

Theistic Evolution: The Failure of Neo-Darwinism

Dr. Ray Bohlin provides an overview of the first section of a landmark book on theistic evolution, showing why evolution doesn't hold up to scrutiny.

Three Good Reasons for People of Faith to Reject Darwin's Explanation of Life

In this article I'm discussing the first of four sections in the book, *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*.^[1] I'll be covering five chapters from the section, "The Failure of Neo-Darwinism." First we'll look at Doug Axe's chapter titled, "Three Good Reasons for People of Faith to Reject Darwin's Explanation of Life."

I need to let you know from the start that I totally disagree with any theistic evolutionary perspective. As a biologist, I see no reason for any accommodation since Darwinism should be rejected on purely scientific grounds.

But moving along, Axe makes three points in this chapter. First, that there is a cost to any theistic evolution position. Second, Darwin's view of life is false. Third, the reasons for the accommodation are confused. I want to focus on his first point that accommodating Darwin's view of life within traditional faith is costly. He begins with a familiar quotation from the Book of Job 39:26-27. "Is it by your understanding that the hawk soars and spreads his wings toward the south? Is it at your command that the eagle mounts up and makes his nest on high?" Eventually, Job was appropriately humbled as he responded later in Job 42:3, "I have uttered what I did not understand, things too wonderful for me, which I did not know." And if you *don't* agree, then *you* should try to make an eagle. Oh, we can create flying toys with flapping

wings and all, but these don't come close to an actual eagle or hawk. These toys must be made on an assembly line with humans adding parts until the "eagle" is complete. With only the yolk and white of the egg as its nutrition, true eagles are formed within the egg by a seamless automated process. No human interference needed.

If a part breaks in the flying toy, it must be replaced by a human. Eagle's bodies can mostly heal themselves and true eagles reproduce on their own. No flying toy will ever reproduce itself. Job's response was correct. He didn't respond, saying "Actually, God, hawks and eagles could have appeared by accident over millions of years." As Doug states, "I see no way around the fact that the arresting awe we're meant to have for the maker of the majestic eagle is lost the moment we accept that accidental physical processes could have done the making instead Neo-Darwinism and the Origin of Biological Form and Information Now we turn to discussing Stephen Meyer's chapter on the origin of biological form and genetic information.

Neo-Darwinism and the Origin of Biological Form and Information

Before we begin, I need to discuss what a body plan is. The body plan of an animal is the overall structure of the body. For instance, the butterfly and the polar bear have very different body plans. The butterfly has its skeleton on the outside, what's known as an exoskeleton. The polar bear has an endoskeleton; the skeleton is on the inside of the body. Butterflies have wings, polar bears don't. In fact, all the major organs, limbs and other body parts are arranged very differently. So, each of these animals will need to form along very different pathways to arrive at the final product. The question becomes, "How does the evolutionary process form such different body plans from similar beginnings?"

Studies in developmental biology, the study of how organisms develop from fertilized egg to final product, show that changes in biological form require attention to the timing, especially those steps involved in developing the body plan. Also, there is a need for careful choreography in the expression of genetic information, not just when, but how much, how long lived, the proper sequence.

There are real problems here for Neo-Darwinism. Major evolutionary change requires changes in the body plan which is formed very early in embryonic development. So, mutations need to occur early. Mutations that may occur late have no effect on body plan. But numerous studies have shown that early mutations are inevitably lethal. Late mutations don't produce body plan changes. As Meyer puts it, "The kind of mutations we need, we don't get. The kind we get, we don't need."

There isn't just a need for new genes and proteins for new functions of the organism. Polar bears can endure freezing temperatures, butterflies can't. But new regulatory pathways are needed. Early development is controlled by developmental gene regulatory networks, or dGRNs. These networks regulate the time and perform the choreography. Any mutations here are always inevitably lethal. Neo-Darwinism can't explain the origin of new animal body plans.

Are Present Proposals on Chemical Evolutionary Mechanisms Accurately Pointing toward First Life?

Now we will review Dr. James Tour's discussion on the origin of life. Dr. Tour is the foremost authority on organic chemical synthesis. That is, he makes chemical products based on the element carbon. This background makes him just the scientist to critique the chemical origin of the first life, since life is also based on the element carbon.

Tour begins by describing the start and stop necessity of making something as simple as a carbon-based car and a car that also contains a motor and then an even better motor. These nano cars take many steps to build. Usually Tour and colleagues run into a roadblock necessitating, before moving to the next step, that they back up several steps and redirect the process. He also documents that each stage usually requires different chemical requirements. This makes it necessary to purify your product. What he demonstrates is that making something comparably simple as a nano car requires intelligent input at every step. This will not happen by chance. Tour emphasizes that the undirected chemical synthesis to make useful biological molecules, and even a cell, is far more complex with no opportunity to start over again when you hit a dead-end.

After walking the reader through the many and enormous roadblocks a prebiotic chemist faces in trying to form the building blocks—sugars, amino acids, fatty acids, and nucleotides—and then the macromolecules; carbohydrates, proteins, lipids, DNA and RNA, and *then* trying to assemble these very different parts into a functioning, reproducing cell, Tour comes to a final conclusion.

“Those who think scientists understand how prebiotic chemical mechanisms produced the first life are wholly misinformed. Nobody understands how this happened. Maybe one day we will. But that day is far from today. It would be more helpful (and hopeful) to expose students to the massive gaps in our understanding. Then they may find a firmer—and possibly a radically different—scientific theory.”

Why DNA Mutations Cannot Accomplish What Neo-Darwinism Requires

Now we discuss Jonathan Wells's chapter on why DNA mutations are insufficient to account for the arrival of new organisms

through evolution. Mutations acted on by Natural Selection are what provides the variation, when given enough time and continued mutations with selection, to provide new types of organisms.

Dr. Wells begins his chapter by making sure we understand what is meant by the "Central Dogma." It goes something like this: DNA makes RNA, makes protein, makes us. It was thought that all the instructions for building organisms was in the sequence code of DNA. But DNA never leaves the nucleus. The sequence of DNA that codes for a protein is transcribed into a molecule of RNA. The messenger RNA then leaves the nucleus and enters the cell, where molecular machines called ribosomes, translate the RNA code into protein code. Proteins are made of long chains of amino acids. Proteins are the workhorse of the cell. They speed up necessary chemical reactions the cell needs and provide structure and support. Our bodies are composed of organ systems, which are made up of organs, which are composed of tissues, and tissues are composed of cells that perform their functions through the proteins each cell makes. Therefore, DNA makes RNA, makes protein, makes us.

Over the last few decades, this analogy has fallen apart. Initially, a stretch of DNA that coded for a single protein was called a gene. One gene, one protein. We now know that the RNA transcribed from a gene can be split up into two or more segments and these segments put back together in several different ways. The RNA then doesn't match the original sequence of DNA. About 95% of human genes can be spliced into more than one RNA and more than one protein. Proteins can also be modified with sequences of sugar molecules that are specific to a particular tissue. What controls the splicing and the addition of sugar molecules is still not fully known. But for various reasons, it's not the DNA alone that determines these variations on a central theme.

Evidence from Embryology Challenges Evolutionary Theory

Finally, I'll cover the final chapter for this article, "Evidence from Embryology Challenges Evolutionary Theory." Sheena Tyler states early that Darwin thought that "Embryology is to me by far the strongest class of facts in favor of change of form."² Tyler goes on to indicate that in Darwin's time, embryology was largely a black box of which little was known.

The section I'll be covering is titled "Development is Orchestrated." Tyler makes a comparison to a mystery novel where the author plans to ensure the different characters come together at the right place and time to resolve the mystery. Embryological development is very much like that. She mentions a four-dimensional pattern of stored information. The first three dimensions of this pattern revolve around being in the right place, the fourth dimension is time. So embryological proteins, chemicals and even electrical fields need to be available at the right time and place. Any deviation and the structures are ill-formed, or the embryo could even die.

Skeletal development in vertebrates starts with an electrical field that begins the process. And from there she quotes an embryologist indicating that the size and shape of skeletal elements in the embryo are "exquisitely regulated." Another word used to describe the sequence of events is "precise." This doesn't sound like something that was cobbled together by chance over a few million years. There is a definite plan and prepattern that *must* be followed.

The central nervous system requires, again, a "precise and exquisitely regulated gene expression." Another expression used is "intricately orchestrated." Each developing neuron anticipates where a connection with another neuron will need to be before contacting the other neuron.

Last, she mentions the heart and circulatory system. One embryologist reports that cardiac transcription factors (small proteins that help initiate the expression of a gene) *choreograph* the expression of *thousands* of genes at each stage of cardiac development. Every blood vessel ends up in the right place every time along with the proper architecture for veins or arteries. Just amazing!

Notes

1. J.P. Moreland, Stephen C. Meyer, Christopher Shaw, Ann K. Gauger, and Wayne Grudem, *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*. Wheaton, IL: Crossway, 2017.

2. Quoted in Sheena Tyler, Evidence from Embryology Challenges Evolutionary

Theory, in *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*, Moreland, J.P., Meyer, S.C., Shaw, C., Gauger, A. K., and Grudem, W., editors.

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Darwinism: A Teetering House of Cards



Steve Cable examines four areas of recent scientific discovery that undermine evolution.

The Origin of Life: A Mystery

Confidence in Darwinism erodes as new discoveries fail to produce supporting evidence. Three books released in 2017,

- *House of Cards* by journalist Tom Bethel
- *Zombie Science* by biologist Jonathan Wells
- *Undeniable* by biologist Douglas Axe

address areas where Darwin's grand idea is weaker now than 150 years ago. As Bethel states, "Today, it more closely resembles a house of cards, built out of flimsy icons rather than hard evidence, and liable to blow away in the slightest breeze."[\[1\]](#) It

is not just critics who recognize this weakening. In 2016, the Royal Society in London convened a meeting to discuss "calls for revision of the standard theory of evolution."[\[2\]](#)



Four areas where Darwin hoped future work would support his theory will be examined. The first area is the origin of reproducing beings.

Darwin only hoped that life may have originated in a "warm little pond." But as one scientist states, "The origin-of-life field is a failure—we still do not have even a plausible coherent model, let alone a validated scenario, for the emergence of life on earth."[\[3\]](#)

Darwin assumed the first reproducing cells were very simple. In truth, the simplest cells are composed of impressively complex machines which could not have arisen directly from inorganic components. But there are no known simpler life forms. As Michael Behe commented, "The cell's known complexity has increased immeasurably in recent years, and points ever more insistently to an intelligent designer as its cause."[\[4\]](#)

The probability of even one of the amino acids necessary for life appearing by random mutations is effectively zero even given billions of years. As Doug Axe writes, "(Examining how) accidental evolutionary processes are supposed to have invented enzymes without insight, we consistently find these proposals to be implausible."[\[5\]](#)

Another professor states, "Those who think scientists understand the issues of prebiotic chemistry are wholly misinformed. Nobody understands them. . . . The basis upon which we . . . are relying is so shaky we must openly state the situation for what it is: a mystery."[\[6\]](#)

Facing insurmountable odds against life appearing, some materialists propose an infinite number of parallel universes.[\[7\]](#) With infinite chances, even the most unlikely events could occur. But, as Axe points out, "The biological inventions that surround us (are) fantastically improbable, with evolution explaining none and the multiverse hypothesis explaining only those absolutely necessary for wondering to be possible, . . . this hypothesis fails to explain what we see."[\[8\]](#)

Even after resorting to unobservable fantasy situations, the challenges presented by the origins of life cannot be overcome. A Darwinian model begins with a self-replicating life form. Currently, this appears to be a hill that no one knows how to climb.

An Example of Macro-evolution: Still Searching

Darwin's theory is dependent upon the unobserved concept of macro-evolution, i.e. intergenerational differences accumulating into different species over time. Darwin believed his magic wand of natural selection could direct this process toward increasingly complex beings. Has further research confirmed his belief?

Let's begin with fossil evidence.

The number of fossils studied has blossomed over the last 150 years. All the types of species which exist today appear in the fossil record over a relatively short period of time.[{9}](#) And, in most cases, with no transitional forms between them undermining Darwin's theory. As science historian Stephen Meyer concludes, "As more . . . fossils are discovered (failing) to document the great array of intermediate forms, it grows ever more improbable that their absence is an artifact of either incomplete sampling or preservation."[{10}](#)

And evolution proponent Stephen Gould wrote, "The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees . . . have data only at the tips and nodes of their branches; the rest is inference."[{11}](#) *Nature* editor Henry Gee put it this way: "To take a line of fossils and claim that they represent a lineage is not a scientific hypothesis that can be tested, but an assertion that carries the same validity as a bedtime story."[{12}](#)

Clearly, the fossil record challenges rather than supports conventional evolutionary theory.

Let's continue by looking at experimental evidence.

Perhaps someone has recreated macro-evolution in the lab.

Studies of fast replicating populations have shown no ability to accumulate multiple changes. Attempts to create macro-evolution in fruit flies, bacteria and viruses concluded “Neither in nature nor under experimental conditions have any substantial effects ever been obtained through the systematic accumulation of micro-mutations.”[{13}](#)

Bethel points out, “The scientific evidence for evolution is not only weaker than is generally supposed, but as new discoveries have been made . . . , the reasons for accepting the theory have diminished rather than increased.”[{14}](#)

Yet biology departments still spout their unfounded belief in the “magic wand” ability to produce an unimaginable array of advanced creatures in what “amounts to the triumph of ideology over science.” Even some materialists see through this charade. One geneticist at Harvard wrote, “If scientists are going to use logically unbeatable theories about the world, they might as well give up natural science and take up religion.”[{15}](#)

“Darwin might well have been dismayed (at) the meager evidence for natural selection, assembled over many years. . . . It is worth bearing in mind how feeble this evidence is any time someone tells you that Darwinism is a fact.”[{16}](#)

The Challenge of Irreducible Complexity

Darwin wrote his theory would “absolutely break down” if an organ could not be formed by “numerous, successive, slight modifications.”[{17}](#) Have such organs been found? Irreducible complexity and functional coherence say yes.

Irreducible complexity means that some known functions require multiple parts that have no purpose without the other parts. For a Darwinian process to create these functions would require useless mutations to be indefinitely maintained until combined with other useless mutations. Michael Behe’s analysis

has shown the 4 billion years of the earth's existence are not sufficient for such complex functions to be created by random mutations.

Even if an improbable series of events occurred allowing **one** of these complex forms to arise through a set of random mutations, it would need to happen thousands, if not millions, of times to produce our complex life forms.

In *Undeniable*, Axe introduces "functional coherence," defined as "The hierarchical arrangement of parts needed for anything to produce a high-level function—each part contributing in a coordinated way to the whole." Axe examines the role of functional coherence as a microscopic level and concludes, "The fact that mastery . . . of protein design is completely beyond the reach of blind evolution is . . . evolution's undoing. . . . The evolutionary story is . . . something much less plausible than hitting an atomic dot on a universe-size sphere over and over in succession by blindly dropping subatomic pins."[18](#)

In *Zombie Science*, Jonathan Wells considers the number of irreducibly complex subsystems required to evolve fully aquatic whales. These features include flukes with specialized muscles, blowholes with elastic tissues and specialized muscles, internal testicles with a countercurrent heat exchange system, specialized features for nursing, and many others. For Darwinism, these changes are insurmountably large. Whales certainly appear to be the product of design, not unguided evolution.

He also points to advanced optical systems. The process by which light detection becomes an intelligent signal to the brain is irreducibly complex. Two scientists wrote, "the prototypical eye. . . cannot be explained by selection, because selection can drive evolution only when the eye can function at least to a small extent."[19](#) These scientists determined the eye was irreducibly complex and could not be

developed by natural selection.

Richard Lewontin, a committed materialist, does not believe natural selection can explain complex life forms. He cannot conceive of any gradual set of useful incremental changes resulting in a flying being. Unless a small change gives an advantage, “the change won’t be selected for, and obviously, a little bit of wing doesn’t do any good.”[\[20\]](#)

So we can agree with Darwin on this issue: his theory “absolutely breaks down.”

DNA and Molecular Science Muddy the Scenario

Has uncovering the role of DNA filled the gaping holes in Darwinism or created more?

A species’s DNA sequence, we are told, contains all the information needed to create new members. But Douglas Axe states, “(We) would be shocked to know the . . . state of ignorance with respect to DNA. The view that most aspects of living things can be attributed neatly to specific genes has been known . . . to be FALSE for a long time.”[\[21\]](#)

The higher-level components making up a species are not entirely specified by its DNA. As Wells explains, “After DNA sequences are transcribed into RNAs, many RNAs are modified so they do not match the original transcript. . . . (changing) over time according to the needs of the organism.” The claim that “DNA makes RNA makes protein” is false.”[\[22\]](#)

Creating new complex functions requires multiple changes in the DNA sequence AND in other elements making the chance of random mutations creating new species untenable.

The original conflicting “trees of life” were created examining the morphology, i.e. the structures of species. These trees suggest different major nodes but almost no

transitional forms. Can DNA analysis help? Research has shown that groupings based on morphology are not supported by DNA analysis. As Wells notes, these conflicts “are a major headache for evolutionary biologists.”[\[23\]](#)

This disconnect from recent gene research is not limited to a few cases. As reported in 2012, “incongruence between (trees) derived from morphology . . . , and . . . trees based on different subsets of molecular sequences has become pervasive.”[\[24\]](#)

But DNA analysis alone has a great degree of uncertainty. In one study looking at fifty genes from seventeen animal groups, multiple conflicting ideas on the evolutionary relationship between the animal groups were proposed.[\[25\]](#) All had seemingly absolute support from the DNA evidence, but all could not be true.

Originally scientists thought DNA was primarily junk sequences not contributing to the characteristics of a species. This junk represented functions which were replaced or had no current usefulness. As Francis Crick, one of the discoverers of DNA’s structure, said, “The possible existence of such selfish DNA is exactly what might be expected from the theory of natural selection.”[\[26\]](#)

But recent research shows at least eighty percent of the human genome contributes. As Wells reports, “The evidence demonstrates that most of our DNA is transcribed into RNA and that many of those RNAs have biological functions. The idea that most of our DNA is junk, . . . is dead.”[\[27\]](#)

The facts uncovered about the functioning of DNA and other elements in passing on characteristics to the next generation appear to make more holes in evolutionary theory.

A Philosophy Props Up Its Poster Child

Recent, scientific insights have weakened Darwin's theory. Yet many are unwilling to discuss its weakness. Why this reluctance? It falls into two camps: 1) a commitment to materialism and 2) a desire for academic acceptance. Materialism is a religious viewpoint where everything has a natural explanation. A spiritual component or events resulting from an outside force are rejected. Science is not materialism. Science attempts to identify and quantify the forces that make the universe. A materialist scientist adds a religious restriction: only natural forces can be considered.

Bethel states, "Although Darwinism has been promoted as science, its unstated role has been to prop up the philosophy of materialism and atheism."

Wells suggests, "Priority is given to proposing and defending materialistic explanations rather than following the evidence wherever it leads. This is materialistic philosophy masquerading as empirical science, . . . zombie science." [\[28\]](#)

Atheist Colin Patterson offers an honest view regarding the theory of evolution as "often unnecessary" in biology. Nevertheless, it was (taught as) "the unified field theory of biology," holding the whole subject together. Once something has that status it becomes like religion." [\[29\]](#)

Until they have a better theory, they will stand behind it rather than consider alternatives. They fear any uncertainty will lead to questioning other aspects of materialism, such as that free will and love for others are simply a façade promoted by natural selection.

Bethel points out, "If our minds are . . . accidental products of a blind process, what reason do we have for accepting materialist claims as true?" [\[30\]](#) After all, our minds are selected to improve our survivability, not to discern what

is true.

Many scientists are not die-hard materialists. They believe there may be a spiritual aspect of our existence. Yet they promote the materialistic view. For most, this inconsistent approach is a reaction to the threat of censure from the establishment.

Axe claims, "The religious agenda is the enemy that threatens science. . . . Everything that opposes the institutionalized agenda is labeled 'anti-science.'" [\[31\]](#)

The same arguments used against intelligent design apply more accurately to Darwinism. Bethel states, "(Some) have said that design can't be measured and therefore it is a religious belief. . . . They might also have said the macro-evolution has not yet been measured, or so much as observed." [\[32\]](#)

In this review, we have seen

1. No materialistic concept for life's origin
2. Little evidence of transitional life forms
3. Strong evidence complex functions could not arise through random changes
4. DNA playing havoc with the basic tenets of Darwinism.

Now we wait for the façade raised by supporters of a flawed concept to collapse.

Notes

1. Tom Bethel, *Darwin's House of Cards: A Journalist's Odyssey Through the Darwin Debates*, Discovery Institute Press, 2017, page 20.
2. Ibid, page 20.
3. Eugene V. Loonin, *The Logic of Chance: The Nature and Origin of Biological Evolution*, FT Press, 2011, page 391.
4. See Behe, back cover comment for Thomas E. Woodward and James P. Gills, *The Mysterious Epigenome* (Grand Rapids, MI:

Kregel Publications, 2012).

5. Douglas Axe, *Undeniable: How Biology Confirms Our Intuition That Life Is Designed*, HarperOne, New York, 2016, page 63.
6. James Tour, "Animadversions of a synthetic chemist," *Inference* 2:2, May 19, 2016.
7. Axe, page 227.
8. Axe, page 230.
9. Meyers and other quotes on the Cambrian.
10. Stephen Meyer, *Darwin's Doubt*, New York, Harper Collins, 2014, page 70.
11. Gould, *The Panda's Thumb*, page 181.
12. Henry Gee, *In Search of Deep Time: Beyond the Fossil Record to a New History of Life*, New York: The Free Press, 1999, p. 32, 113-117.
13. Soren Lovtrup, *Darwinism: The Refutation of a Myth*, New York, 1987, page 351.
14. Bethel, page 45.
15. Richard Lewontin, "Testing the Theory of Natural Selection," *Nature* 236 no. 5343, p. 181-182.
16. Bethel, page 79.
17. Darwin, *The Origin of Species*, 2nd ed., 1860, page 189.
18. Axe, page 184.
19. Gehring and Ikeo, "Pax6: mastering eye morphogenesis and eye evolution," *Trends in Genetics* 15, 1999, 376.
20. James Schwartz, "Oh My Darwin!: Who's the Fittest Evolutionary Thinker of All?", *Lingua Franca* 9, no. 8 (1999).
21. Axe, page 271.
22. Wells, page 90.
23. Wells, page .
24. Liliana Davalos, Andrea Cirranello, Jonathan Geisler, and Nancy Simmons, "Understanding phylogenetic incongruence: Lessons from phyllostomid bats," *Biological Reviews of the Cambridge Philosophical Society* 87, 2012.
25. Antonis Rokas, Dirk Kruger, and Sean B. Carroll, "Animal evolution and the molecular signature of radiations compressed in time," *Science* 310, 2005.
26. Francis Crick, *What Mad Pursuit: A Personal View of*

Scientific Discovery, New York, Basic Books, 1988, page 147.

27. Wells, page 128.

28. Wells, page 17.

29. Bethel, page 149.

30. Bethel, page 174.

31. Axe, page 54.

32. Bethel, page 161.

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“Help Me Counter My Prof’s Teachings on Horse Evolution”

I’m a senior at _____ in Agricultural Business Management. In one of my Range classes the professor has laid the foundation for the entire class on evolution. Using the common picture of horse evolution (hyracotherium to equus) he is saying that rangeland plants and systems have co-evolved with large ungulates. I’m struggling on just how he can give the theory of evolution such validity, the difference between adaptation and evolution, and finding information that I can use to refute some of his ideas. I don’t want to argue with him but just want a chance to exchange ideas. If you can direct me to any information or resources on this specific topic, I would appreciate it. Thanks.

The best source of information on the horse series can be found in Jonathan Wells book, *Icons of Evolution* (2000) from InterVarsity Press. He has a full chapter on the subject as well as a chapter on Archeopteryx and the bird-like fossils. The book is easily obtainable at Amazon.com and some Christian Bookstores. Wells has also responded to some of his critics and negative reviews on the Discovery Institute’s website at

www.discovery.org. He also has other material at Access Research Network, www.arn.org. I would check on both sites for other helpful material.

Respectfully,

Dr. Ray Bohlin
Probe Ministries

“Can You Recommend Good Books on Intelligent Design?”

Grace and peace to you, Dr. Bohlin:

I am a returning college student and a home-schooling parent. In my classes I find myself facing animosity toward those of us who reject evolution. I want to be able to defend myself in class as well as prepare my children to do the same. I want to be able to say to my children and in class, “I believe [THIS], because [of THIS]; and here’s the difference.” I know there is good information available on Intelligent Design and Creationism, but I simply do not have the ammunition of knowledge and information that I desire.

Unfortunately, with so many works available, I am at a loss as to where to begin. Thus, could you recommend a few? Are there any that force evolutionists to base their critical examinations mainly (or exclusively) upon emotional arguments? (I.e., points that naturalistic “science” cannot honestly ignore or refute.) Alternatively, could you recommend an assortment that, when combined, thwart the mass of evolutionist droning? (And a good order in which to read/study the works.)

I honor you for your desire to become more knowledgeable in this important arena. I wish there were more Christians like you.

Below is a brief annotated bibliography in the order I feel they should be read by someone just starting out.

1. *For an overview of the many issues and publishing events surrounding this question, you can start with the Probe book Creation, Evolution, and Modern Science, (Kregel, 2000) which I edited. This will introduce you to several topics without going into too much depth. [This link](#) will give you some more information.*

2. *Darwin On Trial by Phillip Johnson (IVP 1991). Phil Johnson has emerged as the leader of the Intelligent Design movement and here lays out in logical manner some of the important evidential problems with evolution as well as the all important academic and educational problems. [See this related article.](#)*

3. *Reason in the Balance by Phillip Johnson (IVP 1995). Here Johnson lays out just what is at stake in this naturalism vs. theism clash within the culture in law, science, and education. Not his most popular book, but by his own admission, his most important book. [See this related article.](#)*

4. *Icons of Evolution by Jonathan Wells (Regnery, 2000). A superb expose' of the ten most popular evidences for evolution in high school biology textbooks. The evolutionary and educational communities are falling all over themselves trying to explain or discredit this book. They are looking more and more foolish as time goes on. [See this related article.](#)*

5. *Darwin's Black Box By Michael Behe (Free Press, 1996). This is a narrower work explaining the necessity of intelligent design in understanding the molecular workings of the cell. Not as technical as you think. I have a good review*

of it in Creation, Evolution and Modern Science. [See this related article.](#)

6. Intelligent Design by William Dembski (IVP, 2000). Dembski shows how important Design is within a broad perspective across disciplines while also demonstrating the academic rigor of a design hypothesis. [See this related article.](#)

7. Defeating Darwinism by Phillip Johnson (IVP, 1997). A short book for students, parents and teachers highlighting the critical thinking skills needed to weave through the mine fields of the creation/evolution controversy. [See this related article.](#)

8. The Wedge of Truth by Phillip Johnson (IVP, 2000). Johnson's latest book, providing an update and analysis of the current controversy and an explanation of overall strategy (The Wedge). Insightful and quotable as always.

There are other books to help you in specific areas and anthologies to offer more technical perspectives of important aspects of the controversy, but these should get you started.

There are reviews of books 2-7 on our website in the science section. URLs listed at the end of each description.

Respectfully,

Ray Bohlin
Probe Ministries

Icons of Evolution

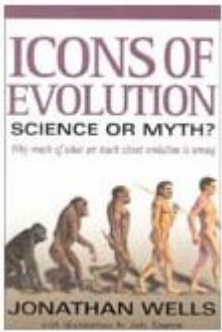
Dr. Ray Bohlin reviews Jonathan Wells' book Icons of Evolution, which exposes the lies and distortions that

constitute evolution's best textbook "evidence."



This article is also available in [Spanish](#).

Lies and Distortions Masquerading as Truth in the Halls of Science



Most everyone was required to take biology in high school, and many who went on to college likely took an introductory biology course as an elective, if not as a beginning course for a biology major. Required in most of these courses, mainly because of its inclusion in the textbook, was a section on evolution. Therefore, most people with a secondary education or above are familiar with the more popular evidences and examples of evolution nearly all textbooks have been using for decades. These include the peppered moth story of natural selection, Darwin's finches as an example of adaptive speciation, and the ubiquitous tree of life with its implied common ancestor to all life forms.

These familiar evidences of the creation story of our early 21st century culture are what Jonathan Wells (Ph.D., UC Berkeley, molecular and cell biology; Ph.D., Yale University, religious studies) refers to as the *Icons of Evolution* in his book by the same name (Regnery Publishing, 2000). Wells focuses on ten of these icons and meticulously exposes them to be false, fraudulent or at best, misleading. Many of these difficulties have been pointed out before and are known to a few, but Wells adds a level of sophistication and packages them in a form certain to get the attention of everyone in the educational establishment. This book is not a plea for creation in the schools or a selective and picky rant against trivial details. It is a frontal assault against some of the most cherished and revered "proofs" of the evolution story. There will be no shortage of controversy around this

extensively researched and well-written exposé. If these “Icons” are the best evidence for evolution, or at least the easiest evidence to explain, then one is left wondering what the future of evolutionary instruction could be. Even further, what future might there be for evolution itself?

Wells begins with an icon that itself starts at the beginning, the Miller-Urey experiment. This purports to show that molecules necessary for life could have arisen by simple chemical reactions on an early earth. The Miller-Urey experiment uses an atmosphere of reduced gases: ammonia, methane, water vapor, and hydrogen. Then it adds some energy in the form of sparks, and produces as Carl Sagan said, “the stuff of life.” Dating back to 1953, this experiment has been around for nearly fifty years. The problem is that for at least the last twenty-five years origin of life researchers realized that this atmosphere does not reflect that of the early earth. Many textbooks will begrudgingly admit this, but include the experiment anyway. One can only guess the reason: no other simulated atmosphere works. I suppose that textbook writers would suggest that since we “know” some form of chemical evolution happened, they are justified in not representing the facts accurately!

Tree of Life, Homology, and Haeckel's Embryos

The tree of life is ubiquitous in evolutionary literature. The notion that all of life is descended from a single common ancestor billions of years ago is how many would define evolution. But the actual evidence argues strongly against any such single common ancestor, and most animal life forms appear suddenly without ancestors in what is known as the Cambrian explosion of nearly 543 million years ago in evolutionary time. The Cambrian documents life forms so divergent that one would predict a fossil record covering hundreds of millions of years just to document the many transitions required from the

first multicellular animal ancestor. Current estimates suggest this change took place in less than 5-10 million years. Yet the tree of life, documenting slow gradual changes, persists.

Another critical evidence for evolution over the years has been homologous structures. The forelimbs of all mammals, indeed all vertebrates, from bats to whales to horses to humans, possess the same basic bone structure. This is routinely held up as evidence of having descended from a common ancestor. The different forms simply tell of different adaptive stories, resulting in their unique functions relying on the same basic foundation. What becomes puzzling is, first, a confusion of definitions. *Homology* is **defined** as structures having arisen from a common ancestor.[\[1\]](#) But then homology cannot be used as an evidence of evolution. Something is very wrong, yet textbook orthodoxy concerning homology continues to perpetuate a myth that has been exposed for decades. Second, supposed homologous structures do not necessarily arise through common developmental pathways or similar genes.

Next, Wells turns his attention to perhaps the most inexcusable icon of all: similarities in vertebrate embryos originally pointed out by Ernst Haeckel in the 19th century and used by Darwin in *The Origin of Species* as a powerful evidence for common descent. Haeckel's vertebrate embryos are shown passing through a remarkably similar stage early in development and only later diverging to the specific form. This passage through a common form early in development was seen as obvious evidence for a "community of descent." Yet, once again, the evidence gets in the way.

Since before the dawn of the 20th century, embryologists have known that Haeckel misrepresented the evidence. Vertebrate embryos never pass through a similar stage. What's more, Haeckel left out the fact that the earlier stages of embryonic development between classes of vertebrates pass through remarkably different pathways to arrive at this supposedly similar intermediate stage. The fraud was recently

“rediscovered,” though most embryologists have been aware of the inaccuracy all along. This shows the longevity of even falsified evidence, due to its persuasive appeal even in the hallowed halls of science. Perhaps scientists are human after all, seduced by a fraud simply because it makes such a good case for a treasured theory.

The Peppered Moth

Probably the granddaddy of all the icons of evolution is the peppered moth story. In pre-industrial England, the peppered moth was common in entomologists’ collections. By the 1840s a dark or melanic form was increasing in frequency in populations across England. By 1900 the melanic form comprised as much as ninety percent of some populations. In the 1950s experiments by Bernard Kettlewell clearly established that this change in frequency from a peppered variety to a dark variety was due to two factors.

First, the surface of tree trunks had changed from splotchy, lichen-covered patchwork, to a uniform, dark complexion, due to increased levels of pollution. The pollution killed the lichens and covered the tree trunks with soot. Second, the peppered variety was camouflaged from predation by birds on the lichen-covered tree trunks, and the melanic variety was camouflaged on the dark tree trunk. Therefore, the switch from peppered variety to melanic variety was due to natural selection, acting through selective bird predation as the trees changed from lichen-covered bark to soot-covered bark. Then with stricter air quality standards, the lichens are returning and the peppered variety is predictably coming back strong.

The peppered moth story became legendary as a classic example of Darwinian natural selection. But within 20 years of Kettlewell’s work, cracks began to appear. It was soon noted that the characteristic switch from the peppered form to the dark form happened in areas where the lichens still grew on

tree trunks. In other areas, the dark form began to decrease before the lichens began returning on trees. A similar pattern of a switch from a light form to a dark form was observed in ladybird beetles. Birds don't like ladybird beetles. Therefore, predation is ruled out as the selector. It all began to unravel when it was observed that peppered moths of both varieties **never** rest on tree trunks!

Essentially all photographs of moths on the trunks of trees were staged using dead or sluggish moths. They are not active during daylight. If that were the case, how could birds find them on tree trunks at all? Kettlewell released his moths in his mark-recapture-predation experiments in daylight hours, when the moths are naturally inactive. They simply found the nearest resting place (tree trunks in their sluggish state), and the birds gobbled up the non-camouflaged moths. We still don't know exactly where moths rest or whether lichens play any significant role in the story. Yet many biologists insist that the traditional story makes a good example of evolution in action. "To communicate the complexities would only confuse students," they say. Once again, flawed, yet cherished, examples persist because they are just too good **not** to be true!

Birds, Dinosaurs, Fruit Flies, and Human Evolution

The reptile-like bird, Archaeopteryx, has long been heralded as a classic example of a true ancestral transitional form. The improbable change from reptile to bird has been preserved in snapshot form in this remarkable fossil from Germany. Possessing a beautifully preserved reptilian skeleton with wings and feathers, Archaeopteryx was a paleontologist's dream. This would certainly explain why Archaeopteryx has found its way into just about every textbook. But Archaeopteryx has fallen on hard times. As happens with so many perceived transitions, it is universally viewed now as

just an extinct bird, an early offshoot of the real ancestor.

Surprisingly, bird-like dinosaurs from much later geologic periods are hailed as the real ancestors. This is based on structural similarities despite their existence after *Archaeopteryx*. Never mind that the child exists before the parent. So enamored are some, that birds are just today's feathered dinosaurs. *National Geographic* was recently caught red-faced by perpetrating a fraudulent dinosaur/bird fossil as the real thing in its pages. Scientists have even accepted molecular evidence indicating an *identical* match between turkey DNA and *Triceratops* DNA. Never mind that the identical DNA match is more likely the result of contamination from a turkey sandwich in the lab and that *Triceratops* is in the wrong dinosaur family for bird evolution. Such is the power of *wanting* to believe your theory is true.

In the next four chapters, Wells visits the familiar icons of Darwin's finches, fossil horses, mutant four-winged fruit flies, and the ultimate icon, diagrams of the progressive change from ape-like creatures to full human beings. Like the others above, these icons turn out to be far less than what the textbooks suggest. In each case, as in the six discussed above, there are plenty of experts willing to expose the lack of evidence for each icon. But they remain staples in the arsenal of evidences of the evolutionary process. Fossil horses and human evolution turn out also to be indicators of the difficulty evolution has in separating philosophical preferences from conclusions drawn from the evidence.

Textbook writers are either ignorant of current data, which prompts one to be skeptical of the accuracy of the rest of the textbook, or they are willfully misrepresenting the evidence in order to present a united front on the factualness of evolution. Unfortunately for our children, Wells is able to provide direct quotes indicating that at least some see no problem with including misleading or false data in order to

make a point. After all, we know evolution is true, so just because we don't have easy simple stories to tell, doesn't mean they aren't out there waiting to be discovered.

The Scientific Academia Reacts

The reasoning behind these *Icons of Evolution* exposes much of the standard story of evolutionary theory to be mythology rather than science. And if these ten icons have been viewed as the best evidence for evolution, the entire theory needs to be questioned and made accountable to the evidence. It will be interesting to watch the evolutionary community react to these revelations. Evolutionary propagandist Eugenie Scott has already reportedly predicted that the book will be a "royal pain in the fanny" for biology teachers. Will the scientific community be able to respond with an appropriate *mea culpa*, or will there be a battery of excuses and obfuscations? I predict the latter. In the last ten years, the evolutionary establishment has been exerting a great deal of effort to demonstrate that evolution is confirmed to such a degree as to be beyond rational dissent. Organizations such as the National Academy of Sciences, the National Association of Biology Teachers, and the National Center for Science Education have lobbied long and hard for the scientific integrity of the standard evolutionary story. They have held up most, if not all, of these ten icons as the principal pillars of the unassailable evidence for evolution.

Evolution is the principal foundation of the naturalistic world view, presented by many in academia as the only scientific, and therefore, objective, view of reality. Without evolution, metaphysical naturalism cannot stand. As Richard Dawkins has said, Darwin made it possible to be an intellectually fulfilled atheist.[\[2\]](#) Without evolution, the naturalistic worldview is in serious trouble. Therefore, the scientific community can be expected to rally fiercely behind the evolution story. Just how they do it will prove

interesting indeed. *Icons of Evolution* will help draw the evolutionary establishment out from behind the protective bulwark of its authority and force it to defend its theory on the basis of the evidence. This is a fight I believe it must eventually lose in the court of scientific and public opinion.

There are two minor, yet unfortunate, problems with the text. The first, actually a book design problem, regards the difficulty finding the legends for some figures and distinguishing them from the regular text. The second involves an unnecessarily inflammatory discussion of the monetary support evolution receives from the U.S. tax-supported National Institutes of Health and National Science Foundation. While Wells' discussion is accurate, it comes across as sour grapes and may provide a convenient target for evolutionary propagandists to dismiss the book without dealing with the evidence.

These problems aside, *Icons of Evolution* is a landmark work and deserves to be read and studied by all who have an interest in the controversy surrounding not only the teaching of evolution, but also the very theory of evolution itself.

Notes

1. "The term 'explosion' should not be taken too literally, but in terms of evolution it is still very dramatic. What it means is rapid diversification of animal life. 'Rapid' in this case means a few million years, rather than the tens or even hundreds of millions of years that are more typical. . . ." Simon Conway Morris, *Crucible of Creation*, (Oxford: Oxford University Press) 1998, p. 31.

2. Richard Dawkins, *The Blind Watchmaker*, New York, NY: W. W. Norton, 1986, p. 6.

Mere Creation: Science, Faith and Intelligent Design

An unprecedented intellectual event occurred in Los Angeles on November 14-17, 1996. Under sponsorship of Christian Leadership Ministries, Biola University hosted a major research conference bringing together scientists and scholars who reject naturalism as an adequate framework for doing science and who seek a common vision of creation united under the rubric of intelligent design. The two hundred participants, primarily academics, formed a nonhomogeneous group. Most had never met each other. Yet virtually all the participants questioned the reigning paradigm of biologynamely, that natural selection and mutation can account for the origin and diversity of all living things.[\[1\]](#)

So said Dr. Henry F. Schaefer III, professor of chemistry at the University of Georgia, author of over 750 scientific publications, director of over fifty successful doctoral students, and five-time Nobel nominee, in his foreword to the 1998 book, *Mere Creation: Science, Faith and Intelligent Design*.[\[2\]](#) I was privileged to be one of the two hundred participants at this historic conference which, along with the subsequent book, form the backbone of future direction of the fledgling intelligent design movement.

I would like to highlight significant chapters from this book and provide additional resources to learn more about this important challenge to Darwinism. Along the way I hope you will gain a glimpse of how important this movement is to the future not just of biology, but of science education as a whole in this country and around the world.

Jonathan Wells is a post-doctoral research biologist in the

department of molecular and cell biology at the University of California at Berkeley. His Ph.D. is from the same institution in developmental biology. In his chapter, "Unseating Naturalism,"[\[3\]](#) Wells lists several important insights from developmental biology that seriously challenge a purely naturalistic biologic science.

Since 1983, homeotic genes have been the rage in evolutionary developmental biology. First discovered in fruit flies, these genes appear to act as switches to turn on a series of genes important for sequential levels of development. Of interest to evolutionists, is the fact that many of the same genes found in fruit flies are also found in almost every other animal group, all acting as developmental switches. They are even frequently found on the same chromosome and in the same order from species to species. Such evidence seems quite a compelling argument for all life forms evolving from a common ancestor.

But Wells quickly points out that these genes do not control the same body structures from species to species, so an evolutionary explanation does not fit so well. "If the same gene can 'determine' structures as radically different as a fruit fly's leg and a mouse's brain or an insect's eyes and the eyes of humans and squids, then that gene is not determining much of anything."[\[4\]](#) There is no current mechanism to understand how a homeotic-switching gene can change from coding for one function to another in different organisms. Suddenly, this new great evidence of evolution is yet another problem for evolutionary biology. Wells goes on to point out that intelligent design has no trouble incorporating similar switches in different organisms just as an engineer understands the use of similar ignition switches in different kinds of vehicles.

Wells concludes that, "A design paradigm can nurture the sort of formal and teleological thinking that will enable biologists to discover the laws of development that have so

far eluded them.”{5} The reason for the elusion is the shackles of Darwinism.

Redesigning Science

In taking a close look at the book, *Mere Creation*, edited by Bill Dembski, I would like to explore Dembski’s own contribution to the volume, “Redesigning Science.”{6} If the name Bill Dembski is unfamiliar to you, it won’t be for long. Dembski is an extremely bright and articulate young man with earned doctorates in mathematics from the University of Chicago and philosophy from the University of Illinois at Chicago along with an M. Div. from Princeton Theological Seminary. Dembski is also the author of perhaps the most significant book to date in the intelligent design movement, *The Design Inference: Eliminating Chance through Small Probabilities*{7}, from the prestigious Cambridge University Press.

Bill is also confident. He is confident that intelligent design can thoroughly reshape the horizons of science in the next twenty years. He begins his chapter with a whimsical scenario recounting a “nightmare” potentially experienced by Harvard paleontologist and vocal anti-creationist, Stephen Jay Gould. The nightmare includes Gould no longer teaching at Harvard, relegated to leading field trips to the Galapagos Islands and the Burgess Shale in the Rocky Mountains of Canada, with Phil Johnson and cronies firmly in control of the National Science Foundation.{8} While Dembski admits that the nightmare is hopefully not realized in all its details, the notion of design claiming primacy within science is clearly the objective.

In order for this objective to be realized, design must be specifically and rigorously defined. I’ll allow Dembski to explain in his own words.

The key step is to delineate a method for detecting design.

Such a method exists. We use it implicitly all the time. . . . The method takes the form of a three-stage explanatory filter. Given something we think might be designed, we submit it to the filter. If it successfully passes all three stages of the filter, then we are warranted asserting it is designed. Roughly speaking, the filter asks three questions, and in the following order: Does a law explain it? Does Chance explain it? Does design explain it?[\[9\]](#)

In trying to classify an event as either due to natural law, chance, or design, we first try to assess if it is an event of high probability and therefore due to some recognizable natural law. A bullet firing when a gun's trigger is pulled or getting at least one head when a fair coin is tossed a hundred times are both high probability events due to natural law.

Rolling snake eyes with a pair of fair dice, or even winning a million dollar lottery when considering how many tickets are sold, constitute events of intermediate probability that are justly relegated to chance.

But let's say the same person wins that lottery three times in a row or even twice in a row. Suddenly we suspect that something more than chance is involved. Dembski's own example is Nicholas Caputo, the county clerk of Essex County, New Jersey. Caputo was responsible for determining the order in which candidates appeared on the ballots for elections. Caputo was a Democrat and 40 out of 41 times the Democrats were listed first, which everyone agrees, gave them a slight advantage. We intuitively use the explanatory filter to classify these events as designed because they are of small probability and they conform to a pattern. Thus intelligent design combines small probability with what Dembski terms, "specified complexity."

Dembski and the other authors of *Mere Creation* believe we can apply the same test scientifically to physical, chemical, and

biological events.

The Explanatory Power of Design

One of the critical questions for intelligent design is its ability to explain at least some natural phenomena more completely than naturalistic science. Stephen Meyer addresses this problem in his chapter, "The Explanatory Power of Design."[\[10\]](#) Steve Meyer is professor of philosophy at Whitworth College in Spokane, Washington, with a Ph.D. in the history of and philosophy of science from Cambridge University, England. As an example of design's explanatory power, Meyer chooses to explore the origin of information within living systems, specifically the origin of the genetic code. Meyer brings a scholarly appraisal to the subject since his Ph.D. dissertation concerned the history and status of origin of life research.

Meyer summarizes the extreme problems origin of life research has encountered in the last thirty years, highlighting along the way the important work by Charles Thaxton and Walter Bradley.[\[11\]](#) Following the euphoria of the famous experiment by Miller and Urey in 1953, the origin of life community has suffered setback after setback. Miller and Urey demonstrated that a mixture of methane, ammonia, water and hydrogen could be induced to produce, among many other organic compounds, a few amino acids, the building blocks of proteins. Subsequent work showed that this hypothetical atmosphere was pure mythology. So was the notion of a prebiotic soup of biochemical building blocks.[\[12\]](#)

Beyond the purely biochemical difficulties of origin of life research looms the immense problem of accounting for the origin of complex specified information contained in biomolecules, and specifically in DNA and the genetic code. In the computer age we are often amazed at the speed and storage capacity of modern personal computers, particularly the laptop variety with their 12 gig hard drives and 500 MHz speeds. We

seldom realize, however, that “the information storage density of DNA, thanks largely to nucleosome spooling, is several trillion times that of the most advanced computer chips.”[\[13\]](#) So not only is there real information stored in DNA, but it is stored at a density on a molecular level, we can’t even approach with our best computers. So just where did this information come from?

Attempts to account for the origin of biological information by natural biochemical means have utterly failed. The odds of achieving even a small 100 amino acid protein are less than 1 in 10^{125} . Events of that small a probability just don’t happen. Not only that, but researchers now realize that natural forces are incapable of achieving the formation of bio-information by any process. At first, some thought that maybe the amino acids and nucleotides had some natural affinity for each other to help account for the specific sequences of proteins and DNA. When that turned into a dead end, some hoped that some sort of natural selection of molecules might help. But natural selection requires reproducing cells. So-called “self-organization” processes only provide low level order, like ripples in the sand, not informational messages like “JOHN LOVES MARY” written in the sand.

Scientific laws will only describe ordered natural phenomena, like the structure of a crystal, which bear no relationship to the specified complexity within biomolecules. Instead, our experience with informational codes and languages indicates that they always come from an intelligent source. Therefore mind or intelligence stands as the only possible source for the information in DNA, proteins and cells as a whole.[\[14\]](#)

Applying Design within Biology

Have you ever wondered how a baby is formed from a single cell in just nine months? You could ask the same question of just about any animal from wasps to caterpillars to frogs to clams.

A fully functioning organism is a symphony of integrated parts performing in coordinated fashion to make beautiful music. But where did all the orchestra members (or proteins) come from? And who told them where to sit? And how do they know when and what to play? And what about tempo and volume and on and on? Well, you get the picture. Biological organisms are immensely complex, but they all start out as single cells. Somehow they turn into assemblages of different cells and tissues that all know their places and roles. Embryological development has long been a mystery and its secrets are only slowly being revealed. It has also turned into a potentially fruitful battleground between evolution and intelligent design.

Paul Nelson recently received his Ph.D. in philosophy from the University of Chicago and is currently doing post-doctoral work at the same university in evolutionary and developmental biology. The connection between embryological development and evolution is significant because, in order for organisms as diverse as hawks and starfish to evolve from a common ancestor, they must change not only their outward appearance but also the developmental process that starts as single cells for both. Nelson's "Applying Design within Biology" explores the connection and its inherent contradictions.[{15}](#)

A major observation of embryology has been that developmental mutations are usually harmful and often fatal. And the earlier in the developmental process the mutation occurs, the more likely the effect will be harmful. This led most embryologists to believe that evolutionary changes utilize mutations that appear relatively late in embryological development. Subsequently Darwinists predicted that the further back you go in comparing two organisms' patterns of development, the more similar they will be. Unfortunately for evolution, this is not true. There is wide diversity of early cleavage patterns of cells in embryos from species that can actually be closely related. One author went so far as to refer to this as "intellectually disturbing."[{16}](#)

Such a dramatic reversal would, you would think, cause many or at least some developmental biologists to question the validity of Darwinism. But as I have indicated so many other times in other essays, Darwinism is assumed, not questioned. Biologists mainly concluded that change in early development is doable after all and quite common. But as Nelson aptly summarizes, "There is little if any experimental evidence that 'changes in early development are possible.'" [\[17\]](#)

While the diversity of pathways to similar ends in development is a problem for evolutionary developmental biology, it is an expectation of intelligent design. The sheer magnitude of instructions for embryological progress screams for a design perspective. Design is also found in the newly discovered redundancy of developmental pathways. Knocking out a seemingly essential gene can sometimes have no effect whatsoever. Built-in redundancy is a hallmark of *design*, not chance mutations and natural selection. Nelson basically believes that any element of an organism necessary for survival and reproduction in any environment is a strong candidate for design. This should help open up new research avenues for developmental biology which is exactly what new theories should do.

Basic Types of Life

Next time you are walking through a zoo, stop and think about what makes some animals different and others similar. For instance, if you are looking out over a large pond, you may see different species of ducks, geese, and swans. While they do appear different in some respects, there are also very tantalizing similarities. However, if there are also some flamingos or sea gulls in the crowd of aquatic birds, you would not put them in the same category as ducks and geese. They seem different. Evolutionists, of course, would see sufficient similarities: they are birds, after all, with wings, feathers, and beaks. So evolutionists would say they all evolved from a common ancestor. Ducks and geese are more

similar to each other than they are to flamingos so the ancestor of ducks and geese is more recent than the ancestor of ducks, geese, and flamingos.

But since intelligent design is calling into question many evidences and predictions of naturalistic evolution, it is reasonable to assume that all animals are not related back in time through a common ancestor. Perhaps all birds did not evolve from a single source. Maybe there are many different ancestors for the many groups of birds and other animals. Well, how would you know? How could you recognize groups of animals that do derive from a common ancestor and those that have arisen independently? Siegfried Scherer makes an attempt in his chapter titled, "Basic Types of Life." {18}

Dr. Scherer is a professor of microbial ecology and director of the Institute of Microbiology at the Technical University of Munich and has published numerous papers in international peer-reviewed journals. Scherer proposes that there is another unit of taxonomic classification that can be overlaid on current taxonomy, the idea of basic types. {19} A basic type is a group of organisms or species that are capable of hybridizing. These hybrids don't necessarily have to be fertile themselves. Simply producing a coherent functioning organism from sperm and eggs of different species is sufficient. {20} Numerous successful attempts to hybridize different species of ducks, swans, and geese have convinced Scherer that they belong to a single basic type. This would mean that all 148 species are descended from a single common ancestor. {21}

The distinct differences mentioned earlier, between ducks and flamingos, would result from them being of different basic types. This observation leads Scherer to suggest that microevolution can now be defined as evolution within one basic type and macroevolution as evolution between basic types. The current evidence suggests that macroevolution is an undocumented process both from the fossil record and the

biology of basic types.

The plethora of species within a basic type like the ducks and geese also suggests that there was a great deal of variation built into each basic type to allow many distinct species to form through speciation. This prediction would be consistent with intelligent design but not evolution. There would be no reason for evolution to suggest that some species would have more variation than others would. This is corroborated by the observation that hybrids between two species frequently resemble a third species. This indicates that the genetic combination of the third species was hidden between the two species used to form the hybrid.[\[22\]](#)

Scherer summarizes that evidence of individual ancestors for each basic type, fossil and biological gaps between basic types, similar or convergent characters in different basic types, and odd features, such as slightly differing genetic codes now found in a few organisms would also be evidence of design over evolution. The possibilities for further research are everywhere. Intelligent design becomes an extremely fruitful paradigm for research.

Notes

1. Henry F. Schaefer III, "Foreword," in *Mere Creation: Science, Faith and Intelligent Design*, William A. Dembski, Ed. (Downers Grove, Ill.: InterVarsity Press, 1998), 9.
2. Ibid., 475.
3. Ibid.,, 51-70.
4. Ibid., 56.
5. Ibid., 68.
6. Ibid., 93-112.

7. William A. Dembski, *The Design Inference: Eliminating Chance through Small Probabilities* (Cambridge: Cambridge University Press, 1998), 243.

8. Dembski, *Mere Creation*, 93.

9. Ibid., 94.

10. Ibid., p. 113-147.

11. Charles Thaxton, Walter Bradley and Roger Olsen, *The Mystery of Life's Origin: Reassessing Current Theories* (Dallas: Lewis and Stanley, 1984), 228.

12. *Mere Creation*, 118-119.

13. Ibid., 120.

14. Ibid., 136-137.

15. *Mere Creation*, 148-174.

16. Eric Davidson, quoted in *Mere Creation*, 155.

17. Ibid.

18. Ibid., 195-211.

19. Scherer does at least mention a competing idea, baramin, initially proposed by creationist Frank Marsh (*Fundamental Biology*, 1940, Lincoln Neb., n.p., *Variation and Fixity in Nature*, Mountain View, Calif.: Pacific Press) and further explicated by Kurt Wise (K. Wise, Baraminology: "A Young Earth Creation Biosystematic Method, in *Proceedings of the Second International Conference on Creationism*, R.E. Walsh and C.L. Brooks, eds. (Creation Science Fellowship, Pittsburgh, PA, 1990, Vol. 2, 345-360 and K. Wise, "Practical Baraminology," *Creation Ex Nihilo Technical Journal*, 1991, 6(2): 122-137). Scherer chooses not to mention another attempt in fleshing out this concept, the prototype, proposed by Lane P. Lester and Raymond G. Bohlin in *The Natural Limits to Biological Change*

(Dallas: Probe Books, 1984), 161-172.

20. *Mere Creation*, 197-199.

21. *Ibid.*, 200.

22. *Ibid.*, 203-204.

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