

small variations occur in the DNA. In the second, these changes lead to an organism better or worse adapted to its environment. By 'natural selection', the better-adapted organisms are more likely to pass on their genes to subsequent generations. This in turn leads to gradual change. If an inter-breeding population becomes isolated, then speciation may occur after a long period of time due to the accumulating load of DNA variation.

Evolution considered overall is not a chance process but a tightly constrained series of steps leading to outcomes that are to some extent predictable. It is a process consistent with the Christian idea of a God who has intentions and purposes for the world, including us. Of course the Bible does not teach evolution any more than it teaches any scientific theory – that is not its role. The Bible explains the point of existence. Evolution explains the biology of how we came into existence in God's world.

Does evolution present a theological challenge to Christians on some issues? Certainly. What about Adam and Eve? What about death before the Fall? What about the role of death and suffering in the evolutionary process? These and other issues are addressed in greater detail in the recommended reading list.



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Further information

www.cis.org.uk – Christians in Science

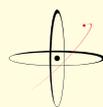
www.faraday-institute.org – The Faraday Institute for Science and Religion

www.biologos.org – BioLogos

Suggested reading

Alexander, Denis. *Creation or Evolution – Do We Have to Choose?* Oxford: Monarch, 2008

Lucas, Ernest. *Can We Believe Genesis Today?* Leicester: IVP, 2005



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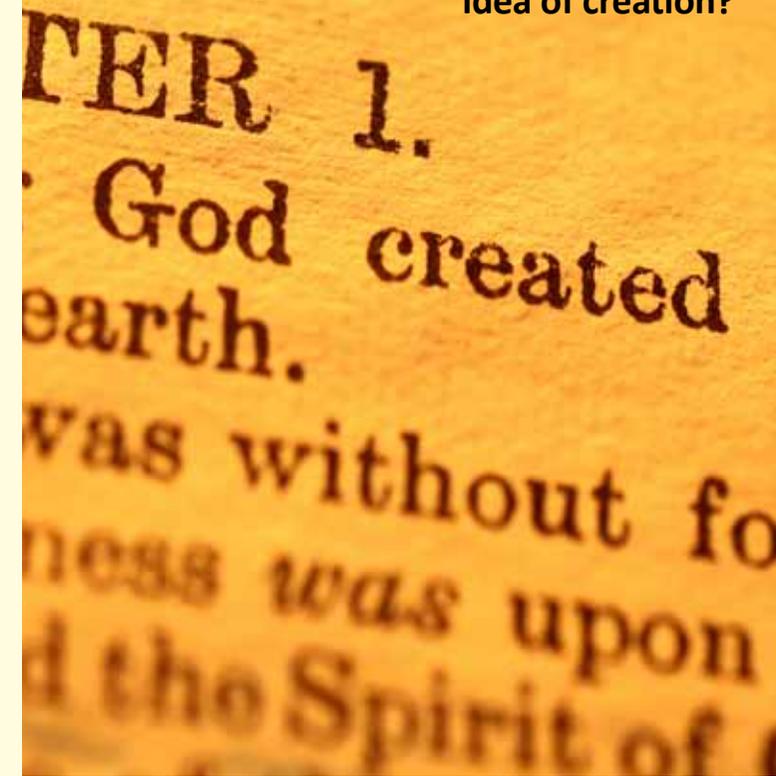


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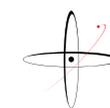
addressing questions of science and faith

Evolution

How does evolution fit with the idea of creation?



"All I have seen of it awes me"



CHRISTIANS · IN · SCIENCE

Thinking about... Evolution

Dr Denis Alexander

On November 18th, 1859, the Revd Charles Kingsley, church vicar and author, wrote a letter to Charles Darwin. It was six days before the publication of Darwin's famous book *On the Origin of Species*. Kingsley was thanking Darwin for his kind gift of an advance copy and writes that 'All I have seen of it awes me', commenting that it is 'just as noble a conception of Deity, to believe that He created primal forms capable of self-development...as to believe that He required a fresh act of intervention to supply the lacunas [gaps] which He Himself had made'. Darwin was impressed and quoted these lines in the second edition of the *Origin*. So this very earliest written response to the theory of evolution is very positive and comes from a Christian. In fact, ever since 1859 most Christians have been equally happy to incorporate evolution within their biblical understanding of creation.

Why have so many Christians accepted evolution since 1859?

How come? A clue comes from the sketch of a tree that Darwin made in one of his early note-books. He was the first to realise that all living things have a history; they are all connected up in one great tree of life. Evolution provides the 'big idea' as to how the tree develops. Just as in linguistics English and Dutch have a 'last common ancestor' in Old Saxon, so in biology each living organism has a last common ancestor, represented in the tree of life at the fork-points of its twigs and branches.

What is evolution?

Christians have always believed that God is providentially over-ruling the affairs of humankind in general, and of His people in particular, so that history ultimately fulfils his purpose: 'But now, this is what the Lord says — he who created [bara] you, O Jacob, he who formed [yatsar] you, O Israel: "Fear not, for I have redeemed you; I have summoned you by name; you are mine."' (Isaiah 43:1). God speaks here of his creative work in forming the people of Israel over many centuries.

Equally God's creative work is expressed through the normal process of physical development of the human individual in the womb. "This is what the LORD says — your Redeemer, who formed [yatsar] you in the womb: I am the LORD, who has made all things..." (Isaiah 44:24). We also see God's sovereign creative power through the

work of His Spirit in our own lives, past, present and future, as we put our trust in Christ for salvation, "For we are God's workmanship, created in Christ Jesus to do good works, which God prepared in advance for us to do" (Eph. 2:10).

The biblical doctrine of creation helps us to see why so many Christians since 1859 have been content to baptise 'Darwin's tree' into their traditional understanding of how God works through all the material processes of the world. For "The earth is the Lord's, and everything in it..."



(Psalm 24:1). Those who believe that God works out His intentions and purposes in creation through the evolutionary process are known as 'theistic evolutionists' or 'evolutionary creationists'.

Today the theory of evolution provides the framework within which all biological and medical research is carried out. The theory continues to render coherent vast amounts of data coming from different branches of science, weaving them together to provide a convincing story. These data involve anatomy, fossils, genetics, geology, ecology, geography, and many other sciences. Evolutionary theory is like a map that joins up facts about the world that otherwise wouldn't make any sense.

We all look slightly different from each other because of variations in the sequence of 'genetic letters' that make up our DNA. Such differences, albeit on a larger scale, are why different species of plant or animal exist. Evolution can best be understood by thinking of a population of inter-breeding individuals within the same species. Two key steps are involved. In the first,

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