

THE THEORY OF EVOLUTION



Charles Darwin

The Big Bang theory has provided a scientific explanation for the origin of the universe without a need to believe to believe that God is responsible. Similarly, various theories have been proposed to explain how new species develop. Darwin's observations of variation in the beaks of finches led to his theory of evolution.

Charles Darwin rocked the Christian world in 1859 when he published his book called **On the Origin of the Species by means of Natural Selection.**

He worked as a naturalist on HMS Beagle and spent a long time studying the animals and birds on the **Galapagos Islands** which are a thousand miles off the coast of South America. He noticed major differences in some of the animals across the different islands, particularly in relation to a type of bird called finches. **Some of the finches had thin, sharp beaks whereas those on other island had short, fat beaks.** The size and shape of their beaks were best suited to the food source that was available to them on each island.

He concluded that these variations happened naturally by chance when a species produced offspring. However, in some cases **the variation was very useful and made it more likely that these animals would survive and breed, producing the next generation.** So, over time the useful variation was passed down and became more common, which eventually led to different variations of animal and eventually to whole new species. **This process is referred to as natural selection or 'survival of the fittest'.**

Darwin proposed that this process had repeated itself many times over a long period of time, leading to completely new species of animals emerging. This process is known as evolution. This was highly controversial at the time; according to this theory one species is descended from another species from which it is different. If we are to work backwards, **human beings have descended from ape-like species** which itself came from a species of mammal, and these mammals descended from a reptile who had come from a fish until **eventually all life can be traced back to simple bacterium.**

The theory of evolution is **supported by fossil records** which reveal that a large number of species have not survived and also that earlier forms of animals have survived by in a mutated form (for example, elephants are closely related to the extinct woolly mammoth). DNA research also seems to suggest that there are very close similarities between many species, which further reinforces evolutionary theory.

Catholics believe...

Our bodies may have evolved but our souls stay the same!

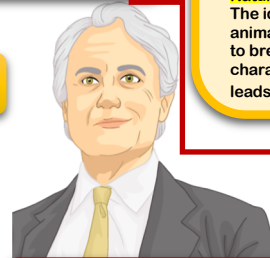
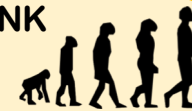


WORD BANK

Atheism
Believing there is no God

Humanism
A belief system based on rational and scientific thought and the importance of humans rather than a supernatural God/s.

Natural Selection (Survival of the Fittest)
The idea that certain characteristics help animals survive, so that animals with that characteristic are more likely to live long enough to breed and pass that characteristic on. This leads to a certain characteristic becoming more common over time and eventually leads to new species developing.



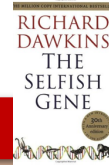
Richard Dawkins

Professor Richard Dawkins is a British scientist who is referred to as **'the most famous atheist in the world'**. He has been outspoken about his support for Darwin's theory of evolution, **atheism, humanism** and is in opposition to religion. **Dawkins believes that the theory of evolution and natural selection explain the origins of the universe much better than the idea of a creator God.** He famously said that you could not be sane and well-educated and disbelieve the theory of evolution.

Dawkins is well known for the work that he has done to build on Darwin's theory of natural selection. In his book, **The Selfish Gene (1976)**, he argues that **it is the individual genes within organisms that adapt and evolve, not organisms themselves.** Dawkins argues that each living organism's body is just a survival machine for its genes and does not serve any other purpose. He described life as just: **'bytes and bytes and bytes of digital information'**.

Therefore, humans are no more than carriers of DNA whereby over time, good genes survive and bad genes die out. Dawkins, therefore, rejects:

- Any notion of a creator God who has a plan for the universe
- The concept of an immortal soul given by God



Is evolution compatible with Catholic beliefs?

For many, Darwin's and Dawkins' views are challenging because they appear to conflict with the Catholic idea that human beings have a special role in God's creation. Dawkins argues that evolution means that:

- The creation of humans was just a lucky genetic mutation
- Humans are merely another slightly more advanced form of animals
- Humans have no greater importance on this earth than other animals

However, Catholics accept the theory of evolution but disagree with the idea that it means that humans aren't special and all life developed by chance. Pope St John Paul II restated the view of Pope Pius XII, that the Church saw no conflict between evolution and the teachings of the Christian faith. He went on to encourage theologians and scholars of Scripture to be informed by scientific research in their ongoing work.

The Catholic Church does not expect Catholics to believe that humans were created on the sixth day looking exactly as they do today. What is important to the Catholic Church is not whether God chose to create through a Big Bang and a process of evolution over many millions of years, but that in Genesis, God created with purpose and so everything that exists is part of his loving plan. This is what is important for Christians to understand; not HOW it happened but WHY it happened.

'If methodical investigation within every branch of learning is carried out in a genuinely scientific manner and in accord with moral norms, it never truly conflicts with faith, for earthly matters and the concerns of faith derive from the same God.' (Gaudium et Spes 36)

Pope St John Paul II in his Message to the Pontifical Academy of Sciences: On Evolution (22 October 1996)

'...In his encyclical Humani Generis (1950), my predecessor Pius XII has already affirmed that there is no conflict between evolution and the doctrine of faith regarding man and his vocation.'

Source of Wisdom and Authority



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What do other Christians believe about the Big Bang theory and evolution?

Whereas the Catholic Church and other Liberal Christians support these theories, some Christian denominations, most notably some Fundamentalist and Evangelical Christians, see them as an attack on their beliefs. These Christians interpret Scripture literally and believe that the Bible has come directly from God and that every word is historically true and accurate. Any scientific account of creation that conflicts with the Genesis account is, therefore, considered wrong. Their views would include:

- The actions of the creator God brought about all life
 - A great variety of life forms suddenly appeared on earth at the time of creation
 - Plant and animal species were created with their own characteristics complete at the time of creation
 - Human life was created last, with characteristics that were complete at the time of creation
- The last two points, therefore, rule out the idea of evolution.

Knowledge Check

- Define the key concept: evolution
- Who first discovered the theory of evolution and in which book is it first forward?
- How did he discover the theory?
- What is natural selection?
- What is Richard Dawkins known as?
- What is the Catholic Christian view on evolution?
- What does Gaudium et Spes 36 say about evolution?
- How do other Christians, such as fundamentalists, interpret the theory of evolution?

Choose a Task

- Create a detailed mind-map (try to make this visual)
- Create a multiple-choice quiz (aim for at least 10 questions)
- Create a poster/leaflet

CHALLENGE!

Turn over the mat and try to complete your task without looking at the information. Then refer back to the task mat to see what you have missed/could have included.

Exam Question

- Describe the scientific theory of evolution [5]
- Explain two different Christian attitudes towards Evolution [8]