

An Anglican priest's perspective on the doctrine of creation in the church today

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Abstract: The Protestant understanding of creation in relation to science has been slightly different from that described for the Catholic churches and more diverse, as Protestants emphasize the authority of the Bible and private judgement. The conflict thesis of science and religion is rejected, but there were four skirmishes: over heliocentricity, the rise of geology, evolution and, today, the impact of creationism. The variety of belief among Protestants, and especially Anglicans, is expounded from non-realism, which denies the existence of God, to critical realism, in its liberal and conservative forms, which totally accept modern science, to 'naive' realism, which emphasizes the plain, or literal, reading of the Bible and rejects evolution and, often, geological time, and has given rise to 'creationism'. Representative examples of each are introduced.

As a Christian with an orthodox Anglican theology, there is much I totally agree with in the paper by Ostermann (2009), as I do with Pope John Paul II's speech to the members of the Papal Academy of Sciences on Evolution of 1996, Pope Benedict XVI's work on early Genesis published in the 1980s and, in part, Cardinal Schönborn's views in *Creation and Evolution* (Horn 2008), although he shows too much sympathy to the questionable ideas of German intelligent design proponents such as Junker & Scherer.

Despite the immense convergence that has taken place between Roman Catholicism and the 'Protestant' churches since the Second Vatican Council of nearly half a century ago, there are still differences between the two. The Roman Catholic church puts far more emphasis on the contemporary teaching office of the Church (i.e. the Vatican and the Pope), whereas mainstream Protestants and Anglicans are more independent. Even so, the relationship of science and Christianity and creation expounded by Ostermann is very similar to the Protestant mainstream, but clearly not 'creationist'.

However, there are greater differences between the various Protestant churches, and these are even greater when the more fundamentalist evangelicals² are included. As befits the subject of geology and religion I shall confine my comments to the doctrine of creation, which comes out in the first chapter of the Bible and the first article of the Apostles' and Nicene Creeds. Today it is impossible to consider 'creation' without considering the various forms of 'creationism' that have swept the USA since its revival in 1961, and that are now spreading through the rest of the world (Numbers 2006; Roberts 2008).

Despite the fact that all Christians affirm the doctrine of creation as a basic belief there is great diversity on what that belief actually means. There is an even greater diversity on the understanding of creation in relation to science, where we are bedevilled by two related issues. The first is the continued acceptance of the conflict thesis of science and religion put forward by J. W. Draper (in relation to the Roman Catholics) (Draper 1923) and Andrew Dickson White in the late 19th century (White 1896). Despite this thesis being undermined over the last few decades, especially in the books edited by Lindberg & Numbers (1986, 2003), it still persists. The second concerns geological time and is the widespread claim that all Christians accepted Ussher's date of 4004 BC until Hutton and Lyell shattered that belief (Lewis & Kneel 2002; Rudwick 2004; Roberts 2007). It is usually told with a strong Anglo-centric bias and little recognition is given to other geologists, British or not. This still bedevils historical treatments of geology in British and US textbooks, and in 'popular' science.

A brief history of science and Christianity

Hard on the heels of the Renaissance the Reformation was begun in 1517 by Luther. The ensuing controversy between Protestants and Catholics resulted in a hardening of theological ideas and a greater emphasis on the literal nature of the Bible by both. This was seen in the general acceptance of an Earth created in about 4000 BC, which reached its apogee in Ussher with his famous date. Although the ideas of warfare between science and religion were overstated, there were a succession of skirmishes.

The first was over heliocentricity, culminating with the trial of Galileo, but by 1700 heliocentricity was almost universally accepted. With the rise of geology in the 18th century a literal interpretation of Genesis became untenable. White (1896, Chapter V) wrote of the conflict, which he considered to be greater in Britain than in mainland Europe, although that can be questioned. Despite a minority of Christians opposing geology, most educated Christians had little problem, although some of their schemes of accommodation seem rather forced (Roberts 2007; Lewis 2009). By the 1850s, biblical literalism had largely gone, although it survived for some revivalist chapels, traditionalists (Young 2009) and the Seventh-Day Adventists. After the publication of *The Origin of Species* (Darwin 1859) many Christians initially opposed evolution but soon adopted it (Moore 1979). In the 1920s, however, anti-evolutionism reared its head in the USA at the Scopes trial, but had little impact elsewhere. The last skirmish, which seems to be turning into warfare, is over creationism, which began in the USA in 1961 with the publication of *The Genesis Flood* (Whitcomb & Morris 1961), which has had a great impact first in the USA and now throughout the world (Numbers 2006; Moshier *et al.* 2009).

All of these skirmishes raise matters of science and of theology. I shall consider only the latter. As modern science developed many theological understandings could not remain unchanged. The basic understanding of *creatio ex nihilo* remained largely intact, except for more 'liberal' Christians. However, the understanding of geological time and prehistoric humans raised questions about the historicity of the Bible and as a result the doctrine of creation was modified by mainstream Christians or at times the science was rejected. With the discovery of primordial beasts living before humans, the picture that death came in at Adam's fall became absurd. Christian thinkers have dealt with these issues in a variety of ways. Some have welcomed the science and found ways of retaining a 'traditional' theology, others have formulated a radically new theology, and yet others have rejected the science. Finally, over the last 30 years there has been much more engagement between science and Christian theology, and to that we turn.

Recently there has been a surge of interest in science and theology within all churches, whether Protestant or Catholic, liberal or conservative. A few decades ago it was possible to keep up with most publications on this subject. That is not the case today, as there is a deluge of publications from every possible scientific or theological perspective. Parallel to this has been a much greater interest in the doctrine of creation and a Christian attitude to environmental issues. As well as these,

death, pain and suffering, the origin of humans and original sin raise problems for believers, and these are either grappled with seriously or the Gordian knot is cut by adopting a young-Earth creationist (YEC) approach, which simply claims that death and suffering came as a result of the transgression of Adam and Eve in the Garden of Eden and thus geological time and evolution must be wrong by definition.

Varieties of belief

Within the British and US Protestant churches there is an immense variety of understandings of the doctrine of creation, particularly within the mainstream denominations, which have both liberal and conservative or evangelical wings. I will subdivide them into three main groups, two of which may be divided again. These are:

- (1) non-realism;
- (2) critical realism ((a) liberal; (b) conservative);
- (3) naive realism ((a) old-Earth creationism (evolution denied); (b) young-Earth creationism).

I have chosen this relatively unusual way of classifying Christian belief today as I consider it to be the best way of highlighting the spectrum of today's Protestants, especially in the English-speaking world. Like any classification it has its limitations and, as we are dealing with human thought, these groups do not form watertight compartments. The various types of 'realism' give a good focus, as they centre on the nature of God, creation, and the meaning and content of theological language, which may or may not look to the Bible as revelation. At the extreme of non-realism, theological language is purely metaphor, which gives meaning to life, and in naive realism every biblical statement 'naively' and literally describes concrete phenomena.

Non-realism

Non-realism is very much a minority position in any of the churches, as its proponents argue that to be Christian one need not believe that God exists, and should not for philosophical and theological reasons. Its most well-known advocate is the Cambridge theologian Don Cupitt, who argued his case in *The Sea of Faith* (Cupitt 1984). Cupitt looks to Rorty's anti-realism for a philosophical underpinning to his theology. Other significant writers are R. B. Braithwaite and the late novelist-philosopher, Iris Murdoch.

Non-realism has a limited appeal, and appeals only to those of a particular philosophical perspective.

Dawkins has waxed lyrical on ‘atheist priests as Don Cupitt’ and continued: ‘[B]ut if “religion” is allowed such a flabby elastic definition, what word is left for *real* religion, religion as the ordinary person in the pew or on the prayer-mat understands it today’ (Dawkins 2003, p. 147). Non-realism cannot satisfy an atheist or agnostic, or the normal believer, who will think of God in (naive?) realist terms.

Critical realism

In its various forms this is probably the dominant thinking person’s understanding within the mainstream churches. It combines a respect for and acceptance of all science with a robust view of God, which may vary from the pantheism of Arthur Peacocke to a traditional understanding of *creatio ex nihilo*. Philosophically, Protestants with this view look to Ray Bhaskar (1986) and W. H. Newton Smith (1981), and scientific critical realism, which emphasizes that scientific discourse is ‘real’ in what it describes, although it uses models and metaphors. This is in marked contrast to the work of Rorty and Feyerabend on the philosophy of science.

Two of the most significant British theologians from a liberal stance are the biochemist–priest Canon Arthur Peacocke (died 2006) and the former Oxford professor of theology Keith Ward; Anglican clergymen who have written prolifically. Peacocke was a biochemist at the universities of Birmingham, Oxford and Cambridge working on aspects of DNA. He became interested in science and religion in the 1950s, initially taking advice from a priest–physicist Grenville Yarnold (who happened to be my uncle). Peacocke was ordained in 1971 and began writing on theology and science. His perspective was that of a liberal Anglican and consequently valued the Bible rather than regarding it as the ultimate authority and revelation. To the critic he was weak both on the Bible and in his understanding of redemption in Christ. His theological method was far more reflecting on the natural world as understood by science rather than appealing to revelation.

On creation he rejected the doctrine of *creatio ex nihilo*, in contrast to all others described in this section and Ostermann (2009), preferring pantheism (literally ‘God in all’). According to this, God is not solely transcendent and separate from the creation but involved in it, although not totally identified with creation as in pantheism. (Pantheism and pantheism are often confused.) Peacocke emphasized the immanence of God in creation rather than both immanence and transcendence. His theology had more in common with the

process theology of theologians such as John Cobb and David Griffin (Cobb & Griffin 1976) than traditional Christian theism. Although Peacocke believed that God is closely involved in his creation and used his scientific understanding to expound this, he did not accept the miraculous because he regarded this as contrary to the nature of God. This agrees with much liberal Protestant theology over the last 150 years, but more conservative Protestants do accept the existence of miracles. Peacocke was a prolific writer and his mature thought is best read in *Theology for a Scientific Age* (Peacocke 1993) and, more briefly, *Paths from science towards God* (Peacocke 2001), the latter title summing up his method.

Canon Keith Ward was originally an atheist philosopher. His interest in science and religion stemmed from his time at Cambridge, where he was involved with seminars with Peacocke and Polkinghorne. Ward sees the future of religion in a liberal rather than a conservative faith, which is open to all religions, Christian or not. His many publications centre on the philosophy of religion rather than a theology based either on revelation or Christ. Ward summarized his work in *Pascal’s Fire* (Ward 2006), which is an excellent introduction to this style of thinking. He argued that scientific explanations are incomplete, and that only a belief in a god, the mind behind it all, makes rational sense as ‘a very elegant, economical and fruitful explanation of the existence of the universe’. Not surprisingly, Dawkins did not agree (Dawkins 2006, p. 179).

Somewhat more conservative, and more Christ-centred, are the more books by the Canon Sir John Polkinghorne, FRS, whose perspective is cosmology rather than geology or evolution. Polkinghorne was professor of mathematical physics at Cambridge before being ordained in 1981 and later became President of Queen’s College, Cambridge. His theology is more ‘traditionally orthodox’ than that of either Ward or Peacocke, and the key to his understanding of God as Creator is to be found in the suffering (or self-emptying (*kenosis*)) of Christ on the Cross. This was discussed by Peter Bowler in his recent book *Monkey Trials and Gorilla Sermons* (Bowler 2007), and I cite him for his sensitive exposition:

Here the thought of John Polkinghorne and John F. Haught (2000, 2004) becomes instructive, because they see that the central role played by suffering in the world may be just what we should expect if God had relinquished His control over nature in order to give His creatures a degree of freedom within their world. Unlike some other religions, Christianity can be presented as a religion in which God, far from sitting outside His creation, has actually entered into it and suffers along with the struggling creatures within it. Such a vision seems to make sense of the fact that the son of God himself suffered the consequences of human

selfishness and intolerance—and the Father did not intervene to prevent this supreme level of involvement and sacrifice. As Polkinghorne writes:

In the lonely figure hanging in the darkness and dereliction of Calvary the Christian believes that he sees God opening his arms to embrace the bitterness of the strange world he has made. The God revealed in the vulnerability of the incarnation and the vulnerability of creation are one. He is the crucified God, whose paradoxical power is perfected in weakness, whose self chosen symbol is the King reigning from the gallows (Polkinghorne, 1989, p.58).

This is powerful stuff, even for a nonbeliever like myself. Here is a totally different vision of the relationship between God, humanity and nature to that offered by the fundamentalists. This is not a God who punishes us eternally unless we accept His son's sacrifice as the only route back into His favor. It is a God who participates in the human drama and in the drama of creation, and if there is any kind of God who makes sense to the convinced Darwinian, this is probably it (Bowler 2007, 222–227).

I think I agree with Bowler.

Taking a similar line are the books by Alister McGrath, who has a PhD in biophysics and is now professor of theology at Oxford. McGrath is probably the most prolific evangelical theological writer in the Church of England today, but his evangelicalism is far removed from the evangelicalism associated with 'creationism', and his treatment of science is similar to that of Polkinghorne. Most of his writing has been on systematic and historical theology, and his *Christian Theology, An Introduction* (McGrath 2001) is a standard work. Unusually for one trained as a scientist, his *Christian Theology* makes scant reference to science. That deficiency was soon to be remedied as he published *Science and Religion; an Introduction* (McGrath 1998), followed in the next few years with his three-volume study *A Scientific Theology* (McGrath 2002–2003). The three volumes are entitled respectively, *Nature, Reality* and *Theory*, and deal at great depth with the relation of science to theology. However, this evangelical theology is further removed from young-Earth creationist approaches than it is from liberal theologies such as Arthur Peacocke's.

Several British scientists have ventured into theological writing, most notably the geneticist R. J. Berry, the Cambridge geophysicist Bob White and the biochemist Denis Alexander (who studied biochemistry under Peacocke at Oxford), all of whom are leading members of Christians in Science and evangelicals. Berry and White are members of Anglican churches. In his Gifford Lectures of 1997–1998, R. J. Berry presented the concurrence of biological evolution and an evangelical theology published as *God's Book of Works: The Nature and Theology of Nature* (Berry 2003). Alexander's works include *Rebuilding the Matrix* (Alexander 2001) and *Beyond Belief* (Alexander & White 2004). These three writers totally accept geological dating and evolution almost in its

entirety, but White and Berry also claim that the biblical Adam lived about 10 000 years ago, which many do not find convincing. This is a similar theological problem to the one that Ostermann (2009) outlined over monogenism.

All of these writers seek to explain the doctrine of creation within a context of the accepted scientific understanding, and show the intellectual depth and range of recent writing on science and religion. My intention in this section has been to describe, rather than evaluate, contemporary British theological writing on creation.

'Naive' realism

By naive realism I mean that there is almost a direct one-to-one relationship between the words used by theologians and in the Bible and the actuality described, rather than the greater use of metaphor adopted by critical realists. Theologically, this is within the more conservative and 'fundamentalist' part of evangelicalism. Here, there is a great desire to understand the Bible in its 'plain and literal sense' and proponents consider that they are continuing the interpretations from the Reformation (Young 2009). In some senses they are, and this can be seen in some evangelical theology today, especially from the USA. This position is also growing rapidly in the UK and with the growth of evangelicalism in all parts of the world, including the 'new' evangelicals of mainland Europe.

All 'conservative' evangelicals have a very traditional doctrine of creation and emphasize *creatio ex nihilo*, as described by Copan & Craig (2004), although these two authors have much in common with McGrath, Berry and Alexander, except over evolution. However, many reject large parts of 'historical science'. Readers will be familiar with young-Earth creationists (YECs), who deny both evolution and geological time, but there are others who accept geological dating but not evolution: old-Earth creationists (OECs), who have remained with a pre-Darwinian understanding. Copan & Craig are examples of the latter. The reasons for the adoption of such positions, which seem nonsensical to most geologists and biologists, have similarities to the Catholic rejection of evolution a century and a half ago as described by Ostermann (2009). With the Bible being almost iconic for many evangelicals the concern is both the plain meaning of the Bible and the origins of humanity, and also the origin of suffering (Roberts 2008, p. 7).

Many call these evangelicals 'fundamentalist' (*evangelikal* in German) but the term is unhelpful and pejorative. 'Fundamentalism' is often used to label those evangelicals who insist both that the

Bible is inerrant and that Genesis is to be taken literally. Commonly, this is regarded as a US phenomenon. It is correct to state that fundamentalism began in the USA in the late 19th century (Numbers 2006; Roberts 2008), but the movement is now worldwide. In 1900 many early fundamentalists accepted evolution, but following the Scopes trial of 1925 and the revival of young-Earth creationism in 1961, the movement has become belligerently anti-evolution and anti-geology. Probably most evangelicals in the USA are anti-evolution, as are increasing numbers in Britain and the rest of the world. These kind of opinions were scarcely present in Britain in 1970. To confuse matters, there is no simple demarcation between the conservative mainstream (such as McGrath and Berry), who are often evangelical, and those who are clearly 'creationists'. Thus in the USA, where nearly half the population claim to be evangelical, there is a range of outlook. At an evangelical liberal arts college such as Wheaton College (Moshier *et al.* 2009) most of the teaching staff (and all the science faculty) accept geological dating but not always evolution. However, about half the students go to college convinced that the Earth was created in 6 days, which presents a challenge in science teaching. (This I say from experience, as in 2001 I taught a geology course for Wheaton at their Black Hills Science Station.) Some other evangelical colleges, such as Liberty University and Cedarville College, insist that all staff are YECs and teach geology from that perspective. As a result, there is immense pressure for all evangelicals to adopt such views.

Until a few years ago, most in Britain were unaware of the growing problem of young-Earth creationism in churches and, increasingly, influencing education as with the Truthinscience initiative since 2006. YEC Christians hold the same central beliefs about God as creator, Jesus Christ, etc. as other more mainstream evangelicals and may seem indistinguishable from other evangelicals, but they insist that the Bible is inerrant and has to be interpreted literally. This kind of perspective is more prevalent in the USA but more and more evangelicals throughout the world are accepting young-Earth creationism. Thus in Britain, YECs, were comparatively rare 40 years ago, but are now dominant in student evangelical circles such as the University and Colleges Christian Fellowship (UCCF) and have made considerable inroads into the Church of England. It is tempting to dismiss these as anti-intellectual, but in Britain alone they probably have more influence and weight of numbers than the scientifically informed Christians I bracketed together as 'critical realists'. Despite having been 'involved' with YECs for nearly 40

years, I am unable to explain why people, including PhD scientists, adopt such a belief with such conviction and apparent rationality. It is difficult to itemize a few publications propounding this kind of view, as there are innumerable publications promoting intelligent design and young-Earth creationism and its compatibility with 'true' science. Although there are differences between these they do have much in common (see the website for Answers in Genesis, at <http://www.answersingenesis.org>). Their attempts to alter science teaching in the USA are well known and since 2006 Truthinscience has been attempting to introduce intelligent design into British schools, although in fact Truthinscience is clearly YEC, as is manifest in their alternative lessons on the fossil record.

There is a two-fold motivation for young-Earth creationism. The first is a view that regards the Bible as inerrant, which in its strongest and popular form claims that the Bible has no mistakes of any kind, including science and history. From early Genesis YECs conclude that the Earth can only be a few thousand years old and then strive to justify this scientifically. The second is the issue of suffering, which they consider to have started after the fall of Adam and Eve in Genesis 3. As Adam's sin caused the suffering, then no animal could have died before then, and thus the standard geological fare of trilobites and dinosaurs predating humans by millions of years simply must be wrong. This is supposed to justify the existence of suffering and death, and to put it slightly satirically: if death and suffering came from Adam's sin, then we must assume that God condemned millions of innocent plants, beasts and humans to death and suffering for the theft of a single apple. Yet this argument has great evangelistic appeal. To me it is moral absurdity. However, it must be said that the existence of suffering, whether through eating apples, or being written into the natural world, is one of the greatest challenges to belief in God.

Young-Earth creationism has come to prominence in the last few decades (Numbers 2006). It began to appear in Britain only in the late 1960s and elsewhere in Europe some years later. Many wrongly assume that it is only to be found in separatist evangelical churches but it has a wider influence. Within the Church of England, I consider that 5–10% of the 10 000 clergy are YECs, whereas in 1970 there were hardly any.³ Third World evangelicals are dominantly YECs. Inroads have been made in mainland Europe within the growing evangelical churches. The cause of this sudden rise has been the burgeoning of evangelicals during recent decades, coupled with a new emphasis on biblical inerrancy, which in its hard form argues for literalism. There have been at least two popular books written by Anglican

clergy arguing for young-Earth creationism, *Deluded by Darwinism* (Down 2007) and *Responding to the Challenge of Evolution* (Logan 2003), the first since the 1850s. Neither author has any undergraduate science: Logan was a journalist and Down a graduate from Cambridge. Their grasp of science, especially geology, is extremely poor, yet both books have received good reviews from the Christian press.

The influence is also seen in the training of clergy, as the most widely used textbook on systematic theology for evangelical seminary students in the USA, and increasingly in the UK, often in preference to McGrath, is *Systematic Theology* by the US theologian Wayne Grudem (Grudem 1994), who has a doctorate from Cambridge. His chapter on creation (pp. 263–414) devoted most space to issues of the age of the Earth and evolution. In this chapter, Grudem rejected evolution out of hand and was undecided on the age of the Earth although he was almost convinced by Davis Young's summary of standard geological arguments in his book *Creation and the Flood* (Young 1977). However, these were balanced by YEC arguments, which Grudem regarded as equally scientific. The net effect on clergy using this work is to raise serious doubts on the 'correctness' of modern geology and evolution. This will then be passed on from the pulpit to their congregations, who in turn will also doubt the 'correctness' of geology and be open to believing young-Earth creationism. All this links back to the paper by Young (2009), who discussed how Bavinck influenced Louis Berkhof (1873–1957). Grudem has stated that he regards *Systematic Theology* (Berkhof 1939) as 'a great treasure-house ... and ... probably the most useful one-volume systematic theology available' (Grudem 1994, p. 1224), and makes great use of it. Berkhof argued forcibly that Genesis must be taken literally. Thus we can see how Bavinck's doubts about geology were passed to Berkhof, then to Grudem and then to evangelical clergy today. In 2006 Grudem signed the evangelical petition questioning global warming, along with other US clergy many of whom were YECs. There is a strong linkage of young-Earth creationism, intelligent design and/or rejection of evolution with anti-global-warming (Mooney 2005; Roberts 2008), although evangelicals such as Sir John Houghton have done much to counteract this.

Young-Earth creationism and geology

During the last few decades young-Earth creationism has made its mark first in the USA and now throughout the world. Its basis is simple: the Bible

should be taken literally and thus the Earth can only be a few thousand years old. That is a nightmare for any geologist. Young-Earth creationism has no historical roots in either the scriptural or anti-scriptural geologists of the early 19th century, or the apparently literalist 17th century theories of the Earth. Its roots, as described by Numbers (2006), are with the Seventh-Day Adventist sect in the late 19th century and the publication of *The Genesis Flood* (Whitcomb & Morris 1961). Young-Earth creationism is now worldwide and attracts much support from conservative Christians. Creationist organizations exist in most countries and one of the most effective is Answers in Genesis led by Ken Ham. In 2007 AIG opened its creation museum in Ohio. Other groups include the Institute of Creation Research (USA), the Biblical Creation Society (UK) and Wort und Wissen (Germany). Some Muslims have adopted young-Earth creationism, such as Harun Yahya (Adnan Oktar) of Turkey, and recently *The Atlas of Creation* (2007) was widely distributed.

For Genesis to be literally true, all geological dating must be wrong, and that is a major thrust of much YEC writing. Arguments include asserting that the use of fossils in relative age dating is a circular argument, radiometric age-dating rests on false assumptions, and many others. These can be found in many YEC books and are easily demolished by any moderately competent geologist, and failing that one can refer to the websites of Talk Origins (<http://www.talkorigins.org>) and the National Center for Science Education (<http://www.natcensci.org>) headed by Eugenie Scott. Most YECs assert that all strata from the Cambrian to the Pleistocene were laid down in the year of the biblical Flood, although some assert that the Flood ended at the end of the Mesozoic. They have two ways of explaining the fossil succession. The first is 'relative victim mobility', whereby the more nimble creatures escaped the deluge for longer and thus are in higher strata. The sloths seem to be an anomaly here. The other is 'differential gravitational sorting', whereby the heavier fossils sink to the bottom. Let the reader decide.

Intelligent design (ID) and geology

Intelligent design (Dembski & Ruse 2004) came to the fore in the mid-1990s with the publication of *Darwin's Black Box* (Behe 1996), which argued that some biochemical structures exhibit irreducible complexity. The leaders of ID attempt to avoid the issue of geological time, arguing that it is not relevant to the question of design and to attract YEC adherents. Since 2000 ID has become increasingly associated with young-Earth creationism, as

happened in the Dover trial of 2005 and previous hearings in Kansas and Ohio. In Britain the group Truthinscience has attempted to encourage the teaching of ID in school science since September 2006; however, this group is actually made up of YECs and, as far as I can see, is using ID as a Trojan horse for young-Earth creationism. Some IDers, such as Behe, fully accept geological time, but remain silent on those who do not. Others claim to be unconvinced, such as the Lutheran philosopher Angus Menuge in the 2005 Kansas hearings. Yet others are convinced of young-Earth creationism as well, as are Paul Nelson of Access Research Network (ARN) and Marcus Ross, who has a PhD in vertebrate palaeontology and now teaches geology from a YEC perspective at Liberty University, founded by Jerry Falwell.

When it comes to geological time IDers tend to be very non-committal (Roberts 2004), but often claim that the Cambrian Explosion undermines 'Darwinian evolution'. This has been discussed in many places, with varying levels of inaccuracy. This vacillating approach can be seen clearly in the article 'The Cambrian Explosion: Biology's Big Bang' by S. C. Meyer, M. Ross, P. Nelson & P. Chien (<http://www.theapologiaproject.org/Cambrian.pdf>) (see also Campbell & Meyer 2004).

In this article, the authors wrote of standard geological time as fact, and gave the accepted dates of the base of the Cambrian. They stated: 'These studies also showed that the Cambrian explosion occurred within an exceedingly narrow window of geologic time, lasting no more than 5 million years. Geologically speaking, 5 million years represents a mere 0.11 percent of Earth's history' (Campbell & Meyer 2004, p. 326). However, at least two of these authors, Nelson and Ross, are self-confessed YECs and thus reject deep time. This seems rather devious, but it does sum up the whole problem for most scientists of ID and YECs, as they seem to say one thing and mean another. However, the rejection of both 'Darwinism' and punctuated equilibrium in the Meyer *et al.* paper was followed by the conclusion: 'In other words, intelligent design constitutes the best, most causally adequate, explanation of the specific features of the Cambrian explosion, and the features of this explosion in turn attest to the activity and power of a purposeful intelligence' (Campbell & Meyer 2004, p. 390).

Conclusion

A brief account like this can hardly do justice to the variety of understandings of the theology of creation today. There is a wide range of views, but a distinction must be made between those of

academia and those of the pulpit and pew. Academics, except for the increasing number of creationists in university positions, tend to incorporate science into their theology. However, an increasing number of clergy, who may have studied theology at university, are becoming sceptical of science and more inclined to adopt a creationist perspective on creation. Thus within the Church of England, there is the whole range from young-Earth creationism to a virtual denial of the existence of God. The Anglican doctrine of creation is indefinable from such a diversity of opinion. From my stance as a practising Anglican priest, with ecumenical contacts and considerable contact with Christians in the USA, it is difficult to give a simple summary. Many within the churches take creation in the wide sense for granted and are not concerned with scientific issues. However, an increasing number are accepting young-Earth creationism or else intelligent design without understanding the (lack of) science behind them; this is partly in reaction to aggressive atheism of Dawkins and others, although this style of atheism came after young-Earth creationism became an issue in the early 1980s. The confusing variety of attitudes encourages me to play the orchestral introduction to Haydn's *The Creation*.

Author's perspective

I have attempted to give an 'objective' account rather than give my personal position. However, this is difficult for several reasons: I write from the perspective of an Anglican priest and have been personally involved in all these questions for about 40 years. My own membership of such groups as HOGG and Christians in Science, and transatlantic visits, including to an Intelligent Design conference in Wisconsin in 2000, have moulded my opinions. For those who wish to know, my theological orientation is similar to that of Polkinghorne and McGrath.

Notes

¹I shall use the term Protestant for all churches that stem from the Reformation, although many Anglicans prefer not to consider themselves as Protestant.

²By evangelical I mean the growing part of the church that has roots in the German Pietism, the Wesleys and New Englanders such as Jonathan Edwards in the 18th century. Since 1730 evangelicals have formed a significant grouping among US and British Christians and are now worldwide (see Roberts 2008). Evangelical means a particular conservative and enthusiastic form of Protestantism. Bebbington summed up their beliefs as

conversionism (the importance of religious conversion), activism (the encouragement of an enthusiastic and active faith), biblicism (the emphasis on the absolute authority of the Bible) and crucicentrism (the heart of evangelical belief: the atoning death of Christ on the cross) (Bebbington 1989, pp. 2–17). However, in Germany ‘evangelisch’ simply means Protestant in the widest sense, and ‘evangelikal’ implies biblical literalism (i.e. fundamentalism to the English speaker).

³This is not based on a ‘scientific’ survey, but on my involvement in the Church of England for over thirty years. In the early 70s I never met a YEC priest, but now in most dioceses there are a small minority and my figure is based on those whom I know and a sampling by show of hands by a colleague for Evangelical clergy. The crucial fact is that it is now a small but significant presence. The significance of this becomes clearer from 1855 to 1970 there were virtually no YEC clergy in the Church of England.

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