To what and for what do we need an analogy with quantum physics? The issue at stake is the theistic point of view—that is, the perspective informed by this concept of God, this superlative theory—as opposed to an atheistic point of view—a perspective not so informed. Now Polkinghorne gives atheists their due, that is, he does not assume that the only difference is the presence or absence of an idea. Still, he argues that a key difference is the way that from one perspective the universe is a beautiful expression of divine reality while from the other it must be a brute fact.

Again, I am not so persuaded that Polkinghorne has presented the case fairly, but we see clearly his view about the interaction between science and theology in this attempted analogy. Playing the analogy out will help make it clearer for us. Polkinghorne argues that the Copenhagen and Bohmian positions are strikingly different readings of quantum reality yet equally explain the data. The question then is, Why the overwhelming acceptance of the Copenhagen school of thought? His answer points to the notion that in this view quantum reality is perceived in a counterintuitive way with an explanation for Schrödinger's puzzle, while the Bohmian view must accept the puzzle as brute fact. We choose what is intellectually the more satisfying. It is, perhaps, a bit of hubris that we argue that theism is intellectually more satisfying even if somewhat more counterintuitive than is atheism. The point is that by analogy Polkinghorne believes he has waved a wand at the notion that empirical/logical rationality has shown theology to be

unsatisfying. All this depends on what we call satisfying.

His contrast is with empirical adequacy and relates to the way that knowledgeable people choose between competing proposals. The fact is that science and scientists sometimes choose between competing proposals by accepting the more aesthetically pleasing theories. Perhaps it is enough to make such an argument here, and I suspect that Arthur Peacocke is making a similar argument when he suggests that God is the best explanation for all that is. Even so, the illustration says very little about the relationship between science and religion except that examples from science might help us understand more clearly the logic of religious knowledge and thinking.

Let me offer one more trajectory of Polkinghorne's analogy. It is possible that Polkinghorne is addressing the stereotype that scientists are all secularists and atheists, even driven to atheism by their science. The point is subtle even if the stereotype is pretty sweeping. If scientists are inclined toward theories that are aesthetically pleasing, then actually it is more likely that they would be drawn to theism than to atheism, given the implication of the analogy. That is, Polkinghorne subtly but directly refutes a persistent stereotype. As an argument for the rationality of theism, this brief interlude hardly brings convincing evidence, but as an argument describing the sensibilities of scientists, the analogy has a fairly powerful appeal. The sort of thinking that drives one toward theism may well be just that kind of thinking so common to most creative scientists. If that is the case, then, Polkinghorne has opened the door to developing quite fully the complex theistic position of the Christian credo quite independently, that is, if he can do so showing the logic of religious belief.

LOCATING THE INTERACTION

Samuelson's reflections on creation are not presented as a theology and surely are not offered in the structure of confession as we see with Polkinghorne. There is a real difference in ways that traditional Jewish thought is developed from ways that traditional Christian thought is developed. Thus, Jewish theology is more like Jewish philosophy, appealing to the community of thoughtful reflectors, who contribute to answering a critical question. Even so, Jewish thought is also thought for the community, and the community is, in the end, the reason for raising the questions. We can better speak of a history of philosophy for Jews rather than a history of Jews doing philosophy. Thus, the projects of Samuelson and Polkinghorne do correspond in that both are concerned with shaping a theology that grows out of the historical belief of the community.

Even so, the distinctiveness of Jewish theology and Samuelson's own read of that create a strikingly different understanding of how science and theology interact. Much like the science of the *Timaeus*, contemporary astrophysics fits into Jewish thought as a resource for understanding religious questions and potential responses. For Samuelson the question is whether contemporary physics provides a more suitable resource than Plato and not whether Jewish thought must come to terms with contemporary science in order to be intelligible. Such a view might be a bit disconcerting, but it surely puts science and religion on a level playing field in this interaction. The end result is that Samuelson's view of Jewish thought in relation to science does finally correspond to Polkinghorne's view of

Christianity's relation to contemporary science even if Samuelson seems less concerned about assuming an inevitable consonance between science and religion (he is less grand in his designs).

But if philosophy and science are resources for Jewish thought, then what results from this interaction between religion and contemporary science? First, we are indebted to Samuelson for condensing the rich history of Jewish thought on creation into the pages of this volume. The style of Jewish thought together with the literature of Jewish thinking is foreign to many non-Jewish thinkers, and Samuelson's efforts to draw us into that world are lucid and instructive. He has begun his reflections with a discussion of this rich heritage, that is, he has set the context in Jewish theology for an appropriate discussion of science and religion with great skill. I only regret that my focus on the dialogue between religion and science turns me toward that portion of his book rather than the equally interesting conversation that could be engaged about other important matters, for example, his discussions of Maimonides or of Rosenzweig.

Given this discussion, however, we are led to consider contemporary science as one way of thinking about the universe, about the creation. What we find is, first, that contemporary cosmology leads us to see that Jewish thought about creation includes dimensions that are enriched by linking this thinking with contemporary science. Let me give one example that seems striking to me. Samuelson argues that the Jewish theological tradition on creation emphasizes a unity of God that requires a unity of actor and activity. That is to say, the classical view of creation in Judaism leads us to say that there is no conceivable distinction between the creator and the creative activity. He argues that "to understand creation—i.e., from and to where everything is moving and why—is the same thing as understanding God" (p. 237). Let us be clear: this unity requires that the laws of the universe are not in the mind of God but *are* the mind of God. Classical Jewish philosophy and contemporary scientific speculation converge.

It is likely, then, that contemporary science is in many ways a valuable resource for understanding a Jewish view of creation. Let me carry this point further in order to show Samuelson's judgment on this potential resource. Classical thought would likely identify "the good" with this structure that is identical with the mind of God, a sense of the good that is not often, Samuelson argues, the context for theodicies. With this understanding, the good is related to the order that might include catastrophic events like the eventual supernova of our sun. Indeed, thinking about the nature of the good in this conjunction between classical Jewish thought and contemporary cosmology produces rich new possibilities to pursue.

The problem is that good not only is associated with the structure of the laws of the universe as such in classical Jewish thought but also is connected to a teleology that is part of the sense of the word *creation* in Jewish thought. This teleology provides a basis for thinking in cosmic terms about the religious idea of redemption, something that contemporary cosmologies fail to provide. In that way, argues Samuelson, the *Timaeus* is a richer resource for Jewish thought. Samuelson's approach to the religion-science interaction ultimately provides a foundation for judging, critiquing the adequacy of contemporary cosmology for the future of Jewish thought. As we saw before, he has put religion and science on a level playing field.

TWO DISTINCTIVE WAYS TO RESOLVE A COMMON RELIGIOUS CONCERN

This description of Polkinghorne's and Samuelson's books shows clearly how distinctive each thinker is. These are surely two different ways to approach the central religious concern of presenting "the tradition" to a contemporary, scientifically informed audience. Even so, there is much that links these two approaches so that by comparing them we can observe a common general approach to this issue. We also can see that this perspective shared by Polkinghorne and Samuelson differs even more dramatically from other approaches. What is this shared perspective? Simply put, both Polkinghorne and Samuelson present a position in which the theological/religious tradition stands relatively unscathed by the emergence of contemporary science. The Enlightenment challenge, which viewed religion as *passé*, fading to the background as rational thinking moves forward, is no longer a serious matter for these two thinkers. Indeed, the same emergence of rational thinking seems only an occasion to retrieve rather than abandon religious thinking.

This confident retrieval of tradition is one form of what has taken shape in the last several decades as postmodernism. Samuelson's approach is a brilliant survey of Jewish thinking, showing that the tradition of Jewish thought has always had the capacity to adjust to new questions and form new responses. The picture we get is that of a body of thinking that easily accommodates new thinkers and new ideas. This accommodation comes, not because of a sense of naive agreement but rather because of a method that can sift through alternatives and sort them out as to their value for a Jewish view. The long survival of this system of thinking is reason enough for Samuelson's confident retrieval of that history and approach to religious thinking. In this pattern contemporary science is just another alternative to a whole series of possible ways of thinking. The Jewish thinker, of course, pays attention to new ideas; but that is as it has always been. It is difficult to see any watershed development that has radically shaken this approach to religious ideas and thinking.

Polkinghorne's approach shares this confidence perhaps for different reasons. Polkinghorne is interested not so much in maintaining a tried and true pattern of theological thinking as in retrieving the essential core beliefs of Christianity. Even so, he does so with confidence, because he is convinced that religion has its own rationality that can be observed simply in the process of putting forth the structure of belief. The creed is as valid now as it was when first shaped, because the essential logic of belief remains sound. His confidence is reinforced by the Augustinian belief that there can be no conflict between the logic of science and the logic of religious belief, since we live in one world under one God. Somewhere there is a convergence that will emerge if we are careful to put forward the clear logic of religious belief in the light of our best present knowledge.

Polkinghorne's notion of complementarity allows for an interim period of interaction that postpones judgments until this clear convergence can be grasped. Thus, the developments of science become an interesting and valuable commentary on the primary discussion of religious belief but they are not essential for understanding the logic of religion. This relation is not a true dialectic or polarity (as with Tillich) but a postponement of a resolution, an argument that allows both religious

and scientific explanations to stand even when there appears to be conflict. Thus, Polkinghorne's confidence is, if anything, bolder than Samuelson's.

NOT THE ONLY POSTMODERNISM

I wonder if such confidence is well-founded. On the one, hand, the sheer survival of the traditions in spite of the many challenges—intellectual as well as personal—warrants such confidence. Science is a mere babe in experience, finally facing its own challenges in a postmodern world. Even so, the critique that now wages against modernism is as much a critique of the religious traditions as of the Enlightenment. In this questioning we see shaped in new ways the challenge to the authenticity of religious claims that were brought in other ways by Enlightenment thinkers. Retrieval of the traditions seems to require more than just a discovery of the logic of religious belief or a theological approach that meets flexibly each new age. We need a postmodern theology that addresses the legitimate challenges of that other wing of postmodernism. We have heard these voices for many years now in theological circles—feminist theology, liberation theology, black theology, gay theology—and know that these are not just passing fancies to be incorporated in the grand logic of the traditions.

I play my hand too strongly here, but there is a sense I get in reading Polkinghorne and Samuelson that they do not hear these voices nor do they consider them especially problematic. Indeed, some others who follow a track like that of Polkinghorne and Samuelson rejoice in a traditionalism wrought by postmodernity as a way of silencing these voices as marginal. I do not think that either Polkinghorne or Samuelson fits that mold, but I am troubled that they seem so untroubled. I, too, seek a retrieval of the traditions, but I join many, like David Tracy, in arguing that this must be a retrieval through the means of a reshaped theology—shaped and winnowed by the tough questions of feminists, liberationists, and post-Shoah thinkers who see the intellectual challenges differently than Polkinghorne and Samuelson. Just what that approach to doing theology means for the science-religion dialogue would require more than this space to develop, but to illustrate, one example might be worth considering.

Let me return to one of the points regarding Polkinghorne's view—that there is no need for a principle of falsification for theological claims. The point can be maintained if there is no direct link between the historical confessional claims of a religion and the cosmic claims of the religion—that is, if religious claims are not claims about this universe in which we live. Such can be said about the story of Jesus, for example. If our claims are historical and the meaning of those claims spiritual, then science does not intrude on the realm of those claims. Science does provide knowledge of the universe in which religious events occur and spiritual experience is mediated. Polkinghorne accepts a compatibility between these two forms of knowledge inherent to our religious perspective. Thus, science cannot, in principle, falsify a theological claim. All this makes sense if the historical-spiritual is a distinct dimension from the natural-physical. But what if we must speak of a holistic reality in which the historical-spiritual is directly wedded to the natural? Then, at the very least, knowledge from the sciences will directly affect the manner in which theological claims can be made. Let us complicate this by suggesting

that the notion of a space-time continuum and a developmental evolutionary process are unquestionably our best explanation of the cosmos into the near future. Surely views that run counter to that perspective, that evolutionary explanatory model, are, in principle, falsifiable to the extent that they are wedded to an alternative model. Thus, the *Timaeus* is just as open to this critique as any other philosophy of the past, because we assume that we will not retreat to another view of the universe, at least not very soon.

This means that all theological claims are set into this evolutionary framework even if the intent is to retrieve their meaning. Surely, many contemporary thinkers believe this to be the case—that is, all theological claims must be filtered through contemporary science in order for them to be intelligible. In that way, postmodern is not a dismissal of the modern but a new stage of incorporating those insights. Now, I believe that Polkinghorne and Samuelson are quite amenable to these sorts of arguments, even though they surely are more committed to a kind of traditionalism (each in his own distinctive way) that leads down a different path than the more radical application of contemporary science, which takes more seriously the holistic nature of reality. Again, this kind of evolutionary theology requires explicit development far beyond the possibilities of this article. Even so, the talk can be done, and many have already begun to articulate just such theologies.

Let me finish with an inclusive suggestion. I suspect that if we truly are working in a postmodern intellectual world, this full range of positions will persist. My suggestion is that the dialogue be flexible enough and broad enough to encompass all these positions. Perhaps Polkinghorne's position of complementarity actually applies to the dialogue between religion and science as a conversation and discipline. That is, strikingly different readings of the implication of the dialogue can be maintained for the present in a creative tension, for surely these differing positions will work to challenge and enrich each other. This is a working dialectic, though, rather than merely a postponement of judgment. In the service of this conversational dialectic, the new books by Polkinghorne and Samuelson are vital, lucid, creative contributions. As surprising to some as they may be, they bring into our circle creative thinking that can serve the purpose of pushing the dialogue forward.

REFERENCES

- Barbour, Ian. 1990. *Religion in an Age of Science*. San Francisco: Harper and Row.
- Davies, Paul. 1992. *The Mind of God*. New York: Simon and Schuster.
- Hefner, Philip. 1993. *The Human Factor*. Minneapolis: Fortress Press.
- Peacocke, Arthur. 1993. *Theology for a Scientific Age*. Minneapolis: Fortress Press.
- Polkinghorne, John. 1987. *One World*. Princeton: Princeton Univ. Press.
- _____. 1990. "A Revived Natural Theology." In *Science and Religion*, ed. Jan Fennema and Iain Paul. London: Kluwer Academic Publishers.
- _____. 1991. *Reason and Reality*. Philadelphia: Trinity Press International.
- Tracey, David. 1987. *Plurality and Ambiguity*. San Francisco: Harper and Row.