The Intelligent Design Revolution

A new movement is starting to shake a scientific establishment built on the assumptions of Darwinian evolution. What is intelligent design, and why is it gaining so much ground?

By Mario Seiglie

We are living in momentous times, whether we know it or not. A scientific revolution is beginning to take place before our very eyes. Exciting information is coming out almost daily about "intelligent design," a concept challenging the reining worldview of Darwinian evolution in classrooms and the media, not to mention in the biology labs.

"We are in the very initial stages of a scientific revolution," said Dr. Stephen Meyer, director of the Discovery Institute, a think tank supporting intelligent design. "We want to have an effect on the dominant view of culture" ("Politicized Scholars Put Evolution on the Defensive," *The New York Times*, Aug. 21, 2005).

The strength of this scientific revolution can be seen by the recent comment from U.S. President George W. Bush that intelligent design should be taught in public schools alongside evolution.

"I think that part of education is to expose people to different schools of thought," he said. Asked whether he believed that both sides in the debate between evolution and intelligent design should be taught, Mr. Bush replied that he did, "so people can understand what the debate is about" (Bush Remarks Roil Debate Over Teaching of Evolution," *The New York Times*, Aug. 3, 2005).

A few days later, Senate Majority Leader Bill Frist, who is also a physician, made the same point. He said teaching both intelligent design and evolution in schools "doesn't force any particular theory on anyone" and that "in a pluralistic society that is the fairest way to go about education and training people for the future" ("Show Me the Evidence," *The New York Times*, Aug. 28, 2005).

Responding to President Bush's remarks, Dr. Meyer went on to say: "We interpret this as the president using his bully pulpit to support freedom of inquiry and free speech about the issue of biblical origins. It's extremely timely and welcome because so many scientists are experiencing recriminations for breaking with Darwinist orthodoxy" ("Bush Remarks Roil Debate Over Teaching of Evolution").

How did this revolution begin? The story is

fascinating.

Origin of the movement

As with most scientific revolutions, this one didn't take place with someone casually doing some abstract thinking.

Galileo started a scientific revolution when he used the recently invented telescope and saw moons orbiting around the planet Jupiter. This went against the reigning scientific worldview of that day, which taught that everything in the starry skies revolved around the earth. The discovery led to his backing the sun-centered theory, which sparked a scientific revolution in astronomy and general culture.

Isaac Newton also began to question the typical explanation of the movement of the heavens when he noticed an apple falling from a tree in his garden. (The legend that an apple fell on his head does not have much credible evidence to back it up, but that an apple fell in front of him certainly does.)

Albert Einstein developed some of his theories because of his fascination with magnets and swirling tea leaves in a cup.

Charles Darwin also developed his theory of evolution from his observations during an around-the-world trip on the ship *The Beagle* and from his fondness of breeding different varieties of pigeons.

The recent intelligent design revolution also started because of practical observations rather than abstract musings. In certain biology labs, scientists couldn't explain by evolutionary theory what they were seeing inside the cell.

"Modern design arguments," writes Canadian science writer and journalist Denyse O'Leary, "stem from 20th century science findings about the complexity of life that Darwin and his followers did not expect. The modern case for design is based on information theory [which] provides a tool for distinguishing between mere order, which can occur without design, and complex order, which probably cannot" (By Design or By Chance? 2004, p. 172).

Of course, just as with previous scientific revolutions, this one started when a courageous group of scientists questioned the dominant theory in a field of science and offered the evidence to unseat it. They faced strong opposition from the reigning authorities, who

felt their prominent position, reputations and power were being threatened.

Revolution pioneers

In the 1980's, several scientists began meeting together to try to explain the incredible complexity they were witnessing inside the cell - and especially the vast amount of information in the form of a language imbedded in the DNA molecule. They began to challenge the theory of evolution within their own field of biology rather than from a religious point of view.

One of those scientists, biochemist Charles Thaxton, coined the term "intelligent design" to explain the need for intelligence behind the elaborate information found inside DNA. "Just when it seemed that natural causes might suffice to account for all natural phenomenon," he notes, "there were breakthrough discoveries in both mathematics and biology' ("A New Design Argument," Cosmic Pursuit, March 1, 1998).

The intelligent design movement gained momentum when New Zealand molecular biologist Michael Denton, a medical doctor and agnostic, carefully examined the main arguments for Darwinian evolution and found them very deficient.

He wrote in his book

Evolution: A Theory in Crisis that the problems with the theory of evolution "are too severe and intractable to offer any hope of resolution in terms of the orthodox Darwinian framework" and that the accepted traditional view "is no longer tenable" (1985, p.16).

He then concluded at the end of the book, "Ultimately the Darwinian theory of evolution is no more nor less than the great cosmogenic myth of the twentieth century" (p.358).

In England, a University of California at Berkeley law professor on sabbatical, Philip Johnson, read The Blind Watchmaker, by prominent British zoologist and atheist Richard Dawkins, who advocated evolution as the real designer behind all living things.

Professor Johnson's legal mind quickly noticed the flimsy and emotional arguments in the book, bereft of solid evidence. He wondered why a noted scientist would resort to such trickery if the theory was on such solid ground. Here was a challenge, he thought.

Professor Johnson began a through investigation of the evolutionary literature and was astounded with what he found. As a famous fable says, truly the emperor wasn't wearing any clothes! He began publishing his findings about Darwinian evolution in popular books such as *Darwin* on *Trial* (1991) and *Defeating Darwinism* by *Opening Minds* (1997).

Meanwhile, at a biology lab in a Pennsylvanian university, biochemist Michael Behe was also puzzled by the astounding complexity he found inside the cell. On reading Dr. Denton's book, he was angered about the suppression of such evidence by the scientific community. He wrote a bestseller, Darwin's Black Box (1996), exposing major scientific weaknesses in the theory of evolution.

Another biologist, Jonathan Wells, also was incensed with the faulty information being perpetuated by Darwinian evolutionists in schools and universities. He wrote the book *Icons of Evolution* (2000), which exposed how some of the major "scientific" examples used to teach Darwinian evolution are in fact fraudulent or misrepresented.

Since then the intelligent design movement has gained notable influence on the public. A 2005 poll showed that a majority of Americans believe in it, and another poll of medical doctors found that 65 percent think intelligent design should be allowed or required to be taught in schools along with evolution. Now a growing number of

U.S. school boards are beginning to insist that intelligent design be taught alongside evolution.

"This year," says The New York Times, "the National Center for Science Education has tracked 70 new controversies over evolution in 26 states, some in school districts, others in the state legislatures" ("Teaching of Creationism Is Endorsed in New Survey," Aug. 31).

What is the basis for the intelligent design revolution? There are four main aspects to it: information theory, irreducible complexity, the anthropic principle and the design inference. Let's briefly consider each of these.

1. Information theory

In the 1960's, some scientists began to look at information as something different from matter and energy. For example, a book contains information, but the ink and paper of the book are not the information itself and can only transmit it. Thus, the means of transmission is entirely different from the message itself.

As George Williams, himself an evolutionary biologist, states: "Information doesn't have mass or charge or length in millimeters. Likewise, matter doesn't have bytes. You can't measure so much gold in so many bytes ... This dearth of shared descriptors makes matter and information two separate domains of existence, which have to be discussed separately, in their own terms" (John Brockman, *The Third Culture: Beyond the Scientific Revolution*, 1995, p.43).

Interestingly, matter, energy and information all unite in living things. Without information, an organism cannot live. In fact, at death, all the biochemical ingredients are still there, but the information is no longer being effectively relayed to the trillions of cells in the body - so the complex biological machinery shuts down.

One of the main points of the intelligent design revolution is that evolution has not been able to explain either the origin of life or the information in our cells, since neither life nor information has been shown to spontaneously arise from matter or energy.

"Science doesn't have the slightest idea how life began," says Gregg Easterbrook, senior editor of *The New Republic*. "No generally accepted theory exists, and the steps leading from a barren primordial world to the fragile chemistry of life seem imponderable" (quoted by Lee Strobel, *The Case for a Creator*, 2004, p.41).

"It was once expected," adds Dr. Behe, "that the basis of life would be exceedingly simple. That expectation has been smashed. Vision, motion, and other biological functions have proven to be no less sophisticated than television cameras and automobiles.

"Science has made enormous progress in understanding how the chemistry of life works, but the elegance and complexity of biological systems at the molecular level have paralyzed science's attempt to explain their origins" (*Darwin's Black Box*, 1996, p. x).

So not only the problem of the origin of life but also the dilemma of the information inside the DNA molecule defies Darwinian explanation and argues powerfully for intelligent design.

Recently, one of the world's most renowned atheists, Sir Antony Flew, renounced his atheism because of the compelling evidence of the DNA molecule.

'It now seems to me," he remarked, "that the findings of more than fifty years of DNA research have provided materials for a new and enormously powerful argument to design ... Biologists' investigation of DNA has shown, by the almost unbelievable complexity of the

arrangements which are needed to produce (life), that intelligence must have been involved."

In the end, explained Professor Flew, he "had to go where the evidence leads" ("Famous Atheist Now Believes in God," Dec. 9, 2004, Associated Press report).

2. Irreducible complexity

In The Origin of Species, Darwin acknowledged that "if it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."

Intelligent design theorists have demonstrated that living things are full of such examples at the molecular level

Dr. Behe coined the term "irreducible complexity" to explain that complex systems will work only if all the components operate at once. He explains that you could not get an intricate, interrelated system from successive and slight modifications, as Darwin proposed.

For instance, blood clotting needs 20 different proteins to work together in sequence for the process to occur. If only one of the proteins is missing, the result is hemophilia, where blood does not clot as it should

Eukaryotic cells, which digest nutrients or excrete waste, contain an elaborate traffic system that directs proteins to the right places another irreducibly complex system.

The bacterial flagellum has some 40 working parts, all carefully coordinated and interacting together. But by removing any of its key components, the whole mechanism grinds to a halt. So how did all 40 parts evolve into a complex interrelated system when none of the parts on their own, whether fully or partially developed, offered any evolutionary advantage?

This is one example of molecular "machines" inside living beings that could not have appeared in a step-by-step evolutionary process. They are, in fact, obvious evidence of intelligent design.

3. The anthropic principle

Since Darwin, it has been common for scientists to believe that the earth is a planet with no special characteristics and that conditions in the universe simply allowed life to evolve from natural processes.

As atheist Sir Julian Huxley said during the Darwin Centennial in 1959: "The earth was not created, it

evolved. So did all the animals and plants that inhabit it, including our human selves, mind and soul as well as brain and body. So did religion" (quoted by Denyse O'Leary, p.133).

"Our posturings, our imagined self-importance, the delusion that we have some privileged position in the Universe," added Carl Sagan, the late astronomer, "are challenged by this point of pale light [upon our world]. Our planet is a lonely speck in the great enveloping cosmic dark" (Pale Blue Dot: A Vision of the human Future in Space, 1994, p. 7).

Yet now the scientific evidence has revealed that we occupy a very privileged position in the universe. To explain this cosmic finetuning, scientists coined the term "anthropic principle," which describes a universe designed for life - and, in particular, human life.

This principle states that all the constants in physics are precisely the values required if you want to have a universe capable of supporting life.

Astronomer Sir Fred Hoyle, an agnostic, reluctantly admitted that the universe appears to be delicately tuned for life: "A common sense interpretation of the facts suggests that a superintellect has monkeyed with the physics, as well as the chemistry and biology [of the

universe] ... The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question" (quoted by Denyse O'Leary, p.41).

As it turns out, our planet is a very special place in the universe. "We've found," says astronomer Guillermo Gonzalez, "that our location in the universe, in our galaxy, in our solar system, as well as such things as the size and rotation of the Earth, the mass of the moon and sun and so forth - a whole range of factors - conspire together in an amazing way to make Earth a habitable planet" (quoted by Lee Strobel, p.164).

This is also a powerful argument for intelligent design. "It is quite easy to understand," says Walter Bradley, author of the landmark book *The Mystery* of Life's Origin, "why so many scientists have changed their minds in the past thirty vears, agreeing that the universe cannot reasonably be explained as a cosmic accident. Evidence for an intelligent designer becomes more compelling the more we understand about our carefully crafted habitat" (quoted by Lee Strobel, p.127).

4. The design inference

Another tool intelligent design advocates are using is

a precise, scientific method to determine what is intelligently designed from what is not.

Dr. Behe explains this concept: "The basic idea is that by looking at features from natural systems, you can discern an intelligent agent was involved in setting up the system. A good example in the U.S. is a mountain called Mt. Rushmore.

"On the face of this mountain have been carved the faces of four American presidents. If you were from another country and never heard of Mt. Rushmore, and were driving down the road when suddenly you see these faces on the mountain, you would know they were not formed by erosion, wind or any other unintelligent sources. You would know a mind was involved, some culture was out there and made that.

"The same idea applies in any area of nature. Suppose you're an astronomer and you're studying the radio waves that fill the universe. Most of them are static, but you have your antennae focused, and all of a sudden you hear radio waves that are conveying a message something like 'We would like pizza, too' or 'Greetings from Alpha Centauri' - then it would be dumb to ascribe those to random physical forces. You would ascribe them to intelligent space

aliens

"Now if you are a biologist and you think the cell is a glob of protoplasm but you go on to investigate it and you find out that instead of being simple, it is filled with these elegant machines - machines of greater sophistication than we are capable of making - that is telling us something.

"The intelligent design hypothesis says we can infer that a mind was at work *there*, too - that matter and energy and natural processes are not sufficient to explain how the cell came to be arranged that way" (interview in *The Good News*, May-June 2005, p. 8).

Where does it go from here?

Linus Pauling, twice a Nobel Prize winner, once wrote, "Science is the search for truth, the effort to understand the world" (No More War, 1958, p. 209).

The pursuit of truth, however, has a price. It is not always going to be received with open arms. Deeply entrenched beliefs, whether in science or religion, are hard to give up.

What the Bible says about truth in another context also applies here. It says that "no lie is of the truth" (1 John 2:21) and also, "You shall know the truth, and the truth shall make you free" (John 8:32). These verses are talking about being set free

from falsehoods that distort our thinking and present a counterfeit reality.

Yet it will be a struggle to be free of strongly held but erroneous academic beliefs misidentified as science. This is evident by what Harvard zoologist Richard Lewontin candidly admitted:

"We take the side of science [as he calls it] in spite of the patent absurdity of some of its constructs, in spite of its failure to fulfill many of its extravagant promises of health and life, and in spite of the tolerance of the scientific community for unsubstantiated just-sostories, because we have a prior commitment, a commitment to materialism ...we cannot allow a Devine Foot in the door" (quoted by Denyse O'Leary, p. 222, emphasis added).

Kansas State immunologist Scott Todd adds, "Even if all the data point to an intelligent designer, such a hypothesis is excluded from science because it is not naturalistic" (*Nature*, Sept. 30, 1999, p. 423). yet true science is the pursuit of truth, not merely the pursuit of a materialistic explanation despite evidence to the contrary.

So the scientific revolution now taking place - which includes the very meaning of science - will be a long and difficult battle. Yet, hopefully, the evidence in the fields of biology, chemistry, astronomy and physics will prevail to show that a supposedly blind and purposeless process like evolution cannot possibly account for the complexity, beauty and harmony we see all around us.

From the orderly pattern of the enormous universe, the galaxies and our planet with its amazing creatures, to the equally wondrous and complex microcosm of the cell, the evidence shouts an unmistakable message: We are the result of a Master Designer!

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