

Intelligent design is not creationism

By Stephen C Meyer

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In 2004, the distinguished philosopher Antony Flew of the University of Reading made worldwide news when he repudiated a lifelong commitment to atheism and affirmed the reality of some kind of a creator. Flew cited evidence of intelligent design in DNA and the arguments of "American [intelligent] design theorists" as important reasons for this shift.

Since then, British readers have learnt about the theory of intelligent design (ID) mainly from media reports about United States court battles over the legality of teaching students about it. According to most reports, ID is a "faith-based" alternative to evolution based solely on religion.

But is this accurate? As one of the architects of the theory, I know it isn't.

Contrary to media reports, ID is not a religious-based idea, but an evidence-based scientific theory about life's origins. According to Darwinian biologists such as Oxford University's Richard Dawkins, living systems "give the appearance of having been designed for a purpose".

But, for modern Darwinists, that appearance of design is illusory, because the purely undirected process of natural selection acting on random mutations is entirely sufficient to produce the intricate designed-like structures found in living organisms.

By contrast, ID holds that there are tell-tale features of living systems and the universe that are best explained by a designing intelligence. The theory does not challenge the idea of evolution defined as change over time, or even common ancestry, but it disputes Darwin's idea that the cause of biological change is wholly blind and undirected.

What signs of intelligence do design advocates see?

In recent years, biologists have discovered an exquisite world of nanotechnology within living cells - complex circuits, sliding clamps, energy-generating turbines and miniature machines. For example, bacterial cells are propelled by rotary engines called flagellar motors that rotate at 100,000rpm. These engines look like they were designed by engineers, with many distinct mechanical parts (made of proteins), including rotors, stators, O-rings, bushings, U-joints and drive shafts.

The biochemist Michael Behe points out that the flagellar motor depends on the co-ordinated function of 30 protein parts. Remove one of these proteins and the rotary motor doesn't work. The motor is, in Behe's words, "irreducibly complex".

This creates a problem for the Darwinian mechanism. Natural selection preserves or "selects" functional advantages as they arise by random mutation. Yet the flagellar motor does not function unless all its 30 parts are present. Thus, natural selection can "select" the motor once it has arisen as a functioning whole, but it cannot produce the motor in a step-by-step Darwinian fashion.

Natural selection purportedly builds complex systems from simpler structures by preserving a series of intermediates, each of which must perform some function. With the flagellar motor, most of the critical intermediate structures perform no function for selection to preserve. This leaves the origin of the flagellar motor unexplained by the mechanism - natural selection - that Darwin specifically proposed to replace the design hypothesis.

Is there a better explanation? Based on our uniform experience, we know of only one type of cause that produces irreducibly complex systems: intelligence. Whenever we encounter complex systems - whether integrated circuits or internal combustion engines - and we know how they arose, invariably a designing intelligence played a role.

Consider an even more fundamental argument for design. In 1953, when Watson and Crick elucidated the structure of the DNA molecule, they made a startling discovery. Strings of precisely sequenced chemicals called nucleotides in DNA store and transmit the assembly instructions - the information - in a four-character digital code for building the protein molecules the cell needs to survive. Crick then developed his "sequence hypothesis", in which the chemical bases in DNA function like letters in a written language or symbols in a computer code. As Dawkins has noted, "the machine code of the genes is uncannily computer-like".

The informational features of the cell at least appear designed. Yet, to date, no theory of undirected chemical evolution has explained the origin of the digital information needed to build the first living cell. Why? There is simply too much information in the cell to be explained by chance alone.

The information in DNA (and RNA) has also been shown to defy explanation by forces of chemical necessity. Saying otherwise would be like saying a headline arose as the result of chemical attraction between ink and paper. Clearly, something else is at work.

DNA functions like a software program. We know from experience that software comes from programmers. We know that information - whether, say, in hieroglyphics or radio signals - always arises from an intelligent source. As the pioneering information theorist Henry Quastler observed: "Information habitually arises from conscious activity." So the discovery of digital information in DNA provides strong grounds for inferring that intelligence played a causal role in its origin.

Thus, ID is not based on religion, but on scientific discoveries and our experience of cause and effect, the basis of all scientific reasoning about the past. Unlike creationism, ID is an inference from biological data.

Even so, ID may provide support for theistic belief. But that is not grounds for dismissing it. Those who do confuse the evidence for the theory with its possible implications. Many astrophysicists initially rejected the Big Bang theory because it

seemed to point to the need for a transcendent cause of matter, space and time. But science eventually accepted it because the evidence strongly supported it.

Today, a similar prejudice confronts ID. Nevertheless, this new theory must also be evaluated on the basis of the evidence, not philosophical preferences. As Professor Flew advises: "We must follow the evidence, wherever it leads."

Stephen C Meyer edited 'Darwinism, Design and Public Education' (Michigan State University Press). He has a PhD in philosophy of science from Cambridge University and is a senior fellow at the Discovery Institute in Seattle

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