

Alongside Darwin Day, in 2004 in the United States, the American biologist Michael Zimmerman initiated *The Clergy Letter Project* which encourages clergy and congregations to participate in Evolution Weekend. *The Clergy Letter Project* suggests that the Sunday nearest to 12th February should be Evolution Sunday.

Among other things, the *Project* states:

Religious people from many diverse faith traditions and locations around the world understand that evolution is quite simply sound science; and for them, it does not in any way threaten, demean, or diminish their faith in God. In fact, for many, the wonders of science often Enhance and deepen their awe and gratitude towards God.

Part of the motivation for *The Clergy Letter Project* was to counter creationism, which is a religious belief that God created the universe and everything in it by specific and individual divine acts. While creationism is popular in parts of the United States, in my twenty-four years experience of full-time ministry I have met only one creationist in Scotland. Is there a case for the Church of Scotland to adopt today as Evolution Sunday? On the one hand it may be a bit twee; on the other hand, it would give every parish church an excuse to reflect on and think about science, scientific discoveries and the nature of the universe. Such a Sunday might also go some way to

counter the erroneous myth that science and religion are mutually exclusive.

Science and religion are not at odds with each other. None of us would challenge the theory of the 'Big Bang', the scientific view that the entire cosmos, including finite time, came into existence with a big bang. The theory of the expanding universe was first proposed in 1927 by the Belgian priest and astronomer Georges Lemaître. The first insights into the genetic mechanisms driving evolution, arguably a discovery as important as that of Darwin himself, came from the experiments with pea plants carried out by the Moravian scientist and Augustinian friar, Gregor Mendel. Known as the 'father of modern genetics', Fr Mendel had no difficulty in writing of the law of genetic inheritance and rising each day at 5am to offer praise to the Maker of heaven and earth. A Belgian priest, an Augustinian friar and in the late 20th century, Francis Collins, an evangelical Christian, was the project director of the international Human Genome Project. The project was set up with the aim of reading the entire sequence of three billion DNA pairs that make up the genetic blueprint of one person.

One story which keeps coming back to haunt the Church is that of the amateur astronomer Galileo. We know that in 1623 the Pope, Urban VIII, demanded that Galileo recant. Galileo was following the theory of Copernicus, the first Christian theorist explicitly to argue for a heliocentric cosmos. The competing scientific view was that the planets did indeed revolve around the sun but that the sun revolved around the earth. There was no religious trump card being played at this early stage: it was astronomers wrestling with mathematics and their observations of the stars and planets.

In 1613, Galileo's most important supporter was Cardinal Maffeo Barberini. What is significant about that is that, ten years later, Barberini had become Pope Urban VIII. Why would Galileo's most important supporter later demand that Galileo recant? The Pope was under enormous pressure because of the Protestant Reformation, and that took its toll. But, crucially, the scientific community which existed entirely within the Church, was not of one mind of these differing theories. Can you imagine scientists taking different views on a new, emerging theory?!

The Pope invited Galileo to write a book on the two chief world systems asking only that the Copernican theory be described as yet unproven. History records that Galileo was a frequently unpleasant and dominating man. Galileo published the book as a dialogue and included the statement which Urban had requested, but the statement was put on the lips of a clown, an obtuse character called Simplicio. The Pope was right: the Copernican theory was unproven but he was in no mood to tolerate Galileo's insolence. A better pope might have stepped back from the insult, but Urban did not. The story of Galileo is not a battle between science and religion.

Atheists are as prone to fundamentalism as people of faith. The American philosopher, Daniel Dennett says, 'At least in the eyes of academics science has won and religion has lost. Darwin's idea has banished the Book of Genesis to the limbo of quaint mythology.' The Harvard zoologist, Ernst Mayr describes neo-Darwinian science as the 'ultimate explanation of life'. More worrying still, the evolutionary embryologist, the late Gavin de Beer, writing in the *Encyclopaedia Britannica*, said:

Darwin did two things: He showed that evolution was a fact contradicting scriptural legends of creation and that its cause, natural selection, was automatic with no room

for divine guidance or design.

Educational standards are definitely falling!

In the late 19th century, post-Darwin, many clergy in the churches accepted Darwin's theory of natural selection and evolution. If there was friction with people of faith, it occurred when Christians insisted on a literal interpretation of Scripture. The preacher and mystic, George Matheson, was one of many who wrote on the subject.

Matheson always looked at Scripture with imagination. In Genesis 1, we read, "And God said, 'Let the earth bring forth living creatures of every kind...'" Matheson said that the ancients understood that the mechanism for creating new life is the earth itself.

In contrast to a literal interpretation of the so-called creation of Eve, Matheson reads Genesis 1 and 2 together. In Genesis 2, it is said that God took a rib from Adam and with that rib created Eve.

Traditionally understood, it is a good patriarchal text. However, with the eye of imagination, Matheson asked, 'Where does this story occur?' He said, 'Adam is asleep; this is a dream.' Matheson's point is not that this is the story of Eve's creation, for she has always been with him. In Genesis 1, they were created together. Rather, it is an

account of their marriage: it is the moment that Adam 'sees' her, as one with him, part of who he is; flesh of his flesh; his soul mate, as he is to her.

Those who argue against the existence of God or the necessity of God often do so on the grounds that the material universe, through the process of evolution, accounts for itself; the world of matter accounts for everything. The problem with this theory is consciousness: the theory of matter does not account for consciousness. The atheist Thomas Hagel, who does not want God to exist, has said that conscious organisms are among the most striking occupants of this universe; and the materialist understanding of biology does not account for it.

Do the physical sciences account for beauty, love, morality or selflessness? Do they account for the study of mathematics?

Evolution does not account for itself. What is a 'Big Bang'? Billions of people across the planet speak of the Divine, of the spiritual, of the Sacred, the Holy: it is not a phenomenon that can easily be dismissed.

I shall never forget the lecture given in this church by the physicist Professor Wilson Poon. Wilson holds the Chair of Natural Philosophy at Edinburgh University. As the lecture drew to a close, Wilson left the lectern, sat at the piano and played the second movement of Beethoven's Sonata Pathetique. It was exquisite. He returned to the lectern and said this:

I can give you a pretty exhaustive account of the physics of what has just happened, in terms of waves and resonances and what not. Douglas Blackwood [Professor of Psychiatric Genetics] and his colleagues can give you a neurobiological account of what happens when we all responded in our different ways to that piece of music....But I have not yet met anyone who, in the face of music like that, is able to look me in the face and say that such scientific accounts are exhaustive, and nothing else needs to be said. I think many physicists are avid amateur musicians precisely because deep down, we know we need regular reminders that science does not have the last word. Beethoven does!

Amen.