

The Agenda for Religion and Science: Guest Editorials

SCIENCE AND RELIGION: BOTTOM-UP STYLE,
INTERFAITH CONTEXT

by John Polkinghorne

The last thirty years have seen an increasingly vigorous dialogue between science and religion. Mostly this has been conducted in the mode of focused discussion of particular frontier issues: the rational transparency and rational beauty of the physical universe seen as being made intelligible by a revived natural theology, offered in a modest mode as being insightful rather than logically coercive; anthropic fine-tuning made intelligible as the endowment of fertility given to a world that is a divine creation; evolutionary process understood in terms of a continuous creation in which creatures “make themselves”; the compatibility of belief in divine special action with what science can actually say about the causal structure of the world. This style of discrete problem-solving discussion will always be a component of the interaction between science and theology, but I believe that it will increasingly be complemented by another approach, comparable to the influence on theological discourse effected by other contextual theologies, such as liberation theology or feminist theology. They not only address their own specific issues but also offer theology a particular style of thought that can prove generally insightful. Theology in the context of science offers a similar gift.

The manner of thinking that is natural in the scientific context is what I called in my Gifford Lectures (Polkinghorne [1994] 1996) “bottom-up thinking.” The natural question for a scientist to ask about a proposed insight is not “Is it reasonable?”—for the physical world has proved too surprising for us to place much reliance on human powers of rational prevision. Rather the scientist’s question is “What makes you think that might be the case?”—an inquiry at once open to surprise but insisting on motivating

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evidence for the answer given. A scientific contextual theology will wish to shape its discourse in this bottom-up mode of seeking to move from interpreted experience to formulated understanding. The resulting conversation will not be limited to classical frontier topics, such as creation or natural theology. A move in the direction of engagement with theistic, rather than simply deistic, issues was signaled in the 1990s by the intense interest of the science-and-religion community in discussions of divine providential action. Not altogether surprisingly, a definitive and agreed understanding did not emerge, for the problem was too difficult for that. Yet a significant gain was made in defeating the defeaters. A fully articulated account of agency, either human or divine, is currently beyond us, but careful discussion at least shows the falsity of the scientific claim to have established the causal closure of the world in terms of a physicalist reductionism.

In recent years other issues of central theological importance have come onto the agenda of science and religion. The increasing scientific recognition of the significance of relationality, for example through studies of the ability of complex systems spontaneously to generate astonishing degrees of holistic order and through the phenomenon of quantum entanglement, has encouraged a significantly revived interest in the insights of trinitarian theology. Eschatological questions also have been pursued. The credibility of a destiny beyond death, about which science with its this-worldly focus is itself powerless to speak, nevertheless requires the satisfaction of some criteria of continuity if persons truly are to live again in some new form of existence. In this connection, scientific insights into the role of embodiment and temporality in relation to life in this world place some constraints on the shape of eschatological expectation.

I believe that the future course of the science-and-religion dialogue will require a widening engagement with a range of theological issues, so that its character becomes that of a truly contextual theology rather than of atomized problem solving. If this broadening of the agenda is to prove fruitful, I believe that the theological input will have to be cast in the mode of bottom-up argument. For example, appeal to the resurrection of Christ in relation to eschatological hope will have to go beyond dogmatic assertion to presenting motivating reasons for that counterintuitive belief, something that personally I believe can be done.

So far, my discussion has been focused on the Christian contribution to the dialogue. This is not mere parochialism but is also due to the fact that so much of the actual interaction so far has taken place within a Christian (and indeed a Western) setting. Of all the great world faiths, Christianity seems to be the one most concerned with intellectual issues. *Theology* is an essential word in Christian thinking in a way that it does not appear to be in other traditions. One of the strongest hopes for the future of the dialogue between science and religion must be its taking place within a much

wider horizon of insight, both geographically and religiously, than has been the case so far. I was involved in the founding of the International Society for Science and Religion. Its development is still at an early stage, but the prime motivation remains the desire precisely to facilitate such a widening of the conversation.

This is desirable for at least three reasons. One is simply the resulting great enlargement of the experience and insight that would be drawn into the discussion. A second concerns the fact that the actual existence of the diverse world faith traditions, with their common testimony to a human dimension of encounter with sacred reality but their very different accounts of the nature of that engagement, is one of the most important and perplexing issues relating to the credibility of religious belief today. Those with a scientific background are particularly conscious of this problem. Modern science enjoyed its first great flowering in the particular time and place of seventeenth-century Western Europe. Today, science is world-wide. Stop a suitably qualified person in the street in New York or Jerusalem, Delhi or Kyoto, and ask him what nuclear matter is made of, and in all four cities you will receive the answer "Quarks and gluons." Stop four people in the street in these four cities and ask them a question about the nature of ultimate reality, and it is likely that you will receive four very different answers. Is the human person something of unique and continuing significance in the sight of God, or is it recycled through reincarnation, or is it ultimately an illusion from which to seek release? These are not culturally shaped statements of the same basic understanding. There are real cognitive clashes between the faith traditions despite their common concern with spiritual reality. The challenge this presents is not one that can be ignored in any truth-seeking conversation about religion. It has to be represented in the science-and-religion dialogue.

The third reason for the enlargement of the dialogue is that it offers a possible location for the necessary mutual meeting of the world faiths. The conversation between them is likely to be long and painful, because beliefs of deep concern to those who hold them will be under scrutiny. A degree of initial obliqueness will be necessary because immediate confrontation of contrasting core convictions will simply cause defenses to go up on all sides. Discussion of how the faiths relate their traditional understandings to the insights of modern science raises an issue that is serious but not so threatening as to inhibit open conversation. The science-and-religion dialogue has a modest but valuable role to play in the future ecumenical encounters of the world faiths.

There is a final area of discussion that we may hope will be more fully pursued in the future dialogue between science and religion than it has been. It concerns the ethical issues that arise from employing the technological developments that scientific knowledge has made possible. Advances in genetics, medical techniques for the prolongation of life, the

threat of global warming, the uses of nuclear technology—all of these and many other discoveries offer the prospect of human powers of unprecedented kinds. Yet not everything that can be done should be done. To scientific knowledge and technological power must be added the wisdom to be able to discern and accept the good, to discern and refuse the bad. Scientific experts cannot be left to be judges in their own cause. Though they possess no monopoly on moral insight, religious traditions offer the accumulated experience of centuries of wrestling with ethical decisions. Dialogue between science and religion can provide a valuable resource for the communal quest for the right use of technology. There have been some notable pioneers in facilitating these ethical discussions, but more remains to be done, and this must surely be an important item on the future agenda for science and religion.

All in all, there is every prospect that the active dialogue of the past will continue with even greater vigor in the future.

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