Mutual Enhancement between Science and Religion

with Fraser Watts, "Mutual Enhancement between Science and Religion: In the Footsteps of the Epiphany Philosophers"; William H. Beharrell, "Transformation and the Waking Body: A Return to Truth via our Bodies"; Marius Dorobantu and Yorick Wilks, "Moral Orthoses: A New Approach to Human and Machine Ethics"; Galen Watts, "Religion, Science, and Disenchantment in Late Modernity"; and Rowan Williams, "Epiphany Philosophers: Afterword."

MUTUAL ENHANCEMENT BETWEEN SCIENCE AND RELIGION: IN THE FOOTSTEPS OF THE EPIPHANY PHILOSOPHERS

by Fraser Watts

Abstract. This article describes some key features of the distinctive approach to issues in science and religion of the Epiphany Philosophers (EPs), and introduces a set of articles from a recent meeting. The objective of the EPs is not merely to establish harmonious coexistence between science and religion. Rather, they are dissatisfied with both, and have a reformist agenda. They see science as unduly constrained by arbitrary metaphysical assumptions, predominantly of an atheist kind, and wish to see it liberated from such constraints. They are also interested in the potential contribution of contemplative enquiry to scientific research. They see no reason why science should not engage with the transcendent, but they do not support any simplistic argument from scientific research to religious belief. They wish to see an approach to religion that is rooted more firmly in the contemplative path.

Keywords: contemplation; metaphysics; religion; science; transcendence

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Much discussion about science and religion has focused on whether or not they are compatible. Some, such as the "New Atheists," argue that they are not. That is argued partly on the basis of perceived substantive disagreements about matters such as evolution, assuming that the Bible and

Fraser Watts was formerly Reader in Theology and Science at the University of Cambridge, and is now Visiting Professor of Psychology and Religion at the University of Lincoln, and Executive Secretary of the International Society for Science and Religion, Cambridge, UK; e-mail: fraser.watts@cantab.net.

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Darwinism are incompatible, despite the convincing arguments of people such as Michael Ruse (2000) that a Darwinian can be a Christian. It is also alleged that there is methodological incompatibility, along the lines of science being rational but religion being irrational (e.g., Wolpert 2006).

Others see no incompatibility between science and religion. It is sometimes argued that science and religion occupy such different domains that the question of compatibility does not even arise, as with Stephen Jay Gould's (1999) "nonoverlapping magisteria." Sometimes it is considered that science and religion speak to each other, but are compatible. One version of that is science and religion answer different sets of questions, for example, science tells us "how" and religion tells us "why."

My own view is that there are a number of points where a fruitful integration of science and religion can be developed, such as on the improbable fruitfulness of the universe, and a theistic view of evolution; but there are other areas where compatibility is more difficult to establish, such as divine action, or the far future of the universe. However, my point here is not to contribute to this discussion, but to emphasize that simply establishing that there is no *in*compatibility between science and religion is a limited and rather negative objective.

Science and religion are not equally interested in compatibility. Science is generally *not* concerned about compatibility with religion. Religion is more concerned about compatibility with science, though there are differences among religious people about how concerned they need to be about that, and whether or not religious claims should be reformulated in a way that renders them more compatible with science. For example, John Polkinghorne (1996) presents himself as less willing than Ian Barbour to revise Christian thinking to become more concordant with modern science.

However, I want to raise an alternative way of approaching the conversation between science and religion that comes in at right angles to this debate about compatibility. I want to focus here on how science and religion can actually benefit from engagement with each other: *both* how religion can benefit from an engagement with science, *and* how science can benefit from an engagement with religion. Neither of these is straightforward.

Epiphany Philosophers

My approach to these issues is influenced by the Epiphany Philosophers, the "EPs" (Watts 2016). They started with an inaugural conference in April 1951, and published a journal, *Theoria to Theory,* which ran from 1966 to 1981. The inspirational figure of the group was Margaret Masterman, whose work straddled philosophy, religion, and computational linguistics. A selection of her scientific articles has been edited by Yorick Wilks (Masterman and Wilks 2005), and a volume of writings on religion

was edited by Rowan Williams and Dorothy Emmet; it was circulated privately, but is now on the EPs website, along with *Theoria to Theory*, at http://epiphanyphilosophers.org.

Other key members of the EPs were Dorothy Emmet, Richard Braithwaite, and Edward Bastin. Recently, the group has revived its activities, with participation from long-standing EPs including Yorick Wilks, Rupert Sheldrake, Rowan Williams, Isabel Clarke, Jonathan Westphal, John Dobson, and myself, together with other newer members of the group. The present set of articles arises from a recent meeting of the EPs. Rowan Williams was present and provided an impromptu response to the various presentations; his remarks have been edited into the Afterword in this set of articles.

There was certainly something distinctive in how the EPs related science and religion. I will explore here questions such as: What kind of religion were they concerned with? And what kind of science? How did they want to relate them? And what was the role of philosophy?

The EPs were very interested in science, and supportive of it. There was no question of religion imposing constraints on scientific exploration or theorizing. They wished to see a more emancipated and open-minded science, not a more constrained one. In as far as they were uneasy about science, it was because they perceived science to be laboring under constraints that came from scientistic assumptions, but which had no empirical basis.

Many who have discussed the relationship between science and religion have been afraid to challenge scientific orthodoxy in case it brought them into disrepute. The prevailing orthodoxy in science and religion that followed Ian Barbour's (1966) *Issues in Science and Religion* was very timid about science. The EPs had no such fears, and were willing to challenge science where they thought it was not being open-minded and empirical. The kind of relationship between science and religion that they sought was one in which each influenced the other.

It was in some ways more a continuation of the approach of the inter-war years, described by Peter Bowler (2001), than part of the scientifically timid approach of more recent years, which has mostly aimed at some kind of peaceful coexistence. The inter-war years were characterized by an attempted synthesis of nonmaterialist science with modernist theology. The nonmaterialist science was influenced by theology, and the modernist theology was influenced by science. Both were changed by coming into contact with the other. The EPs continued this tradition of both science and religion being revised by mutual contact. However, they continued one half of the inter-war synthesis more than the other. They certainly wanted a more emancipated, less materialist science, but they did not continue with modernist theological revisionism.

The EPs were critical of religion as they found it, though they were mostly members of the Church of England. They recognized that within

the Church they were free to express opinions, but were frustrated that no one took any notice of them. They also attached particular importance to contemplative religion, and saw mystical experience as playing an important role in the apprehension of religious truth. Their journal, *Theoria to Theory*, claimed to be about "science, philosophy, and contemplative religion." The EPs were frustrated by the lack of attention to the contemplative path in many Christian churches.

Philosophy was the primary discipline of most of the original leaders of the EPs. Conversation with the EPs was primarily oral, and consisted largely of philosophical disputation. They engaged with both science and religion, but their mode of exploration was primarily a philosophical one. Philosophy is the common ground of science and religion, the place where there can be traction between them. The meeting point between science and religion is often philosophical, focusing particularly on metaphysical assumptions about the nature of reality. The EPs also used philosophy as a tool. The integration of science and mysticism, with which the EPs were engaged, has often been done badly, but the EPs were utterly determined not to follow in the tradition of sloppy thinking that had marred so much previous work of a similar kind. This led them to be merciless about loose thinking, both among themselves and with any hapless strangers who might stray in.

I will now consider in turn the potential benefits to science from an engagement with religion, first through an emancipation of the metaphysics that is embedded in science, and then through an alternative, more participatory, mode of knowing. I will then consider the implications for the scientific study of religion, and for the practice of religion.

The Metaphysical Emancipation of Science

The EPs have always been pro-science but have never had an excessive awe of contemporary science; indeed they have often been scathing about its limitations. One point here is about the provisionality of science. Scientism is often supported by the implicit idea that current science has got most things sorted out, with just a few little issues to finish off. I think the EPs were very much aware of how much science still does not understand, and what huge gaps there were.

The other point is about the role of metaphysics in science. The EPs' approach to science was conceptual rather than empirical. Their contribution lay in clearing away unnecessary constraints on scientific theorizing. They were not, of course, claiming that science *had* to be theologically engaged, but they saw no reason why science could not be so engaged. For some people it is part of the definition of science that it should be free of religious influence. However, there are both historical and philosophical considerations that lead us to dispute that claim.

Historically, Isaac Newton is an interesting test case. Everyone would accept that Newton was a proper scientist, not engaged in some form of prescientific enquiry. Newton, like many scientists in the early modern period, made religious assumptions. He not only devoted much time and effort to religious research that was independent of his scientific work; he also approached science with religious assumptions (Brooke 1991). He invoked God to explain the adjustment of planetary motions.

There was quite a debate in the period following Newton's formulation of the theory of gravity about whether or not to interpret gravity theologically. In the end, things moved toward a nontheological interpretation, but it was a matter that was up for discussion. Newton himself seems to have been fairly agnostic about it. William Whiston, Newton's protégé and successor as Lucasian Professor of Mathematics at Cambridge, argued for a theological interpretation of gravity more strongly than Newton himself (Force 2002). Newton and Whiston eventually fell out, but that was over Whiston's incautious stand against the Trinity, not over how he interpreted gravity. The conclusion from this episode is that proper science can be, and has been, done in the context of religious assumptions. It cannot be claimed that science is only possible on secularist assumptions.

The philosophical problem with the claim that science cannot be religious is that it rests on the belief that secularism does not make metaphysical assumptions, that it is a "view from nowhere." However, if you accept Thomas Nagel's (1986) claim that there is no view from nowhere, the view that secularism is neutral and makes no assumptions has to be challenged. It is admittedly not neutral to claim that there is a God, but neither is it neutral to claim that there is *no* God. Both are metaphysical positions, and secularism cannot be allowed to claim that it is making no assumptions; it is making a metaphysical choice.

There has been a gradual recognition of the role of metaphysics in science. Science standardly makes metaphysical assumptions; these are not always acknowledged, but they routinely shape theoretical choices. A pathbreaking book was Edwin Burtt's (1952) *The Metaphysical Foundations of Modern Physical Science*. Philosophers of science increasingly recognized the importance of metaphysics in science as it emerged from the grip of logical positivism, and the work of Mary Hesse (associated with the EPs) was important in the new-look philosophy of science (e.g., Hesse 1963) sometimes known as "critical realism." Ian Barbour (1974) explored the implications of this new-look philosophy of science for the interface between science and religion.

The story of science over the past few centuries, as Rom Harré (1972) has argued, is one of increasing emancipation from early modern science. Early modern science routinely made corpuscularian assumptions, that is, claimed that scientific explanations had to be framed in terms of the action of little particles. During the nineteenth century, it became possible

to frame scientific explanations in terms of forces and fields, which represented a substantial metaphysical shift in what counted as science. Wolfhart Pannenberg understood the theological significance of those changes in scientific thinking (Pannenberg 1993).

Science remains much more constrained by metaphysical assumptions than is widely appreciated, and I will give three brief examples. First, it is universally recognized that there are various possible theoretical interpretations of the quantum world, for example, of what happens in the famous two-slit experiment (Davies 1990). The majority view favors indeterminacy, but other options are theoretically coherent, such as Everett's many worlds interpretation, or Bohm's deterministic interpretation in terms of hidden variables (Polkinghorne 1991**).** The choice is made on the basis of theoretical preferences rather than evidence.

Theism could, in principle, guide the choice. Some theologians have welcomed indeterminacy as providing a way in which God could act in the world without overturning the laws of science, though I am personally unenthusiastic about that approach. Others dislike indeterminacy, and Albert Einstein famously remarked that "God does not play dice." Peter Hodgson (2005) has elaborated the theological objections to an indeterminist interpretation of the quantum world in a more sophisticated way.

My next example concerns evolution. There is currently an interesting debate between narrow Darwinians, who explain evolution solely in terms of mutation and natural selection, and others who have developed an "expanded synthesis" that allows other contributory factors (Depew in press). Whether theorists will allow other factors or not, and which ones they will allow, is a metaphysical choice.

Martin Nowak and Sarah Coakley (2013) have put the case for allowing altruism as another fundamental principle, and Coakley sees the resistance to this as essentially a metaphysical one. Similarly, Simon Conway Morris (2015) has used evidence for convergencies in evolution to argue for direction in evolution and the inevitability of humans. Standard biology rejects teleological explanations as unscientific, but that depends on background preferences about what should be allowed to count as science (Ruse 2017).

My third example concerns parapsychology. There is widespread rejection of parapsychology in the orthodox scientific community. Admittedly, the evidence for parapsychological phenomena is variable, but at some points it is really quite good. Hans Eysenck, who prided himself on going wherever the evidence led, surprised many people by his positive assessment of the evidence for parapsychology (Eysenck and Sargant 1993).

Rupert Sheldrake, one of the EPs, has provided compelling evidence for various phenomena, such as dogs knowing when their owners are returning home (Sheldrake 2011) or people knowing when they are being stared at (Sheldrake 2003), and interpreted them in terms of "extended

mind" (Watts 2011). The widespread rejection of parapsychology is more metaphysical or doctrinaire than it is about evidence, as Sheldrake found when Richard Dawkins came to interview him about parapsychology and found Dawkins unwilling to discuss the relevant scientific evidence.

My final example concerns artificial intelligence (AI) and computer science. It is an area of science in which EPs have taken a significant interest, with Margaret Masterman doing pioneering work in computer translation, and Yorick Wilks building a considerable reputation in AI (e.g., Wilks 2019). However, there is often a strong metaphysical element in AI, which leads to exaggerated claims about what computers will shortly be able to do, and also to reductionist assertions that the human mind really is just a computer programme. There is also a strange quasi-theological element in some thinking about AI that leads, for example, to the claim that AI can deliver immortality (Tipler 1995). Sorting all this out is not an easy task, but Dorobantu and Wilks make a contribution in this set of articles, focusing on the contribution AI can make to moral enhancement.

I believe there are many such points where scientific theorizing is constrained by arbitrary presuppositions. They have a substantial influence on what it is claimed that science has "proved," but in fact these assumptions often predate evidence, rather than arising from evidence. They arise from outside scientific enquiry, though they are often (wrongly) held to be supported by scientific enquiry. These assumptions are generally secularist and atheistic, and it is perfectly reasonable for theologians to critique them. That can influence how scientific theories are formulated.

The mission of theologians and metaphysicians here is not necessarily to press the case for theological interpretations of science, as Whiston advocated a theological interpretation of gravity. It may just be to challenge arbitrary constraints on scientific theorizing and to contribute to the gradual historical process by which "science" has become increasingly emancipated in terms of how it can frame scientific explanations. It is not trying to "put the clock back," but rather to hasten the ongoing process of scientific emancipation.

Two Ways of Knowing

If science is constrained by arbitrary metaphysical assumptions and restrictions, it is also constrained by confining itself to detached, impersonal modes of enquiry. This is another place where religion can contribute to science. In the previous section, we were concerned with the discussion about the background assumptions that guide the interpretation of evidence (a rather left-brain process); we will now consider the contribution of spiritual practices to the process of discernment that is at the heart of science (a more right-brain process).

This is the path that has been followed in "romantic science" by people such as Johann Wolfgang von Goethe (see Bortoft 1996). Within the EPs, Jonathan Westphal (1987) has taken a particular interest in Goethe's work on color. Goethe also worked on plants, observing the structure of plants very closely, in a process that seems to have been rather like meditation. He contemplated plants in order to understand them, for example, looking closely at the way in which the size and shape of leaves change as he looked up the stem of a plant. Holding that process of change in his mind's eye led him to being able to envisage the essential structure of a plant. It was using the spiritual practice of meditation for a scientific purpose.

Some would question whether this was really science. I am not sure that it fully counts as science on its own, but science consists of both discovery and verification. I suggest that it can be a standard part of science to arrive at intuitions about what is being studied, before trying to test or demonstrate them. Goethe's approach to studying plants can be regarded as a more systematic way of forming scientific intuitions. It is one to which spiritual practices such as meditation contribute directly.

Science generally adopts the onlooker consciousness that came into fashion in the seventeenth century (Davy 1978). Nicholas Lash (1988) calls it a "spectorial" approach, and contrasts it with the "participatory" approach of religion. Since the seventeenth century, scientists have been very enamored with the possibility of acquiring knowledge through taking a detached, spectorial approach. It is undeniable that such science has led to significant advances. However, it is also arguable that there are serious limitations to how far a detached approach can go in understanding things and, as we will see, there are particular limitations to its value in religious enquiry.

The EPs thought that science also required a more participatory approach, and that a participatory mode of observation can contribute to scientific advance. In similar vein, Michael Polanyi (1958) has argued for the importance of "personal knowing." The interest of EPs in how contemplation could contribute to science was reflected in the title they chose for their journal, *Theoria to Theory*, which involved a play on the Greek word "theoria" (meaning "contemplation").

The human capacity for intuition is not well understood in psychology. However, there is evidence that intuition can be very useful and important. This emerges in an interesting way from the comparisons of combining data by humans and by computers to reach a medical diagnosis. Computers do it better. However, if you feed the intuitions of the clinician into the equation as an extra source of data, it further enhances the accuracy of clinical predictions (see Watts 1980).

One approach to these issues is in terms of the distinction made in Philip Barnard's cognitive architecture, *Interacting Cognitive Subsystems* (ICS), between what he calls "implicational" (intuitive, relational) and

"propositional" (detached, analytical) subsystems. He describes an evolutionary trajectory by which additional subsystems were gradually added to the cognitive architecture, with humans adding the implicational subsystem to form an architecture of nine subsystems. Among the EPs, the implications of ICS have been explored by Chris Clarke (2005), Isabel Clarke (2008), and Fraser Watts (2013a).

The implication of mode of knowing is more embodied, and recent psychological work on embodied cognition may help us to understand how this works (Watts 2013b). Our bodies are in fact, highly intelligent. Medicine generally adopts a spectorial approach, but each person is an observer of his/her own body, in a more participative way, through what is known as "interoception." There is reason to think that being good at bodily self-awareness is good for health. There are thus different kinds of health benefits that come from both the "spectorial" and the "participatory" approach to the body. One of the challenges facing medicine is to find a way to integrate them, something that Will Beharrell discusses in this set of articles.

At first glance, it might seem that religion is mainly implicational, and that science is mainly propositional. However, there can be both implicational and propositional approaches to both religion and science. Theology, the rational reflection of religious traditions, is propositional in character, and closely parallels what can be found between the formulations of theology on the one hand, and science and mathematics on the other. In the early days of the EPs, Margaret Masterman drew attention to the resemblance between diagrammatic representations of the Trinity and a Boolean Lattice (Masterman 1967). Similarly, John Polkinghorne (2007) has drawn attention to the similarity between theorizing in theology and quantum mechanics.

Lash has argued that seventeenth-century theology has, mistakenly, tried to adopt the detached approach that has been so successfully adopted by science. However, a detached, nonparticipatory approach to understanding God and the transcendent world is simply inappropriate and cannot go very far. "God does not offer himself for observation," as Hegel remarked (see Lash 1988).

Science is normally a propositional activity, but we are arguing here that there are alternative ways of doing science that are more implicational, as seen in the romantic science of people like Goethe. This opens up the possibility of a contribution to science from the religious tradition of contemplation, something that the EPs were keen to develop during the period. Some precursors can be found in the late mediaeval science of someone such as Bishop Grosseteste (McLeish 2014). However, even though participatory knowing can feed into science, I suggest that such scientific knowledge always, in the end, needs to be translated and integrated with propositional science.

Engaging with the Transient

The topic of transcendence poses a dilemma for the psychological study of religion and spirituality. There is now a tendency in science to claim that anything that is properly called "science" cannot make theistic assumptions, and many would feel that the very notion of transcendence violates the assumptions of science. However, as we have already argued, this is an indefensible position, both historically and philosophically. So, how far can scientific enquiry go in engaging with the transcendent? What place is there for the scientific study of the experience of God?

If the attempt to exclude theism from science is problematic, so is the attempt to argue for theism on the basis of science. Theism is arguably a rational and coherent metaphysical position, and one that is consistent with scientific data. However, it would be taking a significant further step to suggest that science actually supports theism. Arguing for theism is a metaphysical matter, one that can make use of scientific data, but there cannot be a direct scientific evidence for the existence of God.

This takes us back to William James ([1902] 2012) and his attempt to bring scientific methods to bear on studying religious experience in his Gifford Lectures on *Varieties of Religious Experience*. James, under the influence of his father, was predisposed to accept the reality of the transcendent, and it seems likely that he initially supposed that in studying religious experience scientifically he would be able to provide some kind of scientific support for a belief in the transcendent. He provided copious documentation of religious experiences, and suggested that such experiences should be taken at face value, unless there is some compelling reason for not doing so. However, in the end, he seems to have recognized that he was not able to quite provide the scientific support for theism that he perhaps once hoped he could.

What science can certainly do is to study the human sense of the transcendent. There is now a substantial volume of research on religious experience (see Watts 2017). One well-known survey, by David Hay, asks people whether they have "ever been aware of or influenced by a presence or power, whether you call it God or not, which is different from your everyday self?" (Hay 1982). Such experiences of the transcendent are quite common, and are reported by a third of the population. There is also interesting theoretical work on the evolution of the sense of the transcendent and its role in human evolution (Dein 2019); and there can also be an exploration of the role of areas of the human brain in religious experience (Coles and Collicutt in press). However, neither justifies a reductionist approach to religion and the sense of the transcendent.

There has also been much research on spiritual practices. Within the EPs, Sheldrake has recently examined research on gratitude, meditation, reconnecting with the more-than-human world, relating to plants, singing

and chanting, rituals and pilgrimage (Sheldrake 2017), and sports, learning from animals, fasting, psychedelics, prayer, holy days and festivals, and good and bad habits (Sheldrake 2019). One of the puzzles about spiritual practices is that, even though they are very diverse, they seem to have rather similar effects. As Sheldrake comments, there seem to be three broad categories. Some such as meditation are quiet and composed and enable participants to rest in a state of bliss; others focus on how things are known and understood; yet others are practices that are very active and dynamic, including extreme sport.

Psychology can investigate the *sense* of the transcendent, and can do so without assuming that there is any *reality* to the transcendent. Psychology cannot provide conclusive evidence or argument that goes from the *sense* of the transcendent to the *reality* of the transcendent. However, neither does psychology have grounds for assuming that there is *no* such transcendent reality. This is parallel with what Karl Rahner (1997) says about the relationship between evolution and belief about Christ: we cannot deduce the doctrine of the Incarnation from evolution, but neither is it worthwhile to show there is no incompatibility between them as that is so obvious. Similarly, we cannot deduce the reality of God from research on the experience of God, but neither is there any incompatibility between belief in God and the scientific investigation of religious experience.

Science needs a degree of clarity and humility about what it cannot study objectively. There is a distinction between recognizing that God is beyond the scope of a scientific discipline such as psychology, and dismissing belief in God as irrational. Some psychologists feel entitled to assume that when people engage with God, they are engaging with an "imaginary figure" (Gilbert 2009), and do so because it is "soothing." However, that is no more justifiable than simply assuming the reality of God. The assumptions of atheism are not neutral.

Carl Gustav Jung demonstrated a sophisticated awareness of these issues (see Watts 2017). When Jung was famously asked on TV whether he believed in God, he replied, after a pregnant pause, "I don't need to believe, I know." He frequently said that, as a psychologist, he was aware of the image of God in the psyche; that was not a matter of belief. It was something of which he found evidence on a regular basis in his work as a psychologist. However, when asked whether there was a metaphysical God, beyond the image of God in the psyche, Jung generally became evasive. The consistent feature of his response was that it was not a matter for him as an empirical psychologist whether or not there was a metaphysical God.

Perhaps the most useful contribution that psychology can make here is to shed light on the nature of the epistemological issues, drawing on the two ways of knowing that were sketched out in the previous section. Psychology can study the sense of God and the transcendent, using the detached methods that characterize conventional science; however, it cannot engage

with God directly using these methods. Engagement with God necessarily requires the alternative, more intuitive, participatory, and relational mode of knowing.

This enables psychology to understand the ineffability of mystical experience described by William James and others. Looked at theologically, that can be seen as a consequence of the unknowable nature of God. Looked at psychologically, it is a consequence of the modalities of human knowing. The human capacity for participatory knowing does not feed directly into propositional language and articulation. Mystical insights can be translated into propositional claims, and mystics have in fact written voluminously about mystical experiences, despite claiming that they are "ineffable." Translation is possible, but when it is undertaken there is always a sense that something important about the original experience has been lost.

This should not be taken as an invitation to decline to think rigorously about the transcendent, and to lapse into a lazy apophaticism. There is no reason for humans to switch off their capacity for propositional thought when engaging with God. However, it is important to recognize the limitations of such propositional thinking, and the essential role of participatory knowing. As Margaret Masterman (1978) put it in the title of her Gore lecture, when we approach God, we are "thinking at the boundaries of thought."

An Empiricized Religion

The EPs were as dissatisfied with the state of religion as they were with the state of science. They wished to see a more contemplative, more "empiricized" approach to religion (Masterman 1954), and thought that science could help with that. Before considering how that might happen, it is necessary to consider objections to the very idea that religion could possibly benefit from science, and explore what would constitute "improvement" in religion.

The analogy with ethics may help. As everyone knows, there are two basic approaches to ethics. There is a deontological approach that assumes it is evident what constitutes right and wrong, that is, that there is an objective moral law that people can discern and follow. There is also a consequentialist approach that bases right and wrong on an examination of the consequences of actions, and looks at which actions yield the greatest good.

I suggest that there are two parallel views about *why* people should be religious. On one view, religion can be seen as a right and proper response to the supremacy of God over creation. On the other view, the case for religion can be that it benefits people who engage in it. We can dismiss out of hand the idea that religion benefits God; it is inconsistent with

the concept of God to suggest that God needs or benefits from human religion.

There is much to be said for integrating different approaches to ethics, as Dorothy Emmet (1979) argued in *The Moral Prism*. Not to do so can lead to reductionism about ethics. I suggest that, similarly, there is much to be said for integrating different approaches to religion. I see the consequentialist approach to religion that considers its benefits to people, as sitting alongside other approaches that start from God; the two approaches are not incompatible. Science can be said to contribute to both cases for religion.

On the one hand, it has been claimed that science contributes to the case for believing in God. The seventeenth century took the argument from design, one of Aquinas' traditional five rational supports for faith, and used scientific evidence to strengthen the argument. The stronger the argument for God, the more it could be claimed that religious devotion is a right and proper response. We may not find that kind of scientific support for belief in God entirely convincing, though at very least it probably succeeds in showing that it is not *ir*rational to believe in God.

However, as Lash (1988) and others have pointed out, this approach distorts the nature of religion. The religion that emerges from the rational support that science can provide ends up being more like science than it really should be. It seems to be in the nature of religion that it depends on a way of knowing that is more Platonic than Aristotelian, more right brain than left brain; it is more immediate, participatory, intuitive, and experiential than rational and analytic. There is room in religion for rational arguments but, if they become too dominant, they distort the nature of religion and turn it into something else.

Some might welcome the way science can change religion, if it is used to provide support for religion. Sir John Templeton seems to have envisaged a new kind of religion, based on the new "spiritual information" that science can provide, rather than on what he calls the "quaint old scriptures." From his point of view, this would represent "progress" in religion. The resulting religion would have stronger rational foundations, and be universal, contributing to peace and harmony between people of different races and cultures rather than being a focus of division. It is a bold and, in some ways, appealing vision, but it is hard to avoid the concern that the resulting religion would lose the strong appeal that religion can have for people.

However, there is another very different way in which science might improve religion, and I think this is what excited the EPs. If the seventeenth century (early modernity) gave rise to the project of building a more rationalistic religion, the late nineteenth century (late modernity) has given rise to a more subjective kind of religion. In Western society, there has been

a massive "subjective turn," as Charles Taylor (1989) has called it. This has led to a radical transformation of religion that, whatever else it may be, is now seen to arise from personal experience and to contribute to personal transformation.

This subjective turn has occurred gradually. Friedrich Schleiermacher's project of building religious belief on the feeling of absolute dependence is in some ways a precursor. William James's *Varieties of Religious Experience*, with its prioritization of experience in religion, is a landmark publication. At the inaugural conference of the EPs, Margaret Masterman advocated an "empiricization" of theology, in which ascetical (or mystical) theology took center stage and was pursued in dialogue with the psychology of mysticism which "serves to throw into relief the stages through which the human soul develops" (Masterman 1954, 141).

The kind of approach to the study of spiritual practices by scientific psychology that is envisaged here is rather different from what now generally occurs. The emphasis now is largely on the therapeutic benefits, whereas the focus of the EPs was more epistemological, and necessarily involved a transcendent perspective. Masterman says that psychology needs to get to grips with the "soul's striving for God," and claims that "knowledge of man as it increases needs increasingly an apprehension of God" (1954, 141).

Nancey Murphy (1990) suggests that religious experience could form the data that theology systematizes, rather as science interprets empirical data. It is an approach that echoes Masterman's wish to empiricize theology and to put ascetical theology at the heart of it. However, it seems fanciful to claim that theology is currently doing that. If you observe how systematic theologians go about their work, they simply do not spend their time discussing how to interpret religious experience in the way that scientists discuss how to interpret empirical data. It is arguable that systematizations of religious belief could take religious experience as their data much more than they actually do. However, theologians are currently too wedded to the present way of doing theology, as a conceptual rather than as an empirical discipline, for that to be a likely development.

Toward Contemplative Religion

The EPs wanted a different kind of religion. The report of the inaugural conference in 1951 laments how the point of view of people such as themselves has no influence on the Church of England, and they suggest that what looks like the "apathy of the laity" is really "the exasperated despair of people who feel they can no longer go on in this system" (Braithwaite and Emmet 1954).

The EPs approach to religion was highly distinctive. It was neither an exercise in integrating orthodox theology with orthodox science, which is what much work in the past fifty years has tried to do. Neither was

it an exercise in revising theology to be better aligned with science, as the modernist and liberal traditions have done. The EPs' emphasis on contemplative religion was one of their most distinctive features. Why this emphasis? In part it was because it was an aspect of religious practice that many of the EPs valued in its own right. The EPs reflected the turn to spirituality that has become increasingly pronounced in recent years, as Galen Watts discusses in this set of articles.

In somewhat similar vein, Harry Williams in *The True Wilderness* advocates an approach to theology that focuses not so much on *what* to believe, but on the *significance* of those beliefs for the individual, and how they contribute to personal transformation (Williams 1965). In my own work, I have tried to bring the wisdom of the mystics into dialogue with psychology, looking, for example, at how the spiritual wisdom of Augustine Baker maps on to the practical advice that can now be found in cognitive-behavior therapy (Watts and Williams 1988).

It is worth noting that the EPs were a contemplative community, not just a collection of people who were each following a contemplative life separately and individually. They had regular monastic-style offices, wore albs, and sang plainsong. This communal aspect of their contemplative life enabled them to support each other in it, but also helped them to take stock together of the implications of their collective contemplative experience. The contemplative emphasis also had implications for how they related science and religion. Contemplation is one of the most empirical and experiential aspects of religion. In that it is quite scientific; it is what people in the Rudolf Steiner tradition call "spiritual science." Contemplation is experiential rather than a matter of abstract formulations. It is right brain more than left brain.

In so far as it is a kind of science, it can be linked with natural science. But it is a different kind of science, an alternative science, with resemblances to natural science, but with many other significant differences. The focus on contemplative religion changes the nature of the relationship between science and religion. The relationship between scientific theory and theology is about the relationship between two bodies of ideas, but contemplative religion is about practice and experience.

Theology can be brought into *dialogue* with science, but I suggest that spiritual practice actually contributes to science. It provides part of a corpus of data that a broad and integrated scientific worldview needs to make sense of. To put it another way, science need not be restricted to natural science. A broad and integrated science will include both natural and spiritual science.

It is undeniable that, on the ground, there has been a massive transformation in how people approach religion and spirituality, as Galen Watts argues in this set of essays. There is now what might be called a self-spirituality, or a "religion of the heart" that can be found in various

settings, including churches, in broader spiritual groups such as Twelve Steps, and even in secular settings such as Toastmasters. Where spirituality flourishes in the modern world, it often seems to be this new kind of spirituality of the heart, which prioritizes personal experience and transformation. Other forms of spirituality, in contrast, seem to be in decline. The "subjective turn" is sweeping all before it in religion and spirituality in the contemporary West. As Karl Rahner famously observed, "The Christian of the future will be a mystic or will not exist at all" (Rahner 1982, 149).

Religion has always adapted to different cultures and to historical changes. Indeed, it has been through a series of quite radical paradigm shifts, such as the Reformation. There is another such paradigmatic change upon us now. The EPs were keen advocates of this transformation and thought that the empirical, "bottom-up" approach of the sciences, especially psychology, could help to bring it about.

Conclusion

The EPs wanted to change both science and religion, and wanted to use each one to help change the other. They wanted a more emancipated science, one less constrained by arbitrary naturalistic assumptions. Theology provides an intellectual challenge to those constraining assumptions, but contemplative religion brings to the table phenomena that requite a broader science, if science is to be able to accommodate them.

Neither science nor religion is fixed. Both are culturally embedded human activities that are constantly shifting. However, both are in danger of becoming ossified. Science can get in a rut. It can have difficulty in standing back and asking what are the really important questions; it can also be overconstrained by arbitrary assumptions in how it goes about answering them. We need a more open-minded science.

Religion can over-venerate tradition in a way that stops it adapting to cultural changes and fostering spiritual development. There is a way of inhabiting tradition that is respectful of it, without becoming enslaved by it. The present *zeitgeist* calls for quite radical changes in religion and spirituality if it is to transform people, as it is potentially able to do, or even if it is to survive.

Discussions about science and religion often focus on reconciling a fixed approach to science with a fixed approach to religion. In fact, both are fluid and dynamic, constantly changing and in flux. Science and religion are distinct and separate activities and can never simply merge, but it is arguable that both would benefit from being pursued in a way that integrated the two better. That would help science to make "progress." Religion will never make progress in the same way, but it could adapt so as to make it more culturally relevant, and more helpful to participants.

The atmosphere of the EPs in their heyday was invigorating. They were involved in a project that was bold, innovative, exciting, and important. They were ushering in an alternative worldview, with a new, more open-minded science and a new more contemplative approach to religion. They were creating a new worldview in which both science and religion, in refashioned form, would coexist, not just harmoniously, but to their mutual benefit. It was, and remains, an exciting project.

Note

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