RELIGION, SCIENCE, and the ECO-CRISIS

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Introduction
There is a popular perception that science and religion are in opposition to each other, or at the very least have a rather strained relationship, and for some people that is still the case. There are scientists who are convinced that science has eliminated the need for God. Equally, there are religionists who largely reject the findings of science, especially when it suits their purpose. The aim of this paper is

- to explore the complex relationship these two disciplines have had
- to debunk what I regard as some false understandings
- to examine the possibilities of a more fruitful dialogue
- to claim a positive role for religion in dealing with the eco crisis.

The immediate context for such a discussion is the increasingly apparent need for care of the Earth, and it is this that provides a sense of immediacy and urgency to a debate that tends to bring out extreme responses on both sides. But there are also many other issues that need to be addressed, not least in the field of bio-ethics.

The increasingly obvious need for care of the Earth provides a rich agenda for ecological theology, or ecotheology as it is generally known. However, like most other disciplines, this is a theology that must be carried out in a very public place at a busy inter-disciplinary intersection, for it raises the question of how it is interacting not only with science, but also with other disciplines such as social policy, politics, medicine, and economics. But this present discussion will be limited to the inter-action of science and religion, understood in largely Christian terms, and in the context of the eco crisis.

In line with David Tracy’s approach that he calls mutual critical correlation, I am seeking to engage in a mutually critical dialogue with science, in which the questions and responses of both science and religion are open to scrutiny. Thus, I will argue that the two disciplines can and should share in a constructive partnership, both in the service of truth and of the future of sustainable life on Earth.
One factor that adds considerable interest to the debate is the significant number of people who are qualified in both areas. Alister McGrath, for example, holds Oxford doctorates in both science and theology; but there are, and have been, many other eminent scientists who are either qualified theologically, or who are prominent Christians. While this may suggest that there is no problem, the truth is inevitably more complex.

**History of the Relationship**

Historians of the relationship between science and religion invariably indicate that the perception of an essential conflict between them is completely superficial. However, there would also be a widespread assumption that Huxley was right in his assertion that “extinguished theologies lie around the cradle of each new science” (cited in Watts 1998:7). Such an understanding perceives religion resisting an emerging science at every turn, and would advance the case of someone like Galileo as an example. But this is at best a half-truth.

Watts asserts that prior to the 19th century, “most Western scientists, like everyone else, were Christians of some kind or another” (1998:8). Many in fact were clergymen, and others possessed a deep faith. Thus such major figures as Kepler, Galileo, and Isaac Newton, to name but three, were as much concerned about theology as they were about science. While it is true that Galileo, for example, had a difficult relationship with the Church, there was probably more involved than a mere science-theology issue. Varied threads of thought are inter-woven through the entire fabric of the Church’s history. Such a position should not be overstated however, and the influence of the anti-establishment, anti-God Enlightenment of the 18th century also played a major non-religious role in the development of exploitative technologies.

The major change-event of the 19th century was of course the work of Charles Darwin on “The Origin of Species” in 1859, and the perception of conflict dates back to that time. Conservative Christians were unable to cope with his new ideas, and felt that they flew in the face of the Bible’s teaching. Even so, Christian responses were inevitably varied, and there is nothing clear-cut about the events that ensued.

Thus, the perceived difficulties between the two disciplines need to be put into some historical perspective. As I have argued, the relationship
between faith and science has never been straightforward, and in the present day, problems persist largely at the fundamentalist fringe of science and faith respectively. As MacKay argues (1991:196), the bitter debate was never between science and religion, but between parodies of those disciplines.

**Some Definitions**
Perhaps enough has been said to suggest that “science” and more particularly “religion” are not simple terms, but are each capable of being expressed in a variety of ways. The Christian Faith, for example, includes wide variation in expression, ranging from what is termed “progressive” all the way through to “fundamentalist” at the other extreme, and I believe that most other religions would reflect a similar situation. Any failure to acknowledge that variation will lead to distortion. A definition of science is more difficult, but it too is a complex term, with scientists differing in their understanding of their discipline, and of how much it is prepared to claim for itself.

An interim approach to the relationship between these disciplines may be expressed in the words of Abrecht et al: “The tensions between science and religion centre not only on specific scientific and theological ideas, both of which often change, but also, on a deeper level, on what is sometimes called a ‘scientific world view’” (1978:12). This includes the positivistic stance that “only truth is objective” – and that raises an immediate difficulty.

**A scientific versus a theological approach**
A large part of the problem is that both disciplines are engaged in a search for the truth. But as Pontius Pilate once famously asked, “What is truth?” The question is still valid 2,000 years later, especially as one attempts to define the territory occupied by each discipline. Can there be such a thing as “scientific truth” as well as “Christian truth”? More specifically, Humphreys helpfully likens truth to a building, and states, “Truth is a unity – there is one building of truth. However, more than one drawing is necessary for a full description” (1991:111). Certainly it can be very easy to make assumptions that prove to be false. A number of possibilities present themselves.

One popular idea adopted by followers of both sides of the debate sets out to avoid any possibility of confrontation. Here, the possibility of conflict is avoided because the two disciplines are regarded as having
quite distinct and separate roles, and so are on non-intersecting paths. This is the notion that faith and science occupy different spheres, that the former deals with the spiritual world, or the “why” questions, while the latter relates to the material world, or the “how” issues; it is noteworthy that some scientists who also espouse Christian faith, such as Sir John Houghton, also appear to adopt a form of this “safe” position. This view is problematic not only because it virtually eliminates any possibility of dialogue between the two disciplines, but also because science and religion both ask “how” and “why” questions.

A second non-confrontational model is based on accommodation, or what Polkinghorne describes as “integration”. This model begins with the premise that “all truth is from God”, and goes on to assume that “all advances and developments in a scientific understanding of the universe are to be welcomed, and accommodated within the Christian faith” (McGrath 1999:49). In this approach, the possibility of conflict is avoided by the one-way traffic of thought; and ultimately that will not be helpful either to science or faith.

A third influential model is based on confrontation, and one of the principal ways in which that is expressed is through fundamentalism. Thus, the fundamentalist Christian (or Muslim or Jew) may assume that the words of the Scripture represent “God’s word” and therefore “the truth”, and that anything else is clearly false. Such an approach clearly ends any possibility of dialogue! But at the same time, a type of fundamentalist scientific understanding can be just as uncompromising. At a popular level, it is the belief that “science has disproved religion”, and there is no better example of that than Richard Dawkins, for whom reason is the only possible basis of truth.

In Chapter 8 of his book *The God Delusion* (2006), Dawkins asks, “What’s wrong with religion?” One major problem is that he appears to equate religion largely with a dogmatic, unthinking fundamentalism that most Christians I know would also reject with vigour. I and they would agree with the theologian Gerhard Ebeling who wrote, “The faith that is afraid to think is unbelief in the mask of piety.” Yet for Dawkins, faith “is an evil precisely because it requires no justification and brooks no argument”; and because faith is by definition “unthinking”, it follows that encouraging faith in children is the same as teaching them “to grow up into potential lethal weapons for future jihads or crusades” (2006:308). I find this view quite offensive. Dawkins strenuously rejects
the label “fundamentalist” for himself (2006:282-3), but I would argue that that is clearly what he is. Thus, I argue that a confrontational fundamentalism, whether in religion or in science, is unlikely to lead to truth.

It can be very easy, I submit, to give too much uncritical credit to science – to make too many sweeping assumptions about what this discipline is able to establish; and that is an error that adherents of both science and religion can make. Indeed, it may be said, with Abrecht et al, that Faith has tended to lose its nerve at the very time it needs to hold it! But at the risk of replacing one sweeping generalisation with another, it may be noted, with MacKay, that the mood of scientists today is “chastened”. As a scientist himself, he believes that the arrogant posture of some is “widely deplored’ by fellow scientists as atypical (1991:199). In a similar vein, Abrecht writes of a new interest in dialogue, and states, “No longer do they (the scientists) see science claiming to possess final truth or piecing together a comprehensive and impervious picture of the world” (1978:16). That position should not be overstated, however; but as a sign of the changing relationship, science is now more likely to challenge religion than to refute it.

But a more widespread assumption that must be questioned relates to the objectivity of science. It is assumed that science is totally objective, while faith is not; but how true is that? In more recent times there has been a fresh awareness that many seemingly “objective” experiments in fact have a significant subjective dimension. As Barbour traced the history of this debate, he noted a point of view that “scientific theories are never given to us directly by the data; they are mental constructs produced by creative imagination, not by precise observation alone” (1968:19). Polkinghorne also outlines a number of important ways in which the objectivity of science is relative, and that scientific discoveries are “socially moulded” (1998:13).

In response to the view of some of the world’s top scientific minds that science has eliminated the need for God, my counter argument is that in reality scientists can make judgments on a theological-philosophical basis without realising it, and so may not always understand the limits of their own discipline. The most obvious example of that is of course Richard Dawkins; there must be some interesting conversations between Dawkins and my friend Peter Harrison, who is now the Professor of Science and Religion at Oxford!
A more creative way of understanding the relationship between faith and science must be found, and it will be one that eschews both avoidance and unnecessary confrontation. It will be a process in which true dialogue is able to take place.

**How has Science impacted on Theology?**
There can be no doubt that science has had a profound impact on what may be termed “mainstream” theology, and it is right that it should. It has, for example, changed the way in which we read the Bible, although such a constructively critical role is not limited to pure science but includes other disciplines. Christians are now more alert to the danger of using the scripture for purposes they were not intended to serve.

Another important area relates to perceptions of the nature of God. As science has increased human awareness of the world and indeed of the universe, the outcome has been to force a re-think of our understanding of God, and to reject what came to be known as “the God of the gaps”. Thus, it was not merely a question of whether or not there was a God, but how such a God may be understood. It may safely be said that the “god” that is sometimes rejected is no more than a caricature.

Change has also taken place in a Christian understanding of how God works in the world. For Houghton, while science can neither prove nor disprove God, what it does is that it provides perspective – a sense of awe and wonder that he believes many scientists feel as they contemplate the reality about us.

**How does Theology impact on Science?**
It is as true of religious faith as it is of science, that its real nature is not one of credulity; but having said that, it is no doubt true that the impact of a scientific outlook on religious understanding is likely to be more significant than *vice versa*. That does not mean, however, that theology will be subservient to a dominant science.

Treston identifies what I believe is an important element of this relationship. He refers to Francis Bacon’s view that “the earth is tortured until it yields up its secrets”, and suggests that the ensuing “process of reductionism, by which everything is reduced to its smallest parts in order that the part might be properly studied” means that “our grasp of the holistic nature of the world is limited” (1991:63). Such a scientific approach relates well with a positivism that emphasises the
reality of things that can be observed and measured. On the other hand, a religious or spiritual outlook has the capacity to reinstate “a mystical and numinous appreciation of the universe” (1991:63). Scientific analysis is important, but so also is the capacity to see the whole, and enjoy nature as God’s creation.

The advance of science has led to some ethical issues of extraordinary complexity and controversy. Some obvious examples of that would be embryonic stem cell research, cloning, and many practices in the medical area. But the capacity to do something does not mean that it should be done, and thus religious faith has a role to play in the important field of values. Of course the complexity of some of these issues means that some ethical disagreement even among people of faith is almost guaranteed.

Within that context of ethics and values generally, religion needs to extend a significant challenge to those rogue elements of science and technology that look to the disenchantment of nature, and it needs to question the value of some technology. When the focus is turned to the environment, significant moral and ethical issues become apparent, since, as Moltmann asserts, we face a crisis of our whole way of life.

**Towards Consonance**

I have sought to show that any approach that seeks to keep science and theology apart is doomed, and that the two disciplines must share a constructive dialogue. As Polkinghorne states, “Theology has a due autonomy that science must respect, in just the same way that science’s deliberations are not open to theological control and interference” (1998:177-118). But there is one further step, and it is suggested in his term “consonance” (1998:22, 177-118); it is this, I believe, that offers the best possibility for inter-action. In this model, each maintains its autonomy in its acknowledged domain, but “the statements they make must be capable of appropriate reconciliation with each other in overlap regions” – or in other words, the answers to ‘how?’ and to ‘why?’ questions must fit together without strain (1998:22). If Humphreys is right, and there is only one “building of truth”, then such an approach is essential.

In his analysis of the development of a theological doctrine of creation, Moltmann identifies three distinct phases of understanding. The first stage is that the biblical narrative and pre-scientific images of the
universe were fused into “a religious cosmology” (1985:33). Second, when science freed itself from this early view of cosmology, faith tended to retreat to a personal belief in creation. Now, Moltmann suggests, “theology and science have entered a third stage in their relationship” (1985:34). There are several major factors driving this new symbiotic relationship.

The first factor is nothing less than the maturing of both theological and scientific thought, and a realisation that some previously held positions were simply wrong. Such disciplines are never static, but are by definition fluid and evolving in their quest for truth. Moltmann identifies a second and related factor that adds weight and urgency to the first. Science and theology, he says, “have become companions in tribulation under the pressure of the ecological crisis and the search for the new direction which both must work for, if human beings and nature are to survive at all on this earth” (1985:34).

Moltmann therefore perceives science and theology as being in a new phase of partnership, which, in part, he expresses in these terms: “The sciences have shown us how to understand creation as nature. Now theology must show how nature is to be understood as God’s creation” (1985:38). Campolo makes a similar point, suggesting that there is “ample evidence that Christianity and science can come together to facilitate the kind of consciousness that will help us to be environmentally informed” (1992:33).

**Science and Religion in the Eco-crisis**

It is clear that there are various areas in which religion and science may enjoy a fruitful dialogue, and there are many reflected in the literature; but one of the most significant is surely the global environmental crisis. This possibility is reflected in the words of the botanist Sir Ghillean Prance; writing out of a deep faith, Prance stated, “It is no longer enough for me merely to classify and describe the plant species of the Amazon forest; I must also use my research data to address issues of deforestation, pollution, starvation and other problems that surround us today. I am a much more concerned person because my faith helps to remove more selfish motives” (1991:63).

It may be argued that care for the Earth is closely linked to a doctrine of creation. In that regard, perhaps too many people have been too busy arguing over Genesis and the pseudo-scientific question of origins to
note the purpose of creation, and as a result, creation care has suffered. Thus, Polkinghorne asserts that “the doctrine of creation is not concerned with temporal origin but with ontological origin” (1998:79), and that God is as much the Creator now as at the big bang. He goes on to say, as perhaps only he could, that “there is no area in which the interaction of science and theology is more bedevilled by theological ignorance on the part of scientists (and some religionists?) than in the discussion of the doctrine of creation” (1998:80).

But for some decades now, ecologists have been monitoring a whole range of scientific data, and have been issuing dire warnings to any who would listen; sadly, until recently, that was a minority. In recent decades an increasing volume of ecological theology has taken the scientific data seriously, and then proceeded to build, or rather to re-discover a true biblical theology within that context. This relationship has been extremely significant not only in fostering increased awareness of and concern about climate change, but also about many other ecological issues as well. It is a prime example of how science and religion may inter-act effectively, and thus it is a genuine practical theology carried forward in the public arena.

At a somewhat different level, scientific insights, for example regarding DNA, have complemented biblical scholarship in achieving a better understanding of the place of humankind in what some have called “the web of life”. This has led many to reject as invalid the notion that humans are above and separate from other life, and added weight to the theological-philosophical notion of the unity of all life. In other words, both science and religion show there is unity in biodiversity.

**A Wider View**

But at this point it is important to broaden the scope of religious interest beyond Christianity to encompass other great world religions. I want to suggest that there are two factors that offer a powerful incentive to explore a more ambitious goal.

The first is that in most, if not all of the world’s religions today there is a minority who hold what could only be described as extreme and intolerant positions with the effect of driving deep divisions between people, groups, nations, and often within nations. The painful outcome of this development is all too obvious; but most people are not in that category.
The second factor is also a global one in every sense, and that is the pain of planet Earth. Again, it is not my purpose here to elaborate on that point, except to say that the effects of climate change and non-sustainable ways of living are increasingly obvious, and inevitably have their greatest impact on the poorest people who have had little input into the cause of the problem and who are least able to respond to it. But we are all in this together, and we are bound to suffer with a groaning Earth.

However we may interpret the deepest levels of meaning, of life and faith, we are all of the Earth; this one fragile planet is our home. From the differing perspectives of our several Faiths, we each have something to offer. My proposal therefore is an interfaith approach to Earth Mission. There are a number of different ways in which interfaith dialogue may be undertaken fruitfully, but I can think of no better way than a practical and open-hearted approach to working together to care for the Earth.

In the year 2000 the United Nations Interfaith Partnership for the Environment published a book called *Earth and Faith: A Book of Reflection for Action*. As the Director of the UNEP explained, this was the result of an effort “to continue the dialogue between the scientific and faith communities” from which, it is hoped, will emerge “a greater commitment to taking responsible actions for the protection of our environment for our common good.”

There are two issues in that. The first is a positive partnership between religion and science, especially in the area of ecological issues and challenges. In brief, as I have sought to show, the interface of religion and science represents an important and fruitful partnership. Through ecologists and others, science has been playing a truly prophetic role for a number of years now. It has alerted us to what we are doing to the environment, and what the consequences will be if we keep living in an unsustainable way. Faith and spirituality for its part touches deeper levels of purpose and belonging. We clearly need the contribution that such a perspective is able to bring to the care of the Earth.

A second issue rising out of the UN book is the way in which the major world faiths converge in their attitude to environmental care. I can’t go into detail here, nor do I want to downplay either the differences between world faiths or the environmental negatives that have
emanated from religious sources from time to time, but it is clear that there is a significant convergence around this issue. Authorised representatives from the Muslim, Buddhist, Jewish, Hindu, Christian and other faiths each wrote a first-hand account of their Faith’s teaching on environmental care, and the result is striking; in real terms they are in remarkable agreement on this issue, as they all enjoin their followers to a response of care.

But it is important to note that this extends far beyond neatly nuanced phrases, and takes in many and increasing practical examples of care. I could cite numerous examples from my own work in the Church, in addition to my national and international contacts. But beyond that, we could talk about the fine work of Afroz Ali and the Al-Ghazzali Centre for Islamic Sciences and Human Development in Sydney. My Christian spirit resonated with his approach, and led to a hope that it is a work we could one day share.

**Conclusion**

I believe it is clear that there is no conflict between science and religion when each is properly understood, and that the ideal relationship is complementary. Further, while arrogance is possible on both sides, in truth neither discipline can or should claim absolute authority.

Sometimes our spiritual and religious outlook is too restricted. Sometimes our world view is too limited. Sometimes an innate suspicion of anyone who is “different” from us obscures a more fruitful way forward. The Earth – our home – is in need of a mission dedicated to its wellbeing, and it is precisely that need which presents us not only with a profound challenge, but also with a great opportunity to see each other, and the faith traditions and-or scientific perspectives we represent, in a new light.

There could surely be no better way to break down barriers and build bridges than to focus on the bigger picture of the planet. Moreover, as the UN book suggests:

*The spiritual challenge of the ecological crisis draws us back to our religious traditions, to reflect on and celebrate the natural world in its most profound sense of mystery as a manifestation and experience of the sacred.*
Bibliography


