

## Chapter

# 1

## Introducing the Dialogue Between Science and Religion

Why study the interaction of science and religion? The fact that you are reading this book in the first place suggests that you probably think it that it is worth your while to explore their mutual relationship. Yet it is important to begin any engagement with the burgeoning field of science and religion studies by considering its importance and potential benefits, and also clarifying what it is that is being studied.

Religion and science are two of the most powerful cultural and intellectual forces in today's world. Some scientists and religious believers see them as locked in mortal combat: science and religion are thus at war with each other, and that war will continue until one of them is eradicated. Although this view tends to be associated particularly with dogmatic atheist scientists, such as Peter Atkins (born 1940) or Richard Dawkins (born 1941), they are also encountered among religious believers. Some fundamentalist Christians and Muslims, for example, see science as a threat to their faith. A good example of this can be found in the criticisms of evolution made by conservative Protestant Christians, who see it as undermining the biblical creation accounts.

We shall explore the origins of this “warfare” model of the interaction between science and religion later in this work. Although it is influential culturally, it is not seen by historians of science as being particularly reliable or defensible. If anything, science now seems to be opening up religious questions, rather than closing them down, or declaring them to be meaningless. It is increasingly being recognized that natural science can “throw up questions that point beyond itself and transcend its power to answer” (Polkinghorne, 1988, p. 23). Commenting on the scientific search

for the origins of the universe, the astronomer Robert Jastrow notes how modern science finds itself asking precisely the same questions as those posed in earlier generations by religious thinkers.

It is not a matter of another year, another decade of work, another measurement, or another theory; at this moment, it seems as though science will never be able to raise the curtain on the mystery of creation. For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peaks; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries. (Jastrow, 1978, pp. 115–16)

The dialogue between science and religion sets out to ask whether, in what ways, and to what extents, these two conversation partners might learn from each other. Given the cultural importance of both science and religion, the exploration of how they relate to each other has the potential for both conflict and enrichment. Despite the risks to both sides, it remains profoundly worthwhile. Why? Three reasons are often given for this judgment.

1 Neither science nor religion can claim to give a total account of reality. It is certainly true that some on each side have offered grand visions of their discipline being able to answer every question about the nature of the universe and the meaning of life – as, for example, in Richard Dawkins’s notion of “universal Darwinism.” These, however, are not regarded as representative by their peers. Nor is the notion of “nonoverlapping magisteria,” as developed by writers such as the late Stephen Jay Gould (1941–2002), acceptable. This envisages that science and religion occupy well-defined domains or areas of competency, which do not overlap or intersect.

Science and religion are perhaps better thought of as operating at different levels, often reflecting on similar questions, yet answering them in different ways. Historians suggest that both science and religion lose their way when they play at being what they are not. There are some scientists who declare they have displaced religion (evident in recent “scientific atheism”), just as there are religious activists who claim to have displaced science (evident in modern “creationism”). Science does not answer every question that we might have about the world. Neither does religion. Yet taken together they can offer a stereoscopic view of reality denied to those who limit themselves to one discipline’s perspective on things. The science and religion dialogue allows us to appreciate the distinct identities, strengths, and limits of each conversation partner. It also offers us a deeper understanding of things than either religion or science could offer unaided.

2 Both science and religion are concerned about making sense of things. Although many religions, including Christianity, can be argued to place an emphasis upon the transformation of the human situation, most set out to offer explanations of the world. Why are things the way they are? What explanations may be offered for what we observe? What is the “bigger picture” which makes sense of our observations and experience? Scientific and religious explanations generally take different forms, even when reflecting on the same observations. Perhaps most importantly, science tends to ask “how” questions, where religion asks “why.” Science seeks to clarify mechanisms; religions offer meaning.

These approaches do not need to be seen as being in competition, or as being mutually incompatible. They operate at different levels. While some scientists hold that explaining how things happen is the best answer to life’s biggest questions, most would argue for a clear distinction between “explanation” and “meaning.” One of the most influential discussions of this point is found in Roy Baumeister’s classic work *Meanings of Life* (1991). For Baumeister, “meaning” transcends “explanation.” Baumeister suggested that four basic needs – purpose, efficacy, value, and self-worth – appeared to underlie the human quest for meaning, understood as “shared mental representations of possible relationships among things, events, and relationships” (1991, p. 15).

3 In recent years there has been a significant increase in awareness within the scientific community of the broader issues raised by its research, and limits placed upon that community’s ability to answer them. An obvious example concerns ethical questions. Is science able to determine what is right and what is wrong? Most scientists would affirm that their discipline is fundamentally amoral – that is, that the scientific method does not extend to moral questions. For example, Richard Dawkins succinctly confirmed that “science has no methods for deciding what is ethical” (Dawkins, 2003, p. 34). Stephen Jay Gould made a similar point in his important essay “Nonmoral Nature”:

Our failure to discern a universal good does not record any lack of insight or ingenuity, but merely demonstrates that nature contains no moral messages framed in human terms. Morality is a subject for philosophers, theologians, students of the humanities, indeed for all thinking people. The answers will not be read passively from nature; they do not, and cannot, arise from the data of science. The factual state of the world does not teach us how we, with our powers for good and evil, should alter or preserve it in the most ethical manner. (Gould, 1994, p. 42)

This has led to growing interest in complementarian approaches to such issues. Natural scientists seem increasingly willing to complement scientific understandings of the world with additional approaches that permit or encourage the ethical,



**Figure 1.1** Stephen Jay Gould (Jon Chase/Harvard News Office)

aesthetical, and spiritual enhancement of their approaches. Religion is being seen increasingly as an important dialogue partner in allowing the natural sciences to engage with questions which are raised, yet not answered, by scientific research. Debates about the ethics of biotechnology, for example, often raise important questions which science cannot answer – such as when a human “person” comes into existence, or what constitutes an acceptable quality of life.

Other reasons may easily be added for encouraging such a conversation. Yet it is important to appreciate that there are also difficulties associated with the dialogue between science and religion. The most obvious of these is the outright refusal on the part of some “scientific atheists” on the one hand, or religious fundamentalists on the other, to engage in any dialogue. For both sides of this highly polarized argument, science and religion are enemies, and those who engage in dialogue are either traitors or appeasers. Both the atheist scientific writer Richard Dawkins and the biblical creationist Henry Morris, for example, represent this extreme position, arguing that there is a war between

science and religion. Antireligious and antiscientific bias or prejudice remain a significant obstacle to a fruitful dialogue.

Yet other concerns should also be noted, of which the following are the most important.

First, the term “science” covers a wide range of disciplines, each with its own distinctive methodology. To speak of the dialogue between “science and religion” seems to imply that there is some uniform entity called “science,” whereas in fact there are many scientific disciplines, each with its own distinctive sphere of study and associated method of investigation. As we shall see later in this study, the interaction of physics and religion is significantly different from that of biology and religion. The term “science” thus needs to be qualified or further defined before the question can be answered properly.

Second, in much the same way, the term “religion” is very vague, referring to a wide variety of movements. Christianity, Islam, and Hinduism, for example, adopt quite different attitudes towards the natural world, and especially its capacity to disclose or point to God. It is virtually impossible to generalize about “religion,” when it embraces such a wide variety of viewpoints. It is remarkably difficult to offer a viable

definition of what constitutes a “religion.” Since there is no generally accepted definition of religion, it is often difficult to know whether the dialogue should include worldviews with religious elements (such as Confucianism). Developing this point further, a significant variety of viewpoints on the relation of faith and science can be found within any single religion. For example, Christianity consists of a number of important groups, including Catholicism, Orthodoxy, and Protestantism, each of which in turn consists of subgroups. This raises the possibility of a significant number of different religious attitudes towards science.

Thirdly, many would question whether the dialogue is best thought of in terms of “science and *religion*.” The term “religion” designates a broad range of activities, attitudes, and beliefs, and is not purely about ideas. Some writers have argued that the real dialogue between science and religion takes place at the level of methods and ideas. If this is so, we should really speak about a dialogue between science and *theology*. This point has been developed by a number of writings, including some by the leading British theologian Thomas F. Torrance (1913–2007).

These are all important points to bear in mind as we explore the important and intellectually exciting interaction between science and religion. We begin by sketching some historical background, before moving on to look at the big debates of the present.

## For Further Reading

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Baumeister, Roy F. *Meanings of Life*. New York: Guilford Press, 1991.

Clayton, Philip (ed.). *Oxford Handbook of Science and Religion*. Oxford: Oxford University Press, 2006.

Dear, Peter R. *The Intelligibility of Nature: How Science Makes Sense of the World*. Chicago: University of Chicago Press, 2006.

Polkinghorne, John. *Science and Creation: The Search for Understanding*, 2nd edn. Philadelphia, PA: Templeton Foundation Press, 2006.

Watts, Fraser, and Kevin Dutton (eds). *Why the Science and Religion Dialogue Matters*. Philadelphia, PA: Templeton Foundation Press, 2006.

