

GOING PUBLIC: SCIENCE-AND-RELIGION AT A CROSSROADS

by Gregory R. Peterson

Abstract. A survey of recent news events involving science and religion is conducted with an aim toward analyzing the current state of the science and religion dialogue. Recent events suggest that the dialogue has come to a crossroads, achieving an unprecedented level of popular attention. At the same time, this attention reveals what still needs to be done. More attention needs to be given to the nature of religion, to the history of religion and science, and to the increasing plurality of the dialogue.

Keywords: definition of religion; pluralism; popular culture; science and religion dialogue.

If you have not been thinking about science and religion during the past year, you have not been paying attention. The science and religion dialogue, once a remote backwater of academic discourse, has become the subject du jour. Featured in the *New York Times* and *Newsweek*, discussed on public television, and involving such prominent scientists as Steven Weinberg, Stephen Jay Gould, and Richard Dawkins, science and religion is now news. In addition, more people are involved in the science and religion dialogue than ever before. An increasing number of symposiums and conferences on science and religion are being held internationally. Science and religion courses are proliferating, and they draw enthusiastic students. Increasing numbers of books concerned with the dialogue are being published. What is one to make of it all?

It is tempting to believe that, after many years of hard toil, rigorous scholarship, and a bit of serendipity, the science and religion dialogue has come of age. After years of misunderstanding and bitter public conflict, it

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is tempting to believe we are witnessing a maturing of the public understanding of the relationship of science and religion and that we have come to a point where scientists, theologians, and members of the broader human community can intelligently discuss the links and challenges posed by such a dialogue as we enter the twenty-first century. But is it so? It might be more accurate to say that the science and religion dialogue is coming to a crossroads. On this analysis, the recent past does not indicate the path of the future but rather a chance to chart new directions. But crossroads are always dangerously ambiguous places. Whereas one road may lead to success, another may lead to obscurity. Without a map, crossroads always involve risk. If this is correct, then the question posed by a year of phenomenal publicity is not "Have we succeeded?" but "Where do we go from here?"

SCIENCE AND RELIGION IN THE SPOTLIGHT

Prior to 1990 (to pick a somewhat arbitrary date), to be an academic and to profess an interest in science and religion generally meant one of two things. On one hand, it could mean that you were interested in the *conflict* between science and religion, either in its historical development from Galileo to Scopes or in its current form, centered around creation science and modern political campaigns by religious conservatives. On the other hand, it could mean that you were part of a relatively small group of scholars who explicitly argued that science and religion, properly understood, are not in conflict and that, in fact, a productive and important dialogue can and should take place between the two.

If you identified yourself with the latter, you were likely identifying yourself with a fairly select group of individuals. In this case, selection was due not so much to exclusiveness as to proclivity. Very few scientists and very few philosophers and scholars of religion identified themselves with a science-religion dialogue. *Zygon* was the only nonsectarian journal devoted to the subject, and the Institute for Religion and Science (IRAS) was the primary national organization. A religion and science section at the American Academy of Religion, the largest national association of scholars of religion, had just been established. Although important works were being published, it is notable what had not yet been published: Ian Barbour's *Religion in an Age of Science* (1990), Nancey Murphy's *Theology in the Age of Scientific Reasoning* (1990), Philip Hefner's *The Human Factor* (1993), and Arthur Peacocke's *Theology for a Scientific Age* (1993).

Those who were involved in this dialogue saw their work as being of significance for the larger academic community. This sentiment was not universally shared, however, either among academics or among the public. The prominent science-religion event of the 1980s was the Arkansas creation-science trial. Little in the public media countered the image of science and religion in conflict. It would not be an exaggeration to say that to speak of

a science-religion dialogue before 1990 was to speak of a scholarly cul-de-sac with relatively little academic influence and even less public visibility.

In this light, the events of the past year seem nothing short of remarkable. They are worth recounting, if only to appreciate the changes in the dialogue as a whole. Consider, then, the following chronology:

June 1998: The Center for Theology and the Natural Sciences hosts a Berkeley conference entitled “Science and the Spiritual Quest.” The well-publicized conference draws prominent scientists and religious thinkers from a variety of disciplines and religious traditions. Although the scale of the conference might in itself be considered a milestone, equally important is the news coverage. Accounts of the event appear in the *New York Times* (Johnson 1998), the *Washington Post* (Broadway 1998), and the *Wall Street Journal* (Robinson 1998). These are followed in July by the cover article of *Newsweek*, “Science Finds God” (Begley 1998). This largely positive account heralds the conference, among other events, as a rapprochement of science and religion after centuries of conflict.

September 1998: PBS airs a documentary titled “Faith and Reason.” Produced independently, the documentary explores the relationship between faith and reason generally and science and religion specifically. Prominent supporters as well as a few detractors are interviewed in what is, again, a largely sympathetic portrayal of the dialogue.

March 1999: Stephen Jay Gould’s *Rock of Ages* hits bookstore shelves. Gould’s book is arguably more notable for who wrote it than for what he writes. Gould is a popular science writer who has made significant scientific contributions in his own right, and his participation automatically brings the science-religion dialogue to a new level. Gould, however, is in favor of no dialogue at all. Strictly adhering to a policy of Non-Overlapping Magisteria (NOMA), he argues that science is about facts and religion is about values and never the twain should meet. In Gould’s eyes, those who attempt to harmonize science and religion are as misguided as those who see science and religion as being essentially in conflict. He criticizes the Science and the Spiritual Quest conference—or at least the accounts he reads of it in the *New York Times*. It is also clear that Gould makes little effort to intellectually engage current advocates of dialogue. With the exception of Pope John Paul II and secondhand accounts, Gould largely confines himself to slim historical anecdotes that are often entertaining but frequently lacking in intellectual muscle.

April 1999: Ian Barbour wins the Templeton Award for Progress in Religion for his foundational work in religion and science. The \$1.25 million award makes headlines in several major newspapers, and Barbour is interviewed on television and radio. In the same month, Steven Weinberg and John Polkinghorne square off in a debate hosted by the American Association for the Advancement of Science. The debate is significant not only for the prominence of the two physicists involved but also for the

publicity that it generates. The debate makes the 30 April edition of the *Chronicle for Higher Education* and is featured in several other publications. Accounts emphasize the conflict element but also go more in depth into different positions within the dialogue itself.

May 1999: The 21 May issue of *Science* magazine features an article on the Templeton Foundation (Holden 1999). This carefully balanced account cites both proponents and critics of the Foundation and its efforts. Subsequent letters to the editor, however, are largely negative in their reaction to both the Templeton Foundation and religion in general.

July 1999: *Science & Spirit* publishes an interview with Richard Dawkins, who offers his own opinions on science and religion (Floyd 1999). For those familiar with Dawkins's writings, the interview holds relatively few surprises. Dawkins essentially views religion as a virus inculcated in young, credulous children. Scientists who still hold religious beliefs mystify him. While he does confess to a sort of awe at the scientific beauty of the world, he is quick to add that he does not advocate mystery (something that science aims to get rid of) and that his awe is not at all religious in character.

As detailed as this summary is, I have in fact left out several less noteworthy items. What should be noticed is not simply the number of events, but the number of events compared to previous years, the publicity given these events, and the prominence of the scholars involved. Any one of these events would have been fairly remarkable in a previous decade. The concentrated attention now focused on the science and religion dialogue seems by comparison positively extravagant. But why, after so many years, is science and religion on the front pages now?

For many, the finger points most directly to the activities and generous support of the Templeton Foundation. In truth, it is difficult to overestimate the effect that the Templeton Foundation is currently having on the nature and scope of the dialogue. Almost every one of the events described above either was sponsored by the Templeton Foundation or included reactions to Templeton-sponsored events. The activities of the Templeton Foundation have included grants for developing new courses, sponsorship of conferences and lecture series, research grants, and prize competitions for religion and science scholarship. The amount of money the Templeton Foundation has committed so far (\$40 million in 1998 alone, according to *Science* magazine; see Holden 1999) is surely directly responsible for the number of scholars currently involved and indirectly responsible for the increased number of science and religion publications in recent years.

At the same time, it is simplistic to suggest, as Gould does, that the Templeton Foundation has created the science-religion dialogue "ex nihilo" (Gould 1999, 214) or that the Templeton Foundation is solely responsible for the present level of interest. It is worth observing that, although the Foundation offers grants for developing courses on science and religion, this money does not go to the curriculum review committees that

finally approve such courses or to the students who have, by most anecdotal accounts, flocked to them. This is a particularly important point when one considers that many of the science and religion courses are being offered by public universities, which often have had an ambivalent relationship with the academic study of religion generally and theology specifically. While the Foundation has become increasingly efficient at marketing its activities, it is not in the position of determining what is and is not newsworthy and what should and should not receive front page attention.

Additionally, a science-religion dialogue has existed for quite some time. The Templeton Foundation has consistently relied on individuals and organizations that have already devoted considerable thought and expertise to this area. Part of what makes the current dialogue possible is more than a decade of scholarship that has successfully challenged many of the basic historical assumptions of the widely accepted warfare model of the relationship between religion and science. Even before the involvement of the Templeton Foundation, there was evidence of growing interest in the science-religion dialogue. Science and religion sections at the American Academy of Religion were frequently packed, and an increased number of book titles were already hitting the market. This growing interest among religion scholars, and to a lesser degree among scientists, is likely due to several factors, ranging from the rise of antifoundationalist theories of knowledge to the impact of new sciences such as chaos theory and scientific discoveries such as extrasolar planets.

At the same time, the new prominence of the science and religion dialogue is likely due in part to the level of public interest. It is newspaper and magazine editors who ultimately decide what goes on the cover and what gets printed. Their decisions are influenced more by the bottom line than by the influence of public foundations and scholarly work. In short, science and religion stories are published by the mass media because science and religion stories sell. There is increased public interest in a science and religion dialogue that either was previously untapped or has developed only recently. The exact reasons for this are probably complex and may share some of the same factors that are involved in the shifts of academic opinion. Despite sage predictions to the contrary, religious activity continues to be strong and may be increasing. At the same time, the importance of science and technology has not declined, and their impact is arguably increasing as well. If religious traditions are to persist, they must learn to live with the sciences. Thus, it is notable that while much more attention has been given to dialogue, conflict elements remain and have themselves experienced something of a renaissance (again) in the 1990s, now centered around attacks on evolution as a naturalistic philosophy (Johnson 1993) and on hopes of a new science of intelligent design (Behe 1996).

The current attention to religion and science represents a confluence of events, intertwining scholars, the public, and the media. We are riding a wave of popularity, even if only a small one. The question, then, is what this popularity portends. Is this science and religion's fifteen minutes of fame? Has the wave crested or is it gaining momentum? Are we in the midst of a paradigm shift in public attitudes or simply the latest news fad?

THE PROBLEMS OF A NEW MILLENNIUM

No crystal ball will put such trends into instant perspective, but trends do reveal much. What is most interesting about such events as the debate between Polkinghorne and Weinberg and the interview with Richard Dawkins is not what was actually said but the implied assumptions behind the statements. If we look at these assumptions carefully, patterns begin to emerge. It is precisely these patterns that most need to be addressed if the public discussion is to proceed.

Defining Religion. Interestingly enough, one of the key problems involved in current discussions is the definition of religion. For scholars of religion, this is a familiar problem. In his interview (as elsewhere), Richard Dawkins clearly states that religion involves belief in a supernatural creator (Floyd 1999). It is a definition of religion that would fit very well with traditional monotheistic piety, whether Jewish, Christian, or Muslim. Although Dawkins's definition is perhaps more restrictive than he intends, leaving out God or gods who do not create, it is a definition that would likely be given by most of the populace in the United States or Europe. Religion is about belief in God or, more broadly, belief in supernatural beings. This definition would not, however, fit so easily with other religious traditions. Hinduism, Buddhism, Confucianism, and Taoism all have traditions that speak little or not at all of supernatural beings. Even traditions within Christianity, Islam, and Judaism interpret God in such a way that to identify God as a supernatural being would, strictly speaking, be an error. For many scholars of religion such as Wilfred Cantwell Smith (1998), belief is not central to religion at all. While nonspecialists such as Dawkins have little patience with these distinctions, patience is precisely what is needed. Religions are complex, multifaceted traditions with rich resources. To ignore this is to fail to understand the character and motivations of religious traditions and religious believers.

A more satisfactory but still problematic account of religion is provided by Gould in *Rock of Ages* (1999). Arguing for his position of NOMA, Gould claims that science is about facts and religion is about values. Both should receive equal respect in our society, but each occupies a separate realm. For one to intrude upon the other is a violation of this sensible separation. For scientists to intrude on religious matters is to misunderstand the role of science. Likewise, for religion to intrude on science is to

overstep the proper bounds and understanding of religion. Religion is concerned with the Rock of Ages, science with the ages of rocks.

There is much that is sensible in Gould's argument. Many of the conflicts that have involved both religion and science have been questions about boundaries determining which individuals (scientists or theologians) and which resources (empirical data or specific interpretations of divine revelation) are authoritative over what kind of matters. When Gould criticizes the title of the *Newsweek* article, "Science Finds God," he has some right to do so. Clearly, science has not found God. There are no equations for God in Big Bang cosmology, and biology textbooks do not include divine guidance alongside natural selection. The overenthusiasm of such a claim may in fact do more harm than good, misportraying many of the theological and religious perspectives involved in the science and religion dialogue.

Gould's position also has an excellent pedigree. Starting with G. E. Moore and running through Ludwig Wittgenstein and D. Z. Phillips, a significant strand of philosophy and theology has developed a picture of religion that is devoid of factual content and consists solely of value statements. Nevertheless, it is a position no longer widely held among either theologians or scholars of religion. Facts may not determine values, but they certainly do constrain them. Whether or not there are people genetically predisposed toward violence (to use one controversial example) is irrelevant to our moral judgment that violent behavior is wrong. Such knowledge, however, does affect aspects of moral behavior and moral judgment. In the case of religion, many religious beliefs imply claims about how the world is and, implicitly, about our moral response to the world. To state that Jesus is God incarnate or that a Buddha is an enlightened omniscient being is a claim integral to the religious tradition and is often taken to be more than a mere value statement. It is ironic that in the same chapter in which Gould upholds Pope John Paul II's qualified support of evolution as an exemplar of NOMA in practice, Gould also states that NOMA entails no divine intervention in the historical process at all, a claim the pope would surely *not* agree with! (Gould 1999, 75–82)

If the public discussion of science and religion is going to proceed in a productive direction, a broader understanding of religion is needed, both inside and outside the dialogue. It needs to be understood that religion is not simply Christianity or even Christianity, Judaism, and Islam. Religion, at least as conventionally understood, includes Asian religions and other traditions, of which many in Western culture are only dimly aware. Although most religious traditions involve elements that are conventionally designated *supernatural* (a problematic term that implies we know what counts as *natural*), not all do. Science is clearly about facts and religion is clearly about values, but to say that science is only about facts and that religion is only about values is to caricature both enterprises. Religion

certainly is about values, but it also includes much more. Religions provide us with pictures of the cosmos that inform how we act. The pictures that religions provide can be literal but also can be highly symbolic. These pictures in turn encourage certain kinds of ethical and ritual behavior and discourage others.

It is worth pointing out in this connection that religions are not static but dynamic, and the twentieth century has witnessed its share of new religions. Likewise, several of the secular ideologies of the twentieth century have been noted for a number of religion-like qualities. While Richard Dawkins may deny the religious character of his feeling of awe toward the natural world, it may not be so far from Rudolf Otto's (1923) overpowering yet fascinating mystery (*mysterium tremendum et fascinans*), and none the worse for being called religious in character.

The History of Religion and Science. A second problematic area is a proper understanding of the historical relation between religion and science, this despite years of research that has corrected many myths and misperceptions. This is seen most clearly in the *Newsweek* article, "Science Finds God" (Begley 1998). The main text of the article presumes that science and religion have perennially been in conflict. Consequently, to have a conference emphasizing a harmonious relationship between science and religion is radical and daring, the dawning of a new era that will end the centuries-old conflict. Although many new and interesting things happened at the Berkeley conference, however, acceptance of the idea that science and religion can get along and mutually inform one another was not one of them. As many scholars have shown, the warfare model is as much myth as fact, encouraged in part by the activities of latter-day creationists and some militant atheists. Curiously enough, the following article in *Newsweek* (Woodward 1998) acknowledges this. The conclusion from such a juxtaposition seems to be that the conflict model is so persistent in American culture that it does not give way even when the evidence is right before one's eyes.

Even among scholars a proper understanding is still lacking in some quarters, including among prominent scientists. Despite other weaknesses, Gould's *Rock of Ages* clearly brings out the varied interactions between science and religion. Gould's somewhat sympathetic treatment of William Jennings Bryan and his tracing of the myth that Columbus proved the world was round back to the notorious works of Draper (1874) and White (1896) show the kind of historical awareness needed to move the discussion forward. Weinberg's statement (in Kiernan 1999), on the other hand, that "[For] good people to do evil things—that takes religion," can only leave an observer of the twentieth century speechless with incomprehension. Communist and fascist regimes have caused deaths in the tens of millions, not only in wars but among their own populaces. In Western democracies, radiation testing on inmates and other barbarisms have been

carried out in the name of scientific progress, not religion. It is true that countless barbarisms have been committed in the name of religion with varying levels of coherency and justification. Such problems still plague many areas of the world today. At the same time, religious traditions have inspired much of what is best in human history, from architecture to humanitarian concern. Whether we like it or not, history is the grand leveler of all ideologies, religious or otherwise, sometimes bringing out the best in a tradition but frequently preying on its weaknesses or the simple inability to counter what is worst in human nature.

This seems like a basic truth, but it often gets lost in the general melee of public debate, aided by those who profit by perpetuation of these myths. News periodicals (and therefore the public who buy them) tend to center on conflict. Harmony does not sell so well, unless the adjective *new* can be attached to it. Moreover, creationists and missionary atheists, interestingly enough, share the conflict model, albeit for different purposes. Creationists support a version of the conflict model to discredit “atheistic scientists,” who are said to bend data to discredit Christianity and unravel the moral fabric of society. Missionary atheists like Richard Dawkins use science to discredit creationist claims and, it is claimed, religion in general. A third voice that can tell the story straight is needed. The science and religion dialogue has served this function in the past and must continue to do so in the future in order for a more mature public discussion to emerge.

Who Represents Science and Religion? A third and more important issue is the question of exactly who *should* represent the dialogue between religion and science. That is, who are the authorities? Whom should the public trust? While some may balk at the idea of anyone being a public authority figure, it is nevertheless important to recognize that expert witnesses and testimony have become a necessary evil for any public debate. Whether the topic be economic policy, foreign affairs, or global warming, we are forced to rely on relevant expert testimony. Prior to 1999, few people had heard of Kosovo, let alone understood its relation to Serbia historically and currently. Few of us understand precisely why we should be concerned about global warming, let alone the basics of global climatology that give rise to such worries. When experts disagree, the result is confusion on the part of the public. This point is not lost on large corporations, who hire their own scientific panels and think tanks whose sole purpose is to present data favorable to corporate interests. This creates the appearance of expert disagreement where in fact there may be very little.

Expert opinion can and does play a similar role in the public understanding of the relation between science and religion. While public opinion on religious-related issues may be entrenched and not easily swayed by experts, news organizations consistently rely on experts when science and religion issues are covered. But whom should reporters call? Who are the experts?

The prompt answer might be, “We are!”—that is, those in the scholarly community who have taken the time to study both the relevant sciences and religious traditions. But note that “we” are diffuse, and note as well that there are at least two kinds of expertise that are relevant. Historians, sociologists of religion, and religious studies scholars are able to give us *descriptive* accounts of the relationship between the sciences and specific religious traditions. They can tell us how religious traditions have interacted with the sciences in the past, what social trends have influenced and continue to influence perceptions of religion and science, and how specific religious communities have struggled to reinterpret their traditions in the light of the sciences. Scientists and scientific communities, in turn, can tell us what the current agreed-upon paradigms are in particular scientific disciplines, as well as what is uncertain and what is merely speculative. They can inform us about what is currently accepted as good science, what is considered bad science, and what is not considered science at all.

There is a second kind of expertise, however, one which resides primarily within the realms of philosophy (especially philosophy of science) and theology. These disciplines provide *normative* accounts of how specific religious traditions (and perhaps religious traditions in general) should interact with the sciences. While scientists do on occasion have to make judgments regarding what does and does not fall within the scope of science (physical cosmology does, paranormal activity does not), it is not up to scientists to judge how particular religious traditions should, for instance, interpret or reinterpret basic doctrines in light of the claims of genetics or natural selection. This is an important point to note. When Gould argues that science and religion are nonoverlapping magisteria, or when Dawkins argues that science falsifies religion, they are no longer speaking as scientists but as philosophers and theologians. They are not simply describing how religious traditions *do* interact with the sciences but are prescribing how religious traditions *should* interact with the sciences and therefore taking upon themselves the task of interpreting a religious tradition’s own symbols and scriptures.

Likewise, when theologians and philosophers of religion prescribe how religion should interact with science, it should be realized as well that they are working out of specific religious and philosophical traditions. Many book titles and seminars with “religion and science” in the title are somewhat deceptive, as the focus is often on Christian theology and science, with only marginal attention (if any) to other religious traditions. This is not altogether inappropriate, because Christianity shares with other religious traditions many kinds of issues vis à vis the sciences, and Christianity has had the most direct interactions with the sciences. As other religious traditions become increasingly involved in the dialogue, however, theologians and religious scholars need to become more aware of this diversity.

Interestingly, most of the public exposure has been concerned with the normative question, How *should* science and religion interact? Descriptive issues primarily serve a rhetorical function, supporting or providing objections to particular normative claims. This means that there is no one group of experts but rather a plurality of experts involved, each representing particular disciplines and particular religious traditions and perspectives. Furthermore, this plurality involves not only differences between religious traditions but also differences within religious traditions and between the religious and nonreligious.

This radical pluralism is possibly the most important challenge and opportunity for the religion and science dialogue. It is one thing to dialogue among the mutually sympathetic, another to dialogue with those who present radically different and sometimes hostile points of view. Yet this is precisely what the dialogue needs to do if it is to expand and mature. A genuine religion and science dialogue must include not only biologists, paleontologists, and physicists but also atheists, Muslims, and Hindus. Furthermore, the dialogue must develop in a way that is respectful of these differences without denying that there are real conflicts and fundamental disagreements present. If the dialogue can do that, it will continue to make a significant contribution to public discourse.

CONCLUSIONS

Public exposure is an ambiguous thing. On the one hand, it often shows you a distorted image of yourself. Statements get twisted. Sound bites win out over substance. Conflicts and novelty are emphasized over the old and the enduring. On the other hand, public exposure reveals exactly what it is that the public finds interesting about you, which may be completely different from what you think they should find interesting. The science and religion dialogue should treat the recent public exposure seriously, if for no other reason than that the science-religion dialogue is often precisely about public perceptions about both science and religion. In such light, public exposure represents one measure of success for the dialogue. It also allows the dialogue to hold a mirror up to itself, revealing strengths and weaknesses, successes and failures. Thus, the recent public exposure is doubly important not only as a measure of temporary success but as a gauge of the dialogue itself. It is in this sense that public exposure represents a crossroads, for it allows us to gauge where we have been, where we are now, and where we should be going. If we gauge correctly, there is a real chance for public attitudes concerning religion and science to move away from the still dominant conflict model to a more mature understanding of the claims and domains of each. If we do not gauge correctly, then the dialogue faces the prospect of renewed public and professional obscurity. That, indeed, would be a loss.

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