

Intelligent Design and Natural Law

Larry D. Paarmann

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Abstract

It is the contention of this paper that Intelligent Design theory adheres to natural law, and therefore is scientific according to the historical definition of the term, whereas Darwinian Evolution, as applied by most beginning with Darwin himself, is not scientific. Darwinian Evolution is inherently philosophical, even religious, due to its commitment to an unsubstantiated belief that all things are possible through natural means. No matter what biology encounters, it developed by natural means to achieve what it is today. The lack of a generally accepted theory of evolution contradicts this, as does the lack of evidence in the fossil record, as does biological structures that are irreducibly complex, as does the complex information content of DNA, and as does common sense. Intelligent Design theory accepts and applies known natural laws, which Darwinism does not, and therefore Intelligent Design should be recognized as science, whereas Darwinism should not.

1. Introduction

In the last twenty years or so, many books have been written presenting the case for Intelligent Design as evident in the natural world. A few of those that have achieved some recognition include *Darwin's Black Box: The Biochemical Challenge to Evolution*,¹ *Mere Creation: Science, Faith & Intelligent Design*,² *Intelligent Design: The Bridge Between Science & Theology*,³ *Science and Evidence for Design in the Universe*,⁴ *Signs of Intelligence: Understanding Intelligent Design*,⁵ *Doubts about Darwin: A History of Intelligent Design*,⁶ *By Design or by Chance?: The Growing Controversy on the Origins of Life in the Universe*,⁷ *Darwin Strikes Back: Defending the Science of Intelligent Design*,⁸ *The Politically Incorrect*

Guide to Darwinism and Intelligent Design,⁹ *The Design of Life: Discovering Signs of Intelligence in Biological Systems*,¹⁰ *Signature in the Cell: DNA and the Evidence for Intelligent Design*,¹¹ *Darwin's Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design*,¹² *Debating Darwin's Doubt: A Scientific Controversy that can No Longer be Denied*,¹³ and *Undeniable: How Biology Confirms our Intuition that Life Is Designed*.¹⁴

The above books, at least prior to *Signature in the Cell* and *Darwin's Doubt*, caused some stir in the Darwinian camp, but nothing of national notice, with the possible exception of one or two. But with the publication of *Signature in the Cell* and *Darwin's Doubt*, both by Stephen Meyer, a reaction was called for. The reasons why a reaction was called for include Meyer's credentials as a scholar, the publication of the books by a mainstream publisher, the detailed and articulate presentation in the books, and the wide acceptance of the books.

Meyer received his Ph.D. in the philosophy of science from the University of Cambridge. Prior to his doctoral studies at Cambridge, he had obtained a degree in physics and earth science from Whitworth College in Washington State, and became a geophysicist with Atlantic Richfield. After his degree from Cambridge, he returned to Whitworth and taught for several years.

Signature in the Cell was published in 2009, and *Darwin's Doubt* in 2013. Both are published by Harper Collins. *Signature in the Cell* was a *Times* (of London) *Literary Supplement* "Book of the Year" for 2009. *Darwin's Doubt* was a *New York Times* "Bestseller" in non-fiction for 2013. Both books are large (*Signature in the Cell* is about 600 pages, and *Darwin's Doubt* is over 500 pages), scientifically detailed, and very well written. With Stephen Meyer and his books being the elephant in the room, pretending they don't exist didn't seem a good option, so a number of critical reviews have been written by those in the Darwinian camp. Responses, clarifications, and refutations of those critical reviews are what occupies *Debating Darwin's Doubt*.

Earlier criticisms of Darwinian evolution (see section 4 below) were, for the most part, ignored by those in the Darwinian camp. The prevailing view in almost all universities in the United States, and in research institutions as well, has been firmly in the Darwinian camp. So why bother challenging ideas from the intelligent design community or other naysayers?

For example, the following is a quotation from an article by Cornelia Dean in the *New York Times*, May 19, 2007: “There is no credible scientific challenge to the theory of evolution as an explanation for the complexity and diversity of life on earth.”¹⁵

As another example, the following brief quotation is by Karl Giberson, who describes himself as a physicist, scholar, and author specializing in the creation-evolution debate, in *The Daily Beast*, June 1, 2014: “there is no debate about evolution.”¹⁶

As another example, the following is by Barbara Forrest, professor of philosophy at Southeastern Louisiana University, in “Understanding the Intelligent Design Creationist Movement: its True Nature and Goals,” a position paper from the Center for Inquiry, Office of Public Policy, Washington, D.C.: “There is no controversy in the mainstream scientific community about either the fact of evolution or the major aspects of evolutionary theory.”¹⁷

As another example, the following is by Gregory Petsko, member of the National Academy of Sciences: “Let me say this as clearly as possible, so there can be no mistake about what I mean: there is no controversy. Just because a few misguided so-called scientists question the validity of the concept of evolution doesn't mean there is a controversy.”¹⁸

In a document of the American Association for the Advancement of Science, “Statement on the Teaching of Evolution,” we find these words: “there is no significant controversy within the scientific community about the validity of the theory of evolution. The current controversy surrounding the teaching of evolution is not a scientific one.”¹⁹

Michael L. Peterson, professor of philosophy at Asbury University, writes as follows: “It is actually quite fair to say that evolution shares equal status with such established concepts as the roundness of the earth, its revolution around the sun, and the molecular composition of matter.”²⁰

It appears to me that the majority of those who embrace Darwinian evolution do so without knowing much about it, without ever having studied it, without ever really having been taught it, but rather by embracing the philosophical idea of it. This was discovered by Michael Behe, as reported in his book, *Darwin's Black Box*. Not only are the above statements true for grade school and high school students in public schools, not only are they true for people in the news media, etc., but they are true statements for

graduate students in the biological sciences as well, and for those who teach them!

Behe explains in chapter 8 of *Darwin's Black Box* the amazing lack of anything written in journal papers or books on the step by step evolutionary development of any complex biological system, such as an eye, for example. But this is just what Darwinian evolution is supposed to explain! Initially it was just natural selection of variations that somehow occurred, to gradually build increasingly complex biological systems. Then, with neo-Darwinism in the early twentieth century, the cause of the variations was postulated as genetic mutations caused by a variety of sources such as copying errors in DNA. So, copying errors of one sort or another produced changes in an organism from one generation to another, and then those changes that are beneficial with be selected, due to increased survivability. Since that is, pretty much, all there is to it, one would think that many would be documenting evolutionary changes that have occurred based on neo-Darwinism. Apparently the truth is that many claim such changes, but no one documents any! It isn't that they document only a few, they don't document any!

Well, there is one exception that I know of, and that is Michael Behe himself in his book *The Edge of Evolution*.²¹ In this book, Behe describes how sickle cell disease developed in Africa. He writes: “It is crystal clear that the spread of the sickle gene is the result of Darwinian evolution – natural selection acting on random mutation.”²² It was selected because those with it survived malaria, and most of those without it did not. However, he concludes that the edge of evolution, defining what it can and cannot do, is modest indeed. He writes: “With the criterion of two protein-protein binding sites, we can quickly see why stupendously complex structures such as the cilium, the flagellum, and the machinery that builds them are beyond Darwinian evolution.”²³

In *Darwin's Black Box*, Behe writes “No one has ever explained in detailed, scientific fashion how mutation and natural selection could build the complex, intricate structures discussed in this book. In fact, *none* of the papers published in *JME* [*Journal of Molecular Evolution*] over the entire course of its life as a journal has ever proposed a detailed model by which a complex biochemical system might have been produced in a gradual, step-by-step Darwinian fashion.”²⁴ Behe continues: “Attempts to explain the evolution of highly specified, irreducibly complex systems – either mousetraps or cilia or blood clotting – by a gradualistic route have so far been incoherent, as we have seen in previous chapters. No scientific journal will publish patently incoherent papers, so no studies asking detailed questions of molecular evolution are to be found.”²⁵ And in summary: “There has never been a meeting, or a book, or a paper on details of the evolution of complex biochemical systems.”²⁶

This raises the question, “why is Darwinism nonetheless credible with many biochemists? A large part of the answer is that they have been taught as part of their biochemical training that Darwinism is true.”²⁷ Behe goes on to survey a number of college textbooks on biochemistry, and notes that they claim that Darwinian evolution is of critical importance to the subject, but then doesn’t develop or even use Darwinism in the book itself. “The implicit promise that the secrets of evolution will be uncovered is never consummated. Many students learn from their textbooks how to view the world through an evolutionary lens. However, they do not learn how Darwinian evolution might have produced any of the remarkably intricate biochemical systems that those texts describe.”²⁸

“Molecular evolution is not based on scientific authority. There is no publication in the scientific literature – in prestigious journals, specialty journals, or books – that describes how molecular evolution of any real, complex, biochemical system either did occur or even might have occurred.”²⁹

Then Behe goes on to write what is shocking, especially considering that Behe is himself a molecular biologist: “If a theory claims to be able to explain some phenomenon but does not generate even an attempt at an explanation, then it should be banished. Despite comparing sequences and mathematical modeling, molecular evolution has never addressed the question of how complex structures came to be. In effect, the theory of Darwinian molecular evolution has not published, and so it should perish.”³⁰

So, as we come to the close of section 1, we should ask the question, who is involved in science, those in the intelligent design camp, or those in the evolution camp? This leads into a discussion as to just what is science.

2. What Is Science?

The meaning of the word “science” seems to be perhaps simple enough: “The state or fact of knowing: knowledge or cognizance of something specified or implied.”³¹ But many in the sciences dispute just what is and is not properly “science.” Stephen Meyer says that “Defining science is a notoriously difficult thing to do.”³² Defining what is and is not science is called the demarcation problem. Complicating this, there is operations science, which covers most things, and then origins science, which asks where and/or how something originated. Many say that establishing a demarcation line is impossible, in the sense that not everyone will agree on just where that line is to be drawn. If your ox is about to be gored, you will object. Nevertheless, most would agree that true science

must be pursued as empirically, objectively, knowledgeably, and intelligently as possible.

Additional definitions of science include the following. According to the English Oxford Living Dictionaries online, “science” is “The intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment.”³³ According to the Merriam-Webster online dictionary, “science” is “the state of knowing: knowledge as distinguished from ignorance or misunderstanding”,³⁴ which has a broader meaning. According to the Science Council (of the United Kingdom), “Science is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.”³⁵

According to those who study the nature of science and how it is pursued, such as philosophers of science, it is not so clear as to just what is meant by science. For example, one of the more well-known philosophers of science, Karl Popper, defining the demarcation of science from non-science requires some clear thinking and careful definition. “Popper’s falsificationist methodology holds that scientific theories are characterized by entailing predictions that future observations might reveal to be false. When theories are falsified by such observations, scientists can respond by revising the theory, or by rejecting the theory in favor of a rival or by maintaining the theory as is and changing an auxiliary hypothesis. In either case, however, this process must aim at the production of new, falsifiable predictions. While Popper recognizes that scientists can and do hold onto theories in the face of failed predictions when there are no predictively superior rivals to turn to. He holds that scientific practice is characterized by its continual effort to test theories against experience and make revisions based on the outcomes of these tests. By contrast, theories that are permanently immunized from falsification by the introduction of untestable ad hoc hypotheses can no longer be classified as scientific.”³⁶ Some question Popper’s falsification methodology as being too restrictive, but others still hold to his views.

3. Limitations of Naturalism

One of the problems with defining “science,” is that many want to allow only naturalistic methods and results. Such a restriction is termed Methodological Naturalism, or MN. To many theists, this seems unrealistically and unnaturally restrictive. How can anyone complain about the lack of evidences, for example, for the existence of God, if MN has ruled them out *a priori*? Historically this has not been done. The Bible claims that God is known through

His creation. And many founders of scientific disciplines believed they were thinking God's thoughts after Him.

Thomas Nagel, a well-known philosopher at New York University, while apparently being an atheist nevertheless finds consciousness, cognition, and value not to be explained by the physical sciences. He writes: "there are doubts about whether the reality of such features of our world as consciousness, intentionality, meaning, purpose, thought, and value can be accommodated in a universe consisting at the most basic level only of physical facts – facts, however sophisticated, of the kind revealed by the physical sciences."³⁷ Nagel continues: "I would now like to say something about the polar opposite of materialism, namely, the position that mind, rather than physical law, provides the fundamental level of explanation of everything, including the explanation of the basic and universal physical laws themselves."³⁸ Although not a theist, "I agree with Alvin Plantinga that, unlike divine benevolence, the application of evolutionary theory to the understanding of our own cognitive capacities should undermine, though it need not completely destroy, our confidence in them."³⁹ That is, naturalistic evolutionary theory undermines human cognition, and therefore appears to be a significant limitation to naturalism. It also undermines human morality: "an evolutionary self-understanding would almost certainly require us to give up moral realism – the natural conviction that our moral judgments are true or false independent of our beliefs."⁴⁰ Nagel concludes as follows: "I have argued patiently against the prevailing form of naturalism, a reductive materialism that purports to capture life and mind through its neo-Darwinian extension. But to go back to my introductory remarks, I find this view antecedently unbelievable – a heroic triumph of ideological theory over common sense."⁴¹

Although Nagel is an atheist and Plantinga a Christian, they agree on the limits of naturalism. Plantinga writes: "Polls reveal that most Americans have grave doubts about the truth of evolution. Only about 25 percent of Americans believe that human beings have descended from ape-like ancestors, whatever they think about the main lines of the whole theory. Many Americans are concerned about the teaching of evolution in the schools and want to add something as a corrective ('intelligent design,' perhaps) or they want it taught as a mere 'theory' rather than as the sober truth, or they want the objections to it taught, or they want it taught along with 'critical thinking.' . . . The vast majority of Americans reject atheism, and hence also naturalism. A solid majority of Americans are Christians, and many more (some 88 or 90 percent, depending on the poll you favor) believe in God."⁴² Much later in the book, Plantinga writes: "science and naturalism don't fit together at all well. The fact is there is deep unease, deep discord, deep conflict between naturalism and science."⁴³

Intelligent Design

Stephen Meyer states that "Defenders of methodological naturalism can claim, at best, that it has had normative force during *some* periods of scientific history. But this concedes that canons of scientific method change over time – as, indeed, they do. From Newton until Darwin, design arguments were a common feature of scientific research."⁴⁴

The concern that many have is that MN is artificially added to the meaning of science by some, not because of empirical evidence or for some good logical reason, but rather for religious reasons – to rule out anything that may even suggest something about God.

For example, Richard Dawkins, a champion of atheism and evolution, has written that "An atheist before Darwin could have said, following Hume: 'I have no explanation for complex biological design. All I know is that God isn't a good explanation, so we must wait and hope that somebody comes up with a better one.' I can't help feeling that such a position, though logically sound, would have left one feeling pretty unsatisfied, and that although atheism might have been *logically* tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist."⁴⁵ Such sentiments give a strong motivation to impose MN, as then all evidence for design is ruled out *a priori*.

Even more telling, is the following from Richard Lewontin: "We take the side of science *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, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door."⁴⁶

4. Is Darwinism Science?

Based on the above, I would have to say that some aspects of Darwinian evolution are science, and some aren't. Such things as gene sequencing and comparisons with others to indicate similarities, etc., are science. But the big picture, the overarching materialistic worldview, especially when applied to just about anything or everything, is a religious commitment without evidential support, and is not science. Even in the restricted area of finding possible

evolutionary pathways for biological systems development is not science, as pointed out above by Michael Behe. Please reread pages 2 and 3 above.

To stress this point because of its critical importance, note Behe's words again: "No one has ever explained in detailed, scientific fashion how mutation and natural selection could build the complex, intricate structures discussed in this book [*Darwin's Black Box*]. In fact, *none* of the papers published in *JME* [*Journal of Molecular Evolution*] over the entire course of its life as a journal has ever proposed a detailed model by which a complex biochemical system might have been produced in a gradual, step-by-step Darwinian fashion."⁴⁷ Behe continues: "Attempts to explain the evolution of highly specified, irreducibly complex systems – either mousetraps or cilia or blood clotting – by a gradualistic route have so far been incoherent, as we have seen in previous chapters. No scientific journal will publish patently incoherent papers, so no studies asking detailed questions of molecular evolution are to be found."⁴⁸ And in summary: "There has never been a meeting, or a book, or a paper on details of the evolution of complex biochemical systems."⁴⁹

Then Behe goes on to write what is shocking, especially considering that Behe is himself a molecular biologist: "If a theory claims to be able to explain some phenomenon but does not generate even an attempt at an explanation, then it should be banished. Despite comparing sequences and mathematical modeling, molecular evolution has never addressed the question of how complex structures came to be. In effect, the theory of Darwinian molecular evolution has not published, and so it should perish."⁵⁰

For those with great respect for Behe, we could stop right here as far as answering the question, Is Darwinism Science? But we will continue. William A. Dembski offers this critique: "Darwinism is *on its own terms* a failed scientific research program – that it does not constitute a well-supported scientific theory, that its explanatory power is severely limited and that it fails abysmally when it tries to account for the grand sweep of natural history."⁵¹ Dembski continues: "The abiotic infusion of exogenous information is the great mystery confronting modern evolutionary biology. It is the mystery posed by Manfred Eigen at the beginning of this chapter. Why is it a mystery? Not because the abiotic infusion of exogenous information is inherently spooky or unscientific but because evolutionary biology has failed to grasp the relevance and centrality of information to its task. The task of evolutionary biology is to explain the origin and development of life. The key feature of life is the presence of complex specified information – CSI. Caught up in the Darwinian mechanism of selection and inheritance with modification, evolutionary biology has failed to appreciate the informational hurdles organisms need to jump in the course of natural history.

Intelligent Design

To jump those hurdles organisms require information. What's more, a significant part of that information is exogenous and must originally have been infused abiotically."⁵²

Cornelius Hunter is another scientist that finds Darwinism less than scientific. He writes: "Nonetheless, it should be clear that controlling the copying action of RNA polymerase is an exquisite process requiring many details to be worked out in advance. It is not the sort of thing that lends well to Darwin's idea of unguided evolution. . . . how does such a phenomenally complex system just arise on its own so that it can be selected?"⁵³ Echoing Behe, Hunter continues: "Biology is full of incredibly elaborate, complex machines. If you are beginning to suspect that Darwinism has no compelling explanation for them, you're right. Aside from vague hypotheses that have more speculation than hard fact, evolutionists have no idea how such machines could have come about by unguided forces of nature."⁵⁴

Michael Denton, a molecular biologist, notes that "The German zoologist, Bernard Rensch, was able to provide a long list of leading authorities who have been inclined to the view that macroevolution cannot be explained in terms of microevolutionary processes, or any other currently known mechanisms."⁵⁵ Denton gives a lengthy quotation from Ernst Mayr, one of the 20th century's leading evolutionary biologists, as follows: "The nature and cause of transpecific evolution [macroevolution] has been a highly controversial subject during the first half of this century. The proponents of the synthetic theory [modern neo-Darwinian theory] maintain that all evolution is due to the accumulation of small genetic changes, guided by natural selection, and that transpecific evolution is nothing but an extrapolation and magnification of the events that take place within populations and species. A well-informed minority, however, including such outstanding authorities as the geneticist Goldschmidt, the paleontologist Schindewolf, and the zoologists Jeannel, Cuenot, and Cannon, maintained until the 1950's that neither evolution within species nor geographic speciation could explain the phenomena of "macroevolution", or, as it is better called, transpecific evolution. These authors contended that the origin of new "types" and of new organs could not be explained by the known facts of genetics and systematics."⁵⁶ Clearly, from this quotation and many others, things are not as settled among Darwinists as is often presented to the public.

Near the end of his book, Denton writes: "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 or scientific advance since 1859. Despite more than a century of intensive effort on the part of evolutionary biologists, the major objections raised by Darwin's critics such as Agassiz, Pictet, Bronn and Richard Owen have not been met."⁵⁷

While on sabbatical in England during 1986/87 Phillip Johnson read Richard Dawkins' *The Blind Watchmaker* and Michael Denton's *Evolution: A Theory in Crisis*, both published in 1986. Both authors, Dawkins and Denton, are highly skilled scientists, yet their understandings of Darwinian evolution could hardly differ more. Those two readings, among others, in part, led to the publication of Johnson's *Darwin on Trial*,⁵⁸ arguably launching the modern Intelligent Design movement. Reference to Johnson's book is included here rather than in section 1 because, as the title suggests, it is a critique of Darwinism rather than an argument for Intelligent Design. It does mention Intelligent Design, but only in passing. Since Johnson is not a scientist but rather teaches law at the University of California at Berkeley, he consulted with scientists about his book while still in manuscript form and did his homework to make sure what he wrote was correct. His book was well received, and because of it, and his subsequent writings, he is recognized as the father of modern Intelligent Design.

In writing *Darwin on Trial*, Johnson relied heavily on the writings of highly recognized Darwinists themselves. For example: "Gould [Stephen Jay Gould (1941-2002), well-known paleontologist and evolutionary biologist at Harvard University] wrote that, although he had been 'beguiled' by the unifying power of the Darwinist synthesis when he studied it as a graduate student in the 1960s, the weight of the evidence had driven him to the reluctant conclusion that the synthesis, 'as a general proposition, is effectively dead, despite its persistence as textbook orthodoxy.'"⁵⁹

Johnson continues: "Gould published a major article in the scientific journal *Paleobiology* which expressed his endorsement of Goldschmidt [Richard Goldschmidt (1878-1958), professor at University of California at Berkeley, and originator of the 'hopeful monster' hypothesis in evolution] even more explicitly, and in which he pronounced the effective death of the neo-Darwinian synthesis. In place of the dead orthodoxy he hailed as 'the epitome and foundation of emerging views on speciation' a passage by Goldschmidt which insisted that 'neo-Darwinian evolution . . . is a process which leads to diversification strictly within the species . . . The decisive step in evolution, the first step towards macroevolution, the step from one species to another, requires another evolutionary method than the sheer accumulation of micromutations.'"⁶⁰

Johnson continues: "Paleontologists seem to have thought it their duty to protect the rest of us from the erroneous conclusions we might have drawn if we had known the actual state of the evidence. Gould described 'the extreme rarity of transitional forms in the fossil record' as 'the trade secret of paleontology.' . . . Niles Eldredge [biologist and paleontologist, American Museum of Natural History] has been even more revealing: 'We paleontologists have said that the history of life supports [the story of gradual adaptive change], all the while really knowing that it does not.'"⁶¹

When Michael Denton was asked, "Does Darwinian theory adequately explain the pervasive patterns of natural history?", his answer was as follows: "Well, the basic pattern it fails to explain is the apparent uniqueness and isolation of major types of organisms. My fundamental problem with the theory is that there are so many highly complicated organs, systems and structures, from the nature of the lung of a bird, to the eye of the rock lobster, for which I cannot conceive of how these things have come about in terms of a gradual accumulation of random changes.

"It strikes me as being a flagrant denial of common sense to swallow that all these things were built up by accumulative small random changes. This is simply a nonsensical claim, especially for the great majority of cases, where nobody can think of any credible explanation of how it came about. And this is a very profound question which everybody skirts, everybody brushes over, everybody tries to sweep under the carpet.

"The fact is that the majority of these complex adaptations in nature cannot be adequately explained by a series of intermediate forms. And this is a fundamental problem. Common sense tells me there must be something wrong."⁶²

5. Intelligent Design and Science

Stephen Meyer provides sound reasons for Intelligent Design being considered science in chapters 6 and 7 of *Signature in the Cell*. First he provides an historical review of the issue. He notes that "The founders of the scientific revolution (ca. 1300-1700) were often deeply religious men who expressed a profound appreciation for the design of life and the universe. Moreover, for these scientists, the concept of design was not just a pious sentiment. For them it was an indispensable assumption upon which the whole of the scientific enterprise rested. . . . As the British philosopher Alfred North Whitehead explained, 'There can be no living science unless there is a widespread instinctive conviction in the existence of an *Order of Things*. And, in particular, of an *Order of Nature*.' Whitehead argued that confidence in this proposition was

especially inspired by the ‘medieval insistence upon the rationality of God.’”⁶³ Others “have insisted that modern science was specifically inspired by the conviction that the universe is the product of a rational mind who designed the universe to be understood and the human mind to understand it. As sociologist of science Steve Fuller notes, Western science is grounded in ‘the belief that the natural order is the product of a single intelligence from which our own intelligence descends.’ This foundational assumption gave rise to the idea that nature was ‘intelligible,’ that it had been designed in accord with discernible laws that could be understood by those who subjected nature to careful scrutiny. Or as the astronomer Johannes Kepler said, scientists have the job of ‘thinking God’s thoughts after him.’”⁶⁴

Meyer continues, “As the Oxford physicist and historian of science Peter Hodgson observes: ‘According to Judeo-Christian beliefs the world is the free creation of God from nothing. The structure of the world cannot therefore be deduced from first principles; we have to look at it, to make observations and experiments to find out how God made it. This reinforces the Aristotelian principle that all knowledge comes through the senses, but requires that it be situated within a wider set of beliefs concerning the nature of the world that is implicit in the doctrine of creation.’”⁶⁵

Meyer, who obtained his PhD from the University of Cambridge, writes that “Each day as I walked to my department on Free School Lane, I passed by the entrance to the old Cavendish Laboratory in which thirty-odd years before Francis Crick and James Watson realized that their model of DNA was so beautiful it had to be right.” He notes that there is an inscription on the archway over the door of the Cavendish lab, placed there at the insistence of James Clerk Maxwell, which is Psalm 111, verse 2: “Great are the works of the Lord, sought out by all who take pleasure therein,” although in Latin rather than English. Meyer continues, “The Inscription summarized Maxwell’s inspiration for scientific study: the thought that works of nature reflect the work of a designing mind. In this belief he had been joined by many of the leading scientists of Western civilization for over four hundred years – Copernicus, Kepler, Ray, Linnaeus, Cuvier, Agassiz, Boyle, Newton, Kelvin, Faraday, Rutherford – on and on the list could go.”⁶⁶ During the 2016 AG in San Diego, I made a presentation highlighting some 19 recent scientists who see design in nature, including 4 who are Nobel Prize winners.⁶⁷

William A. Dembski states that “Intelligent design properly formulated is a theory of information. Within such a theory, information becomes a reliable indicator of intelligent causation as well as a proper object for scientific investigation. . . . It is the empirical detectability of intelligent causes that renders intelligent design a fully **Intelligent Design**

scientific theory and distinguishes it from the design arguments of philosophers or what has traditionally been called ‘natural theology.’”⁶⁸

Meyer gives six reasons why Intelligent Design should be considered science⁶⁹: (1) The case for ID is based on empirical evidence, (2) Advocates of ID use established scientific methods, (3) ID is a testable theory, (4) The case for ID exemplifies historical scientific reasoning, (5) ID addresses a specific question in evolutionary biology, and (6) ID is supported by peer-reviewed scientific literature.

6. Summary & Conclusions

The essence of neo-Darwinian evolution, the very core of what it is, is random mutations of DNA followed by natural selection. Comparative anatomy, the fossil record, etc., are peripheral to this basic theory. As difficult as it may be to believe, very little research and almost no publishing takes place concerning this core theory. Repeating from page 2 above, Behe explains in chapter 8 of *Darwin’s Black Box* the amazing lack of anything written in journal papers or books on the step by step evolutionary development of any complex biological system, such as an eye, for example. But this is just what Darwinian evolution is supposed to explain!

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From page 3 above, “If a theory claims to be able to explain some phenomenon but does not generate even an attempt at an explanation, then it should be banished. Despite comparing sequences and mathematical modeling, molecular evolution has never addressed the question of how complex structures came to be. In effect, the theory of Darwinian molecular evolution has not published, and so it should perish.”

Because neo-Darwinian evolution is suppose to be able to produce any conceivable biological system, or at least all of the very wide variety that we see in the natural world, one would think that random mutations of existing DNA can produce everything. But Lee Spetner disagrees. In his book, *Not By Chance!*,⁷⁰ he indicates that the complete set of all possible mutations is finite. Not just anything can happen, but only certain mutations are conceivable, such as a gene segment patched in reversed, or in the wrong place, etc. Spetner writes: “[A]mong all the mutations that have been studied, there aren’t any known, clear, examples of a mutation that has added information. . . . The NDT [neo-Darwinian theory] says not only that such mutations must occur, they must also be probable enough for a long sequence of them to lead to macroevolution.”⁷¹ Spetner continues: “All point mutations that have been studied on the molecular level turn out to reduce the genetic information and not to increase it.”⁷²

Spetner continues: “The neo-Darwinians would like us to believe that large evolutionary changes can result from a series of small events if there are enough of them. But if these events all lose information they can’t be the steps in the kind of evolution the NDT is supposed to explain, no matter how many mutations there are. Whoever thinks macroevolution can be made by mutations that lose information is like the merchant who lost a little money on every sale but thought he could make it up on volume. . . . The failure to observe even one mutation that adds information is more than just a failure to find support for the theory. It is evidence *against* the theory.”⁷³

Combine the above with the quotation from Lewontin: “We take the side of science *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, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.”⁷⁴

It appears that the neo-Darwinian theory is motivated more by world-view, philosophical, even religious reasons than by what may be called science.

On the other hand, as noted above, Meyer gives six reasons why Intelligent Design should be considered science:

- (1) The case for ID is based on empirical evidence,
- (2) Advocates of ID use established scientific methods,

- (3) ID is a testable theory,
- (4) The case for ID exemplifies historical scientific reasoning,
- (5) ID addresses a specific question in evolutionary biology,
- and (6) ID is supported by peer-reviewed scientific literature.⁷⁵

It should also be noted that intelligent causes are routinely investigated in forensics, to establish, for example, whether a death was the result of an accident or natural cause, or that brought about by another person. Intelligent causes are also routinely investigated in known/unknown structures, such as in Mount Rushmore versus the man’s head on the surface of Mars, a natural rock bridge versus a man-made bridge, native-American “mounds” versus naturally occurring mounds, ancient building foundations versus surrounding rock, pottery shards versus naturally occurring materials, language carved in rock versus random formations, etc. And what of the digital information transmission when DNA replicates, which includes error-correction coding not unlike that used in cell phone transmissions.

The results are hopefully clear, that neo-Darwinian evolution appears indeed to be “A Theory in Crisis,” whereas Intelligent Design is valid scientific investigation.

Notes

1 Michael J. Behe, *Darwin’s Black Box: The Biochemical Challenge to Evolution*, The Free Press, 1996. This book is a seminal work on Darwinian evolution and intelligent design. Endorsed by David Berlinski, Robert Shapiro, Peter van Inwagen, George Gilder, and others.

2 William A. Dembski (editor), *Mere Creation: Science, Faith & Intelligent Design*, InterVarsity Press, 1998. Contributors include Michael Behe, David Berlinski, Phillip Johnson, Hugh Ross, William Lane Craig, J. P. Moreland, Jonathan Wells, Stephen Meyer, Paul Nelson, and others.

3 William A. Dembski (editor), *Intelligent Design: The Bridge Between Science & Theology*, InterVarsity Press, 1999. The Forward is written by Michael Behe. The book is endorsed by Phillip Johnson, Jonathan Wells, William Lane Craig, Jack Collins, J. Budziszewski, and others.

4 Michael J. Behe, William A. Dembski, and Stephen C. Meyer, *Science and Evidence for Design in the Universe*, Ignatius Press, 2000. This book is papers presented at a conference sponsored by the Wethersfield Institute in New York City, September 25, 1999.

5 William A. Dembski and James M. Kushiner (editors), *Signs of Intelligence: Understanding Intelligent Design*, Brazos Press, 2001. Contributors include Phillip Johnson, Nancy Pearcey, Jay Wesley Richards, John Mark Reynolds, Michael Behe, Stephen Meyer, Jonathan Wells, Paul Nelson, and others.

6 Thomas Woodward, *Doubts about Darwin: A History of Intelligent Design*, Baker Books, 2003. The Forward is written by Phillip E. Johnson. The book is endorsed by William A. Dembski, Michael Behe, Ravi Zacharias, and others.

7 Denyse O’Leary, *By Design or by Chance?: The Growing Controversy on the Origins of Life in the Universe*, Castle Quay Books, 2004. The book is endorsed by Phillip Johnson, Timothy G. Standish, Jonathan Wells, and William Dembski.

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9 Jonathan Wells, *The Politically Incorrect Guide to Darwinism and Intelligent Design*, Regnery Publishing, 2006.

10 William A. Dembski and Jonathan Wells, *The Design of Life: Discovering Signs of Intelligence in Biological Systems*, Foundation for Thought and Ethics, 2008. The book is endorsed by Michael Behe and William S. Harris. Even though the book is richly documented and illustrated on heavy gloss paper, it comes with a CD that includes a 62-page pdf of additional notes and illustrations.

11 Stephen C. Meyer, *Signature in the Cell: DNA and the Evidence for Intelligent Design*, HarperOne, 2009. This book is endorsed by Philip S. Skell, member, National Academy of Sciences, and Evan Pugh Professor Emeritus at Pennsylvania State University; Scott Turner, professor, environmental and forest biology, State University of New York; Thomas Nagel, professor, New York University; Alastair Noble, former BBC education officer and Her Majesty’s Inspector of Schools for Science, Scotland; Edward Peltzer, ocean chemistry, Scripps Institution of Oceanography; Steve Fuller, professor of sociology of science, University of Warwick; John C. Walton, professor of organic chemistry, University of St. Andrews, Scotland; Norman C. Nevin, professor emeritus in medical genetics, Queen’s University, Belfast, fellow of the Royal College of Physicians; and others. This book was a *Times Literary Supplement* “Book of the Year” for 2009.

12 Stephen C. Meyer, *Darwin’s Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design*, HarperOne, 2013. This book is endorsed by George Church, professor of genetics at Harvard Medical School; Mark McMenamin, paleontologist at Mt. Holyoke College; Scott Turner, professor of biology at the State University of New York; Russell Carlson, professor of biochemistry and molecular biology and director of the Complex Carbohydrate Research Center at the University of Georgia; Wolf-Ekkehard Lönnig, senior scientist emeritus (biologist) at the Max Planck Institute for Plant Breeding Research,

Cologne, Germany; and others. The book was a *New York Times* “Bestseller” in non-fiction for 2013.

13 David Klinghoffer (editor), *Debating Darwin’s Doubt: A Scientific Controversy that can No Longer be Denied*, Discovery Institute Press, 2015. This book is a follow-on to *Darwin’s Doubt*, responding to the questions and negative reviews that the book engendered. Authors to the various chapters include Stephen Meyer, William Dembski, David Berlinski, Douglas Axe, Paul Nelson, and others.

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- 21 Michael J. Behe, *The Edge of Evolution: The Search for the Limits of Darwinism*, Free Press, 2007.
- 22 *The Edge of Evolution*, p. 29.
- 23 *The Edge of Evolution*, p. 146.
- 24 *Darwin's Black Box*, p. 176.
- 25 *Darwin's Black Box*, p. 177.
- 26 *Darwin's Black Box*, p. 179.
- 27 *Darwin's Black Box*, p. 180.
- 28 *Darwin's Black Box*, p. 183.
- 29 *Darwin's Black Box*, p. 185.
- 30 *Darwin's Black Box*, p. 186.
- 31 *The Compact Edition of the Oxford English Dictionary*, Oxford University Press, 1971. This two-volume edition contains the complete text of the original twelve-volume set. The simple definition of "science" given is definition 1 in the dictionary, with a great deal more given, but definition 1 is sufficient for our purposes here.
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- 34 <https://www.merriam-webster.com/dictionary/science>
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- 42 Alvin Plantinga, *Where the Conflict Really Lies: Science, Religion, & Naturalism*, Oxford University Press, 2011, pp. 52-53.
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- 45 Richard Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design*, Norton, 1996, p. 6.
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- 48 *Darwin's Black Box*, p. 177.
- 49 *Darwin's Black Box*, p. 179.
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- 51 William A. Dembski, *Intelligent Design: The Bridge Between Science & Theology*, InterVarsity Press, 1999, p. 112. This book is endorsed by Phillip E. Johnson, Michael Behe, Jonathan Wells, William Lane Craig, J. Budziszewski, and others. Dembski holds a Ph.D. in mathematics from the University of Chicago and a Ph.D. in philosophy from the University of Illinois at Chicago. He has done postdoctoral work at Chicago, MIT, and Princeton.
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- 53 Cornelius G. Hunter, *Darwin's Proof: The Triumph of Religion over Science*, Brazos Press, 2003, p. 20. Hunter has a Ph.D. in biophysics and computational biology from the University of Illinois.
- 54 *Darwin's Proof*, pp. 33-34.
- 55 Michael Denton, *Evolution: A Theory in Crisis*, Adler & Adler, 1986, p. 86. The reference to Rensch is from Bernhard Rensch, *Evolution above the Species Level*, Columbia University Press, 1959, p. 57. While on sabbatical in England Phillip Johnson read Richard Dawkins' *The Blind Watchmaker* and Michael Denton's *Evolution: A Theory in Crisis*. Those two readings, in part, led to the publication of Johnson's *Darwin on Trial*, arguably launching the modern Intelligent Design movement.
- 56 *Evolution: A Theory in Crisis*, pp. 86-87. The quotation from Mayr is from Ernst Mayr, *Populations, Species and Evolution*, Harvard University Press, 1970, p. 351.
- 57 *Evolution: A Theory in Crisis*, p. 345.

58 Phillip E. Johnson, *Darwin on Trial*, 2nd edition, InterVarsity Press, 1993. The first edition was published in 1991.

59 *Darwin on Trial*, p.11.

60 *Darwin on Trial*, p. 40.

61 *Darwin on Trial*, p. 59.

62 Transcript of “An Interview with Michael Denton,” Access Research Network, *Origins Research*, vol. 15, no. 2, Fall/Winter 1993. This interview is obtainable online at <http://www.arn.org/docs/orpages/or152/dent.htm>

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64 *Signature in the Cell*, p. 143. The quotation from Fuller is from Steve Fuller, *Science vs. Religion? Intelligent Design and the Problem of Evolution*, Polity Press, 2007, p. 15. The quotation from Kepler is from Gerald Holton, *Thematic Origins of Scientific Thought: Kepler to Einstein*, Harvard University Press, 1973, p. 86.

65 *Signature in the Cell*, p. 144. The quotation from Hodgson is from Peter E. Hodgson, “The Christian Origin of Science,” *Logos: A Journal of Catholic Thought and Culture*, vol. 4, no. 1, pp. 138-159, Spring 2001, p. 145. At the time of the publication, Peter E. Hodgson was a fellow of Corpus Christi College, Oxford, and head of the Nuclear Physics Theoretical Group of the Nuclear and Particle Physics Laboratory. He has written ten books on nuclear physics and many articles on theology and science, on the philosophy of science, and on nuclear power, energy, and the environment.

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69 *Signature in the Cell*, pp. 403-414.

70 Lee Spetner, *Not By Chance!: Shattering the Modern Theory of Evolution*, Judaica Press, 1998. Spetner received his Ph.D. in physics from MIT. Professor Edward Simon (d. 2006), Department of Biology at Purdue University, writes of *Not By Chance!*: “It is certainly the most rational attack on evolution that I have ever read.” (back cover of book)

71 *Not By Chance!*, pp. 131-132.

72 *Not By Chance!*, p. 138.

73 *Not By Chance!*, p. 160.

74 See note 46 above.

75 See note 69 above.