

Dawkins on Darwin

If you have watched the Channel 4 programmes by Richard Dawkins on a Darwin you will have had an apparent conflict between evolution and Christian faith thrust down your throats!

I have to say that while there are many things that I have to agree with Dawkins - evolution being one - as the recently retired professor of the Public Understanding of Science in Oxford he is one of the worst examples of the scientific method! His selectivity in his interviews and the way in which his militant atheist bias dominated his whole approach is completely unscientific.

Two examples:

a) The Human Genome Project gives the strongest evidence that we have for the reliability of the theory of evolution. The Human Genome - the sequence of genetic information built into our DNA - was unravelled by two groups: one a commercial group led by Craig Venter and an international group funded by the National Institutes of Health in the States led by Francis Collins. Dawkins interviewed only Craig Venter in spite of the fact that he tried to patent the human genome and capitalise on the research commercially. The other group led by Francis Collins argued that the benefits of the Human Genome Research should be available to all. Why then didn't Dawkins interview Francis Collins? Because he is a Christian and has written a superb book called the *Language of God*. That interview would have undermined Dawkins' thesis completely!

b) The second example is that the nearest Dawkins got to admitting that there was another side to evolution was when he admitted that some Christians tried as he put it "to have their cake and eat it" - to reconcile evolution and Christian faith. Now he could have interviewed half a dozen of his Oxford scientific colleagues who have written extensively on this. Instead, he interviewed the Archbishop of Canterbury, who though a lovely man and a great writer, is well known for his ability in interviews to be completely obscure!

But Dawkins' chief error is a very common one: a misunderstanding of the **nature of knowledge** and in particular of the relationship between scientific and other knowledge. I want to argue that evolution and the account of the creation we have in Genesis are **both true** and we need **both** to get a complete picture.

But you will say that they appear to give totally different accounts of the beginnings of the universe. How can we reconcile them?

i) Let's try an experiment. Hold out your right arm and with one finger point at my nose. Hold your arm still and close one eye. Now open that eye and close the other. You'll notice that your finger seen by one eye will be to the left of my nose and with the other to the right. Now which account is the correct one? Is it the left eye or the right eye? They are contradictory accounts. One has to be wrong. Which is it? The

answer, of course, is that they are **both** correct and that the contradiction can be resolved by noting that they are views taken from different viewpoints or standpoints. So it is with knowledge. You can have two or more apparently contradictory accounts of something, but they can be reconciled if they are taken from different standpoints or viewpoints. In the case of our eyes, our brains are wired so that the discrepancies between the eyes are used to calculate to produce a third dimension of depth. And so it is with knowledge: different apparently contradictory views, when properly reconciled by their viewpoints, can give us newer dimensions of meaning.

ii) Let's try another analogy: consider a painting. If you ask a physicist for his or her description of the painting you will get a list of the wavelengths of light reflected and the patterns of luminosities etc. Ask a chemist, and you'll get the chemical composition of the pigments and of the canvas, etc. So each of these descriptions can be complete in their terms and yet most of us would say that they both completely miss the point of the painting. For those of us viewing the Painting it is the **meaning**, the impression that it gives, which is the main message. Of course, if you come to restore the painting, then you have to take more notice of the chemist's account!

iii) Another analogy - if you work at BT - is of a general purpose computer. You can describe the activity of the computer solving a problem in two completely different ways: using the language of the Electrical Engineer in terms of voltages and states of the hardware - totally complete with no gaps in the description - or you can describe it again completely in the software engineers language in terms of solving equations or whatever. You won't find the equations in the electrical description and you won't find electrons mentioned in the software description. Each of them can be complete in their own terms; but a complete description of the computer's activity requires both. We tend to use the software description until the blessed thing goes wrong!

What all these analogies try to show is that when we try to give an account of something, we can have more than one what we call **complementary** accounts of it - each account can be exhaustive or complete its own terms but still leave room for other accounts. Each account depends on the particular standpoint: left eye, right eye, physicist, chemist, software engineer, electrical engineer etc. So knowledge isn't serial: in other words if you have a complete account from one source that doesn't mean that there is no room for other accounts. Knowledge is not **serial** but is more like **parallel**: you can have several accounts existing in layers on top of each other, rather than lying side by side.

So how do we reconcile evolution and Genesis?

The evidence for evolution is now so overwhelming that it would seriously damage our credibility if we try to resolve the conflict between Genesis and evolution by denying that evolution occurred. The problem lies in our interpretation of Genesis. The problem arises if we try to take Genesis literally.

Even a simple reading of the early chapters of Genesis show that we cannot take the account of God's creation of the Universe **literally**.

In the first place, there are two accounts in Genesis 1 and 2 with different sequences of events. Secondly, the "Days" mentioned in Genesis 1 cannot be 24 hour days because there is no sun until verse 14! **The language is clearly not scientific**. Let's face it: if it were, nobody would be able to understand it and it would have been subject to revision every decade or so over the past 2000 years! It does however indicate that creation took place in stages and that humans came along later in time than the rest. But like all parts of the Bible, the writing has to be taken not **literally** but **seriously**: it has to be interpreted in its context whether it is poetry, history, allegory, parable, etc. What sort of account does it give? Its whole thrust is on God's **purposes** in creation; the answer to the question **why?** rather than the question **how?**

Summing it all up, what I am trying to argue is that the Genesis account - with its emphasis on what was God's purpose in creation and the scientific account - with its emphasis on how the world came into being: each can both be true. The Bible is not a scientific textbook - it is as in 2 Tim 3.16:- **All Scripture is God-breathed and is useful for teaching, rebuking, correcting and training in righteousness**. Science, on the other hand, is materialistic and therefore any notion of God and his purposes cannot be part of the scientific account.

This was the position of the founders of the Royal Society who were puritan Christians. They held that their science - the **Book of God's works** - needed to be held alongside the Bible - the Book of God's thoughts and purposes. Scientists like **Galileo, Kepler, Pascal, Hooke, Boyle, Newton, Mendel, Pasteur, Kelvin, Faraday, Maxwell** rejoiced at being part of God's revelation unravelling some of the unknowns. "Thinking God's thoughts after Him". The first head of the Cavendish Laboratory for experimental Physics in Cambridge was James Clerk Maxwell. He had put up over the front door what has been called the research workers text: Ps 111.2: **"Great are the works of the Lord; sought out of all those who delight in them"**. I was delighted to see that the words had been retained over the front door of the New Cavendish on the Cambridge west site. Throughout my career as a neuroscientist, that has been my text.

I've left out a great deal that I hope we might talk about in discussion and particularly "creationism" and "intelligent design" as well as "faith"?

Interpretation of scripture: everyday language; human observer; not always literally
- use context; useful...for training in righteousness (2 Tim 3.16)

Meaning of Gen1 & 2: one true God (cf polytheism); creates out of nothing, and in stages; made for us; humans special; all good in God's plan, though involving light and dark.

Theistic Evolution: Its properties seem to be precisely tuned for life (anthropic principle); Universe out of nothing: 14 billion Years ago; earth: 5 billion; life: 4 billion; mammals: 0.1 billion; humans: <0.4 million; Evolution accounts for variety of life; Humans part of this process; Humans are unique; Biggest scientific problem is how did life start in the first place? Concept of information - the *logos*? (John 1.1)

1960 + growth of biblical literalism in USA:-

"Creationism": Genesis 1 and 2 provide us with an alternative scientific account to evolution, but admit it may have taken longer than 6 days; "Young Earth Creationism": strict 6 day model of creation. Therefore earth < 10,000 years old. Held by 45% in USA!

"Intelligent Design": recent attempt at (1), invoking unlikelihood of organs like the eye to have evolved "by chance"; *irreducible complexity* of organelles like bacterial flagellum. Basically, anti-evolution.

All being undermined by recent findings (fossils, DNA eg); therefore in danger of the same fate as "God of the Gaps" arguments in the past; Unnecessary given complementarity!

Further Reading

F S Collins (2006). *The language of God: A Scientist Presents Evidence for Belief*. Free Press/Pocket Books

E Lucas (2005). *Can we believe Genesis Today?: The Bible and the questions of science*. IVP

D. Alexander (2008). *Creation or Evolution: Do We Have to Choose?* Monarch Books.