

## Parallel Thinking Part 23: Evolution II

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When Charles Darwin (d. 1882) published *On the Origin of Species* in 1859, he articulated the evidence which implied that life emerged on Earth through natural processes operating over millions of years. By

the 1870s the scientific community and majority of the public had accepted Darwinian evolution as fact. Nevertheless, the specifics of how the evolutionary development of the species happened was still unclear.

The first clue to the process of evolutionary development was noticed by the Czech abbot and horticulturalist Gregor Mendel (d. 1884) who noted that certain traits are inherited by offspring. Swiss biochemist Freidrich Miescher (d. 1895) discovered the DNA molecule present in every living cell, which is responsible for passing these traits on through sexual reproduction. By the mid-1950s the structure of DNA was fully understood through the seminal work of Rosalind Franklin (d. 1958, a member of the New West End United Synagogue), Maurice Wilkins (d. 2004), James Watson and Francis Crick (d. 2004).

Biologists such as Ronald Fisher (d. 1965) and Julian Huxley (d. 1975) proposed that random mutations in this DNA code could provide some organisms with more beneficial features, giving them an advantage in locating food more successfully or protecting themselves from predators. In a competitive environment, those organisms would be more likely to survive, reproduce and pass on these traits. This adaption to the local environment would ultimately generate new species, accounting for the diversity of life on Earth.

There are however, a number of scientific difficulties with this idea. The mutation rate of DNA is actually very low. Moreover, mutations are often inconsequential or damaging; few mutations ever help an organism to survive.

However, there may be scientific mechanisms which could account for this.

Assuming these questions can be answered, evolution seems to present a theological challenge. If life had evolved through natural processes, the diversity of life on Earth could presumably be accounted for without Divine intervention. Neo-Darwinian evolution has seemingly removed the need for God to explain the origin of life.

However, there is a logical flaw in this argument, as it assumes that God's existence depends on our need to explain things about the world. This is not true. God was not 'invented' to explain the diversity of life; His existence is absolute and unconditional.

Nevertheless, another question remains: if natural processes are driving the diversity of life, what role is there for God? On this point the German scholar Rabbi Shimshon Raphael Hirsch (d. 1888) noted that the laws of nature can "no more do without the One Who governs and guides the course of the Universe ... than a steamship, operating with the laws of mechanics, can do without the helmsman who guides it". Similarly, he states that: "the [natural] phenomena are present in nature, and God is their invisible Source Who guides and maintains them at all times". Hirsch's view of Darwinian evolution was in principle to accept the idea of natural selection, but view it as guided by God. Being able to explain the mechanisms of life, does not preclude the existence of a spiritual source and a higher purpose for existence.

