

Contemporary design theory: The intelligent design movement

Part 2

James Gibson

In the December 2005 issue we reviewed the development of the intelligent design theory of origins. We also noted how the arguments of Hume and Darwin and their followers were thought to have brought about the demise of the design theory. But in recent times some scholars have argued that certain phenomena in nature are best explained in terms of intelligent design theory. In this concluding article, we will review the contemporary status of the design theory and examine some of the major criticisms leveled against it.

In 1913, Lawrence Henderson published a book¹ in which he described the physical features that facilitate the existence of living organisms. He concluded that the environment and living organisms were mutually fit for each other, and that both must be products of similar kinds of processes. Noting that teleology would be a tempting explanation for the fitness of the environment, he opted instead for an explanation using only natural laws. He looked for a process parallel with natural selection and appealed to cosmic evolution as the process by which the environment became so friendly to the possibility of life. Henderson's book has been largely forgotten, but the issues he raised have recently come into focus again.

A more recent book with similar arguments is by Michael Denton.² However, Denton is more open to the possibility that the laws of nature themselves may be the result of intelligent design. James Lovelock³ advocates the idea that the earth

is a kind of living organism, with homeostatic feedback systems that favor the existence of conditions suitable for life. He does not favor intelligent design but seems sympathetic to the possibility of some type of vitalistic force that produces favorable results. Another book addressing the design of the physical universe was by Barrow and Tipler.⁴ These authors all have in common a recognition that the physical universe is fit for life with no apparent necessity that it be so. They also share a reluctance to attribute the remarkable design of the universe to a Creator/God, preferring instead to propose some kind of vague cosmic force or, at best, a deist conception of God.

Although the books mentioned above provide an intellectual basis for inferring design, it was an entirely different kind of book that gave rise to the intelligent design movement. That honor goes to *Evolution: A Theory in Crisis*.⁵ In this book, Michael Denton points out that the general theory of biological evolution was not well-supported by the data. After reviewing the evidence from comparative anatomy, paleontology, and molecular biology, Denton concludes: "Neither of the two fundamental axioms of Darwin's macroevolutionary theory—the concept of the continuity of nature, that is, the idea of a functional continuum of all life forms linking all species together and ultimately leading back to a primeval cell, and the belief that all the adaptive design of life has resulted from a blind random process—have been validated by one single empirical discovery of scientific advance since 1859."⁶

Denton has softened some of his statements since the book was published, but the overall impact of his critique remains. Chance is simply not a plausible mechanism for the origins of the kind of complexity we observe in living organisms, nor is there adequate empirical evidence to conclude for a single tree of life.

Among those who read Denton's book was Phillip Johnson, a professor of law at the University of California, Berkeley campus. Johnson had supposed that evolution was on a firm empirical basis and had never been motivated to challenge it. Denton's book changed that perspective. Johnson began to study evolutionary writings, paying particular attention to the structure of the arguments presented and the evidence used to support them. He was surprised by the results and concluded that the central evolutionist claims were based on philosophical presuppositions rather than logically derived from empirical evidence. As a result, Johnson decided to challenge the evolutionary establishment. Thus was born the intelligent design movement.



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Johnson opened his attack on Darwinism with his book *Darwin on Trial*. Johnson pointed out that the data from nature support evolution only if they are interpreted on the assumption that evolution is true (and design is false). If separated from the assumptions of naturalism, the data may actually be problematic for the evolutionary hypothesis, and design might be the best explanation. Thus, Johnson concluded, it is actually philosophical naturalism, rather than empirical data, that is driving scientists to affirm evolution. If intelligent design is ruled out *a priori*, the only remaining alternative is some kind of naturalistic process, such as evolution.

The influence of philosophical naturalism on science is a focus of the intelligent design movement. Johnson eschewed any specific process for design—focusing only on the question of design itself, by whatever process might have been used.

Johnson's book attracted a great deal of attention, both positive and negative. Unsurprisingly, evolutionary scientists opposed his arguments vehemently. Biblical creationists were intrigued that the flaws in evolutionary thinking were so skillfully being revealed, but they were not satisfied to leave the details or age of creation ambiguous. Ancient creationists welcomed Johnson's arguments, because they were consistent with the possibility of direct divine actions in nature without insisting on a young earth. The most surprising reaction came from those who believe that evolution through natural selection is God's chosen method for creating. This group vigorously protested against the idea that God is active in nature. According to this view, God may or may not have designed the laws of nature, but nature is the product of natural law, not of any specific activity on God's part. Johnson's argument for intelligent design implies an active God. Thus reaction to Johnson's argument tends to be based on whether or not one believes in an active God.

Johnson's stature as a tenured professor at a prestigious university attracted a group of young graduate students who agreed with his argument, despite holding differing views on the age and process of creation. Among these were William

Dembski, Stephen Meyer, Paul Nelson, and Jonathan Wells. Each of these has published supporting arguments for intelligent design. Wells has written⁷ a strong critique of evolutionary arguments that use misleading evidence to support their conclusions, and Nelson⁸ and Meyer⁹ have both contributed to books discussing various aspects of design.

William Dembski has been especially successful in developing the theory of intelligent design by proposing a method of identifying design through what he calls "specified complexity."¹⁰ Dembski proposes an "explanatory filter" to identify three types of causes: natural law, chance, and design. Events that are not the result of natural law must be due either to chance or to design. Chance is ruled out only if the probability is extremely low, and the phenomenon to be explained is complex, and if the phenomenon matches some independently derived pattern. Dembski's proposals have been criticized on grounds that certain computer programs develop complexity by selection, allegedly falsifying specified complexity as an indicator of design.¹¹ Dembski's explanatory filter has been criticized for separating the different causes when in fact they may not be mutually exclusive.¹² Natural evil is also said to be a problem for design.

A group of other scholars has joined the intelligent design movement. Michael Behe, a biochemist from LeHigh University, has probably had the greatest impact. Behe introduced¹³ the concept of irreducible complexity as a criterion to identify design. An irreducibly complex system is any system that requires numerous, well-integrated parts to function, whereas removal of any single part destroys function. Such systems cannot be constructed by natural selection one piece at a time, because selection cannot favor a nonfunctional system. Thus, if such systems exist, they must have been formed by intelligent design. The flagellum is a favored example. Several criticisms have been leveled at Behe's argument, including the claim that it is premature to identify the flagellum as irreducibly complex, and that an irreducibly complex system might be built stepwise by providing different kinds of functions at each step.¹⁴

Several other scholars sympathetic to intelligent design have written books and articles.¹⁵

Criticisms of intelligent design

I will briefly describe and evaluate some of the major criticisms leveled against intelligent design.

Criticism 1: Intelligent design inhibits scientific inquiry.¹⁶

Description. Attributing a phenomenon to design is to remove motivation for further study, and/or to make it impossible to reach any conclusion because we cannot know the intentions of the designer.¹⁷

Evaluation. This is a false concern. Historically, science was developed by people who believed in design, and who even attributed phenomena to design, but who, nevertheless, attempted to explore how God might have brought about the observed phenomenon, and what regularities might be inferred from their study. Indeed, it has been argued that the idea of design provided the necessary context in which modern science developed. Those who are inclined to explore the world will do so whether or not they believe in design.

Criticism 2: Intelligent design is a sterile idea.¹⁸

Description. Intelligent design does not provide any questions to explore scientifically, hence it is useless for science, whether true or not.

Evaluation. Intelligent design may not be a hypothesis to test, but it may provide a "metaphysical research programme"¹⁹ in which hypotheses may be generated and tested. For example, consider historical biology. Under the current paradigm, three major types of questions are being asked:

- a. What is the pattern of relationships of living organisms? Assuming it is a single tree or bush, how are the various species connected within that single structure?
- b. What processes have led to diversification of life within the tree/bush?
- c. What is the history of life in time and space?

Intelligent design would pose the same categories of questions, but without the same assumptions about the answers. For example, design might ask the following:

(continued on page 16)

a. What is the pattern of relationships of living organisms? Assuming there are numerous trees or bushes, what are the boundaries of the various natural lineages?²⁰

b. What processes have led to diversification within each lineage, and what might be the limits of such processes?

c. What is the history of life in time and space? What similarities and differences might we find in comparing patterns in time and space among various independent lineages?

Criticism 3: Intelligent design is an appeal from ignorance.²¹

Description. Design is invoked when we don't understand something, of the same kind as the "god-of-the-gaps" argument of former ages. As science advances, our understanding will increase, and the number of mysteries will decrease. Thus, what appears as design today will eventually be shown to be the result of chance and natural law.

Evaluation. This problem has occurred historically, but contemporary intelligent design arguments are meant to avoid this problem. The criterion of irreducible complexity requires an understanding of function and mechanism rather than ignorance. Dembski's explanatory filter requires that law and chance be given first consideration as potential explanations, and design is inferred only when other explanations can be reasonably ruled out. This is a valid concern, but advocates of intelligent design have developed their arguments explicitly to avoid this problem.

Criticism 4: Design is religiously motivated and inappropriate in science.²²

Evaluation. This is basically an *ad hominem* argument. The value of intelligent design should be examined on its own merits, not on the private views of its advocates. Mere religious motivation, by itself, is irrelevant to whether design should be considered as an explanation of nature. Honesty is a religious value, but scientists have found it very helpful in the practice of science. Although there is always the danger that ideology will negatively affect free inquiry, this danger is the fault not of religion but of politics. Critics of the general theory of evolution may find that ideology is currently affecting

free inquiry, making this argument sound politically motivated. In addition, it can be argued that evolution itself is religiously motivated.

Criticism 5: Any designer would also have to be responsible for evil.²³

Description. If the world is the result of intelligent design, the existence of so much suffering and violence implies that the designer is evil. Since Christians claim their God is good and not evil, He cannot be the designer.

Evaluation. The character of the designer is irrelevant to the question of whether design exists. The great controversy metanarrative provides an explanation for why God does not prevent evil.

Criticism 6: Design is superfluous because natural selection is adequate.²⁴

Description. Natural selection is an adequate mechanism to explain the apparent design of living organisms. This has been demonstrated by computer analogies such as the Tierra program, in which computer images are subjected to a series of modifications and selection, resulting in unexpected complexity and creativity. Design is an unnecessary and untestable hypothesis.

Evaluation. Natural selection has never been shown to have the power claimed by its advocates.²⁵ Selection clearly has the power to favor different variants in different environments, and to "pull" the process of speciation. However, it is a leap of presumption to claim that this provides support for the contention that all biodiversity originated from a common ancestor. Nor will it help to appeal to experimental evidence. The experimental evidence we have available suggests that natural selection lacks the power to produce morphological novelties. Living populations respond rapidly to selection at first, but variation soon runs into limits. Appealing to computer modeling is not satisfactory in the absence of any evidence that the modeling applies to real biological systems.

Criticism 7: Accepting design would overturn all of science.²⁶

Description. All of science is based on naturalistic explanations. To accept design as an explanation would change the fundamental nature of scientific methodology. Furthermore, it would alter the

conclusions drawn in all areas of science and would create chaos, leaving only religious speculations to take the place of rigorous inquiry.

Evaluation. First, the mere fact that accepting design would force a change in scientific methodology and/or scientific conclusions is irrelevant to the question of whether design is true or not. Indeed, if design is true, and if its acceptance would radically alter the way science is done, then the sooner the change is accomplished the better for science.

On the other hand, it seems a great exaggeration to claim that all of science would be overturned by acceptance of design. The best of science is based on experiment, whereas design is a historical explanation. An explanation of intelligent design would have little or no effect on experimental procedures or inferences drawn from them. This is because, if design is true, the regularities in nature, which are the subjects of experiment, are due to God's continuous, consistent activity. Any irregularities due to God's special actions are not amenable to experiment, since they are singularities and do not form any patterns to be investigated. Thus, acceptance of design would have minimal effect on the kind of science that forms the basis for technology, but might affect the kinds of historical explanations and "just-so stories" that are offered in the historical sciences.

A caveat and future prospects

Two questions were posed at the beginning of this article in the December 2005 issue: Is design a necessary inference from nature? And would the explanatory power of design enhance our understanding of nature? I think the answer to both is a qualified "yes." Design is a necessary inference from nature if one is concerned with its origins, but most of science is unconcerned with origins. Intelligent design would improve our understanding of the history of life, but one can practice a great deal of experimental science without considering historical explanations like design.

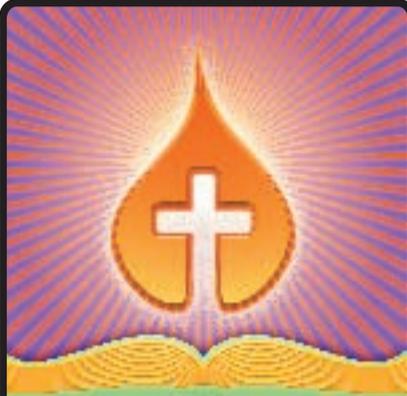
A caveat is in order here. I believe that intelligent design is a useful explanation for the origin of many features in nature. However, it is inappropriate to attribute

every event in nature to the direct will of God. God does not normally intervene to prevent our behavior from having predictable consequences. Thus, when someone slips and falls, it is not valid to claim that God designed that person to fall. Freedom of choice requires that God not prevent our will from being actualized. This is the best explanation I know of for the problem of moral evil, and the problem of natural evil has a parallel kind of explanation. Scripture indicates that God delegated to Adam the responsibility for the world and its creatures, and Adam forfeited that responsibility to Satan. Thus, Satan is the “prince of this world,” and it is only reasonable to expect that evil will be the result. The book of Job reveals that Satan has an influence on nature. What we term “acts of God” may actually be, in some cases, “acts of Satan.” Intelligent design has a useful place, but it is not the only factor to consider.

What is the probable future of intelligent design? Of course, no one can say with certainty. However, I think it is clear that the present leaders of science will not accept it. They are too deeply committed to materialistic philosophy. This does not mean that intelligent design will not gain a stronger foothold in the scientific community. I suspect it will. Those who believe that God intentionally used the process of descent with modification to bring about the diversity of life may find it easy to suppose that He actively guides the process. The drawback from this is the potential for acceptance of occult, vital forces and the dark side of the supernatural this involves. On the other hand, intelligent design also has the potential to open minds to the possibility of biblical supernaturalism and to consider the promises of the gospel. Believers should work to make this happen. ■

(Bethesda, Md.: Adler and Adler, 1995).

- 6 Denton, 1985, 345.
- 7 J. Wells, *Icons of Evolution: Science or Myth?* (Washington D.C.: Regnery Press, 2000).
- 8 Nelson contributed chapters to *Mere Creation* and, with John Mark Reynolds, to *Three Views on Creation and Evolution*, and has another book in preparation.
- 9 Meyer co-edited, with John Angus Campbell, *Darwinism, Design and Public Education* (Michigan State University Press, 2003), and has contributed chapters to *Mere Creation* and *The Creation Hypothesis*.
- 10 Dembski, *The Design Inference*, (1998) 36–47.
- 11 R. T. Pennock, *Tower of Babel: The Evidence Against the New Creationism* (Cambridge, Mass.: MIT Press, 1999), 108.
- 12 *Ibid.*, 95.
- 13 M. J. Behe, *Darwin's Black Box* (New York and London: Free Press, 1996).
- 14 Pennock, 266–269.
- 15 These include: J. P. Moreland, *Christianity and the Nature of Science: A Philosophical Investigation* (Grand Rapids: Baker Books, 1989); J. P. Moreland, ed., *The Creation Hypothesis* (Downer's Grove: InterVarsity Press, 1994); J. P. Moreland and R. M. Reynolds, eds., *Three Views on Creation and Evolution* (Grand Rapids: Zondervan, 1999); C. G. Hunter; Thomas Woodward, *Doubts About Darwin: A History of Intelligent Design* (Grand Rapids: Baker Books, 2003); Del Ratzsch, *Science and Its Limits: The Natural Sciences in Christian Perspective*, 2nd ed. (Downer's Grove: InterVarsity Press, 2000); philosopher Alvin Plantinga, and others.
- 16 E.g., Ruse, 24, 25, discussing Bacon and Descartes; T. M. Berra, *Evolution and the Myth of Creationism* (Stanford: Stanford University Press, 1990), 66.
- 17 Pennock, 291, 292.
- 18 Berra, 142; Miller 28, 126.
- 19 Popper in D. Miller, *Popper Selections* (Princeton: Princeton University Press, 1985), 242. Popper once applied the term to natural selection; he later modified his position to accept the notion of natural selection as testable.
- 20 Such research is already being conducted by the group Wort and Wissen in Germany, and the Baraminology Study Group at Bryan College in Tennessee.
- 21 Pennock, 249.
- 22 Pennock, 352–358; Ruse, 287.
- 23 Hume, 1779; Charles Darwin, *The Origin of Species: By Means of Natural Selection or the Preservation of Favored Races in the Struggle for Life* (New York: New American Library, 1859, 1958); Ruse, 28, 330–333; Pennock 1999; K. R. Miller, *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution* (New York: HarperCollins, 1999), 127, 128.
- 24 Pennock, 106–109; Ruse, 319–328.
- 25 Recall Denton's criticism, endnote 20; see also J. Whitefield, 2004. “Born in a Watery Commune,” in *Nature* 427:674–676, last sentence.
- 26 Pennock, 340, 341; Miller, 1999, 81; Berra, 120, even goes so far as to worry that society would be ruined.



ACTS 100
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Reading the Word of God

For some, reading has almost become a lost art. However, to the follower of Jesus, Bible reading is an informative, encouraging, and spiritual exercise. Some find it difficult to maintain a consistent schedule of Bible reading. It seems like it is always easier to do something else. What can you do if you don't really enjoy reading the word?

1. Make a decision. Determine that, come what may, you are going to follow a Bible Reading Plan every day. Start with a short, but specific, amount of time (just five or ten minutes).
2. Use the power of your will.
3. Establish a set time and place to study.
4. Always pray before you open the Bible. Ask the Holy Spirit to guide you. Remember, “spiritual things are spiritually discerned.”
5. Get acquainted with the Bible as a whole—compare what a prophet says with the teachings of Jesus and the letters of an apostle.
6. Keep reading the same passage until it becomes a part of your mind. Aim for comprehension more than quantity. Sometimes a paragraph must be read several times to understand God's message.
7. Read for understanding and application. Ask yourself, what is God trying to tell me personally in this passage?
8. Take notes as you read. A special notebook journal and pencil are invaluable tools.
9. Determine to apply what you discover. Don't ask for more light. Ask for more willingness to follow.
10. Expect the Holy Spirit to help you live what you learn. When you request God's power, you will receive it abundantly.

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- 1 L. J. Henderson, *The Fitness of the Environment* (Basingstoke, Hampshire, England: Macmillan Co., 1913).
- 2 M. Denton, *Nature's Destiny* (New York: Free Press, 1998).
- 3 J. E. Lovelock, *Gaia: A New Look at Life on Earth* (Oxford and New York: Oxford University Press, 1979, 1987).
- 4 J. D. Barrow and F. J. Tipler, *The Anthropic Cosmological Principle* (Oxford and New York: Oxford University Press, 1986).
- 5 M. Denton, *Evolution: A Theory in Crisis*