A Philosophical Critique of Theistic Evolution

Dr. Ray Bohlin provides an overview of some philosophical problems with theistic evolution, particularly methodological naturalism.

Methodological Naturalism as a Ground Rule of Science

In this article I review the philosophical critique of theistic evolution from the book *Theistic Evolution: A Scientific, Philosophical, and Theological Critique.*{1} I'm starting with the chapter in this section by Steve Meyer and Paul Nelson titled, "Should Theistic Evolution Depend on Methodological Naturalism?" Now I admit that's quite a mouthful. What is methodological naturalism?

Well, if you simply break the word down, you can see that it is first about a method, therefore "methodological." The second word is "naturalism." The philosophy of naturalism maintains that only nature exists. There is no supernatural, no spirit or spirits, only matter and energy.

Therefore, methodological naturalism is a method that only considers matter and energy. This refers for many to science. So methodological naturalism is a method of science that only considers natural explanations. As Meyer and Nelson put it, "Methodological naturalism asserts that, to qualify as science, a theory must explain by strictly physical or material—that is, non-intelligent or non-purposive—causes."

Theistic evolutionists collectively assert that this is how science must be done. No purpose or intelligence allowed. Strangely though, Meyer and Nelson quote atheist Sean Carroll saying, "Science should be about determining truth, whatever

truth that may be—natural, supernatural, or otherwise." In addition, they quote theistic evolutionist Darrell Falk admitting that natural selection and mutation do not explain the origin of animal form. Yet he also affirms there is a natural explanation waiting out there. Why?

Meyer and Nelson explain, "Because of his commitment to methodological naturalism, Darrell Falk will not consider any theory (such as intelligent design) that invokes 'creative intelligence.'" Instead, he waits for an adequate and fully naturalistic theory of evolution. But is this reasonable?

This is my third article critiquing Theistic Evolution. You can find the first two here and here. I simply ask that our brothers and sisters who accept Theistic Evolution, look again with unbiased eyes.

Why Methodological Naturalism?

Above, I said that science should be about determining truth, wherever the evidence leads. Methodological naturalism limits that search for truth in science to only natural explanations. So why this restriction?

Some theistic evolutionists like Nancy Murphy are quoted as saying that, "For better or worse, we have inherited a view of science as methodologically atheistic." This limit by history over the last 150 years hardly seems adequate. Others, however, insist that methodological naturalism is supported by independent and objective criteria. These are often referred to as Demarcation criteria, such as:

1. Must be based on observable data and/or
2. Must be testable or falsifiable and/or
3. Must offer explanations based on natural law.

These criteria will be able to distinguish genuine science from pseudoscience, metaphysics, or religion.

I’m going to need to examine these criteria to see if they provide what is needed—basically a principled philosophical or methodological reason for supporting methodological naturalism. Can these criteria enable scientists or philosophers to do science in a normative way? Do the criteria justifiably exclude, *a priori*, some theories as unscientific or pseudoscientific, despite what the evidence may show? If so, then it may be perfectly justifiable to exclude from scientific consideration theories of the origin and development of life that invoke creative intelligence, and it may also be justifiable to require that theories refer only to materialistic causes or natural processes just as many theistic evolutionists assume.

BUT—and this is a big BUT—what if these demarcation criteria are neither independent nor objective? Is there already an inherent bias in these criteria and are they applicable in all situations? The answer is a resounding NO!

Demarcation Criteria Work, Except When They Don’t

Earlier, I discussed if methodological naturalism is necessary for science, and most evolutionists and theistic evolutionists think that it is. There are what are called demarcation criteria that are supposed to distinguish science from pseudoscience and religious theories.

There was a significant and famous federal court case challenging a new law passed in Arkansas back in 1980, that required creationism to be taught alongside evolution in public schools. Federal Judge William Overton struck down the Arkansas law and used many of these demarcation criteria as his reasoning. His reasoning was that creationism was not science based on these criteria.

First, he said, virtually verbatim from the brief submitted

from the ACLU, creationism was not guided by natural law. Second, it was not explained by reference to natural law. Third, creationism was not testable against the empirical world. And fourth, Creationism was not falsifiable. On the surface judge Overton's decision was reasonable.

Therefore, despite whatever scientific evidence creationists were able to offer for their claims, it simply wasn't science. No matter what the evidence!

But within months of the ruling being issued, it was blistered by philosophers of science. They explained that many theories throughout science in the past and present would not qualify as science according to Overton's decision.

But as Meyer and Nelson point out, Newton and Galileo posed no natural law to govern gravitational phenomena. Yet, Newton's universal law of gravitation described and predicted gravity precisely, but according to the criteria, it's not science. Even Darwin's theory of natural selection knew nothing of the genetics it would eventually refer to. Were both Newton and Darwin unscientific? No one would claim that today. So, judge Overton greatly
overreached.

Demarcation Criteria Could Exclude Both ID and Evolution

In the previous section I began discussing what are called demarcation criteria that are supposed to distinguish between science and non-science. I showed that Newton's gravitational ideas were not based on scientific law. He had no idea what caused gravity. Another criterion is that science must be testable. But as philosopher of science Larry Laudan showed after the trial, creationists routinely offered geological tests for their catastrophic flood geology.

Another major criterion was that a scientific hypothesis must be observable. When discussing intelligent design, of course, the designer is not observable. So, ID is not science. Meyer and Nelson point out however, that this is applying the criterion far too rigidly. After all, we still cannot see gravitational waves, we have never observed an electron, we have never observed a mammalian carnivore evolving into a wolf or a lion, or anything even remotely this close in relationship.

But evolutionists can suggest evolutionary events that could give rise to the wolf and the lion, and we can very precisely predict and describe gravitational fields even though we can't observe gravity itself, only the results.

Appropriately, while we may not observe the designing mind behind the information rich content of living things, we are very acquainted with the results of intelligence. Our only model today for the origin of complex specified information (or language) is the mind. Our minds interpret and produce language every hour of our waking day; even in our sleep, we dream—again information.

So, if we use the criterion of observability too rigidly, then both evolution and ID are not science, but if we apply the criterion more realistically, then both materialistic and non-materialistic theories can qualify as science.

Why Methodological Naturalism Sinks Theistic Evolution

I will now close my discussion of the philosophical objections to theistic evolution by discussing an intriguingly-titled chapter, How to Lose a Battleship: Why Methodological Naturalism Sinks Theistic Evolution.

Remember that Methodological Naturalism is defined by

asserting that science, properly understood, can only suggest natural causes. Author Stephen Dilley reminds us of what has been known for decades; that Darwin's *Origin of Species* was written as a scientific answer to its main competitor, special creation. However, in the fourth edition, Darwin also claimed that special creation is not science.

But if you use scientific evidence to discredit a theory as false, it must be science, otherwise, scientific evidence is useless. But when Darwin also claimed that special creation was not science, then his scientific arguments against special creation should have been taken out of what he called "the long argument."

But even modern-day theistic evolutionists do much the same thing. On the one hand, they use methodological naturalism to contend that ID is not science, but then they offer scientific evidence that ID is false using scientific arguments. If ID is not science, then scientific evidence is useless; if it is science, then use scientific evidence to demonstrate that it is incorrect science.

Francis Collins is perhaps the most recognizable proponent of theistic evolution. In his book, *The Language of God*, he uses theological language to show evolution as being true and ID as false. Basically, he reasons that the design of the mammalian eye is less than ideal. That is what you would expect, he says, from evolution, but not design. Evolution will cobble something together that works, whereas you would expect the Designer to design it perfectly. This argument has been around for some time and simply is not true, but you can see that Collins uses theological language to exclude design.

If evolution is science, then why resort to what we think God would do, to argue in favor of evolution? Either way, Dilley shows, theistic evolutionists would be wise to discard methodological naturalism. I agree.

Notes

1. *Theistic Evolution: A Scientific, Philosophical, and Theological Critique* by J. P. Moreland, Stephen C. Meyer et al. (Wheaton, IL: Crossway, 2017).

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Theistic Evolution – Part 2

Dr. Ray Bohlin reviews a second science critique of Theistic Evolution, asking if universal common descent is real. The evidence says no.

The Fossil Record and Universal Common Ancestry

In a previous article, I examined the failure of neo-darwinism on the basis of the landmark book ***Theistic Evolution: A Scientific, Philosophical, and Theological Critique.***{1}



In this article, I'm reviewing the second science critique of theistic evolution. This section asks whether universal common descent or UCD is real. Universal common descent simply states that all organisms today are descended from one or a few early organisms by Darwinian evolution. UCD is usually if not always vigorously defended by theistic evolutionists, or, as they now prefer, "evolutionary creationists." UCD is considered beyond question. And doubters of UCD are compared to flat earthers and those who believe the sun and planets revolve around the earth. In this section I'll review the first chapter in this section by Gunter Bechly and Stephen C. Meyer.

Bechly and Meyer simply ask if the fossil record records this smooth transition from a single common ancestor to all life forms today. They survey numerous gaps in the fossils where certain large groups appear suddenly again, and again, and again. When a variety of new forms appear, the fossil record is full of gaps. In an old earth perspective, which theistic evolutionists adopt, one of these gaps goes back to the earliest life on earth. Fossils of bacteria show up 3.8 billion years ago right after the Late Heavy Bombardment of the earth by asteroids from 4.1 billion years ago to 3.8 billion years ago. This leaves virtually no time for the origin of that first life.

Let’s jump ahead to the Cambrian Explosion where nearly all animal Phyla show up in the fossil record suddenly, with no ancestors, 450 million years ago. Arthropods, Mollusks, Annelids, Chordates, and many others just show up, already fully differentiated from each other, with few
clues of which phyla are most closely related to other phyla.

Then there is the Silurian-Devonian Radiation of Terrestrial Biotas. Here vascular land plants show up suddenly with no clue as to how and when they transitioned from marine plants to land plants.

Then there are the flowering plants. Charles Darwin called their sudden appearance in the Cretaceous period “an abominable mystery.”

There are more problems in the animal kingdom. All the orders of mammals with placentas suddenly show up in a narrow time window, too narrow to have evolved from earlier animals. A paleontologist said, “Within approximately 15 million years of dinosaur extinction most of the 20 orders of placentals had appeared.” And last, the orders of modern birds show up all at once in the fossil record around the same time. Whew, more tomorrow.

Universal Common Descent: A Comprehensive Critique (Part 1)

In this section I'm reviewing Casey Luskin's chapter called "Universal Common Descent: A
Comprehensive Critique."

In this chapter, Luskin covers four main topics:

- evidence against common descent from biogeography,
- the fossil record,
- molecular phylogenies, and
- embryology.

Since I covered the fossil record in the above section, I'll focus on biogeography here and molecular phylogenies in the next.

Why would biogeography even be considered by theistic evolutionists as evidence of common ancestry? Well, it was used by Darwin, when he saw that the fossil mammals in South America resembled the animals living on the continent today. Luskin looks at a most glaring example of a severe problem in this category, Platyrrhine monkeys. Two families have prehensile tails, which
can grasp things like tree branches while their four limbs perform other tasks. While some old-world monkeys have tails, they are not prehensile.

The new world monkeys are said to have arrived in South America about 30 million years ago. At that time however, Africa and South America were at least 600 miles apart. So how did the platyrrhine monkeys, supposedly recently evolved from old-world monkeys, cross the ocean? The usual response is to suggest that a group or even a single pregnant female rafted on some fallen trees and brush.

This seems incredibly improbable. First, it would require

these branches or shrubs to provide food for at least one pregnant female. This drifting pile of branches would take several weeks or most probably months to drift from Africa to South America. This incredible hypothesis is offered because these two groups of monkeys are supposedly related by common ancestry, but on different sides of the ocean. So, there must be a way to preserve common ancestry of these two groups of monkeys no matter how improbable.

Biogeography hurts UCD far more than it helps.

Universal Common Descent: A Comprehensive Critique – (Part 2)

In this section on Casey Luskin's chapter on Universal Common Descent, my focus is on evidence from molecular phylogenies, where molecules like genes and proteins are compared to create trees based on molecules, not anatomy. Scientists can now determine the amino acid sequence of
proteins and the nucleotide sequence of the gene that codes for the protein.

Previously, Darwin's tree of life was constructed by comparing anatomical similarities and differences to determine where a species or group of species belonged in the tree. And since it was thought that genes determine the anatomical structure of an organism, a tree constructed by
comparing the gene sequences of a protein should give the same tree as the anatomical tree. This was the expectation of numerous scholars.

However, there has been no agreement between anatomical and gene sequence trees except with very closely related species. Molecular phylogenies for different proteins reveal contradictory trees. Now, many scientists have abandoned Darwin's tree of life. In 1999, W. Ford Doolittle
offered that "Molecular phylogenists will have failed to find

the ‘true tree’ . . . because the history of life cannot properly be represented as a tree.” The problem has only gotten worse. Several authors over the last 25 years are quoted by Luskin{2}: one said that “Different proteins generate different trees” (1998); another said, “Evolutionary trees from different genes often have conflicting branching patterns,” (2009). A third author wrote, “The problem was that different genes told contradictory evolutionary stories” (2009). And finally, a fourth author said, “Evolutionary trees constructed by studying biological molecules often don’t resemble those drawn up from morphology.”

Many evolutionists have abandoned the tree model altogether, which leaves Universal Common Descent in grave trouble.

Missing Transitions: Human Origins and the Fossil Record

Theistic evolutionists agree that humans show clear evidence of having a common ancestor with chimpanzees. But if humans evolved from an ape-like ancestor, was there a real Adam and Eve? Was there an actual fall? Many evolutionary creationists would say no. They hold that humans evolved from a population of at least 1,000 individuals, not two, and that humans were already sinful and therefore never fell into sin.

Casey Luskin explores whether the fossil record documents a steady series of fossils transforming an ape-like ancestor into humans over the last 6-7 million years.

Luskin focuses on three critical questions about the hominin fossils: first, are there candidates for something very close to the common ancestor of humans and chimps; second, are the australopithecines intermediates between our ape-like ancestor and us; and last, is there a series of fossils linking australopithecines and humans?

Fragmentary fossils of three possible candidates for a common ancestor between chimps and humans have been found between 6.6 to 4.4 million years ago. But all three were eventually dismissed as simple apes or too fragmentary to draw any conclusions. All these fossils would easily fit inside a child's shoe box.

The second question is, were the australopithecines intermediates between our ape-like ancestor and us? The australopithecines ranged from 4 to 1 million years ago and have long been advertised as on the road to humans. But paleoanthropologists cannot agree about the roles, if any, the australopithecines had in human origins.

The third question asks, is there a series of fossils linking australopithecines and humans?

Homo erectus, the first species in the genus *Homo*, appeared about 1.8 million years ago, but we haven't found *any* potential intermediates between australopithecines and *Homo*. "Although the transition from *Australopithecus* to *Homo* is usually thought of as a momentous transformation, the fossil record bearing on the origin and earliest evolution of *Homo* is virtually undocumented." The so-called evolution of the human species is fragmentary and blotchy.

Evidence for Human Uniqueness

Most evolutionary creationists believe that humans and chimpanzees share a common ancestor around 6-7 million years ago. Above, I addressed the lack of fossil evidence for the human descent from this common ancestor. But equally, evolutionary creationists claim there is powerful evidence linking humans and chimpanzees, that there is only a 1-2% difference of our DNA, indicating humans and chimps are closely related. Ann Gauger, Ola Hossjer, and Colin Reaves deal with this claim in their chapter, *Evidence for*

Human Uniqueness.

This chapter uses an abundance of technical terminology. I will be avoiding many of those terms to save time needing to define them for you. I will be generalizing their discussion as much as possible.

If you simply compare the individual building blocks of DNA called nucleotides, where the sequences match up between human and chimp DNA, there is only a 1.23% difference between humans and chimps. But when you begin to include insertions, deletions, the number and location of repeated elements, as well as the extreme differences between the Y chromosomes of humans and chimps, the difference rises to at least 5%.

It's estimated that there are about 60 genes found in humans that have no similar genes in chimps. It's difficult to get just one unique gene in 6 million years, but 60? Impossible!! There are differences in non-coding DNA, how chromosomes are arranged in the nucleus in cells of different tissues, how genes are regulated, etc. Many of these differences are found in genes expressed in brain tissues.

These genetic differences bring about dozens of anatomical and physiological differences. Our brains are larger and constructed differently; our feet, necks, and location of the skull on the spine are different.

We think about past and future, we play, dance, make music, communicate through language, use symbolic logic, we write novels and poetry, use math and art, and show empathy for others. There are so many more differences. We do not share a common ancestor with chimps. There is not enough time for evolution bring about all these differences.

I hope that now you are convinced that evolutionary creationist insistence that Universal Common Descent be fully accepted is not based on evidence, just a belief that

evolution is true.

Notes

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

2. Pp. 380-382.

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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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Redesigning Humans: Is It Inevitable?

Is genetic technology just the next step in human discovery about ourselves, or does it mean the end of humanity as we know it? Could we literally redesign humanity out of existence? On the other hand, there are those who maintain that we are headed down a disastrous technological and ethical road.

This article is also available in Spanish.

The People Are Restless

There is a general unease in the wind. People are a little squeamish concerning the coming revolution in biotechnology. There is a sort of stand-offish fascination where we wonder at the possibilities for curing genetic diseases and even for making ourselves smarter, prettier, or stronger. Yet we shrink from the potential horror of the world we might create for ourselves with no hope of turning back.



We have faced such forks in the road before. Every new technology has presented fantastic benefits and uncertain costs. Gunpowder, electricity, the combustion engine, atomic energy, etc., have all offered tantalizing either/or tensions. Some of these tensions we still live with, such as the threat of nuclear weapons and encroaching pollution from combustion engines.

But for the most part we have been able to develop a stable coexistence between the potential for good and the potential for evil. Weapons have become more precise, minimizing

unnecessary collateral casualties, the combustion engine has become cleaner and more efficient, and atomic weapons so far have been remarkably harnessed.

But what about genetic technology? Is this just the next step in human discovery about ourselves, or does it mean the end of humanity as we know it? Could we literally redesign humanity out of existence? There are voices in our culture today that will tell us that indeed we can and we will and it is inevitable and "you'd just better get used to it."

On the other hand there are those who maintain that we are headed down a disastrous road, and that we have a small opportunity to harness the benefits of the new technologies while minimizing and corralling the hazards.

I recently spent several days at the United World College in New Mexico developed by the late Armand Hammer, one of several upper high schools around the world for the best and brightest. The occasion was a student-led conference organized for discussing the ethics of human genetic engineering and cloning. Three other invited guest speakers and I spent two days with the 200 students from around the world and the UWC faculty and staff.

About fifty of the students were from a variety of backgrounds from here in the U.S., and the other 150 were from almost ninety countries. Their knowledge and perspectives on human genetic engineering ran from those who saw few problems and were perplexed by those with reservations to those who held all such technologies at arm's length and couldn't understand why anyone would want to do such things.

Who's right? Beyond that, What have we done already? And is there any opportunity for science and society to meet together to figure this out? In this program we will hear from several voices and see if we can navigate the coming genetic mine fields.

Is There a Posthuman Future?

One of participants at the UWC conference designated himself a "transhumanist." Transhumanists are among those who welcome with open arms the possibilities of genetic engineering to alter who and what we are. They scoff at the reluctance of others to step into this coming Brave New World. They relish the possibilities of double and triple average life-expectancy, designer babies, and the elimination of genetic disease. They aren't troubled by the necessity of costly mistakes and failures. That's just the price of research and progress. We accept risk all the time, they say. Why should genetic research be any different? They apply rather consistently a naturalistic worldview which sees human beings as just another species. We certainly aren't made in the image of God, they say, so why is our current genetic structure sacred?

Gregory Stock opened his 2002 book, *Redesigning Humans: Our Inevitable Genetic Future*, this way: "We know that *homo sapiens* is not the final word in primate evolution, but few have grasped that we are on the cusp of profound biological change, poised to transcend our current form and character to destinations of new imagination."{1}

Stock rightly points out that we have already started down the road of genetic manipulation of our species. Several fertility clinics in the U.S. already offer preimplantation genetic diagnosis or PGD. This procedure screens newly created embryos by in vitro fertilization for a few genetic diseases such as Tay Sachs, cystic fibrosis, and hemophilia. You can also have the embryos screened for sex selection. Some clinics even offer sex selection as the sole purpose of your visit to the clinic.

One couple from Wyoming had fourteen embryos created by in vitro. Seven were male, seven were female. They chose three females to be implanted to ensure their fourth child was a

girl after three boys. The technique is virtually 100% effective. Less efficient sperm selection techniques are only 91% effective for girls and only 76% effective for boys.{2} But should we be selecting the sex of our children?

Over one million IVF babies have been born worldwide, around 28,000 in the U.S.—roughly 1% of newborns. This may soon become the "natural" way once more procedures become available to design our own babies. We may recoil today at the thought of designer babies, but we also recoiled twenty-five years ago against the thought of test-tube babies.

Stock closes his book by saying, "We are beginning an extraordinary adventure that we cannot avoid, because, judging from our past, whether we like it or not this *is* the human destiny."{3} But is it?

What's So Wrong With Tinkering With Our DNA?

Couples are already being given the power to choose the sex of their child, even at the cost of simply rejecting the embryos that are the wrong sex. But our technology is advancing rapidly to allow a far broader array of genetic choices.

Gene therapy, the ability to transfer a normal human gene into the affected tissues of a person affected by a single gene disease, has been pursued for over ten years. So far results have been disappointing. That is partly the reason why many are looking for improved ways to add genes to the earliest one cell stage embryo so the gene can be spread to all tissues at once. This process is also rather inefficient in animals, successful only about 1% of the time.

But this does not deter some because they already view the embryo, before fourteen days after conception, as little more than reproductive cells and not yet worthy of being declared human. If this definition holds, embryos can be wasted as long

as a supply of human eggs is readily available. In addition to preimplantation genetic diagnosis (PGD) for sex selection and selection of embryos that are free of cystic fibrosis, Tay Sachs, hemophilia, and other genetic diseases, other genetic technologies are on the near horizon.

Researchers have already devised artificial chromosomes. These chromosomes pass on stably over several generations in mice. They have been tested successfully in human tissue culture, and have remained stable over dozens of cell divisions. No one has added foreign genes to these chromosomes, but that is the plan: to provide a safe and effective means of adding genes to embryos and have them distributed to all tissues and to succeeding generations.

Genetic futurist Gregory Stock summed it up when he said, "Breakthroughs in the matrixlike arrays called DNA chips, which may soon read thirty thousand genes at a pop; in artificial chromosomes, which now divide as stably as their naturally occurring cousins; and in bioinformatics, the use of computer- driven methodologies to decipher our genomes—all are paving the way to human genetic engineering and the beginnings of human biological design."{4}

Some may scoff at these projections, but people seem quite willing around the world to consider taking advantage of technologies that can genetically enhance themselves or their offspring. "In a 1993 international poll, Daryl Mercer, director of the Eubois Ethics Institute in Japan, found that a substantial segment of the population of every country polled said they would use genetic engineering both to prevent disease and to improve the physical and mental capacities inherited by their children. The numbers ranged from 22 percent in Israel and 43 percent in the United States to 63 percent in India and 83 percent in Thailand."{5} So what's the problem?

What’s Our Next Step?

I believe that being able to genetically redesign human beings is far closer than most people realize. Not only is the technology developing at an ever-increasing rate, but people are also far more willing to consider using such technologies than most would want to think.

I hope my tone in this article has indicated that I have deep reservations about this seemingly inevitable future. But why do I say this is inevitable? And why would I have reservations about taking this next step?

I believe that at least trying to alter ourselves genetically is inevitable because the technology is developing rapidly using animal models. And whatever we have done in animals, we eventually do in humans. The naturalistic worldview says quite strongly that we are just another animal species. If our understanding of our own genetics continues to increase and we gain the technology to correct our defects and faults, the naturalist says, Why not?!

Society and governments have put few barriers in the way of scientists and researchers from simply taking the next logical step. So far, we have been unwilling to say that there are some experiments we will not do. Even though most will say they are against human cloning—even scientists—that figure is changing, and we have few reasons for our objections besides the fact that it is not yet safe. If it does become safer, the public will have little room to say no. We’ve painted ourselves into a bit of a corner.

In regard to genetic engineering, we are easily swayed by appeals to eliminate genetic diseases without considering how difficult it is to delineate between curing genetic disease and producing genetic enhancements. James Watson, co-discoverer of the structure of DNA and Nobel Laureate, exposes our difficulty with two penetrating statements. Concerning

curing genetic disease he said, “What the public wants is not to be sick and if we help them not to be sick, they’ll be on our side.”{6}In another context Watson would have left most people dead in their tracks when he said, “No one really has the guts to say it, but if we could make better human beings by knowing how to add genes, why shouldn’t we?”{7}

Leon Kass, chairman of President Bush’s Council on Bioethics, put it quite succinctly when he said, “The first thing needful is a correction and deepening of our thinking.”{8} When I speak to young people in particular, I almost plead with them to pay attention in biology class. These genetic choices will probably begin to be available to today’s high school students as they marry and begin their families. They and we need to be better prepared.

How Will the Church Be Challenged?

There are just a few voices warning of the coming challenges and opportunities of the developing crisis over human dignity as the diesel engine of human genetic technology gains momentum and steam. Some fear it may already be beyond the point of no return and believe we’d better figure out how we are going to cope with our inevitable future of redesigned humans.

Leon Kass’s book, *Life, Liberty, and the Defense of Dignity,* is a good place to start. Though not a Christian, Kass dances around the edges of a Christian or theistic worldview that at least acknowledges that there is a human design in place that we need to be mindful of before we head out at breakneck speed to change who and what we are.

Kass sees that our efforts to redesign humans challenge our very dignity and identity as human beings. If parents have constructed the best child for them using the best available technology they can afford, are they still parents, or creators and owners with additional rights and privileges? A

child becomes a commodity to be designed, manufactured, and even sold. Love and nurture will turn to management and stimulation.

Gregory Stock is the director of the Program on Medicine, Technology and Society at the UCLA School of Medicine. His book, *Redesigning Humans: Our Inevitable Genetic Future*, will sober you up quite quickly. Stock is a naturalist and has little patience with those who would hold back our genetic future. He is knowledgeable and unflinching about the possibilities. One commentator wrote; “This is the most important book ever written about what we could do to make better people. I could not put this book down because it challenged everything I knew about human nature.” I would agree.

In my travels I have found the church to be largely unaware of how close we are to Stock’s vision of redesigning humans. Within a few short decades our children will be pressured to alter their children genetically to keep up with society. Scientific research may well make use of human embryos as matter of fact research subjects. This may likely extend to developing fetuses, and it will all in the name of furthering health and eliminating disease.

How will we react? The Barna Research Group tells us over and over again that the Christian community does not think or act in an appreciatively different manner than society at large. That means these genetic technologies will find their way into the church. There will be a new source of discrimination to deal with. No longer will churches be segregated by economic status and race but by genetic pedigree as well.

Do we really think we can improve on or maybe at least recover the original design? There may be a new Tower of Babel on our horizon. We must take seriously this threat to our future, both of humanity and the church.

Notes

1. Gregory Stock, *Redesigning Humans: Our Inevitable Genetic Future* (New York: Houghton Mifflin, 2002).
2. Claudia Kalb, "Brave New Babies," *Newsweek,* 26 January, 2004, 45-53.
3. Stock, 197.
4. Ibid., 13.
5. Ibid., 58.
6. Quoted in Leon Kass, *Life, Liberty, and the Defense of Dignity: The Challenge of Bioethics* (San Francisco: Encounter Books, 2002), 7.
7. Quoted in Stock, 12.
8. Kass, 8.

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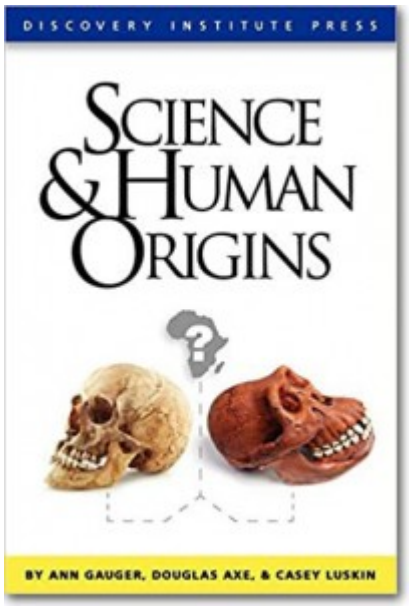
Science and Human Origins

Dr. Ray Bohlin explains how the Discovery Institute's book "Science and Human Origins" reveals why evolutionary theory cannot account for human origins.

Just What Needs to be Accomplished From Ape-like Ancestor to Humans?



In 2012 the Discovery Institute published an edited volume discussing the possibilities of human evolution from an ape-like ancestor by Darwinian evolution mechanisms. In this article I will offer an overview of the book, *Science and Human Origins*{1} and investigate the state of research into human origins from an evolutionary perspective.



First I'd like to discuss the first chapter by Ann Gauger. Ann is a research scientist with Biologic Institute with laboratory experience at Harvard and the University of Washington. Initially Ann points out two things that are necessary for there to be a link by common ancestry between humans and some ape-like ancestor. First there must be a step-wise adaptive path to follow. Neo-Darwinism depends on a slow, gradual path between two forms, genes or proteins. Rapid large jumps are likely to be too disruptive to the organism's state of being. Either survival or reproduction will be compromised.

Second, standard unguided Darwinian mechanisms such as mutation, selection, random drift and genetic recombination have to be sufficient for the task. Modern evolutionary theory is quite insistent that only natural unguided processes are necessary for evolution to occur no matter what the transition being considered.

To better understand the problem, the book discusses the numerous types of biological changes needed to transition from a primarily arboreal monkey adjusted to life in the trees to a walking, running, hunting gathering, intelligent, talking human being. Compared to the other great apes, humans possess longer legs, shorter arms, different pelvis and rib cage, refined muscles for fingers, lips and jaw, eyes that can focus straight ahead and still see where we are walking, larger and unique brain structures, a head that sits directly on top of the spine and a spine that will support upright walking and running. Now add to that our unique capacities for language, art and abstract thought and you can easily understand that a lot needs to happen.

The usual series of fossils links together Lucy, the australopithecine closest to humans and Turkana Boy (*Homo*

erectus), the first full member of our genus Homo. Lucy is said to have lived 3.2 million years ago (mya) and Turkana Boy about 1.5 mya. This is indeed a very short time span in evolutionary terms, especially considering all that must change. One recent paper from the journal *Genetics* suggested that it would take about 6 million years for a single mutation to be fixed in a primate lineage. This transition probably needs tens of mutations. If you need two mutations, forget it. That would require 216 million years.

It's not too hard to see that standard evolutionary processes are wholly insufficient to cause the transition between australopithecines and humans.

The Earliest Fossils Leading to Humans

Now I want to discuss the evidence for human evolution from the fossils. Study into ancient humans is called paleoanthropology. Casey Luskin breaks down his discussion into two parts, Early Hominin Fossils and Later Hominins: The Australopithecines. Let's start with the early hominins. As the story goes, humans and chimpanzees share a common ancestor about six million years ago. The fossil record of six million years ago has been pretty stingy. Not much to choose from for a human/chimp ancestor until the last twenty years.

The Toumai Skull (*Sahelanthropus tchadnesis*) was first reported in 2002 and is widely referred to as the oldest fossil in the hominin line. But when you dig a bit deeper as is always necessary when discussing human evolution, not everyone agrees. Some suggest that the Toumai Skull has far more in common with apes than anything resembling a human. All this skull really shows is how complex the evolutionary story has become.

A second fossil known as "Orrorin" (*Orrorin tugenensis*) or "original man" in a local Kenyan language was designated as

the earliest human link in 2001.{2} But it was little more than a few bone fragments from an arm, thigh, lower jaw and a few teeth. As usual, there were some saying that Orrorin walked on two feet and others who said there isn't enough information to determine how this organism moved. Another fossil found on the island of Sardinia is truly an ape but had some indications that it too was bipedal. But Oreopithecus is thought to have arrived at its bipedal gait independently. This would clearly indicate that just because an ape-like fossil had bipedal adaptations doesn't mean it was ancestral to humans.

Last is the curious story of "Ardi" (*Ardipithecus ramidus*). Ardi is a 4.4 million year old fossil announced in 2009. Ardi quickly rose in fame and attention, being hailed by some as the oldest human ancestor found and the key to understanding how human bipedalism evolved. But Casey Luskin informs us that Ardi was originally found in the early 1990s. It took over a decade to piece the fossil together because it was found literally crushed and extremely brittle. How did they know how it all really fit together? Within a year other paleontologists indicated Ardi had little to do with human evolution and was simply overhyped. That's become a familiar story. So much change to cover and so little evidence.

From "Lucy" to "Turkana Boy"

We now turn to the appearance and nature of a very important fossil category. If humans have evolved by a Darwinian process from an ape-like ancestor, then there must be some species or group of species that show clear signs of being intermediate between fossil apes and humans. For many years that position has been occupied by the "australopithecines." More specifically a particular species (*Australopithecus afarensis*) has been represented for decades as that ancestor, represented by a fossil known as "Lucy."

As Casey Luskin carefully documents, Lucy is a fossil that represents about 40% of the original organism so it is very incomplete, although far more representative that any earlier fossils. He also notes that the original fossil was found scattered over a hillside and may not truly represent a single individual. But significantly, Lucy is not necessarily closely related or descended from the Toumai Skull, Orrorin, or Ardi that I discussed above. There is much about Lucy that is very ape-like, and many anthropologists even question whether Lucy can be considered as truly ancestral to humans.

Most significant about Lucy is the contention by some that she possessed a form of bipedalism that was very much or at least similar to human locomotion. But even that is highly contested by the evolutionary experts. Lucy's skull is small and quite ape-like. The chest cavity is shaped in a way that would make upright walking difficult and her arms are long like apes and her legs are short like apes. Much is made about the shape of her pelvis. But as Luskin points out, the shape may have been an error in reconstruction since that part of the skeleton was found severely crushed.

Even more to the point, Lucy shows numerous characteristics that require significant reworking compared to the earliest human-like fossils (*Homo erectus*) usually represented by "Turkana Boy." This two-million-year-old fossil shows itself to be entirely human. Even its small brain is within the range of modern humans and the brain architecture is also entirely human and nothing like Lucy. As Luskin points out there needs to be a sort of "Big Bang" between Lucy and Turkana Boy.{3}

What we have then is a large gap between apes and Lucy, and a large gap between Lucy and humans. So even though the fossil record could be interpreted to show a modest progression from apes to humans over time, there are no true transitional forms to document how this important transition took place.

DNA Doesn’t Lie

In a well-documented chapter, Casey Luskin examines the claims of evangelical scientist, Francis Collins, that there is explicit and undeniable genetic evidence that humans and chimps evolved from a common ancestor. Collins has earned a stellar reputation as a medical geneticist for first discovering the gene responsible for cystic fibrosis, leading the Human Genome Project for over a decade, and then in 2009 being named by President Obama as the head of the prestigious National Institutes of Health (NIH). In between Collins’s role as head of the Human Genome Project and his current role at NIH, he founded an organization, BioLogos, dedicated to convincing the church in America that evolution is indeed is a fact and we need to adjust both our science and preaching to reflect that fact.

In preparation for BioLogos he published a book titled *The Language of God*.{4} In this book, Collins presents a two-fold line of evidence that humans and chimps evolved from a common ancestor. First he appeals to what are known as repetitive elements in our DNA. All mammalian genomes have relatively short sequences that can be very specific to species and groups of species, spread throughout the genome. It appears as if these sequences make copies of themselves and randomly insert the copy elsewhere in the genome. These repetitive elements are frequently found in the same place in the genome in distant species such as mice and humans. These are referred to as Ancient Repetitive Elements (ARE). These AREs are assumed to have no functional significance in the organism. This renders them as what is referred to as “selfish DNA” which exists only to survive and reproduce.

Some AREs are found in the same chromosomal location in mice and humans as well as humans and chimps. This sure seems like evidence of common ancestry, as Collins claims. But the assumption I just mentioned, that these sequences have no

function, has been widely disproved in just the last ten years. As a result of the Human Genome Project that Collins led, we can now search all DNA sequences for some kind of function. Relying on work published by Richard Sternberg, Luskin lists twenty newly discovered functions for different types of repetitive elements in mammalian and human genomes.{5}

The chapter discusses two other now disproven evidences for common ancestry of humans and chimps. I hope you can see that new and mounting evidence is making the common ancestry of humans and chimps even more difficult to defend.

How Many Humans at the Start?

In the final chapter of *Science and Human Origins*, Ann Gauger discusses a bit more of an academic argument for humans having evolved from an ape-like ancestor. Some evolutionary geneticists have described an argument that the level of genetic variation for particular human genes could not have arisen from a beginning of just two people. They state that standard genetic equations indicate that the human population most likely descends from a population of around 100,000 individuals. Just two people could not have generated this much variation in 100,000 years, let alone less than 10,000 years. If their analysis is true, then the Biblical account of Adam and Eve becomes a theological story with no historical significance. So let's take a look.

Gauger investigates in detail the most variable gene in humans. This gene codes for a protein involved in the immune system. One section of this gene is what geneticists call "hypervariable." Evolutionist Francisco Ayala and others researched this gene in the mid-1990s. Ayala's conclusion was that the original human population that separated from the line that evolved into chimps contained at least 32 copies of the gene in its population. Each of us has only two copies of

each gene, so 32 copies requires at least 16 people. But since, over time, different gene copies are lost, Ayala estimated a human population of at least 10,000 individuals with an average closer to 100,000.

Gauger points out that Ayala misused several assumptions. He assumed a small mutation rate and he assumed no selection. When Gauger corrects for these errors and examines the studies of others, she determines that the equations, when the proper assumptions and mutation rates are used, the original human population could have had as few as 4 copies of this gene. Let's see, two copies per person, four copies, only needs two people. How about that!

Obviously in this short article I have intentionally glossed over the technical details. Ann Gauger gives you the details as well as more non-technical summaries along the way. I strongly encourage you to purchase the book. At 122 pages, it's readable in a Saturday. Considering all I have covered this week, my doubts about human evolution have only been strengthened. It becomes even more obvious over time that Darwinian evolutionary mechanisms are proving less and less adequate.

Notes

1. Gauger, Ann, Douglas Axe, and Casey Luskin, *Science and Human Origins* (Seattle: Discovery Institute Press, 2012).
2. Ibid., p. 51.
3. Ibid., p. 65-70.
4. Francis Collins, *The Language of God: A Scientist Presents Evidence for Belief* (New York: Free Press, 2006).
5. Gauger, Ann, et al., *Science and Human Origins*, p. 87-88.

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The Five Crises in Evolutionary Theory

Dr. Ray Bohlin discusses five crises in evolutionary theory: 1) the unsubstantiation of a Darwinian mechanism of evolution, 2)The total failure of origin of life studies to produce a workable model, 3) The inability of evolutionary mechanism to explain the origin of complex adaptations, 4) The bankruptcy of the blind watchmaker hypothesis, and 5) The biological evidence that the rule in nature is morphological stability over time and not constant change.

 *This article is also available in Spanish.*

The Case of the Missing Mechanism

The growing crisis in Darwinian theory is becoming more apparent all the time. The work of creationists and other non-Darwinians is growing and finding a more receptive ear than ever before. In this discussion I want to elaborate on what I believe are the five critical areas where Darwinism and evolutionary theory in general are failing. They are:

1. The unsubstantiation of a Darwinian mechanism of evolution
2. The total failure of origin of life studies to produce a workable model
3. The inability of evolutionary mechanism to explain the origin of complex adaptations
4. The bankruptcy of the blind watchmaker hypothesis
5. The biological evidence that the rule in nature is morphological stability over time and not constant change.

Much of the reason for evolution's privileged status has been

due to confusion over just what people mean when they use the word evolution. Evolution is a slippery term. If evolution simply means “change over time,” this is non-controversial. Peppered moths, Hawaiian drosophila fruit flies, and even Galapagos finches are clear examples of change over time. If you say that this form of evolution is a fact, well, so be it. But many scientists extrapolate beyond this meaning. Because “change over time” is a fact, the argument goes, it is also a fact that moths, fruit flies, and finches all evolved from a remote common ancestor. But this begs the question.

The real question, however, is where do moths, flies, and finches come from in the first place? Common examples of natural selection acting on present genetic variation do not tell us how we have come to have horses, wasps, and woodpeckers, and the enormous varieties of living animals. Evolutionists will tell you that this is where mutations enter the picture. But mutations do not improve the scenario either. In speaking of all the mutation work done with bacteria over several decades, the great French zoologist and evolutionist Pierre-Paul Grasse’ said:

> What is the use of their unceasing mutations if they do not change? In sum, the mutations of bacteria and viruses are merely hereditary fluctuations around a median position; a swing to the right, a swing to the left, but no final evolutionary effect.

When I speak of evolution or Darwinism, it is the origin of new biological forms, new adaptive structures, morphological and biochemical novelties that I am referring to. This is precisely what has not yet been explained. When people question the popular explanations of the origin of complex adaptations such as the vertebrate limb, or sexual reproduction, or the tongue of the woodpecker, or the reptilian hard-shelled egg, they are usually given a litany of reasons why these structures are beneficial to the organisms. More precisely, the selective advantage of these structures is

offered as the reason they evolved. But this begs the question again. It is not sufficient for an evolutionist to explain the function of a particular structure. What is necessary is to explain the mechanistic origin of these structures!

Natural selection does explain how organisms adapt to minor changes in their environment. Natural selection allows organisms to do what God commanded them to do. That is to be fruitful and multiply. Natural selection does not, however, explain the crucial question of how complex adaptations arose in the first place.

The Origin of Life

We have been led to believe that it is not to difficult to conceive of a mechanism whereby organic molecules can be manufactured in a primitive earth and organize themselves into a living, replicating cell. In fact, the ease by which this can (allegedly) happen is the foundation for the popular belief that there are numerous planets in the universe which contain life. Nothing could be further from the truth.

Early experiments suggested that it was relatively simple to produce some of the building blocks of life such as amino acids, the components of proteins. However, the euphoria of the Miller- Urey experiment of 1953 has given way to a paradigm crisis of 1993 in origin of life research. The wishful, yet workable atmosphere of ammonia, hydrogen, methane, and water vapor has been replaced by the more realistic, but stingy atmosphere of nitrogen, carbon dioxide, carbon monoxide, hydrogen sulfide, and hydrogen cyanide. This is the stuff that volcanoes belch out. This atmosphere poses a much more difficult challenge. Molecules relevant for life would be much rarer. Even more damaging is the possibility of the presence of molecular oxygen in the atmosphere from the break-up of water vapor. Molecular oxygen would poison any reaction leading to biologically significant molecules.

Coacervates, microspheres, the "RNA world," and other scenarios all have serious flaws obvious to everyone in the field except those who continue work with that particular scenario. Some have privately called this predicament a paradigm crisis. There is no central competing model, just numerous ego-driven scenarios. Even the experiments in which researchers try to simulate the early earth have been severely criticized. These experiments generally hedge their bets by using purified reactants, isolated energy sources, exaggerated energy levels, procedures which unrealistically drive the reaction toward the desired product and protect the products from the destructive effects of the energy sources which produced them in the first place.

The real situation was summed up rather well by Klaus Dose:

> More than 30 years of experimentation on the origin of life in the fields of chemical and molecular evolution have led to a better perception of the immensity of the problem of the origin of life on earth rather than to its solution. At present all discussions on principal theories and experiments in the field either end in stalemate or in a confession of ignorance." [From *Interdisciplinary Science Review* 13(1988):348-56.]

But all of these difficulties together, as staggering as they are, are not the real problem. The major difficulty in chemical evolution scenarios is how to account for the informational code of DNA without intelligence being a part of the equation. DNA carries the genetic code: the genetic blueprint for constructing and maintaining a biological organism. We often use the terms of language to describe DNA's activity: DNA is "transcribed" into RNA; RNA is "translated" into protein; geneticists speak of the "genetic code." All these words imply intelligence, and the DNA informational code requires intelligent preprogramming, yet a purely naturalistic beginning does not provide such input. Chemical experiments may be able to construct small sequences of nucleotides to

form small molecules of DNA, but this doesn't make them mean anything. There is no source for the informational code in a strictly naturalistic origin of life.

The Inability to Account for Complex Adaptations

Perhaps the single greatest problem for evolutionary biologists is the unsolved problem of morphological and biochemical novelty. In other words, some aspects of evolutionary theory describe accurately how existing organisms are well adapted to their environments, but do a very poor job of explaining just how the necessary adaptive structures came about in the first place.

Darwinian explanations of complex structures such as the eye and the incredible tongue of the woodpecker fall far short of realistically attempting to explain how these structures arose by mutation and natural selection. The origin of the eye in particular, caused Darwin no small problem. His only suggestion was to look at the variety of eyes in nature, some more complex and versatile than others, and imagine a gradual sequence leading from simple eyes to more complex eyes. However, even the great Harvard evolutionist, Ernst Mayr, admits that the different eyes in nature are not really related to each other in some simple-to-complex sequence. Rather, he suggests that eyes probably had to evolve over forty different times in nature. Darwin's nightmare has never been solved. It has only been made 40 times more frightening for the evolutionist.

In his 1987 book, *Theories of Life*, Wallace Arthur said:

> One can argue that there is no direct evidence for a Darwinian origin of a body plan—black *Biston Betularia* certainly do not constitute one! Thus in the end we have to admit that we do not really know how body plans originate.

In 1992, Keith Stewart Thomson wrote in the *American Zoologist* that:

> While the origins of major morphological novelties remain unsolved, one can also view the stubborn persistence of macroevolutionary questioning…as a challenge to orthodoxy: resistance to the view that the synthetic theory tells us everything we need to know about evolutionary processes.

The ability to explain major morphological novelties is not the only failing of evolutionary theory. Some argue that molecular structures are even more difficult to explain. The molecular architecture of the cell has recently described by molecular biologist Michael Behe as being irreducibly complex systems which must have all the components present in order to be functional. The molecular workings of cilia, electron transport, protein synthesis, and cellular targeting readily come to mind. If the systems are irreducibly complex, how do they build slowly over long periods of time out of systems that are originally doing something else?

While publishing hundreds of articles pertaining to molecular homology and phylogeny of various proteins and nucleic acids over the last ten years, the *Journal of Molecular Evolution* did not publish one article attempting to explain the origin of a single biomolecular system. Those who make molecular evolution their life's work are too busy studying the relationship of the cytochrome c molecule in man to the cytochrome c molecule in bacteria, rather than the more fundamental question of where cytochrome c came from in the first place!

Clearly then, whether we are talking about major morphological novelties such as the wings of bats and birds, the swimming adaptations of fish and whales, the human eye or the molecular sub- microscopic workings of mitochondria, ribosomes, or cilia, evolutionary theory has failed to explain how these structures could arise by natural processes alone.

The Bankruptcy of the Blind Watchmaker Hypothesis

In his 1986 book, *The Blind Watchmaker*, Richard Dawkins states, “Biology is the study of complicated things that give the appearance of having been designed for a purpose.” He explains that

> Natural selection is the blind watchmaker, blind because it does not see ahead, does not plan consequences, has no purposes in view. Yet the living results of natural selection overwhelmingly impress us with the appearance of design as if by a master watchmaker, impress us with the illusion of design and planning.

Darwinism critic, Philip Johnson, has quipped that the watchmaker is not only blind but unconscious!

Dawkins later suggests just how this process may have brought about the development of wings in mammals. He says:

> How did wings get their start? Many animals leap from bough to bough, and sometimes fall to the ground. Especially in a small animal, the whole body surface catches the air and assists the leap, or breaks the fall, by acting as a crude aerofoil. Any tendency to increase the ratio of surface area to weight would help, for example flaps of skin growing out in the angles of joints…(It) doesn’t matter how small and unwinglike the first wingflaps were. There must be some height, call it h, such that an animal would just break its neck if it fell from that height. In this critical zone, any improvement in the body surface’s ability to catch the air and break the fall, however slight the improvement, can make the difference between life and death. Natural selection will then favor slight, prototype wingflaps. When these flaps have become the norm, the critical height h will become slightly greater. Now a slight further increase in the wingflaps will make the difference between life and

death. And so on, until we have proper wings.

This can sound rather seductively convincing at first. However there are three faulty assumptions being used.

The first doubtful assumption is that nature can provide a whole chain of favorable mutations of the precise kind needed to change forelimbs into wings in a continuous line of development. What is the larger miracle, an instantaneous change or a whole series of thousands of tiny changes in the proper sequence?

The other assumption is “all things being equal.” These mutations must not have secondary harmful effects. How is the creature’s grasping ability compromised while these wingflaps grow? These little shrew-like animals may slowly be caught between losing their adaptiveness in the trees before they can fully utilize their “developing” wings. Or there might be some seemingly unrelated and unforeseen effect that compromises survivability.

A third faulty assumption is the often used analogy to artificial selection. “If artificial selection can do so much in only a few years,” so the refrain goes, “just think what natural selection can do in millions of years.” But artificial selection works because it incorporates foresight and conscious purpose, the absence of which are the defining qualities of the blind watchmaker. In addition, artificial selection actually demonstrates the limits to change since an endpoint in the selection process is usually reached very quickly.

The blind watchmaker hypothesis, when analyzed carefully, falls into the category of fanciful stories that are entertaining—but which hold no resemblance to reality.

The Prevalence of Stasis over Mutability

Rather than observing organisms gradually evolving into other forms, the fossil record speaks of “sudden appearance” and “stasis.” New types appear suddenly and change very little after their appearance. The rarity of gradual change examples in the fossil record were revealed as the trade secret of paleontology by Steven J. Gould of Harvard. Gould also refers to stasis as “data” in the paleontological sense. These are significant observations.

Darwin predicted that there should be innumerable transitional forms between species. But the reality of paleontology (the study of fossils) is that new forms appear suddenly with no hint of the “gradual” change predicted by evolution. Not only that, but once these new forms have appeared, they remain relatively unchanged until the present day or until they become extinct.

Some animals and plants have remained unchanged for literally hundreds of millions of years. These “living fossils” can be more embarrassing for the evolutionist than they often care to admit. One creature in particular, the coelacanth, is very instructive. The first live coelacanth was found off the coast of Madagascar in 1938. Coelacanths were thought to be extinct for 100 million years. But most evolutionists saw this discovery as a great opportunity to glimpse the workings of a tetrapod ancestor. Coelacanths resemble the proposed ancestors of amphibians. It was hoped that some clues could be derived from the modern coelacanth of just how a fish became preadapted for life on land, because not only was there a complete skeleton, but a full set of internal organs to boot. The results of the study were very disappointing. The modern coelacanth showed no evidence of internal organs preadapted for use in a terrestrial environment. The coelacanth is a fish—nothing more, nothing less. Its bony fins are used as exceptionally well-designed paddles for changing direction in

deep-sea environment, not the proto-limbs of future amphibians.

Nowhere is the problem of sudden appearance better demonstrated than in the Burgess Shale found in the Canadian Rockies. The Burgess Shale illustrates that in the Cambrian period (which evolutionists estimate as being over 500 million years ago) nearly all of the basic body plans (phyla) of animals existing on earth came into existence in a geological instant (defined as only 20-30 million years), and nothing that new has appeared since that time. The Cambrian explosion as it is called is nothing less than astounding. Sponges, jellyfish, worms, arthropods, mollusks, echinoderms, and many other stranger-than-fiction creatures are all found to suddenly appear in the Cambrian without a hint of what they descended from nor even how they could all be related to each other. This is the opposite expectation of Darwinism which would have predicted each new body plan emerging from pre-existing phyla over long periods of time. The Cambrian explosion is a direct contradiction of Darwinian evolution.

If Darwin were alive today, I believe he would be terribly disappointed. There is less evidence for his theory now than in his own day. The possibility of the human eye evolving may have caused him to shudder, but the organization of the simplest cell is infinitely more complex. Perhaps a nervous breakdown would be more appropriate!

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Jerry Coyne’s Illusions

Dr. Ray Bohlin critiques evolutionary biologist Jerry Coyne’s materialistic claim that our brain is only a meat computer.

Jerry Coyne Says Science Proves We Make No Real Choices



Let’s see. This morning I chose my black t-shirt, tan dress slacks, black shoes, and black socks. After gathering all my things for the trip to the office, I put on my now-famous Grand Canyon felt hat and headed out the door, deciding I didn’t need an umbrella for the short walk in the rain.



Oops! Wait a minute! According to evolutionary biologist, Jerry Coyne, I made none of those choices. Now I did do all those things, but my brain determined those “choices.” After all, my brain is just a meat computer, destined to obey the laws of physics to combine my genetic history, past environmental cues, and my latest experiences to make those decisions. “I,” meaning me as a person apart from the meat computer, don’t exist! Enter with me into the wacky world of evolutionary naturalism where all there is, is matter and energy.

Dr. Jerry Coyne is a Professor at the University of Chicago in the Department of Ecology and Evolution. In many ways he has broken political ranks with many of those seeking to improve education in evolution by actively proclaiming that evolution entails atheism. He lines up with those like Richard Dawkins, Sam Harris, and the late Christopher Hitchens. Religion is the greatest evil on the planet, they decry, and we need to dispose ourselves of all religious nonsense such as freedom of choice.

You see, our mental decisions are just chemical reactions in our brains which just happen. There is no purpose or even a choice in making our choices!

Now that I probably have you thoroughly confused, let me try to let Jerry Coyne speak for himself.

In January of last year, Coyne published a commentary in the online version of *USA Today* titled, "Why you don't really have free will."{1} He stated, "You may feel like you've made choices, but in reality your decision to read this piece, and whether to have eggs or pancakes, was determined long before you were aware of it—perhaps even before you woke up today. And your 'will' had no part in that decision. So it is with all of our other choices: not one of them results from a free and conscious decision on our part. There is no freedom of choice, no free will."

Despite Coyne's blatant certainty, he only offers, using his phrase, two lines of evidence. Notice even Coyne refers to them as just lines of evidence. There's no real fact or certainty.

Coyne's Ultra-naturalism "Predetermines" His Conclusions

Let me allow Coyne to speak for himself as he explains his first line of evidence, a materialistic assumption. He says,

> *We are biological creatures, collections of molecules that must obey the laws of physics. All the success of science rests on the regularity of those laws, which determine the behavior of every molecule in the universe. Those molecules, of course, also make up your brain — the organ that does the "choosing." And the neurons and molecules in your brain are the product of both your genes and your environment, an environment including the other people we deal with. Memories, for example, are nothing more than structural and chemical changes in your brain cells. Everything that you think, say, or do, must come down to molecules and physics.*

It may be true that science depends on the regularity of the laws of physics, but Coyne makes no defense of whether there is anything else to our minds other than chemistry. He assumes without saying so that the material brain is all there is to our mind.

In 2007 neuroscientist Mario Beauregard and journalist Denyse O'Leary published *The Spiritual Brain*.{2} Quoting from the dust jacket, Beauregard and O'Leary demonstrate that scientific materialism like Coyne's "is at a loss to explain irrefutable accounts of mind over matter, of intuition, willpower, and leaps of faith, of the 'placebo effect' in medicine, of near death experiences on the operating table, and of psychic premonitions of loved ones in crisis." For each of these phenomena, they provide numerous examples where people's minds understood, observed, changed, or perceived physical realities they simply could not know about in a purely physical sense.

Jerry Coyne's first line of evidence turns out to be an unverified materialist assumption that has plenty of physical evidence that cannot be explained on a materialist basis. So much for convincing evidence. But to his credit, Coyne proceeds to scientific evidence he says demonstrates that brain measurements indicate our "decisions" can be predicted by observing blood flow to certain areas of the brains seconds before we actually feel we have "decided."

Does Our Brain "Decide" Before We're Conscious of the Decision?

Coyne's second line of evidence consists of brain experiments claiming to predict our decisions by observing blood flow in decision-making areas of our brain seconds before we are aware of our decision. Coyne says,

> *Recent experiments involving brain scans show that when a*

> *subject "decides" to push a button on the left or right side of a computer, the choice can be predicted by brain activity at least seven seconds before the subject is consciously aware of having made it. (These studies use crude imaging techniques based on blood flow, and I suspect that future understanding of the brain will allow us to predict many of our decisions far earlier than seven seconds in advance.) "Decisions" made like that aren't conscious ones. And if our choices are unconscious, with some determined well before the moment we think we've made them, then we don't have free will in any meaningful sense."*

This is certainly interesting research. My first reaction is to note that these are the simplest decisions we can make. Just choose left or right. No thinking involved, no consequences. What if the choice were far more substantial, such as "Should I buy this house based on my set of pros and cons of the decision?" Or what about those "split-second" decisions to avoid a collision in a vehicle or whether to stop or go when the traffic light unexpectedly turns yellow? Each of those decisions takes far less than seven seconds.

Granted, Coyne's article is a simple commentary in an online newspaper, but I expect more solid and convincing evidence that this. Coyne leaves us with little else than his materialist assumptions as reviewed previously.

Coyne is Required to Pretend He Has Choice

I'd like to turn my attention to Coyne's attempts to spell out our options, once we are convinced, as he is, that we really don't make any choices.

Coyne dismisses various philosophical attempts to rescue some sort of free will. It's clear Coyne is scornful of philosophy

in general. Maybe that explains why he is such a bad philosopher. I say that because he continues by expressing that it's impossible to just throw up our hands and despair that life is not worth living if I don't really make choices. Coyne says:

> *So if we don't have free will, what can we do? One possibility is to give in to a despairing nihilism and just stop doing anything. But that's impossible, for our feeling of personal agency is so overwhelming that we have no choice but to pretend that we do choose, and get on with our lives. After all, everyone deals with the unpalatable fact of our mortality, and usually do so by ignoring it rather than ruminating obsessively about it.*

Now that's a mouthful. First, Coyne rejects despairing nihilism simply because we are bound by the laws of physics. That's my understanding of his rationale that our "feeling" of personal agency is so overwhelming. But I hope you caught the absurdity of the following comment. Coyne says, "for our feeling of personal agency is so overwhelming that we have no choice but to pretend that we do choose." Really? We have no choice (was the pun intended?) but to "pretend" that we do choose?

I have to say that when your worldview requires you to pretend that reality is something other than what you perceive, your worldview clearly can't be trusted.

This reminds me of a class back in grad school when I asked about meaning and purpose in life in the evolutionary world view. They said that as just another animal, our only purpose is to survive and reproduce. I asked again, "What difference does it make, though, when I'm dead and in the ground?" According to evolution, my existence is over. One prof responded by saying that ultimately it doesn't really matter. So I asked, "Then why go on living, why stop at red lights,

who cares?" The same professor responded by saying, "Well, in the future, those that will be selected for will be those who know there is no purpose in life, but will live as if there is."

So not only do we need to pretend that we choose but we also need to pretend that our lives have meaning. Doesn't that make you want to get up in the morning?!

How Does Knowing Our Brain's Illusions Lead to a "Kinder" World?

Towards the end of Coyne's commentary he tries to discern what we should do with our understanding that we don't have any free will. First, as you might suspect, he disparages religion, specifically Christianity. He concludes that, since we have no real choice, none of us can really choose Jesus or reject him. It's all predetermined by our genetic and environmental history. So, "If we have no free choice, then such religious tenets—and the existence of a disembodied 'soul'—are undermined, and any post-mortem fates of the faithful are determined, Calvinistically, by circumstances over which they have no control." Well, there you have it, Reformed theology according to Jerry Coyne.

His second observation is that since we are little more than marionettes responding to the laws of physics, this should influence how we deal with criminals. We may decide for the sake of society that some need to be removed from circulation, so to speak – sent to prison for our protection. But we certainly can't hold them responsible. According to Coyne, "What is not justified is revenge or retribution—the idea of punishing criminals for making the 'wrong choice.'"

Well if all this is really true, then why is Jerry Coyne trying to convince us of anything? We have no real choice. Coyne is an atheist because he can't help it. That would mean

I'm a Christian because I can't help it. So why is he trying to convince me I have made a "wrong choice"? Obviously the internal contradictions abound.

Lastly, Coyne says our knowledge of no free will or real choices should lead to a kinder world, presumably because revenge is outdated. "Further, by losing free will we gain empathy, for we realize that in the end all of us, whether Bernie Madoffs or Nelson Mandelas, are victims of circumstance—of the genes we're bequeathed and the environments we encounter. With that under our belts, we can go about building a kinder world."

Just one word: Huh?

Well, personally I have gained empathy for Jerry Coyne because his commentary is just a product of circumstance, so I can just ignore it.

Thanks for reading.

Notes

1. Jerry Coyne, "Why you don't really have free will," *USA Today*, Jan. 1, 2012, usat.ly/WBnUBi. All Coyne's quotations are from this commentary.
2. Mario Beauregard and Denyse O'Leary, *The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul* (Harper One: New York, NY, 2007).

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“I’m a Girl Because That’s What Mommy Wanted!” – The Ethics of Screening for Gender Using IVF

The brave new world of the future is not so far away anymore. Fertility clinics, originally created to assist infertile couples have children, can now screen for numerous genetic traits. Are we ready for the responsibility and future ethical questions? My experience says we are woefully unprepared. In our consumer oriented society of the 21st century, we want what we want, when we want it. If a couple has the financial resources and says they are willing to take the medical risks, who can say what they can and can’t do?



In July 2015 an article appeared on Yahoo Parenting{1} about a couple in Frisco, Texas, north of Dallas. Rosa (36) and Vincent (37) Costa spent $100,000, enduring seven rounds of In Vitro Fertilization (IVF), including one miscarriage, just to ensure their third child would be a girl. Numerous fertility clinics allow infertile couples to genetically screen their embryos for nearly 400 genetic disorders. One additional benefit is that the embryos can also be screened for gender. Gender is a fairly simple assessment. Males will contain an X chromosome and a Y chromosome. Females are XX. These chromosomes are easily identified and distinguished.

This service is becoming more commonplace for couples since a round of IVF can cost around $12,000. If for an additional

$6,000, screening can focus on healthy embryos, why not? Identifying the sex of the embryos is an added bonus. But in the last few years, couples like the Costas have mushroomed. Some clinics report a rise of 250%. As one who has addressed the issue of genetic engineering for over twenty years, I have regularly discussed the possibility of choosing the sex of your next child. The primary method used by fertility clinics is to assess gender before implantation. If you desire a girl, then only female embryos are implanted. Embryos of the "wrong" sex can be discarded, frozen for later use, made available for adoption or donated to "science" for stem cell research. Most frozen embryos end up in limbo. They do not stay viable forever. Some frozen embryos have been successfully revived after 5 years in storage. But many are simply discarded. Embryos donated for stem cell research are also ultimately killed. In order to retrieve the valuable embryonic stem cells, the embryo is destroyed.

Consequently, this IVF procedure to guarantee the sex of your child ultimately results in the death of numerous perfectly healthy embryos. So you have perfectly healthy parents sacrificing healthy embryos just to get the male or female child they desire. This cost is far more consequential than the dollar amount. I'm opposed to even discarding genetically challenged embryos for healthy embryos. Now we have crossed the line to create human life in the laboratory with the full intention of sacrificing embryos of the wrong sex. In another article{2}, fertility specialist, Dr. Jeffrey Steinberg, acknowledges he has had the technology to screen for eye-color since 2009. He delayed making it available then due to an outcry from the public. Saying he has a waiting list of 70-80 people, he's getting ready to make it available again.

But despite the clear loss of innocent human life in our search for a "balanced family" or even worse, children of the preferred eye color, we run into the specter of facing up to responsibilities too few have considered. The Costas, for

instance, want a little girl. There is nothing wrong with that necessarily. But what are they really expecting? After all, they've spent $100,000 in the effort. The article mentions they will be decorating the new nursery in pink. But what if Olivia, their chosen name, ends up not liking pink? What if she's a tomboy who doesn't even like dresses? Or even more extreme, what if she decides as a little girl, she's really a boy! What do you do then? Even when selecting a child's gender, you likely have some concept in your mind of what a boy or girl will be like-otherwise, why choose gender at all?

It seems we are unwilling to ask the hard questions. Fertility experts will likely cater to what their clients want. There is competition, after all. One fertility specialist even believes that withholding these technologies puts him in the role of "playing god." He won't withhold something a client wants when the technology is available. That equates the consumer as a "god." The American Idol is not just a performer looking to win a contest to land a lucrative recording contract. The American Idol is personal choice. As I said earlier, if someone says they understand the risks, has the money and wants to pursue a medical technology, whose is going to say no? Should we say no? We have known for some time that absolute power corrupts absolutely. Do we just stand by and allow people to make choices that show an utter disregard for innocent human lives in the pursuit of personal preferences? Life becomes cheap across the board. Everyone is suddenly at risk. Where do we draw the line?

My great concern is that public demand, not reasonable ethical considerations, will guide medical decisions. Do we really not have the collective will to say there are some medical procedures or even experiments we will not do?

Notes

1. Why One Mom Spent 100K to Guarantee Baby No. 3 Is a Girl Accessed July 14 2015.

2. Couple Spends 50K to Choose Baby's Sex, Shining Light on Trend Accessed July 14, 2015.

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"So What Evidence IS There Against Evolution?"

Dr. Bohlin,

I just read an article by yourself condemning evolution and the teaching of it. You state your opinion that scientists should teach the controversy behind the teaching thereof. Is this the job of scientists? They cannot teach the issues in every discovery ever made and every theory they believe.

They would be teaching a course on the history of science rather than a course on science if they did. Evolution is accepted as proven in the scientific community, so why should scientists justify teaching it? We teach science in science classes and theology in theology classes. And what information is in conflict with it? You made frequent reference to it, but never said exactly what it is.

> *You state your opinion that scientists should teach the controversy behind the teaching thereof. Is this the job of scientists? They cannot teach the issues in every discovery ever made and every theory they believe.*

Actually, science textbooks do this all the time, especially with the more important and central theories. Check out a high school or college introductory biology text that emphasizes evolution and I can just about guarantee that there will be some discussion about just what Darwin was attempting to

overthrow in proposing his theory of natural selection. You're not really teaching science unless you also teach some of its history as well.

> *They would be teaching a course on the history of science rather than a course on science if they did. Evolution is accepted as proven in the scientific community, so why should scientists justify teaching it? We teach science in science classes and theology in theology classes. And what information is in conflict with it? You made frequent reference to it, but never said exactly what it is.*

The list of problems with evolution is long and has everything to do with science and nothing to do with theology. It has to do with evidence, both the lack of evidence for evolution on the broadest scale, and the presence of evidence for design.

Lack of Evidence for Evolution:

- No workable system for a naturalistic origin of life.
- Inability of evolutionary mechanisms to explain anything but minor variation in finch beaks and moth coloration.
- Rapid origin of nearly all animal phyla in Cambrian period with little or no evidence of ancestors.
- Early life is now known to not be monophyletic, a classic prediction of Darwinian evolution. Molecular evolutionists have had to invent a polyphyletic origin of life and massive gene transfers in earth's early history to explain the molecular data.
- Despite the presence of a few putative transitional forms in the fossil record, transitions are rare (Darwin expected them to be everywhere). The invertebrate fossil record is virtually devoid of any transitional forms (BTW, invertebrates comprise around 90% of the fossil record) .
- The fossil record demonstrates stasis, not a gradual process of origin for new forms.
- We see a lot of evidence for structures falling into disuse in organisms but no examples of new organs appearing.

Evidence for Design:

- Irreducible complexity of many cellular molecular structures and pathways.
- The genetic code is an informational code and informational codes only arise from an intelligent source.
- Junk DNA, a label derived from Darwinian interpretations of non-transcribed DNA, is junk no longer. The "junk" continues to be found functional in surprising ways.
- The overall complexity of the cell was not anticipated by Darwinists, and the last 50 years has yielded surprise after surprise as to the order and complexity of living cells.
- Embryology is looking more and more like a biological process with a goal that cannot be arrived at by natural selection. Body plans are determined early in development but mutations in early development are the harshest and most deleterious mutations of all. An early mistake renders a ruined organism.

I have other articles on our website, www.probe.org, that will elaborate with references most of the above claims.

Everything I have cited is known in the scientific community, but textbooks and media reports are routinely devoid of these evidences because the scientific community believes that science must only seek natural causes for all the biological realities they discover. (How the physical operates is reasonably to be assumed to be naturalistic, but the origin of physical and biological objects may not be so.) This is nothing more than a philosophical bias and not a scientific one. A scientist should be willing to follow the evidence wherever it leads and not wherever he wants it to lead. One of Richard Feynman's basic principles for scientists was that a scientist must not fool him or herself, and he is the easiest person to fool. Evolutionary biologists are fooling themselves with an errant definition of science which leads to a suppression of real evidence to the contrary. Teaching the controversy is the only way at the moment to get around the

naturalistic filibuster going on in science and in science education. Evolutionists are now fighting back hard because, I believe, that deep down they realize that a fully open and public discussion of the evidence is not to their advantage.

Respectfully,

Ray Bohlin, Ph.D.
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The Case for Christ – Reasons to Believe in the Reality of Christ

Dr. Ray Bohlin summarizes the evidence found by Lee Strobel when researching the question: Is Jesus Christ really who the Bible says He is? He shows that we have strong evidence on every front that backs up our belief in Jesus as the Son of God. This important apologetic argument helps us understand the enduring value of Christianity.

Sometimes the Evidence Doesn't Stack Up

Skeptics around the world claim that Jesus either never said He was God or He never exemplified the activities and mindset of God. Either way they rather triumphantly proclaim that Jesus was just a man. Some will go so far as to suggest that He was a very moral and special man, but a man nonetheless. Well, Lee Strobel was just such a skeptic. For Strobel, there was far too much evidence against the idea of God, let alone the possibility that God became a man. God was just mythology,

superstition, or wishful thinking.

As a graduate of Yale Law School, an investigative reporter, and eventual legal affairs editor for the *Chicago Tribune*, Strobel was familiar with the weighing of evidence. He was familiar with plenty of university professors who knew Jesus as an iconoclastic Jew, a revolutionary, or a sage, but not God. He had read just enough philosophy and history to support his skepticism.

As Strobel himself says,

> As far as I was concerned, the case was closed. There was enough proof for me to rest easy with the conclusion that the divinity of Jesus was nothing more than the fanciful invention of superstitious people. Or so I thought.{1}

That last hesitation came as a result of his wife's conversion. After the predictable rolling of the eyes and fears of his wife being the victim of a bait and switch scam, he noticed some very positive changes he found attractive and intriguing. The reporter in him eventually wanted to get to the bottom of this and he launched his own personal investigation. Setting aside as best he could his own personal interest and prejudices, he began reading and studying, interviewing experts, examining archaeology and the Bible.

Over time the evidence began to point to the previously unthinkable. Strobel's book *The Case for Christ* is a revisiting of his earlier quest. He interviews a host of experts along three lines of evidence. In the first section Strobel investigates what he calls the record. What did the eyewitnesses say they saw and heard? Can they be trusted? Can the gospel accounts be trusted? What about evidence from outside the Bible? Does archaeology help or hurt the case for Christ? Strobel puts tough questions to his experts and their answers will both surprise and exhilarate.

In the third section of the book, Strobel investigates the

resurrection. He examines the medical evidence, explores the implications of the empty tomb, the reliability of the appearances after the resurrection, and the wide-ranging circumstantial evidence.

However, here we'll focus on the middle section of the book, the analysis of Jesus Himself. Did Jesus really think He was God? Was He crazy? Did He act like He was God? And did He truly match the picture painted in the Old Testament of the Messiah?

Was Jesus Really Convinced that He Was the Son of God?

The psychological profiler is a new weapon in the arsenal of criminal investigators. They understand that behavior reflects personality. These highly trained professionals examine the actions and words of criminals and from these clues construct a psychological and sometimes historical profile of the likely perpetrator.

These same skills can be applied to our question of whether Jesus actually thought He was God. We can learn a great deal about what Jesus thought of Himself, not just from what He said, but what He did and how He did it.

Ben Witherington was educated at Gordon-Conwell Theological Seminary (M. Div.) and the University of Durham in England (Th. D.). He has taught at several universities and seminaries and authored numerous books and articles about the person of Jesus.

Strobel began his interview by stating that Jesus wasn't very forthcoming about His identity in public, even mysterious. He didn't come right out and say He was the Son of God or the Messiah. Couldn't it be that Jesus simply didn't see Himself that way?

Witherington points out that Jesus needed to operate in the context of His day. To boldly state that He was God would have at first confused and then maddened the Jews of His day. Blasphemy was not treated lightly. Therefore He was very careful, especially at first, of what He said publicly.

There are other clues to Jesus' self-identity as God. He chose twelve disciples, as God chose the twelve nations of Israel. He called John the Baptist the greatest man on earth; yet He went on to do even greater things in His miracles. He told the Pharisees, in contradiction to much of the Old Testament law, that what defiled a man was what came out of his mouth, not what he put in it. "We have to ask, what kind of person thinks he has the authority to set aside the divinely inspired Jewish Scriptures and supplant them with his own teaching."{2} Even the Romans labeled Him King of the Jews. Either Jesus actually said that or someone thought He did.

Since Jesus' followers called Him Rabboni or Rabbi, it seems they just thought of Him as a teacher and nothing more. But Witherington reminds us that Jesus actually taught in a radical new way. In Judaism, the authority of two or more witnesses was required for the proclamation of truth. But Jesus frequently said, "Amen I say to you," or in modern English, "I swear in advance to the truthfulness of what I am about to say." Jesus attested to the truth of what He was saying on His own authority. This was truly revolutionary.

The evidence that Jesus believed that He stood in the very place of God is absolutely convincing. Maybe He was just crazy. We'll explore that question next.

Was Jesus Crazy When He Claimed to be the Son of God?

There's considerable doubt in the general public about the usefulness of psychological testimony in the courtroom. It seems that you can find some psychologist to testify to just

about anything concerning someone's state of mind at the time a crime was committed. But while abuses can occur, most people recognize that a trained and experienced psychologist can offer helpful insights into a person's state of mind while examining his words and actions.

In our investigation of Jesus, if He really believed He was God, can we determine if He was crazy or insane? You can visit just about any mental health facility and be introduced to people who think they are Julius Caesar or Napoleon or even Jesus Christ. Could Jesus have been deluded?

Not so, according to Gary Collins, a psychologist with a doctorate in clinical psychology from Purdue and the author of numerous books and articles in popular magazines and professional journals. Disturbed individuals often show signs of depression or anxiety or explosive anger. But Jesus never displays inappropriate emotions.

He does get angry, but this is clearly appropriate—in the temple, for instance, when He saw the misuse of the temple courtyard and that the moneychangers were taking advantage of the poor. He didn't just get ticked off because someone was annoying Him. In fact, Jesus seems at His most composed when being challenged. In a beautiful passage, Collins describes Jesus as he would an old friend:

> He was loving but didn't let his compassion immobilize him; he didn't have a bloated ego, even though he was often surrounded by adoring crowds; he maintained balance despite an often demanding lifestyle; he always knew what he was doing and where he was going; he cared deeply about people, including women and children, who weren't seen as being important back then; he was able to accept people while not merely winking at their sin; he responded to individuals based on where they were at and what they uniquely needed. All in all I just don't see signs that Jesus was suffering from any known mental illness.{3}

OK, so maybe Jesus wasn't mentally disturbed, but maybe He used psychological tricks to perform His miracles. Many illnesses are psychosomatic, so maybe His healings were just by the power of suggestion. Collins readily admits that maybe some of Jesus' miracles were of this very type, but they were still healed. And some of His miracles just can't fit this description. Jesus healed leprosy and people blind since birth, both of which would be difficult to pull off as a psychological trick. His miracles over nature also can't be explained psychologically, and raising Lazarus from the dead after being in the tomb for a few days is not the stuff of trickery. No, Jesus wasn't crazy.

Did Jesus Fulfill the Attributes of God?

Modern forensics utilizes artists who are able to sketch the appearance of a criminal based on the recollections of the victims. This is an important tool to be able to alert the public as to the appearance of a usually violent offender. In Lee Strobel's investigation of the evidence for Jesus, he uses the Old Testament as a sketch of what God is supposed to be like. If Jesus claims to be God, then what we see of Him in the Gospels should mirror the picture of God in the Old Testament.

For this purpose, Strobel interviewed Dr. D. A. Carson, research professor of New Testament at Trinity Evangelical Divinity School in Deerfield, Illinois. Carson can read a dozen languages and has authored or edited over forty books about Jesus and the New Testament.

At the start of the interview, Strobel asks Carson, "What did Jesus say or do that convinces you that Jesus is God?" The answer was a little surprising. Jesus forgave sins.

We all see ourselves as having the power and authority to forgive someone who has wronged us. Jesus forgave people for things they did that didn't involve Jesus at all. This was

startling for that time and even today. Only God can truly forgive sins, and Jesus specifically does so on a number of occasions.{4}

In addition, Jesus considered himself to be without sin. Historically, we consider people to be holy who are fully conscious of their own failures and are fighting them honestly in the power of the Holy Spirit. But Jesus gave no such impression. In that wonderful chapter, John 8, Jesus asks if anyone can convict Him of sin (John 8:46). The question itself is startling, but no one answers. Sinlessness is another attribute of deity.

This chapter is a wonderful interview with Carson, covering other questions, such as: how could Jesus be God and actually be born; or say that the Father was greater than He; or not speak out strongly against the slavery of the Jewish and Roman culture; or believe in and send people to Hell? I'll leave you to explore those fascinating questions on your own in the book.

Strobel concludes that the Bible declares several attributes for God and applies them to Jesus. John 16:30 records one of the disciples saying, "Now we can see that you know all things." Jesus says in Matthew 28:20, "Surely I am with you even unto the end of the age." And in Matthew 18:20 He says, "Where two or three are gathered in my name, there I am with them." All authority was given Him (Matthew 28:18) and Hebrews tells us that He is the same yesterday and today. So Jesus is omniscient, omnipresent, omnipotent, and immutable. In John 14:7, Jesus says, "If you really knew me, you would know my Father as well."

Did Jesus—and Jesus Alone—Match the Identity of the Messiah?

So far in Strobel's interviews with scholars we have affirmed that Jesus did claim to be God, He wasn't insane or

emotionally disturbed, and He did things that only God would do. Now we want to review Strobel's interview with Louis Lapides, a Jewish believer as to whether Jesus actually fit the Old Testament picture of what the Messiah would be like.

One of the important pieces of evidence that convinced Lapides that Jesus was the long-looked-for Messiah was the fulfillment of prophecy. There are over forty prophecies concerning the coming Messiah, and Jesus fulfilled every one. Some say this is just coincidence. But, the odds of just one person fulfilling even five of these prophesies is less than one chance in one hundred million billion—a number millions of times greater than the number of all people who have ever lived on earth.{5}

But maybe this isn't all it seems. Objections to the correlation of Jesus' life to the prophecies of the Messiah fall into four categories. The first is the coincidence argument, which we just dispelled. Perhaps the most frequently heard argument is that the gospel writers fabricated the details to make it appear that Jesus was the Messiah. But the gospels were written close enough in time to the actual events that, if false, critics could have exposed the details. Certainly this is true of those in the Jewish community who had every reason to squash this new religion before it got started.

Third, there is the suggestion that Jesus intentionally fulfilled these many prophecies so as to make Himself appear as the Messiah. That's conceivable for some of the prophecies, such as Jesus' riding into Jerusalem on a donkey, but for others it's impossible. How could Jesus arrange for his ancestry, or place of birth, or the method of execution, or that soldiers would gamble for his clothing? The list goes on.

Fourth, perhaps Christians have just ripped these so-called prophecies out of context and have misinterpreted them. When asked, Lapides sighed and replied:

> You know, I go through books that people write to try to tear down what we believe. That's not fun to do, but I spend the time to look at each objection individually and then to research the context and the wording in the original language. And every single time, the prophecies have stood up and shown themselves to be true.{6}

What I found most intriguing about the interviews was the combination of academic integrity on the part of these scholars alongside a very evident love for the One of whom they were speaking. For these scholars, finding the historical Jesus was not just an academic exercise, but also a life-changing personal encounter with Jesus. Perhaps it can be for you too.

Notes

1. Lee Strobel, 1998, *The Case for Christ*, Grand Rapids Michigan/Zondervan Publishing House, p. 13.
2. Ben Witherington, quoted in *The Case for Christ*, p. 135.
3. Gary Collins, quoted in *The Case for Christ*, p. 147.
4. Strobel, *The Case for Christ*, p. 157-158.
5. Strobel, *The Case for Christ*, p. 183.
6. Louis Lapides, quoted in *The Case for Christ*, p. 185.

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