

Darwin's Impact on the Relation between Science and Religion

by Peter van der Burgt

Few topics are more controversial in Christian circles than Darwin's theory of evolution. Over 150 years have passed since the publication of Darwin's book *On the Origin of Species*, and the debates about the religious and philosophical implications of the theory of evolution are still raging on.

For many scientists with an atheistic or agnostic worldview, the scientific evidence collected in support of evolution has weighted the scales in favour of evolution, leaving no room for a God. For others Darwin has been the motivation to seek scientific and theological arguments to dismiss evolution. The implicit assumption behind all these efforts is that science and religion are mutually incompatible and are locked in a battle to the death.

Many have commented that this warfare model of the relation between science and religion is invalid, and in particular the Irish scientist and Nobel Laureate Ernest Walton has stated:

"One way to learn the mind of the Creator is to study His creation. We must pay God the compliment of studying His work of art and this should apply to all realms of human thought. A refusal to use our intelligence honestly is an act of contempt for Him who gave us that intelligence ..."

(Quoted from p. 58 of V. J. McBrierty: Ernest Thomas Sinton Walton, *The Irish Scientist, 1903-1995*, Trinity College Dublin Press 2003). Ernest Walton was a professor of physics at Trinity College, and had a long and distinguished career, which culminated in the award jointly with John Cockroft of the 1951 Nobel Prize in Physics. Ernest Walton was also a Christian believer and a long-time member of the Methodist Church. Following the award of the Nobel Prize, he spoke on science and religion to audiences in Ireland, the United States, and Sweden.

The 2011 Walton Lecture on Science and Religion

Walton's statement is an important reminder that we need to be careful to take both science and theology seriously. In order to build bridges between these two realms of knowledge, Christians in Science Ireland has established a new lecture series, called the E. T. S. Walton Lectures on Science and Religion. The first speaker in this series was Rev. Prof. David Wilkinson from the Department of Theology and Religion at Durham University.

Professor Wilkinson has degrees in both astrophysics and theology, and has written extensively about science and Christianity. Under the title "Darwin's Impact on the Relation between Science and Religion", Wilkinson gave two lectures on 24 November 2011 to audiences at the University Road Moravian Church in Belfast and at Trinity College Dublin. The lecture at Trinity College was organised in collaboration with the TCD Christian Union.

A brief overview is given here of the main points Wilkinson made in his lecture. Audio files of the lecture in Dublin and the question and answer session can be found at <http://www.cis.org.uk/ireland/walton/>.

The legacy of Darwin

The legacy of Darwin is hotly debated in Western culture at the moment, and is used by many different groups in many different ways. Many would claim that the legacy of Darwin is inevitable atheism. Many have used science to argue against religion, and one of the most serious criticisms has been given by Richard Dawkins in his book *The God Delusion*. Some 21 books have been written by Christians in response to this book.

Others see Darwin as a symbol of Western secularism and should be resisted at all cost. Six-Day Creationism sees Darwinism as a direct competitor for the picture in Genesis 1 that God created the universe, leading to atheism and the collapse of moral standards. Intelligent Design claims that Darwinism both scientifically and philosophically is overrated, and only an intervening intelligent Designer can fill the gaps.

In his lecture Wilkinson explored whether the argument that the God delusion is the inevitable consequence of Darwin is actually the case. The legacy of Darwin is very complicated. Even at the time of the publication of the *Origin of Species*, the response to Darwin by various Christians and others was very complex. In the discussion of science and religion it is very easy to oversimplify history in order to make your point or to exercise your prejudice. Notably, Oxford theologian Aubrey Moore, in the late 19th century, wrote that under the guise of a foe Darwin did the work of a friend.

What is the impact of Darwin on the relationship of science and religion, and what might Christian faith learn from the legacy of Darwin? Wilkinson discussed five points of impact, stressing that each of these points has a question mark after it, to highlight the complexities in the evaluation of Darwin's legacy.

A new view of the natural world ?

Darwin was not the first to write about the development of life, and in the 19th century others such as de Buffon, Wallace and Lamarck wrote about the possibility of natural modifications of species over time.

Notably, Darwin was not primarily attacked by the religious community. A number of scientific objections were raised, although some of these objections may have been for theological reasons [1]. Scientific objections continue to be raised, in particular from within Six-Day Creationism and Intelligent Design, but the vast majority of the scientific community have rejected these objections. The evidence for evolution is very strong and the theory of evolution continues to be improved.

Christian palaeontologist Simon Conway Morris has argued for convergence in evolution: organisms not closely related independently evolve similar traits as a result of having to adapt to similar ecological circumstances [2]. His view is that God may be working through the randomness of evolution in achieving His purposes. On the other hand, for Richard Dawkins and others the evolutionary picture has become a justification for believing that there is no purpose in the universe, leading to naturalism.

If we take Walton's approach to the relationship between science and religion, what might we say about this new view of the natural world? Wilkinson here highlighted three key aspects following from Walton's approach.

If science is a gift from God, we need to take science seriously. It is well documented in the history of science that the intervention of the Christian worldview gave an impetus to the growth of modern science. Whereas the ancient Greeks attempted to explain the universe in terms of logic and beauty, Christians argued that because God had created freely, He was not bound by human logic, and therefore humans had to look at the universe and take scientific observation seriously.

If we seriously think that Darwin gives us some insight into the nature of the natural world, then we are faced with a very different picture of design in the universe. In the 19th century many supported the view initiated by William Paley, who saw the universe as a clockwork mechanism, perfectly designed by God, but in which God had no space to intervene. Darwinian evolution pointed to a very different universe, in which the interaction of chance and necessity, or randomness and law, is very important for its fruitfulness.

A sentiment following from Walton's approach, and also expressed by Darwin and by Dawkins is the sense of awe and extravagance of creation. For the Christian the challenge of this new view of the world is whether we can see the greatness of God in the extravagance of the universe and of life on Earth, a sentiment also expressed in Psalm 19.

A new view of Genesis ?

A simplistic but popular view of the 19th century is that most Christians believed in a 6000 year old universe, and that the first chapter of Genesis 1 could be read as a scientific textbook. Darwin destroyed that myth and Christians either became atheists or retreated in Christian fundamentalism.

The history of the interpretation of Genesis 1 is rich and varied within the Christian church and already at the time of the church fathers Augustin and Gregory of Nyssa pointed out that one cannot read Genesis 1 as a literal scientific text, because night and day are spoken of before the creation of the Sun and the Moon.

It is important to note that Scientific Creationism is a relatively recent phenomenon, with its roots in the 1940s. In the 19th century many other interpretations of Genesis were being discussed by Christians who took the authority of the Bible seriously. These included the gap theory, the day-age theory, and the days of revelation interpretation.

When we are reading Genesis, it is important to ask the question that Augustin asked: what kind of literature is this? The primary trust of Genesis is to establish who is God, and to present theology, liturgy and history woven together in a beautiful tapestry. Darwin's legacy is to help us in a small way towards reclaiming the depth and the breath of the Genesis account.

A new view of the design argument ?

A very well known argument of design has been the watchmaker argument by William Paley. In 1802 Paley drew an analogy between the design found in a watch and the design found in the natural world, and used this as a teleological argument for the existence of God. This led to the development of natural theology and many publications, including the Bridgewater Treatises, were devoted to support for the design argument.

Philosophers such as Emmanuel Kant and David Hume pointed out weaknesses in the design argument. With Darwin's statement that biological organisms were the result of a long process of adaptation and natural selection, leading to the evolution of new species, one of Hume's criticisms became real. Darwin's theory of evolution provided an alternative explanation for design found in biological organisms.

Wilkinson stated here that the Christianity is a faith built on the concept that God has revealed Himself to us, rather than based on proofs of the existence of God. God has revealed Himself in the life, death and resurrection of Jesus of Nazareth. He has become a human being and walked amongst us. This explains why many Christians prominent in society in the 19th century had no difficulty with accepting evolution [1].

Here is an important legacy for the Christian faith. The design argument is becoming popular again. In astronomy, the anthropic principle states that a number of fundamental constants must have been very finely tuned. The values of the fundamental constants are such that, if they differed even slightly from their actual values, life as it is presently understood could not possibly have arisen in the universe. However, the hypothesis of the multiverse provides an alternative hypothesis to the statement that the anthropic principle provides proof for the existence of God. The legacy of Darwin here is to caution us to be careful with trying to prove the existence of God based on design.

Despite these difficulties with the design argument, there are many aspects about the natural world that may be pointers towards the existence of God. Paul Davies [3] and others have no religious axe to grind, but they say that the nature of the universe points towards a deeper meaning and purpose.

A new view of what it means to be human ?

A major issue raised by Darwin's theory of evolution is whether it is destroying the uniqueness of human beings. If human beings are simply part of the evolutionary picture, could human beings be seen differently in any way from the animal kingdom? Wilkinson thinks that what Darwin did for us was to push us back to the Bible, and he pointed out that there are three things in the first chapters of Genesis that highlight our difference.

The gift of relationship between humans mutually and between humans and God is symbolised by God walking in the Garden of Eden with Adam and Eve. The gift of responsibility is God giving Adam and Eve stewardship of the created world. The gift of creativity is given to Adam and Eve as they are made in the image of God.

Wilkinson noted that there is nothing in Scripture about the physiological make-up of human beings that makes us different from the rest of creation. Rather, what makes us different is God's free gifts of relationship, responsibility, and creativity. It is for this reason that many Christian scientists [4] think it is quite possible that evolution is the way that humans developed physically, but that at some point God intervened by giving these free gifts to the first human beings.

A new view of the relationship of science and religion ?

Up to the middle of the 19th century, the church had a strong influence in the progress of

science, and Thomas Henry Huxley saw the potential in Darwin's theory not just for scientific advancement, but for political advancement of science. Huxley's famous 1860 debate with Samuel Wilberforce was a key moment in the wider acceptance of evolution. In the years following, Huxley and others attempted to move science into its own political realm by promoting the conflict hypothesis that science and religion are and always have been in conflict with one another.

This conflict model has been extremely successful. Galileo and Darwin, amongst others, have been interpreted in terms of a conflict between the new findings of science and the conservatism of religious beliefs. Nowadays, the conflict model continues to be promoted by Richard Dawkins and a number of other scientists, but also by many Christians.

Wilkinson argued that the conflict model oversimplifies the relationship between science and religion. Whereas science can provide us with a description of processes in terms of natural law, cause and effect, and in that sense is true and necessary, it is unable to provide any appreciation in terms of value or purpose. The conflict model does not do justice to the complexity of the history of science or the reality around us. There are many scientists, including well-known Christian geneticist Francis Collins [5], who argue for a deeper view of science and of theology. Science is not the end of the story.

Wilkinson ended his lecture by bringing us back to Walton's statement (quoted above). We need to use our intelligence honestly and we need to use the data of science as a gift from God. This is not to reject our theological commitments, but to see how natural science and Christian theology can talk together in honest dialogue.

References

Although the references given here are aimed at a wider audience, most require some background in science to fully appreciate them.

- [1] David Livingstone: Darwin's Forgotten Defenders (1987, Wm. B. Eerdmans and Scottish Academic Press).
- [2] Simon Conway Morris: Life's Solution: Inevitable Humans in a Lonely Universe (2003, Cambridge University Press).
- [3] Paul Davies: The Goldilocks Enigma: Why is the Universe just Right for Life? (2006, Penguin).
- [4] M. A. Jeeves and R. J. Berry: Science, Life and Christian Belief, A Survey and Assessment (1988, Apollos).
- [5] Francis Collins: The Language of God: A Scientist Presents Evidence for Belief (2006, Free Press).