

Post-Modernism and Science: Challenges to 21st Century Christian Witness

This article¹ will explore the interconnections between post-modernism, science and Christian witness in order to point towards possible articulations of the Christian gospel that are consistent with contemporary intellectual and cultural paradigms and that enable the gospel to be heard and received in more credible ways within 'Western' society in these early decades of the 21st century. With this goal in mind, five key questions will be central to our exploration:

1. What are the key critiques that post-modernism makes with regard both to the empirical approaches of contemporary science and to Christian belief?
2. What are the fundamental assumptions of contemporary scientific methodology?
3. What paradigms are offered to enable an understanding of the connections (or disconnections) between science and Christian belief?
4. What re-affirmations or re-statements of the central tenets of Christian faith may be offered in the light of post-modern, scientific critiques?
5. What are the implications for renewed approaches to mission and witness?

The post-modern critique of Christian belief

In order to understand the impact of the post-modern critique we need first to outline the modernist paradigm that has hitherto been the foundation of so much 'modern' intellectual and cultural approaches. Fundamentally, it represented a denial of the mediaeval metaphysical approach rooted in philosophical theology that was largely, if not exclusively, shaped by the existence of a divine being upon whom the universe and humankind were dependent for their existence and being and who gave their meaning to metaphysical accounts of reality. In general, metaphysical explanations were

¹ This article is not intended primarily for academic use but rather for discussion and reflection by local congregations or groups of congregations. Thus references have been kept to a minimum although more detailed references can be provided if required. As a reflective exercise to be undertaken within the context of the European Region of CWM, a Western European religious, intellectual, social and cultural context is assumed. Use in other contexts will require appropriate adaptations.

determined more by the principles of mediaeval philosophical theology than by gathered evidence.

Modernism was a reaction to the limits of this mediaeval approach. Fundamental to the modernist approach was an empiricism based on rational deductions that lead to the formulations of hypotheses based on gathered evidence and observations. It claimed that our understanding of the world should only be based upon an empiricism that gathers evidence and, on the basis of that evidence alone, formulates a hypothesis that provides a rational explanation for this range of gathered or experimental evidence.

One of the earliest and best-known examples of this modernist approach was the work of Copernicus (1473-1543) and Galileo (1564-1642). Their empirical observations of the planets led them to formulate a hypothesis of planetary motion and inter-relationships that radically and fundamentally challenged the accepted understanding of the universe as earth-centred. This geocentric view held that the earth was at the centre of our planetary system and that all the other planets (including the sun) were in orbit around the earth. Copernicus and Galileo rejected this view on the basis that it was inconsistent with their observational evidence. They proposed a heliocentric hypothesis in which all the planets (including our earth) were in orbit around the sun. As is well-known, since this challenged the accepted theological understanding that was thought to be based not only on Christian tradition but also on Biblical authority, Galileo was ultimately branded as a heretic for challenging theological truth and undermining the Church's doctrine and teaching.

However, this conflict between mediaeval philosophy and empirically based hypothesis did lead in due course to a re-formed understanding of the universe within the scientific community and a reconsideration of the theology of creation, not least through Calvin (1509-1564) who welcomed the empirical approach and found the heliocentric view of the universe to be consistent with Biblical faith.

A more recent example, which is the focus of much of the current debates about these issues, is the theory of evolution as originally proposed by Wallace (1823-

1913) and Darwin (1809-1882) and recently developed more fully on the basis of a fuller understanding of the role of DNA in the processes of evolutionary biology. The details are generally adequately known. But the theological debate hinged (and hinges still, in many quarters) around the question of whether there is consistency between the hypothesis about the origins of species, including human beings, as developed by Wallace and Darwin on the basis of their empirical observations and the claims of Biblical faith (not least, in the first two chapters of the Book of Genesis). Their conclusions were claimed to be inconsistent with some interpretations of Biblical truth and the Christian doctrines of creation, human origins and human nature.

In both of these examples, the heliocentric hypothesis and the theory of evolution, a modernist, empirically-based approach was seen (and, especially in the case of the theory of evolution, is seen) as threatening the Biblical fundamentals of Christian faith and doctrine. Thus the modernist approach became the fundamental paradigm of modern scientific exploration and explanation from the 18th century onwards and, indeed, remains so until the present day. For many theologians and 'ordinary' Christians there is no perceived conflict between modernism and orthodox faith. However, many Christians (and also, of course, people who reject the Christian claims) would question any claims of compatibility between empirical science and Biblical Christian faith.

These debates, then, highlight some of the key approaches of the modernist paradigm: it recognises and, generally, welcomes the scientific revolution that emerged from the 16th, 17th and 18th centuries; it is observation and evidence based; it proceeds from empirical observation to explanatory hypothesis; within the Christian intellectual context, it recognises that these principles may also be deployed in Biblical criticism; this in turn may be seen as leading to a rejection of Biblical fundamentalism (especially textual fundamentalism) and an adherence to a traditionally held understanding of Christian orthodoxy.

We are now in a position to ask: how does post-modernism challenge this modernist approach? For the purposes of this article, two aspects of the post-

modernist paradigm will be considered. Firstly, Jean-Francois Lyotard (1924-1998)² denied the possibility of what he described as a 'meta-narrative' i.e. an overall narrative that seeks to offer an acceptable, comprehensive and universal account or explanation of reality or an aspect of reality.

He proposes what he calls an extreme simplification of the "postmodern" as an 'incredulity towards meta-narratives'. These meta-narratives - sometimes 'grand narratives' - are grand, large-scale theories and philosophies of the world, such as the progress of history, the knowability of everything by science, and the possibility of absolute freedom.³

We will come later to a more detailed consideration of the impact of this proposal. Suffice it, for the moment, to point out that this proposal challenges the modernist scientific approach as well as any claims about the universal truth of orthodox Christian doctrine.

Secondly, Jacques Derrida (1930-2004)⁴ explores the ambiguity and the non-universal nature of language – any language, including, of course, religious language and language about God. One of the key concepts is that of *différance*. Derrida argues that no word can have a final and definitive meaning since no word can be defined without references to another, different word (or words) upon which its meaning depends. These words, in turn, depend on the definition of other words before their meaning can be fully understood. And these words need further definition... And so on, *ad infinitum*! Thus even the word 'God' cannot have an absolute, universally recognizable meaning. It needs to be 'deconstructed' (another key concept in Derrida's thought) into other words and concepts which themselves need further definitions.

²Jean-Francois Lyotard, *The Postmodern Condition* [1979]. tr. Geoff Bennington and Brian Massumi. Minneapolis: University of Minnesota Press, 1984.

³see http://en.wikipedia.org/wiki/Jean-Fran%C3%A7ois_Lyotard

⁴For an excellent introduction to, and elucidation of, Derrida's thought, see, for example, <http://www.iep.utm.edu/derrida/#SH3c>

This claim that nothing has meaning in and of itself, except the meaning that it derives from other words and concepts, applied and interpreted in the way that 'I' (and, of course, every other 'I') understand them, means that not only is the vocabulary of theology brought into question, but so also is the vocabulary of science. In scientific no less than in theological discourse absolute definitions and universal meanings are beyond human reach. Again, we will return to exploring the implications of this conclusion for Christian witness in a post-scientific era.

The fundamental assumptions of contemporary scientific methodology

We have already noted that the fundamental methodology of scientific exploration and explanation is that of evidence, hypothesis, corroboration of hypothesis, and modification of hypothesis in the light of new evidence or re-interpretation of previous evidence. It is fundamentally based on the assumptions of empirical modernism. It is worth noting that science moves from evidence to hypothesis and not vice versa. It does not legitimately seek evidence to confirm a previously developed hypothesis but formulates the hypothesis that best fits the available evidence. And it is prepared to modify the hypothesis when this is demanded by new evidence. This means that any hypothesis is only valid for as long as it is consistent with the available evidence. This does not undermine the authority of any current hypothesis, since it is considered to be the best explanation for the evidence that is currently available. However, it does recognise that any hypothesis is only valid for as long as it does offer the best account of that evidence.

So far in this article, we have considered science as an overarching term, which includes within it a range of different scientific disciplines that explore different aspects of the natural world and bring a range of different assumptions, approaches and methods to that exploration. Thus, although each branch of science functions within the general methodology outlined in the previous paragraph, biology would function differently from cosmology, and astrophysics would function differently from human physiology. That is, within an overall narrative or intellectual framework, there is a variety of ways of engaging in that overarching scientific process. But it is also the case that one of the important

developments of recent years is that there has been a growing recognition of the fruitfulness of scientific investigations at the boundaries between different scientific disciplines e.g. the interconnections between sub-atomic particle physics and cell metabolism or between nano-technology and medical science.

There is also another factor at work here. There are those who argue that ultimately everything can be reduced to the quantum physics of subatomic particles. This reductionist approach points towards a single interpretative paradigm, namely, the quantum paradigm, and that the diverse disciplines of biology, psychology, cosmology etc are all ultimately ways of understanding the consequences of quantum forces and relationships within the various interconnected 'levels' of the natural world. Some scientists such as Stephen Hawking argue that we should be able to develop a theory of everything that offers a physical explanation for all known physical and natural phenomena within the universe. Such a theory has so far been beyond our reach, but Hawking and others argue that current developments increasingly point to the feasibility of developing such a theory of everything.

This brief exploration of the scientific methodology points to two different conclusions. Firstly, the scientific method is clearly rooted in the empirical paradigm of modernism and depends fundamentally on the application of empirical reason to the analysis of the phenomena of the natural world. In this sense, it rests upon the assumption (in contradiction of Derrida's claim) that there is a common understanding of language and concepts that nevertheless enables each discipline to function in its own way. But, secondly, if we accept the probability of our being able to develop a theory of everything that provides an overarching account of all natural physical phenomena, then we are arguing (in contradiction of Lyotard's claim) for a meta-narrative that provides scientific (and, therefore, intellectual) meaning for all that exists.

Both of these conclusions point to the possibility that the contemporary scientific methodology and discourse is not compatible with (and could indeed be regarded as completely resisting) the post-modern paradigm and rests more

firmly within the modernist paradigm of an overarching, empirical, rational methodology and narrative.

The interconnections between science and religious belief⁵

Barbour⁶ proposes a four-fold typology for the relationship between religion and science. He describes the first category as *conflict*, in which religion is understood as being in conflict with the principles and methodology of science. He describes the second as *independence*. Science and religion could co-exist provided they are recognized as referring to different aspects of life and employing different kinds of language to answer different questions. He describes the third category as *dialogue*. Barbour's understanding of dialogue recognizes that, although science and religion each have their own integrity and generally answer different kinds of questions, fruitful connections and interactions could be possible which would be mutually enriching. Science could lead to questions that religion could contribute to answering and may contribute to a greater understanding of religious affirmations and beliefs. Finally, Barbour proposes *integration* as a description of a closer partnership between the two disciplines that can enable theology to be reinterpreted in the light of the new understanding and scientific to be integrated more fully with a theological and philosophical system.

This article is based on the assumption that the interconnections between science and Christianity as such may be understood at least in terms of dialogue but may be more fully elucidated in terms of integration. Christian theology and contemporary scientific explanations of the universe, human origins and human nature may be interwoven and integrated to provide a narrative that is consistent with a contemporary understanding of Christian faith. We must recognize, of course, that not all Christians take this view. Some will see a fundamental conflict between science and Christianity. Others see them as independent narratives. These views are typified by the claims of Richard

⁵The following is taken from chapter 14 of the following book that I wrote with Martin Conway, *SCM Core Text on World Christianity in the 20th Century*, Davies, N., and Conway, M. (2008), London: SCM Press, pp242-3

⁶ I.G.Barbour (2000), *When Science Meets Religion*, San Francisco: Harper-SanFrancisco, pp1-4

Dawkins and Stephen Hawking, among others, that the hypothesis of God is either a 'delusion' or no longer necessary, both claims that are based on a belief that the hypothesis may only be tested by subjecting it to the empirical evidential analysis that is the methodological basis of contemporary science.

However,

At their best, theology and science have been perceived as mutually enriching. A theological perception of the world as 'created' has enabled scientists – even those who have been extremely sceptical about the claims of Christianity – further to explore questions of meaning and purpose as they have developed their understanding of the cosmos. The frequent claim that there is more to be said than is offered by scientific theory alone is, to a degree at least, a perception gained, directly or indirectly, from Christian philosophical and theological reflection.⁷

Towards a contemporary understanding of Christian faith

Our exploration of the interconnections between science and Christian faith may also lead us to a recognition of the need for theology to be challenged and re-shaped by contemporary scientific understandings. In a post-modern culture it is necessary to recognise the post-modern critique of any intellectual framework that claims universality and immutability. Theology no less than science needs to recognise that new discoveries that lead to new hypotheses about the natural world and human nature may call for a reconsideration of both the essence and the presentation of some of the doctrines that are at the heart of Christian belief. We confess an eternal truth about God in Christ, but the conceptual and presentational framework of that truth will need to change as cultural and intellectual paradigms change from era to era.

There is always the danger of seeing theology as a body of immutable or unchanging truth about God, the universe and humanity which needs only to be interpreted and explained. Twentieth century (*and twenty-first century*) advances (and those of previous centuries) have contributed to

⁷ Davies and Conway (2008), p250

challenging this view. Theology must be shaped as much by the changing understanding of the world in which is acted out the story of God's engagement with the universe and with human destiny, as it must be by the understanding of God handed on from generation to generation (*i.e. tradition*). Maintaining the tradition and enabling theological renewal have to be held together in creative tension in theology as much as in any other discipline.⁸

In a post-modern period this is more important and urgent than ever if the church is to communicate the Gospel effectively and relevantly into the twenty-first century.

So are there hints towards a contemporary expression of the Christian faith that is 'shaped by the changing understanding of the world? The following are no more than brief hints but they may provide starting points for a re-telling of the Christian story for today's post-modern culture:

- God is the creator God, the energy of whose mind and purpose and love is the energy of the universe. The hypothesis of God is not a necessity any more than it is a hypothesis! But the Christian faith affirms that this understanding of the being of God, beyond the scope of scientific evidential exploration and confirmation, is completely consistent with and, indeed, enriches both the traditional understanding of God and the contemporary understanding of the origins and meaning of the universe.
- God is bringing the universe in all its wonder and richness and glory to its ultimate destiny in Christ, in whom all things hold together. There is no denying that contemporary science has enriched our understanding of the universe in all its complexity, vastness and microscopic intricacy. Christians do not accept, as some would have us believe, that all this is entirely purposeless and meaningless. They believe that God has a purpose that is not discernible through scientific observation since the divine purpose is not a natural phenomenon that may be explored through

⁸ Davies and Conway (2008), p250-1

scientific experiment. The focus of this purpose may be discerned in Christ in and through whose incarnation God has been fulfilling the purposes of God for humanity within and beyond our present experience of time and space.

- God calls human beings to be the creator's partners in this act of creation and creativity. So we have a place within the story of God's engagement with the creation. It is about stewardship and care. But it is also about our creative involvement in those processes that shape and reshape our planet and thus the destiny of those who live on it and depend upon it.
- In exploring this truth and achieving this goal we who are people of faith must explore, debate, collaborate and wonder along with others of different faiths and of no faith in bringing this cosmos to its ultimate purpose, when – we believe – God will be all in all.
- And in all this we stand - with all who look towards the depths and heights of the universe and its intricacies – in awe at the wonder of it all, and know that at the heart of that wonder, beyond the reach of any scientific observation and exploration, is God.

Implications for renewed approaches to Christian witness

A number of briefly stated conclusions may be drawn from our exploration of post-modernism and science from the perspective of Christian faith:

1. The Christian faith challenges the assumptions of post-modernism and affirms that
 - a. words can have meanings in and of themselves, so that we can say God with meaning.
 - b. there is an over-arching story (or meta-narrative) to be told that embraces both the Christian story, focussed on Christ, and the contemporary scientific story about the cosmos and about humanity within the cosmos.
2. At the same time, Christian faith needs to take seriously the challenges of post-modernism. We can no longer assume in simplistic and unquestioning ways that the Christian narrative as traditionally told can be held to be undeniably true in all its detail and fundamentally unflawed. We must

constantly allow our telling of the Christian story to be re-formed and renewed in the light of discoveries about the origins, design and purpose of the universe and of human life within it, without in any way undermining the story's firm foundations in the witness of Scripture. Indeed, Scripture itself needs to be read, to some degree at least, from a post-modern perspective.

3. We must also take Derrida's warnings about the meaning of language seriously. None of the Christian traditions can assume that our traditional faith-language carries the same meaning as it has throughout the centuries. The meaning of our language must be re-evaluated and reconfigured so that it is true both to the tradition that has been handed over to us throughout the centuries of apostolic witness and to the contemporary meanings that language has come to carry.
4. Therefore, we have a responsibility to engage with the contemporary scientific enterprise in order to understand its insights more fully and thus be enabled to renew our theological language in response to current scientific concepts and perceptions.
5. This could enable us to develop resources for Christian witness in our post-modern societies and cultures that recognise these realities and find fresh expressions of the Gospel that are not bound to traditional paradigms and thought-forms but in new, creative and lively ways, offer a retelling of the Gospel that reflects the contemporary scientific enterprise.
6. In this context, our Christian witness must be primarily focussed on dialogue. Our retelling of the Christian story must involve listening as much as, if not more than, telling. Any resources for witness must tell the scientific story as well as the Gospel story in meaningful and accessible ways and must provide space for dialogue with those who are engaged in the scientific enterprise and those whose thinking is largely shaped by that enterprise, so that together we may be brought to a place where we may help one another to a fuller understanding of the Gospel and of the world around us.

Further Reading

Dawkins, R. (2006), *The God Delusion*, London: Transworld Publishers
Ward, K. (2006), *Pascal's Fire: Scientific Faith and Religious Understanding*,
Oxford: One World

McGrath, A. (2005), *Dawkins' God: Genes, Memes and the Meaning of Life*,
Oxford: Blackwell Publishing
Watts, F. and Dutton, K. (2006), *Why the Science and Religion Dialogue Matters*,
W. Conshohocken PA, USA: Templeton Foundation Press

Revd Dr Noel Davies
7 January 2011