

Over the past decade a particularly virulent form of anti-evolutionism has emerged in the United States, but with its adherents here and elsewhere, called Intelligent Design Creationism (IDC). When examined closely, IDC turns out to be the old Argument from Design dressed in modern garb. It is basically a return to Paley, but with emphasis on biological complexity at the biochemical and cellular levels rather than at the organ level. The basic contention of IDC is that natural selection is incapable of accounting for life's complexity - the only answer: Invoke an Intelligent Designer or Creator.

However, although the focus has changed, much of the flavour of "scientific" creationism is retained in the form of some of the more familiar arguments used by creationists against evolution, such as the alleged lack of transitional forms in the fossil record. There are parallels also in the tactics used. Thus, proponents of IDC are not averse to resorting to selective quotations from the evolutionary literature in their fight against evolution, and the 'fact' of evolution continues to be conflated with its chief mechanism, natural selection (see creation "science" flyer).

The chief architects of the ID movement reside in the United States. Prominent among them are Michael Behe (*Darwin's Black Box: The Biochemical Challenge to Evolution*), William Dembski (*Intelligent Design: The Bridge Between Science and Theology*), Phillip Johnson (*Darwin On Trial*, and others) and Jonathan Wells (*Icons of Evolution*). The central organization of the

movement is the Discovery Institute's Center for the Renewal of Science and Culture, and the key strategy is called the "wedge", an attempt "to wedge" IDC into mainstream culture and education.

As Phillip Johnson has expressed it, the purpose of the "wedge" is to "affirm the reality of God by challenging the domination of materialism and naturalism in the world of the human mind." Johnson has further written: "The objective...is to convince people that Darwinism is inherently atheistic, thus shifting the debate from creationism vs. evolution to the existence of God vs. the non-existence of God."

The defining concept of the movement is "theistic realism" and creation science has been superseded by another oxymoron, theistic science, representing a further attempt to undermine evolutionary science by marshalling so-called scientific arguments against it. Thus, contrary to the denials of some of its proponents, the ID movement is religiously, philosophically and politically motivated. Organic evolution merely epitomizes much of what the followers of IDC abhor in society.

One of the cornerstones of IDC, but as we shall see a very unstable one, is the idea of irreducible complexity as conceived by Michael Behe, a biochemistry professor. This is how Behe explains the concept: "By irreducibly complex I mean a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of

the parts causes the system to cease functioning. An irreducibly complex system cannot be produced directly...by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional."

Behe describes the humble mousetrap as exhibiting irreducible complexity with respect to its intended function and, as examples of irreducible complexity in the natural world, he cites the blood clotting mechanism and cilia (whiplike structures which function as swimming organelles in many microscopic organisms). At face value, Behe's argument seems plausible. If the cilium, for example, could not have evolved in functional steps, then it must have been created as a functional entity. The solution to its existence must be intelligent design, not evolution.

However, the question has to be asked, how well does the mousetrap analogy describe reality? A basic flaw in Behe's argument is that "biochemical pathways did not evolve by the sequential addition of steps to pathways that became functional only at the end. Instead they have been rigged up with pieces co-opted from other pathways, duplicated genes and early multifunctional enzymes." (J. Coyne, *Nature* 19 September 1996). In the case of cilia, for example, a series from simple to complex does exist in nature, obviating Behe's claim of irreducible complexity. Behe's idea has failed to pass muster in scientific and philosophical circles, and is unlikely to.

Intelligent design

Although Behe appears to accept evolution at visible levels of biological organization, he balks at the efficacy of natural selection at the microscopic level. In promoting his idea of irreducible complexity, he erects a discontinuity where none apparently exists - bodies, organs, and events and structures at the cellular level appear inextricably linked in both evolution and development.

From the viewpoint of science and science education, any return to Paley and the God of the Gaps would be disastrous. The essence of science is free inquiry. Drawing boundaries, still within the natural world, beyond which science is deemed powerless to penetrate would quickly lead to stagnation in many research areas.

IDC must be rejected as a viable alternative to evolution in science and science education since it has, as an inherent element, an appeal to an entity which lies outside the scope of science. Science deals with that part of reality amenable to empirical inquiry. Alternative explanations must be testable against the *natural* world.

It is generally accepted in scientific circles that science is based on a *necessary* methodological materialism, not to be confused with philosophical materialism or naturalism. (Many creationists conflate the two, leading to the false accusation that scientists and science teachers are guilty of the indoctrination of godless belief systems.)

The principle of freedom of belief and expression is a vital one in an open society. What should not be tolerated is the inclusion of non-scientific beliefs as allegedly viable alternatives to evolution in the science classroom. The integrity of science education must be upheld by all who value quality in our education system.

Further reading

Robert T. Pennock. *Tower of Babel: The Evidence against the New Creationism*

Robert T. Pennock (editor). *Intelligent Design Creationism and its Critics*

Kenneth Miller, *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution*

Evolution Web Resources

<http://skeptics.org.nz/STCREATIONISM>

<http://www.millerandlevine.com/km/evol/>

<http://www.pbs.org/wgbh/evolution/>



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Intelligent design = creationism

As Darwin wrote, there is grandeur in an evolutionary view of life, a grandeur that is there for all to see, regardless of their philosophical views on the meaning and purpose of life.

I do not believe, even for an instant, that Darwin's vision has weakened or diminished the sense of wonder and awe that one should feel in confronting the magnificence and diversity of the living world. Rather, to a person of faith it should enhance their sense of the Creator's majesty and wisdom.

Against such a backdrop, the struggles of the intelligent design movement are best understood as clamorous and disappointing double failures - rejected by science because they do not fit the facts, and having failed religion because they think too little of God.

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