

“How Do Christians Respond to the Fact of Evolution?”

After reading one of your articles on Creation vs. Evolution I understood every aspect of their respective arguments, I was just a little confused as far as Christian responses to the arguments. Do Christians acknowledge evolution but then just say that God has pre-ordained this evolution to happen? Or do Christians just ignore the fact that evolution exists? Maybe I am making this too complicated. If Christians can see that an organism changes over time to adapt with the environment for absolutely no apparent reason, does this mean that they acknowledge this change happened for no apparent reason thus evolution, or just that God made this change possible?

Christians respond differently to the questions you propose. Some Christians, indeed, suggest that God ordained the evolutionary process as His means to create. These usually refer to their position as *theistic evolution* or *evolutionary creation*. As far as I know, no Christian ignores that “evolution” happens. All recognize microevolution as a real process in response to environmental change. This does not require mutation or the establishment of new genetic or morphologic systems. Change over time is only one form of evolution, which no one objects to. What we believe there is insufficient evidence for, is the notion that all life forms today are descended from a single original life form that itself evolved from purely chemical precursors around 4 billion years ago.

I hope this helps.

Respectfully,

Dr. Ray Bohlin
Probe Ministries

Are We Alone in the Universe?

A Biblical View of Aliens

Dr. Ray Bohlin provides a Christian view on the probability and meaning of life on other planets. From a biblical perspective, what would it mean to find evidence of life beyond this earth?



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

Life on Mars?

There was great excitement in the media when a group of scientists from NASA announced they had found evidence of life on Mars. Their evidence, an alleged Martian meteorite, was vaulted to center stage, and everyone from CNN to *Nightline* ran special programs with interviews and video footage of the scientists and their prized specimen. President Clinton was so excited by the announcement that he praised the U.S. space program and took the opportunity to establish a bipartisan space summit headed up by Vice President Al Gore to study the future of U.S. space research. Aren't we already doing that?

Anyway, clearly this announcement took the country by storm. Some of the scientists were embarrassingly gushing about how significant these findings were. The media frenzy was prompted by the early release of an article from the journal *Science*, the premier scientific journal in the U.S. The article was due out the following week, but *Science* decided to release it early because it had leaked out.

Here's what the excitement was about. A group of scientists had studied a meteorite that had been found in the ice of Antarctica. Previously, it had been determined that this

meteorite had originated on Mars by studying the gaseous content of glass-like components of the meteor. The gas composition matched very well the atmosphere of Mars. This conclusion seems reasonable.

So, they presumed they had a meteor from Mars. Next they looked for evidence of life on and in the crevices of the meteor. They found two types of molecules that can form as a result of life processes, carbonates and complex molecules called polycyclic aromatic hydrocarbons or PAHs. They also found shapes in the rock that resembled those of known microfossils on Earth. Microfossils are fossils of one-celled organisms which are rather tricky to interpret.

Well, what does this mean? Obviously, the NASA scientists felt the things just mentioned provided ample evidence to conclude that life once existed on Mars. However, the chemical signs could all be due to processes that have nothing to do with life, and the supposed microfossils are 100 times smaller than any such fossil found on Earth. Other groups that studied this same meteorite concluded that either the temperature of formation of the chemicals was far too high to allow life (over 700 degrees C) or that other chemical signals for life were absent. John Kerridge, a planetary scientist from the University of California at San Diego, said, "The conclusion is at best premature and more probably wrong." But listen to the concluding statement in the paper in *Science*:

Although there are alternative explanations for each of these phenomena taken individually, when they are considered collectively, particularly in view of their spatial association, we conclude that they are evidence for primitive life on Mars.[\[1\]](#)

In plain English, there are reasonable non-life explanations for each of the evidences presented, but we just think that they mean there is life on Mars. The evidence **is** very

equivocal and was challenged by many other scientists, but the media did not report that as fully. But maybe they are right! In fact, there is one simple explanation that is consistently ignored by media and scientists alike. If there really is, or has been, life on Mars, what could that possibly mean for evolution, and more importantly, does it somehow refute creation? We'll look at that next.

What Would Life on Mars Mean?

Because of the recent announcement of signs of life on Mars, many people were encouraged in their belief that we are not alone in the universe. These signs are far from certain and probably wrong, but if it's true, what would these results mean to evolutionists? Moreover, is there any reason for Christians to fear confirmation of life on Mars?

Let us assume, then, for the moment that the evidence from this Martian meteorite is legitimate evidence for life on Mars—life that at some point in the past actually existed on Mars. What would it mean?

For evolutionists the evidence is perceived as confirmation that life actually arises from non-life by purely chemical processes. In addition, evolutionists draw the conclusion that life must be able to evolve very easily since it did so on two adjacent planets in the same solar system. Therefore, even though origin of life research is actually at a standstill, such a discovery seemingly confirms the notion that *some* chemical evolution scenario *must work*. I will address this assumption later.

On the other hand, some have stated that if there is life on Mars, creationism has been dealt a death blow. They rationalize that since (1) we now know that life can evolve just about anywhere, and (2) the Bible never speaks of life anywhere but on Earth, the Bible is, therefore, unreliable. Besides, they reason, why would God create life on a planet

with no humans? However, since the Bible is absolutely silent on the subject of extra-terrestrial life, we can make no predictions about its possibility. God is certainly free to create life on planets other than Earth if He chooses.

Getting back to the evolutionists' glee at the possibility of life evolving on other planets, the real question is whether this is the proper conclusion if life is indeed found on Mars? The simple answer, inexplicably avoided by the media, is NO! The simplest answer to the possible discovery of life on Mars is that the so-called "Martian life" actually came from Earth!

Think about it this way. The meteorite that was found is supposed to have existed on Mars previously. How did it get to Earth? Well, it is hypothesized that a large meteorite crashed into Mars throwing up lots of debris into space, some of which finds its way to Earth and at least a few of which are found by Earthlings. If you are thinking with me, you now realize that the same scenario could have been played out on Earth.

Evolutionists suggest that the Earth was under heavy meteor bombardment until at least 3.8 billion years ago—about the time they say life appeared on Earth. Christian astronomer Hugh Ross states it this way:

Meteorites large enough to make a crater greater than 60 miles across will cause Earth rocks to escape Earth's gravity. Out of 1,000 such rocks ejected, 291 strike Venus, 20 go to Mercury, 17 hit Mars, 14 make it to Jupiter, and 1 goes all the way to Saturn. Traveling the distance with these rocks will be many varieties of Earth life.[*{2}*](#)

Ross also documents that many forms of microscopic life are quite capable of surviving such a journey. All this is quite well known in the scientific community, but I have not seen it mentioned once in any public discussion. I believe the reason is that the possibility of life having evolved on Mars is too juicy to pass up.

The Improbability of Life Elsewhere in the Universe

I would like to address the amazing optimism of so many that the universe is teeming with life. No doubt this is fueled by the tremendous success of such science fiction works as *Star Wars* and *Star Trek* which eloquently present the reasonableness of a universe pregnant with intelligent life forms.

Inherent within this optimism is the evolutionary assumption that if life evolved here, certainly we should not arrogantly suppose that life could not have evolved elsewhere in the universe. And if life in general exists in the universe, then, of course, there must be intelligent life out there as well.

This is the basic assumption of the SETI program, the Search for Extra-Terrestrial Intelligence. This is the program, now privately funded instead of federally funded, that searches space for radio waves emanating from another planet that would indicate the presence of intelligent life. But is such a hope realistic? Is there a justifiable reason for suspecting that planets suitable to life exist elsewhere in the universe?

Over the last two decades scientists have begun tabulating many characteristics of our universe, galaxy, solar system, and planet that appear to have been finely-tuned for life to exist. Christian astronomer and apologist, Dr. Hugh Ross documents all these characteristics in his book *Creator and the Cosmos*, [\[3\]](#) and is constantly updating them. In the book's third edition (2001), Ross documents 35 characteristics of the universe and 66 characteristics of our galaxy, solar system, and planet that are finely-tuned for life to exist.

Some examples include the size, temperature, and brightness of our sun, the size, chemical composition, and stable orbit of Earth. The fact that we have one moon and not none or two or three. The distance of the Earth from the sun, the tilt of the earth's axis, the speed of the earth's rotation, the time it

takes Earth to orbit the sun. If any of these factors were different by even a few percent, the ability of Earth to sustain life would be severely compromised. Recently it has been noted that even the presence of Jupiter and Saturn serve to stabilize the orbit of Earth. Without these two large planets present exactly where they are, the Earth would be knocked out of its present near circular orbit into an elliptical one causing higher temperature differences between seasons and subjecting Earth to greater meteor interference. Neither condition is hospitable to the continuing presence of life.

Ross has further calculated the probabilities of all these factors coming together by natural processes alone to be 1×10^{-166} ; that's a decimal point followed by 165 zeroes and then a one. A very liberal estimate of how many planets there may be, though we have only documented less than 100, is 10^{22} or 10 billion trillion planets, one for every star in the universe. Combining these two probabilities tells us that there are 10^{-144} planets in the entire universe that could support life. Obviously this is far less than one; therefore, by natural processes alone, we shouldn't even be here—let alone some kind of alien life form.

So unless God created life elsewhere, we are alone, and for the materialistic evolutionist, this is a frightening thought.

Problems with Chemical Evolution on Earth

The statistics given above mean that we are really alone in the universe and that there is no hope of finding intelligent civilizations as in the television program *Star Trek*. While it means there is no one out there to threaten our survival, there is also no one out there to save us from our own mistakes.

This observation highlights why I believe the scientific

community and the media became so excited about the possibilities of life on Mars. Efforts to determine how life could have evolved from non-living matter have been so fraught with problems that it makes the possibility of life elsewhere extremely remote. But if it could be proved that life evolved elsewhere, then it would demonstrate that life springs up rather easily, and we just haven't found the right trick here on Earth to prove it. But this just leapfrogs the problem.

But is the evolution of life from non-living chemicals really that impossible? The difficulties fall into three categories, the Chemical Problem, the Thermodynamic Problem, and the Informational Problem. These issues are presented comprehensively in a book by Thaxton, Bradley, and Olsen titled *The Mystery of Life's Origin*[\[4\]](#) and in a chapter in the edited volume by J. P. Moreland, *The Creation Hypothesis*.[\[5\]](#)

Chemical Problems are illustrated by the difficulty in synthesizing even the simplest building block molecules necessary for life from inorganic precursors. Amino acids, sugars, and the bases for the important nucleotide molecules that make up DNA and RNA were all thought to be easily synthesized in an early Earth atmosphere of ammonia, methane, water vapor, and hydrogen. But further experiments showed this scenario to be unrealistic. Ammonia and methane would have been short-lived in this atmosphere; the multiple energy sources available would have destroyed the necessary molecules and water would have broken apart into hydrogen and oxygen. The oxygen was scrupulously avoided in all prebiotic scenarios because it would have poisoned all the necessary reactions.

Thermodynamic Problems arise from the difficulty in assembling all these complex molecules that would have been floating around in some prebiotic soup into a highly organized and complex cell. To accomplish the task of achieving specified complexity in life's molecules such as DNA and proteins, the availability of raw energy for millions of years is not enough. All systems where specified complexity is produced

from simple components requires an energy conversion mechanism to channel the energy in the right direction to accomplish the necessary work. Without photosynthesis, there is no such mechanism in the prebiotic Earth.

The Informational Problem shows that there is no way to account for the origin of the genetic code, which is a language, without intelligent input. Informational codes require intelligent preprogramming. No evolutionary mechanism can accomplish this. Life requires intelligence.

So you can see why evolutionists would get excited about the possibility of finding evolved life elsewhere. It's because life is seemingly impossible to evolve here. So, if it did happen elsewhere, maybe our experiments are just missing something.

Independence Day, The Movie

In the movie *Independence Day*, an alien battle force swoops down on Earth with the intention of destroying the human race, sucking the planet dry of all available resources and then moving on to some other unlucky civilization in the galaxy. But, those indomitable humans aided by good old American ingenuity outsmart those dull-witted aliens and Earth is saved. The story has been told many times, but perhaps never as well or never with such great special effects. The movie was a huge success.

But why are we continually fascinated by the possibility of alien cultures? The movie gave the clear impression that there must be great numbers of intelligent civilizations out there in the universe. This notion has become widely accepted in our culture.

Few recognize that the supposed existence of alien civilizations is based on evolutionary assumptions. The science fiction of *Star Trek* and the *Star Wars* begins with

evolution. As I've stated earlier, evolutionists simply rationalize that since life evolved here with no outside interference, the universe must be pregnant with life. Astronomer Carl Sagan put it this way after he had reviewed the so-called success of early Earth chemical evolution experiments:

Nothing in such experiments is unique to the earth. The initial gases, and the energy sources, are common throughout the Cosmos. Chemical reactions like those in our laboratory vessels may be responsible for the organic matter in interstellar space and the amino acids found in meteorites. Some similar chemistry must have occurred on a billion other worlds in the Milky Way Galaxy. The molecules of life fill the Cosmos.[{6}](#)

Sagan strongly suggests that the probabilities and chemistry of the universe dictate that life is ubiquitous in the galaxy. But as I stated earlier, the odds overwhelmingly dictate that our planet is the only one suitable for life in the universe. And the chemistry on Earth also indicates that life is extremely hard to come by. The probability of life simply based on chance occurrences is admitted by many evolutionists to be remote indeed. Many are now suggesting that life is inevitable because there are yet undiscovered laws of nature that automatically lead to complex life forms. In other words, the deck of cards is fixed. Listen to Nobel Laureate and biochemist, Christian de Duve:

We are being dealt thirteen spades not once but thousands of times in succession! This is utterly impossible, unless the deck is doctored. What this doctoring implies with respect to the assembly of the first cell is that most of the steps involved must have had a very high likelihood of taking place under the prevailing conditions. Make them even moderately improbable and the process must abort, however many times it is initiated, because of the very number of successive steps

involved. In other words, contrary to Monod's affirmation, the universe was—and presumably still is—pregnant with life.[\[7\]](#)

The only problem with de Duve's suggestion is that we know of no natural processes that will lead automatically to the complexity of life. Everything we know of life leads to the opposite conclusion. Life is not a product of chance or necessity. Life is a product of intelligence.

Without Divine interference we are alone in the universe and without Christ we are—and should be—terrified. The gospel is as relevant as ever.

Notes

1. *Science*, 16 August 1996, 273:924-30.
2. *Creator and the Cosmos*, NavPress, 2001, p. 210.
3. *Ibid.*, pp. 145-199.
4. Lewis and Stanley, 1984.
5. InterVarsity Press, 1994, pp. 173-210.
6. *Cosmos*, Random House, 1980, p. 40.
7. *Vital Dust*, Basic Books, 1995, p. 9.

© 2002 Probe Ministries

PBS Evolution Series

Darwin's Dangerous Idea

Some evolutionists are definitely worried. Creation, intelligent design and a general dissent concerning Darwinian evolution continue to gain ground—so much so that a deliberate

counterattack has been launched. Using scientists from around the world, professional defenders of evolution, beautiful nature photography, computer graphics and simulations, the prestige of the PBS NOVA series and the financial backing of Microsoft billionaire Paul Allen, a monumental defense and celebration of evolution has been produced.

The new PBS Evolution Series is a seven part, eight hour documentary originally aired on PBS stations around the country in late September of 2001 and rebroadcast in May and June of 2002. Accompanying the video series is an interactive Web site, 360-page companion book, coordinated teacher training and education, and a determined publicity campaign aimed at getting the series into the nation's high schools.

The explicit goals of the series are to help students understand the critical importance of evolutionary theory in understanding so many scientific and health issues of today—from AIDS to antibiotic resistance to fighting agricultural pests to even how we choose a sexual partner. The producers set out to establish the overwhelming evidence behind evolution and the soundness of the science behind it. They specifically sought to pursue solid science journalism and forego the religious realm.

Essentially, the series has failed on all counts. This beautiful documentary is loaded with speculation, exaggerated evidence and claims, glossing over of legitimate controversy, and a persistent hostility towards any religious perspective deemed incompatible with evolution.

Episode One begins with a dramatization of a conversation between Charles Darwin and Captain Robert Fitzroy of the HMS Beagle in South America as Darwin is purchasing a fossil. The fictitious conversation clearly pokes fun at the Biblical account of the flood. Darwin was nowhere near as skeptical as portrayed, and Fitzroy was nowhere near as literal either. This opening scene lays the groundwork for a continual assault

on history and the evidence to make evolution look as positive as possible and opponents of evolution as silly as possible.

This two-hour opening episode crosses paths with religion several more times in discussions of the philosophical meaning of evolution in an interview of Kenneth Miller, a Darwin defender who finds no incompatibility between his Christian faith and Darwinian evolution. In this opening episode the producers present a confusing contradiction. On the one hand Darwin's dangerous idea precludes any true meaning to life and on the other hand, Darwinian evolution is completely compatible with an informed Christian faith. For more detailed analysis of this episode consult the Discovery Institute's free Viewer's guide available on the Internet at www.reviewevolution.com.

“Great Transformations” and “Extinction”

Perhaps the most foundational episode is Episode Two: The Great Transformations. One's expectation would be the presentation of numerous persuasive transitional forms demonstrating without doubt, the common ancestry of all life. Instead we are treated to a certainty based on the usual arguments from authority, selective fragmentary fossil evidence, and speculative molecular mechanisms.

The opening segment presents the mounting evidence for the amazing transition from a terrestrial wolf-like vertebrate to modern aquatic whales. Lots of fossils and reconstructions are paraded before us, unfolding the supposed story of whale evolution. Complete skeletons are pictured with no indication that they are based on very partial fossil finds. The overall transitional series is discussed with certainty despite the fact that evolutionists themselves admit that the known members of the transitional series are not thought to be the actual members of the transitional series but just representative of what the actual transitional species may have looked like.^[1] Also missing is the admission that, by

the very nature of fossils, it can never really be known if any one fossil was ancestral to another.

Also featured in this episode is the stunning Cambrian explosion of animal life forms featuring Simon Conway Morris. Morris freely admits that “this sudden appearance of the fossils led to this term, the Cambrian explosion. Darwin, as ever, was extremely candid, he said, Look, this is a problem for my theory. How is it that suddenly animals seem to come out of nowhere? And to a certain extent that is still something of a mystery.” As the segment develops, no attempt is made to explore or resolve this mystery. The experts make only vague references to evolution tinkering with what already exists. But even tinkering is a design activity, design with a purpose. Natural selection would be better described as a blindfolded man trying to navigate a minefield.

Episode 3 explores the evolutionary significance of extinction. Both the great Permian extinction of 250 million years ago and the KT extinction of dinosaur fame of 65 million years ago are explored and make fascinating stories. Their relation to evolution is obscure, however. Mass extinctions supposedly open up the playing field for new and diverse species to evolve due to less competition. But Darwinian natural selection supposedly thrives on competition. The segments on biological invaders, while important in and of themselves, have little to add to the evolutionary debate. Biological control has been practiced for centuries with no knowledge of evolution.[\[2\]](#) Once again, we witness lots of authoritative posturing but little evidence for evolution.

“The Evolutionary Arms Race” and “Why Sex?”

For many years medical authorities have been warning of the dangers of infectious bacteria becoming resistant to antibiotics. The overuse and misuse of antibiotics in western

society has led to an increase in the number of strains of bacteria that are resistant to our primary defense against infection. In Episode Four of PBS's *Evolution Series* titled "The Evolutionary Arms Race," we are told this is evolution in action.

First, this statement leads to the conclusion that knowledge of evolution is essential to designing adequate health care. And second, labeling antibiotic resistance as evolution in action implicitly states that evolution is a fact, since antibiotic resistance is a fact. This is another case of a selective use of evidence. What the producers of *Evolution* don't say is that the mechanisms for antibiotic resistance have been known for years. Usually the capacity to resist antibiotics has always been in the bacterial population and does not result from mutation. Even when a mutation is responsible, a new function is never evolved, just the damaging of an existing function. Sometimes the mutation results in the antibiotic being expelled from the cell faster or taken in more slowly. This doesn't create a new species and doesn't fundamentally change the organism.

Another factor left out of the discussion is that antibiotic resistance always comes with a cost of its own. Antibiotic resistant bacteria are always inferior to the original wild-type bacteria. Their growth is stunted. Sometimes these costs can be compensated for but also at additional costs. Resistant bacteria are not better bacteria. Remove the antibiotic and they quickly lose out to the original wild-type bacteria. Therefore, to suggest that in the case of resistant tuberculosis that the bacteria evolved right inside the human host is highly misleading. The bacterial resistant forms were already present, the bacterium has not changed or evolved at all.

While the episode gives numerous examples of natural selection on a micro scale, the evidence discussed tells us nothing of how antibiotic resistance arose in the first place or how

ants, molds, fungi, and bacteria first became intricately associated.

The fifth episode contains perhaps the least science and relevance to evolution, but will certainly be the most entertaining and even titillating for high school students. The episode "Why Sex" tries to ascertain the purpose and even evolution of sexual reproduction. While containing some helpful information and case studies, the program is full of speculative storytelling and an overload of sexual displays and sexual acts from fish to lizards, to birds, to chimpanzees and even a highly unnecessary and suggestive encounter between humans.

Also included is a highly controversial, yet factually presented discussion of evolutionary psychology and one researchers ideas that all forms of human artistic endeavors are little more than sexual displays. Some of their own previously used evolutionary experts would find most of this episode an incredible waste of time and money.

"The Mind's Big Bang" and "What About God?"

The uniqueness of human beings presents a difficult evolutionary puzzle. So much of who and what we are is categorically different from other animal species that trying to account for it by mutation and natural selection presents a tough challenge. In Episode Six, "The Mind's Big Bang," we unfortunately don't get much of an answer.

The episode begins by documenting the amazing human capacity for art in the caves of France. This launches a long series of segments that document the early appearance of artistic expression that has its roots in the development of tool making. Eventually this explosion of capacities rooted in the brain is traced to the remarkable development of human language. As in other episodes there is lots of speculation

about the selective advantages of language, but this tells us nothing of how language evolved. The discussion gives the impression that if we can just discover what language is used for, we will know how it evolved. This is typical evolutionary story-telling masquerading as science.

The Cambridge Encyclopedia of Language candidly admits that “For centuries, people have speculated over the origins of human language. . . . [but] the quest is a fruitless one. . . . We have no direct knowledge of the origins and early development of language, nor is it easy to imagine how such knowledge might ever be obtained.”[\[3\]](#) The Discovery Institute’s Viewers Guide also notes that we are told that language was the key to our becoming human. In Episode Two, however, we were told it was the ability to walk on two legs and in Episode Five it was using our brains to choose sexual partners. This confusion of “key events” exposes them for the speculation they truly are.[\[4\]](#)

The final episode “What About God?” reveals the entire series as the propaganda it is meant to be. Here we meet the old science vs. religion argument in all its glory. The Evolution producers go to great lengths to distort the controversy to their own ends. The Scopes trial and the Sputnik-induced revolution in science education are neatly packaged and distorted as science vs. religion. The inquiring and passionate science students and professors who have no quarrel with evolution are favorably portrayed against uneducated parents and naïve Bible literalists. Theistic evolutionist Keith Miller is pictured as a liberator to Wheaton College students who don’t want to be perceived as unintelligent.

What becomes unmistakably clear in this episode is that the reigning naturalistic stranglehold on science education is to be maintained at all costs. Those who oppose it, risk being branded as dangerous or stupid or ignorant or all three. Censorship of facts contrary to evolution is justified in the name of science. The bottom line is that “It’s OK for people

to believe in God, as long as their beliefs don't conflict with Darwinian evolution. A religion that fully accepts Darwin's theory is good. All others are bad." {5}

The PBS Evolution Web Site

Located at www.pbs.org/wgbh/evolution, the PBS Evolution Web site is a goldmine of information and teaching suggestions along with interactive games and exercises aimed at sharpening one's evolutionary skills. But visitors should also expect that much of the information contained here employs the same sleight of hand that the video series uses in relating evidence for evolution. With such a great volume of information available at the *Evolution* Web site, I will direct my attention to one article as an example. Under the main heading of "Change," an essay is offered critiquing Intelligent Design. The essay is authored by Kenneth Miller, a Brown University biology professor, featured in the first episode as a Roman Catholic who sees no problem with evolution.

The essay is titled "Life's Grand Design" and purports to explain how evolution accounts for the design of nature far better than an intelligent designer would. His entire discussion revolves around the design of the human eye. {6} On page one Miller presents the problem. The eye is exquisite in its design, accomplishing the wondrous effect of color vision with a very complicated design. How could it possibly have evolved one step at a time? On page two, Miller begins his response with the standard blind watchmaker explanation from Richard Dawkins. Miller emphasizes the gradual slight improvements and that all those that are positive will be selected. This is not necessarily true. It is well known that some genetic changes will be so slight that they do not offer a significant enough selective advantage and therefore, will be lost. Miller ignores the uncomfortable details.

Miller then describes how easy it would be to build an eye

from just a few light-sensitive cells. But he starts with "light-sensitive cells." Where did these come from? How did they become light sensitive? The molecular mechanism of light sensitivity is quite complex and one of Michael Behe's examples of irreducible complexity. But once again Miller ignores the uncomfortable details. Miller states, "it is possible to draw a series of incremental changes that would lead directly to the lens and retina eye." But you know, I'm not interested in whether it can be drawn. I want to know how it would evolve biologically.

Finally Miller delivers the *coup de grace*; the eye exhibits design flaws that any engineer would never employ. You see, the human eye seems to have things a little backwards. The light-sensitive cells face the back of the eye or the retina, instead of the front of the eye where the light comes from. Therefore, the incoming light must pass through the nerve cells and blood vessels first, potentially distorting the image. Not only that, but the nerve cells eventually bunch together before punching through the retina en route to the brain, therefore creating a dangerous blind spot. Surely an intelligent designer wouldn't do it that way. The eye is therefore a great example of evolution at work. Evolution simply arrives at the best available solution.

But again, Miller ignores the details. He doesn't reveal that the layer of cells behind the nerve cells, behind the blood vessels and behind the photoreceptor cells, is an immensely important group of cells we will abbreviate as the RPE (Retinal Pigmented Epithelium). The RPE is necessarily in close proximity to the photoreceptor cells, the rods and cones, because the RPE replenishes the necessary molecules for vision. With the RPE at the very back of the retina, these cells act as an absorptive layer to get rid of excess light. Without the RPE we would be blinded by ordinary sunlight. Also the absorption of excess light sharpens our vision. So the designer has a dilemma. Both the nerves and blood vessels must

be in front of the rods and cones or the RPE must be in front because both must be in direct contact with the photoreceptor cells and they all won't fit and function together. Something will get between the light and the light sensitive cells. Putting the blood vessels and nerves in front of the rods and cones creates a very mild light filter, but does create a blind spot where the nerves bundle together. However, putting the RPE between the light and the rods and cones would create a much more detrimental filter and diffusing agent. The vertebrate eye is structured properly when all factors are considered.

"The vertebrate eye provides an excellent example of functional— though non-intuitive design. The design of the retina is responsible for its high acuity and sensitivity. It is simply untrue that the retina is demonstrably suboptimal, nor is it easy to conceive how it might be modified without significantly decreasing function." [\[7\]](#)

As we have seen in this essay, evolution can offer some impressive evidences on first glance. But time and time again, the intricacies of design are in the details.

Notes

1. The story of whale evolution has indeed grown more sophisticated over the last 10-15 years. Indeed, this was one transition that many creationists had a great deal of fun with. How could a land mammal evolve into a whale? How could the transitional forms possibly be functional on land or in water? If one were to scan the presumed transitional series (found on page 138 of *Evolution* by Carl Zimmer, Harper Collins, 2001) it is quite impressive evidence for evolution. The transitional series, while a little jerky with certain gaps remaining, appears gradual enough and the fossils seem to appear in the expected order and strata. But as always, the truth is in the details. Two recent articles investigate the

evidence with some detail and rigor. Ashby Camp has written a fine summary (last modified March 11, 2002) and critique of the fossil evidence for whale evolution that is available from the TrueOrigins website at www.trueorigins.org/whales.asp. Also, John Woodmorappe has analyzed the mixture of characters in some of the whale-like fossils in his article "Walking whales, nested hierarchies, and chimeras: do they exist?" in *TJ* 16(1) 2002: 111-119. *TJ* was formerly *Creation Ex Nihilo: Technical Journal*.

What we learn from these articles is that the true land mammal ancestor of whales is still in dispute. The pakicetids, the first "intermediate," are true land mammals with a few potential aquatic features in their inner ears. The next group known as ambulocetids show some aquatic features but other features distance them from actual whale ancestors. Many of these are not in the proper stratigraphic position. The pakicetids and ambulocetids are all less than 10 feet long; the fully marine Basilosaurus are all over 50 feet in length. Even by evolutionary standards there isn't enough time between these species to evolve even this simple increase in length. None of the species depicted on page 138 of *Evolution* are thought to be actual ancestors of modern whales. The diagram is actually drawn to indicate this fact but most people looking at it won't come away with that impression. Each species is diagrammed as an offshoot of the lineage but not an actual transitional form. How come we always find just "types" of ancestors and never the ancestors themselves? Some character or another always disqualifies the intermediate in question. There seems to be a deeper lesson here that most evolutionists are unwilling to face.

2. The documentation of human interference in the ecosystems of Hawaii and Thailand are summed up with a plea to slow down the rate of human induced extinction and allow nature to take its own more natural and easy-paced course. This implies, however, that humans are somehow outside the loop of nature. If we are just another biological species, then we are only

acting according to our own biological nature. How or why should this be suppressed? As in past mass extinctions, the strong, opportunistic and lucky will survive. Perhaps that includes us, perhaps not. In the naturalistic worldview of the series, what's the difference? This is another example of stealthily applying a Christian worldview that gives intrinsic value to nature while maintaining the guise of naturalism. In a naturalistic worldview, nature just is. Choosing to interfere on nature's behalf indicates intrinsic value and worth that can only come from outside nature itself. In the Christian worldview, this comes from God.

3. David Crystal, *The Cambridge Encyclopedia of Language*, Second Edition, Cambridge: Cambridge University Press, 1997, p. 6,290.

4. www.reviewevolution.com, p. 92.

5. Ibid, p. 107.

6. www.pbs.org/wgbh/evolution/change/grand/, p. 1-6.

7. George Ayoub, On the design of the vertebrate retina, *Origins and Design*, Vol. 17(1): 19-22. This article can also be found on the web at www.arn.org/docs/odesign/od171/retina171.htm.

©2002 Probe Ministries

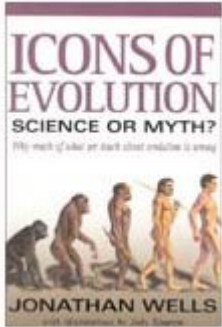
Icons of Evolution

Dr. Ray Bohlin reviews Jonathan Wells' book Icons of Evolution, which exposes the lies and distortions that constitute evolution's best textbook "evidence."



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

Lies and Distortions Masquerading as Truth in the Halls of Science



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

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

easiest evidence to explain, then one is left wondering what the future of evolutionary instruction could be. Even further, what future might there be for evolution itself?

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

Tree of Life, Homology, and Haeckel's Embryos

The tree of life is ubiquitous in evolutionary literature. The notion that all of life is descended from a single common ancestor billions of years ago is how many would define evolution. But the actual evidence argues strongly against any such single common ancestor, and most animal life forms appear suddenly without ancestors in what is known as the Cambrian explosion of nearly 543 million years ago in evolutionary time. The Cambrian documents life forms so divergent that one would predict a fossil record covering hundreds of millions of years just to document the many transitions required from the first multicellular animal ancestor. Current estimates suggest this change took place in less than 5-10 million years. Yet

the tree of life, documenting slow gradual changes, persists.

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

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

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

falsified evidence, due to its persuasive appeal even in the hallowed halls of science. Perhaps scientists are human after all, seduced by a fraud simply because it makes such a good case for a treasured theory.

The Peppered Moth

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

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

The peppered moth story became legendary as a classic example of Darwinian natural selection. But within 20 years of Kettlewell's work, cracks began to appear. It was soon noted that the characteristic switch from the peppered form to the dark form happened in areas where the lichens still grew on tree trunks. In other areas, the dark form began to decrease before the lichens began returning on trees. A similar pattern

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

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

Birds, Dinosaurs, Fruit Flies, and Human Evolution

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

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

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

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

because we don't have easy simple stories to tell, doesn't mean they aren't out there waiting to be discovered.

The Scientific Academia Reacts

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

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

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

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

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

Notes

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

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

The Coming Revolution in Science

The Design Inference



True scientific revolutions that impact more than a single discipline rarely occur more than once a century. Newton's *Principia*, published in the 17th century, truly qualifies. Darwin's *Origin of Species*, published in 1859, also belongs on the list. Standing in the wings, ready to join these esteemed works and perhaps even overturn the latter, stands William Dembski's *The Design Inference*.[\[1\]](#) This impressive work published by the distinguished Cambridge University Press outlines the mathematical principles necessary to distinguish intelligently caused events from natural events.

Just listen to some of the comments from the dust jacket of the book from secular philosophers and mathematicians. One wrote, "Dembski has written a sparkingly original book. Not since David Hume's *Dialogues Concerning Natural Religion* has someone taken such a close look at the design argument." Being put in the same sentence as David Hume is no small potatoes. Mathematician David Berlinski warns, "Those who agree with its point of view will read it with pleasure, and those who do not will ignore it at their peril."

Dembski has rigorously detailed the key trademark of intelligent causes, what he calls *specified complexity*. The term *specified* refers to the notion that an event conforms to an independently given pattern. Complexity refers to an event of small probability. For instance, people win improbable lotteries all the time. The odds are usually in the millions to one. But when the number of tickets purchased is considered, nobody questions the legitimacy of *someone* holding the winning ticket. This would be an event of small probability without any specification. Somebody will win, but nobody can predict whom. But let's propose that the same person wins the same lottery three times in a row! Suddenly there is an independent pattern and we immediately become suspicious that more than just chance is involved. We now have an event of extremely small probability that also conforms to a pattern or is specified. The most likely cause for such an event is that someone has intelligently tampered with the lottery.

Dembski boldly suggests that these same principles can be applied to the question of the origin of life and other evolutionary questions and still maintain the integrity of science. While Dembski has been sharply criticized by the evolutionary establishment, to their discredit, their critiques have been largely emotional and dismissive. No one has successfully challenged the heart of his thesis.

Now before you decide to run out and get a copy, please be advised that this book is not for the casual reader. Loaded with technical jargon and symbolic logic, you had better have eaten your mental Wheaties before tackling this one. But Dembski has written a scaled down version, which I will now discuss.

Hasn't Science and Philosophy Ruled Out

Design?

☒ William Dembski's groundbreaking book, *The Design Inference* from Cambridge University Press, is highly technical. Dembski has therefore written a follow-up book titled, *Intelligent Design: The Bridge between Science and Theology*,[{2}](#) which is more accessible to the general reader. *Christianity Today* has named it their 1999 Book of the Year in the "Christianity and Culture" category.

Listen to a few sound bites from comments of those recommending Dembski's *Intelligent Design*. A quantum chemistry professor from the University of Georgia says, "William Dembski is perhaps the very brightest of a new generation of scholars." A professor of philosophy from the University of Texas says, "William Dembski is the Isaac Newton of information theory." Another university professor proclaims "If Dembski is right, and I believe he is, then it is unscientific to deny the existence of God." Wow! Unscientific to deny God! Do you think that comment is rankling a good number of evolutionary biologists? Finally, another University of Texas professor of government goes further by claiming that "Dembski strengthens the case for saying that our deepest moral inclinations not only look designed, they are."

Let me now begin to satiate your curiosity by telling you a little more about this groundbreaking work. The book is divided into three parts. In the first part Dembski gives a historical backdrop to the current controversy over design. In academia, the design argument has been considered dead for over 150 years. Dembski identifies two major reasons for this demise of design. The first was the continual attack on miracles, which culminated in the 18th and 19th century. Dembski cogently explains that their arguments don't work.

The second blow to design came from Darwin's *Origin of Species*. Darwin dismissed the prevalent British natural theology of his day by not so much refuting it, but by

announcing that it simply wasn't scientific. Dembski quotes evolutionary philosopher David Hull, "He dismissed it not because it was an incorrect scientific explanation, but because it was not a proper scientific explanation at all." Darwin's faulty conception of science is still with us and Dembski sets out to refute it.

The criteria used by the British natural theologians were naive in the sense that they believed that design was self-evident. This led to far too many false positives, that is, assignments of design that were later proved to be naturalistic. The design argument was forced to retreat. In the second part of *Intelligent Design*, Dembski articulates the principles laid out in his *The Design Inference* for the general reader.

What Does a Theory of Design Look Like?

Having told you about Dembski's work and the impact it is beginning to have, I will summarize Dembski's prescription or cure for the rule of naturalism in science.[{3}](#)

No one in the design movement as far as I know seeks to invoke God at every turn as an explanation for natural phenomena. So why bring God into the picture at all? For most scientists, God is only a hypothesis, and an unnecessary one at that. But beyond the ordinary operation of nature is its order. Dembski references Einstein's remark that the most incomprehensible thing about the universe is that it is comprehensible. This order must come from outside the universe or from within. But science tells us today that the only allowable answer is that it comes from within. This naturalistic philosophy has become a form of idolatry. Nature becomes the do all and end all. As Dembski says, "Rather it is a matter of investing the world with a significance it does not deserve."[{4}](#)

Naturalism is pervasive in the culture. Even most Christians think and live naturalistically without realizing it. So how

can naturalism be defeated? What is needed, says Dembski, is a means of detecting God's actions in the natural world. In other words there must be a reliable way to distinguish natural causes from intelligent causes. Some sciences already employ such methods such as forensic medicine, cryptography, archeology, and even the SETI program, the search for extraterrestrial intelligence. SETI depends on the ability to distinguish an intelligent message from space from the surrounding radio noise. This can be done without necessarily understanding the message or knowing the message sender.

This brings up another crucial point of intelligent design. Dembski says that intelligent design is theologically minimalist.[{5}](#) By this he means that intelligent design empirically detects design without speculating about the nature of the intelligence. This is crucial to answer the critics who accuse design theorists of simply wanting to bring the Bible into science. If one detects design or concludes that a particular natural phenomena contains the necessary earmarks of design, that's all that needs to be said. One can personally reflect on the nature of this intelligence, but it is not a part of the scientific test.

Dembski calls for a new generation of scholars open to pursuing intelligent causes in the universe. Here at Probe we're committed to helping find, select, and train such potential scholars to take part in a true scientific revolution.

Does Intelligent Design Offer a Bridge between Science and Theology?

In this review and summarization of Dembski's insights let's now explore the future Dembski foresees for the dialogue between science and theology.[{6}](#)

Of course most within the scientific community see no future at all for such a discourse. Most within modern academia hold

to either of three models that Dembski labels as conflicting, complementing, or compartmentalizing. Most of us are very familiar with the conflict model. Most who call themselves rationalists or secular humanists would subscribe to this view. Basically they see science as having explained all of reality and that there is no room for theology at all. I once attended a conference where a theology professor was so intimidated by this view that he said that theology was a dead discipline and would cease to exist in twenty years.

Stephen J. Gould, a Harvard paleontologist, and the National Academy of Sciences have advocated the compartmentalization view. Basically they maintain that science and theology inform different parts of reality—science the realm of facts and theology the realm of morals and faith. There is no conflict and also no dialogue between the two. It is also not hard to see that this view basically rules theology out of any important discussions about real facts. Theology inhabits only the fuzzy world of morals, which must be relative if naturalism rules in science.

Similar is the complementarity view, which essentially states that science and theology can actually inform the same reality, but their language is so foreign to the other that no meaningful discourse can take place. Both are necessary to give a complete account of reality, but you can forget about the two ever talking to each other.

In one way or another, each of these three views will eventually rule theology as irrelevant to the important questions and a fully naturalistic science will eventually be the wellspring for all useful information and discourse. But as you might expect, Dembski offers a fourth view and argues that it is the only proper view of the two disciplines.

Dembski compares science and theology to two different windows that view the same reality. Since the windows are different, they gain a different perspective. But since they are viewing

the same reality, what is seen from each window can in many cases be meaningfully related. Both science and theology may on occasion, be capable of further explaining observations from each window. He offers the current discussion concerning the cosmology's Big Bang and theology's act of Creation as an example. If the Big Bang is true, then Christianity's theology of creation *ex nihilo* is a better explanation than naturalism's attempt to explain something from nothing.

There is much more work to be done here as Dembski readily admits, but the tone and direction is very refreshing.

What Are the Standard Objections to Design in Science?

There is the potential of the intelligent design movement bringing about a revolution in science. I have summarized the work of William Dembski, a double Ph.D. in philosophy and mathematics with a Master's of Divinity thrown in for good measure. In the appendix of his much acclaimed book, *Intelligent Design: The Bridge between Science and Theology*, Dembski investigates several of the more common objections to intelligent design. To conclude this review I will examine one of these objections.

Dembski states the first objection this way, "Design substitutes extraordinary explanations where ordinary explanations will do and thereby commits a god-of-the-gaps fallacy." Those believing that God used evolution as His means of creation usually voice this objection. This view is motivated by the tremendous history of naturalistic science in explaining very difficult natural phenomena by natural means. This often occurs after someone has claimed that God was necessary to explain a particular observation. Isaac Newton thought divine intervention was necessary to explain the irregularities of planetary orbits. It was eventually shown that these irregularities were periodic and not random and

thus explainable by natural law.{7}

Newton was widely criticized for this view, and many Christians fear that appealing to design now will end up in ridicule later when natural processes may also explain contrivances of intelligent design later. While this fear is understandable in the light of history, there are considerable differences. Design does not claim to simply explain what we do not understand. Rather, intelligent design is attempting to demonstrate a real solution to problems based on what we know about design, not what we don't know about natural explanations.

Besides, if we believe that the laws of nature are incapable of producing certain natural phenomena, such as the genetic code of DNA, just how long are we supposed to keep looking for a naturalistic solution instead of looking elsewhere? This puts shackles on scientific inquiry and stifles new ideas. Certainly we should attempt to exhaust all known naturalistic possibilities before pursuing a design answer. But fear of failure should not be our deterrent. There is always risk in proposing new scientific ideas and hypotheses. The risk is that you just might be wrong. But this has never permanently hindered the proposal of a new idea. Failure should be a constant risk in science. Otherwise nothing new will ever be discovered.

"Not all gaps are created equal. To assume that they are is to presuppose the very thing that is in question, namely, naturalism."{8} William Dembski has issued a strong challenge through his books and more are to follow from others dealing with the philosophy and science of intelligent design. The next several years should be very exciting indeed.

Notes

1. William A. Dembski, *The Design Inference: Eliminating Chance by through Small Probabilities* (Cambridge, England:

Cambridge University Press, 1998).

2. William A. Dembski, *Intelligent Design: The Bridge between Science and Theology* (Downers Grove, IL: InterVarsity Press, 1999).

3. Ibid., 97- 121.

4. Ibid., 101.

5. Ibid., 107.

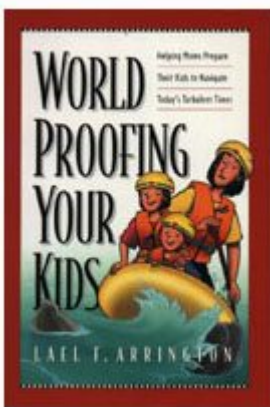
6. Ibid., 187- 210.

7. Nancy Pearcey and Charles Thaxton, *The Soul of Science: Christian Faith and Natural Philosophy*, Wheaton, IL: Crossway Books, 1994), 91-92.

8. Dembski, *Intelligent Design*, 245.

© 2000 Probe Ministries

Worldproofing Our Kids



Lael Arrington has written a truly wonderful and exceptionally helpful book, *Worldproofing Your*

Kids, [{1}](#) subtitled “Helping Moms Prepare Their Kids to Navigate Today’s Turbulent Times.” While she ostensibly wrote it for moms, any Christian parent who cares about helping his or her child develop a Christian worldview will enjoy it . . . and probably learn a thing or two (or three) in the process.

Lael has raised five questions that Christian parents would be wise to keep in mind, so we can relate them to what happens in our kids’ world and in the world at large. In teachable moments, we can help our kids to think through and then *own* their answers to these questions:

- 1. Who makes the rules?*
- 2. How do we know what is true?*
- 3. Where did we come from?*
- 4. What are we supposed to be doing here?*
- 5. Where are we going?*

The first question truly is foundational, not just to the other questions but to a basic Christian worldview: Who makes the rules?

Who Makes the Rules?

As a nation, we used to believe that God makes the rules, and through special revelation He told us what they are. But there has been a shift in the culture, and now there are a great many people who “do not believe that moral truth is universal and final. They do not believe in special revelation from God that lays down what is morally right and wrong for all people for all time. They believe that . . . ultimately, *man makes the rules*.” [{2}](#)

We need to talk with our children about the consequences of each answer. When man makes the rules, when “everyone does

what is right in his own eyes" (Judg. 21:25), there are dreadful consequences. Sometimes the strong and powerful lord it over the weak and defenseless. Sometimes, when man makes the rules, everything breaks down into chaos. In *Worldproofing Your Kids*, Lael Arrington provides some wonderful activities to help develop the elements of a Christian worldview. For example, she suggests we watch a video of *Alice in Wonderland* with our kids, and she provides some excellent discussion questions to bring out the consequences of what happens when anybody and everybody can make the rules.

The bottom line to communicate to our kids is that much of the pain and suffering in this life is the result of making our own rules and violating God's.

But when we agree that God has the right to make the rules, and we follow them, life works the way it was designed. That's because there are good reasons for the rules. We need to give our kids the "whys" behind God's commands. In his book *Right from Wrong*, [\[3\]](#) Josh McDowell explains that God's loving heart makes rules designed to do two things: *protect* and *provide* for us. Our kids need to talk with us about *why* God doesn't want us to have sex before marriage—because purity protects our hearts and bodies, and purity provides a better sexual relationship within marriage. We need to talk to our kids about *why* God tells us not to cheat and lie: because He is truth, and He knows that honesty and truth telling protects us from the pain of lies and provides for a peace filled life.

The goal is not just to teach our kids that God makes the rules, but to choose to submit to those rules because it's the right thing to do . . . and because it will make life work better.

How Do We Know What Is True?

Truth has taken a beating.

The Christian view of truth is a belief in truth that is true for all people at all times: absolute truth. The western world used to believe that all truth was God's truth. After the Renaissance and the Enlightenment, which produced the byword "Man is the measure of all things," truth became secular. People believed that there is a body of real truth "out there" that can be discovered through our reason. God was no longer a part of it.

Now we've moved to the postmodern view of truth. There is no such thing as "true truth," nothing that is true for all people at all times. Truth is now what I make it. Truth is whatever works for me. I create truth based on my feelings and experience.

So when we say things like "The only way to heaven is by trusting Jesus Christ," we get responses like, "You narrow minded bigot!" and "That may be true for you, but it's not true for me." And the classic postmodern response to just about anything: "Whatever!"

How do we help our kids know what is true?

First, we start with the foundational truth of our lives: God's Word. Remember, it's not just a body of truth, it is *alive* and *active* (Heb. 4:12). We teach them the Bible's strongest truth claims: In the beginning, God created the heavens and the earth (Gen. 1:1); people are infinitely valuable (Isa. 43:4); we have a sin problem and we need a savior (Rom. 3:22-24); Jesus claims to be God (Mark 14:62, among others [\[4\]](#)). Our kids need to know the truth before they can spot a lie.

Second, we teach them not to be afraid of criticism from those who do not believe in truth. Those who trumpet a postmodern worldview don't live by it, because it doesn't match the real world we live in. People who sneer at Christians for insisting that there is such a thing as absolute truth still stop at red

lights, and they expect everybody else to do the same. They may say they decide what is true for them, but they don't try to pay for their groceries with a one-dollar bill and insist that, for them, it's worth a hundred dollars.

Third, we can strengthen our kids' confidence in the truth by teaching them logic. Begin with the simplest rule of logic: A does not equal non-A. Two opposite ideas cannot both be true. One can be true, they can both be false, but they can't both be true. Teach them to recognize red herrings, ad hominem arguments, and begging the question. Get Philip Johnson's terrific book, *Defeating Darwinism by Opening Minds*,[\[5\]](#) which has a great chapter called ["Tuning Up Your Baloney Detector."](#) He covers several false arguments.

Make it a game: "Spot the lie." Help them identify songs, movies, TV shows, advertisements, and articles that contain errors in logic or which go against biblical truth. Encourage them to recognize when people make up private meaning for words. Postmodern people who believe they can create their own truth say things like "Well, that depends on what the meaning of the word *is* is."

Truth matters to God, because He is truth. We need to teach our kids that it should matter to us as well.

Where Did We Come From?

I especially appreciated the way Arrington explained the importance of addressing the worldview question, "Where did we come from?" and the closely related question, "Who are we?" She points out that the way we answer these questions will also determine how we deal with the issues of animal rights, abortion, infanticide, and euthanasia.

The "Where did we come from?" question isn't about sex and the stork; it's about creation and evolution. There are really only two basic answers. Either God made us, or we are an

accident of the universe, the unplanned product of matter plus chance plus time.

If God made us, then we are infinitely valuable and intrinsically significant because God personally called each of us into existence. And not only are we valuable and loved, but every other human on the planet is equally valuable and loved. If evolution is true—defining evolution as the mindless, impersonal chance process that produces the stuff of the universe—then there is no point to our existence. We have no value because there is no value giver. Honest evolutionists recognize this: Cornell professor William Provine has said, “If evolution is true then there is no such thing as life after death, there is no ultimate foundation for ethics, no ultimate meaning for life; there is no free will.”[\[6\]](#)

We come hard wired from the factory with a longing for transcendence, desperately wanting to be a part of a larger story where we are beloved and pursued. We long to know that there is meaning to the world and to our lives. We come equipped with an innate sense of fairness and justice, concepts that have no meaning in a world without a God who is absolutely just and moral.

As parents, we need to tap into these basic longings to teach our children that only the creation story adequately explains our legitimate thirst for relationship and for significance, for fairness and for transcendence. Then we can explain how the creation story (and I define story as “the way things happened,” not “wishful thinking”) also helps us understand other issues. We can teach our kids that it is not murder to use the flesh of animals for food and the skin of animals for clothing because animals are not like humans; only human beings are made in the image of God. We need to be good stewards of the animals that God made, but not elevate them to the same level as mankind—or devalue man to the level of animals.

With an understanding that the creation story makes human life sacred and holy, we can teach our kids why it is wrong to kill babies before they are born (abortion), and after they are born (infanticide). We can teach them why it is equally wrong to kill the sick and the infirm when it is inconvenient for us (euthanasia).

Lael writes, "The common thread between evolution, abortion, infanticide, and euthanasia is the devaluing of human life and the way our culture has responded with options for disposal." [\[7\]](#)

What Are We Supposed to be Doing Here?

This section of Lael Arrington's book is called "Work, Leisure, and the Richer Life: I'm tired of paddling! Are we there yet? I'm bored!"

If we were to get an honest answer to the questions, "What are you supposed to be doing here? What's your purpose in life?," many high school and college students would probably say, "To have as good a time as possible." Our culture has raised the expectation that everything is supposed to be fun and entertaining. When my mother managed the layaway department of a Wal-Mart a few years ago, she said it was frustrating to deal with the young employees. They came in feeling entitled to a paycheck but didn't want to work for it. Work wasn't "fun."

One of the greatest gifts we as parents can give our children is to cast a vision for their part in the larger story of life, one that involves a planning and purpose for their life, a calling from God to play their specially designed part. Our innate longing for transcendence means that we need to teach our children that they are a specially chosen part of the cosmic story of creation, fall, and redemption.

First, we need to teach by word and example that work has

dignity and value. Work isn't part of the curse; it is part of God's perfect design for us. God gave Adam and Eve the responsibility of stewarding the garden before the Fall (Gen. 2). Part of our purpose in life is to be a difference maker, and work is part of how we do that. Whether one's work is to be a student, a fast food counter person, a house cleaner, a computer programmer, a mechanic, an administrator, or the really super important roles of mother or father, we are called to make a difference in the world and in God's kingdom.

Second, we can be a cheerleader for our children's God given gifts and talents. We need to be students of our children so that we can understand and appreciate the unique package that God put together. It helps to explore the various personality styles to help our kids grow in understanding of themselves and others. John Trent has written a book for children using animal motifs called *The Treasure Tree*.[\[8\]](#) Tim LaHaye[\[9\]](#) and Ken Voges[\[10\]](#) have explored the temperaments in slightly different ways, but they're both very helpful.

As we discern how our children are gifted with natural talents and abilities, we need to acknowledge those gifts and encourage our kids to develop them. If our children have trusted Christ as Savior, they have received a whole new set of spiritual gifts for us to be on the alert for. Of course, we need to have a working knowledge of the gifts and learn how to spot them. God gives personality gifts, talent and ability gifts, and spiritual gifts to equip our children for whatever He has planned for their lives. What a privilege we have as parents to help them discover that they are called to a special place of service with a special set of equipment to do whatever it is God has called them to!

Where Are We Going?

The last part of the book *Worldproofing Your Kids* deals with citizenship—especially our heavenly citizenship. Another way

to inspire confidence that the Christian worldview is true is to celebrate the fact that the best part of life is still ahead.

If we want our kids to recognize the larger, cosmic story of creation, fall, and redemption, then we need to point them continually to their future (Lord willing) in heaven, where we will finally experience real life, real riches, and real intimacy with God. We need to remind them that their choices on earth, for good and for bad, are determining their future in heaven. This is an important part of our roles as parents, of course—to teach them the wisdom that comes from considering both the long term and short term consequences of their choices.

Lael Arrington urges us to take our children to biblical passages and good books that give them a glimpse of where we are going. Help them catch the vision of what C. S. Lewis was describing:

“We are half-hearted creatures, fooling around with drink and sex and ambition when infinite joy is offered us, like an ignorant child who wants to go on making mud pies in a slum because he cannot imagine what is meant by the offer of a holiday at the sea.”[{11}](#)

And speaking of C. S. Lewis, please do yourself and your children the favor of reading *The Chronicles of Narnia*, which is a series of books for children of all ages which will capture their hearts for the world to come and make them fall in love with the Lord Jesus.

Lael writes, “Perhaps we are now qualifying for what degree of power and authority we will be granted when we reign with Christ. The New Testament assures us that those who endure, those who serve now, will reign later (2 Tim. 2:12, Rev. 5:10, 22:5). We can challenge our [children], ‘Are we making daily decisions to serve, to develop our gifts and talents so we

will be best prepared to reign with Christ?'"[\[12\]](#)

I love the story of the godly old woman who knew she was about to die. When discussing her funeral plans with her pastor she told him she wanted to be buried with her Bible in one hand and a fork in the other.

She explained, "At those really nice get-togethers, when the meal was almost finished, a server or maybe the hostess would come by to collect the dirty dishes. I can hear the words now. Sometimes, at the best ones, somebody would lean over my shoulder and whisper, 'You can keep your fork.' And do you know what that meant? Dessert was coming!

"It didn't mean a cup of Jell-O or pudding or even a dish of ice cream. You don't need a fork for that. It meant the good stuff, like chocolate cake or cherry pie! When they told me I could keep my fork, I knew the best was yet to come!

"That's exactly what I want people to talk about at my funeral. Oh, they can talk about all the good times we had together. That would be nice.

"But when they walk by my casket and look at my pretty blue dress, I want them to turn to one another and say, 'Why the fork?'

"That's what I want you to say. I want you to tell them that I kept my fork because the best is yet to come."[\[13\]](#)

The author gratefully acknowledges the generous assistance of Lael Arrington in the preparation of this article.

Notes

1. Lael Arrington, *Worldproofing Your Kids* (Wheaton, IL: Crossway Books, 1997).
2. Ibid, 42.
3. Josh McDowell and Bob Hostetler, *Right From Wrong* (Nashville, TN: Word Books, 1994).

4. See also the Probe article ["Jesus' Claims to be God"](http://www.probe.org) on the Probe Web site (www.probe.org).
5. Phillip E. Johnson, *Defeating Darwinism by Opening Minds* (Downers Grove, IL: InterVarsity Press, 1997).
6. William Provine and Philip Johnson, "Darwinism: Science or Naturalistic Philosophy?" (videotape of debate held at Stanford University, April 30, 1994). Available from Access Research Network (www.arn.org).
7. Arrington, 179.
8. John Trent, *The Treasure Tree*, rev. ed. (Nashville, TN: Word Publishing, 1998).
9. Tim LaHaye, *The Spirit-Controlled Temperament* (Wheaton, IL: Tyndale House, 1993).
10. Ken Voges and Ron Braund (contributor), *Understanding How Others Misunderstand You* (Chicago: Moody Press, 1995).
11. C. S. Lewis, *A Weight of Glory* (New York, Macmillan Co., 1949), 1-2.
12. Lael Arrington, personal correspondence with the author, February 26, 2000.
13. Jack Canfield, ed., *A 3rd Serving of Chicken Soup for the Soul* (Edison, NJ: Health Communications, Inc., 1996).

© 2000 Probe Ministries.

Mere Creation: Science, Faith and Intelligent Design

An unprecedented intellectual event occurred in Los Angeles on November 14-17, 1996. Under sponsorship of Christian Leadership Ministries, Biola University hosted a major research conference bringing together scientists and scholars who reject naturalism as an adequate framework for doing

science and who seek a common vision of creation united under the rubric of intelligent design. The two hundred participants, primarily academics, formed a nonhomogeneous group. Most had never met each other. Yet virtually all the participants questioned the reigning paradigm of biology—namely, that natural selection and mutation can account for the origin and diversity of all living things.[\[1\]](#)

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

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

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

Since 1983, homeotic genes have been the rage in evolutionary developmental biology. First discovered in fruit flies, these genes appear to act as switches to turn on a series of genes important for sequential levels of development. Of interest to evolutionists, is the fact that many of the same genes found

in fruit flies are also found in almost every other animal group, all acting as developmental switches. They are even frequently found on the same chromosome and in the same order from species to species. Such evidence seems quite a compelling argument for all life forms evolving from a common ancestor.

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

Wells concludes that, "A design paradigm can nurture the sort of formal and teleological thinking that will enable biologists to discover the laws of development that have so far eluded them." [\[5\]](#) The reason for the elusion is the shackles of Darwinism.

Redesigning Science

In taking a close look at the book, *Mere Creation*, edited by Bill Dembski, I would like to explore Dembski's own contribution to the volume, "Redesigning Science." [\[6\]](#) If the name Bill Dembski is unfamiliar to you, it won't be for long. Dembski is an extremely bright and articulate young man with earned doctorates in mathematics from the University of Chicago and philosophy from the University of Illinois at

Chicago along with an M. Div. from Princeton Theological Seminary. Dembski is also the author of perhaps the most significant book to date in the intelligent design movement, *The Design Inference: Eliminating Chance through Small Probabilities*[\[7\]](#), from the prestigious Cambridge University Press.

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

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

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

In trying to classify an event as either due to natural law, chance, or design, we first try to assess if it is an event of

high probability and therefore due to some recognizable natural law. A bullet firing when a gun's trigger is pulled or getting at least one head when a fair coin is tossed a hundred times are both high probability events due to natural law.

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

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

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

The Explanatory Power of Design

One of the critical questions for intelligent design is its ability to explain at least some natural phenomena more completely than naturalistic science. Stephen Meyer addresses this problem in his chapter, "The Explanatory Power of Design."[\[10\]](#) Steve Meyer is professor of philosophy at Whitworth College in Spokane, Washington, with a Ph.D. in the history of and philosophy of science from Cambridge University, England. As an example of design's explanatory

power, Meyer chooses to explore the origin of information within living systems, specifically the origin of the genetic code. Meyer brings a scholarly appraisal to the subject since his Ph.D. dissertation concerned the history and status of origin of life research.

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

Beyond the purely biochemical difficulties of origin of life research looms the immense problem of accounting for the origin of complex specified information contained in biomolecules, and specifically in DNA and the genetic code. In the computer age we are often amazed at the speed and storage capacity of modern personal computers, particularly the laptop variety with their 12 gig hard drives and 500 MHz speeds. We seldom realize, however, that “the information storage density of DNA, thanks largely to nucleosome spooling, is several trillion times that of the most advanced computer chips.”[{13}](#) So not only is there real information stored in DNA, but it is stored at a density on a molecular level, we can’t even approach with our best computers. So just where did this information come from?

Attempts to account for the origin of biological information by natural biochemical means have utterly failed. The odds of achieving even a small 100 amino acid protein are less than 1

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

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

Applying Design within Biology

Have you ever wondered how a baby is formed from a single cell in just nine months? You could ask the same question of just about any animal from wasps to caterpillars to frogs to clams. A fully functioning organism is a symphony of integrated parts performing in coordinated fashion to make beautiful music. But where did all the orchestra members (or proteins) come from? And who told them where to sit? And how do they know when and what to play? And what about tempo and volume and on and on? Well, you get the picture. Biological organisms are immensely complex, but they all start out as single cells. Somehow they turn into assemblages of different cells and tissues that all know their places and roles. Embryological development has long been a mystery and its secrets are only slowly being revealed. It has also turned into a potentially fruitful

battleground between evolution and intelligent design.

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

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

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

While the diversity of pathways to similar ends in development is a problem for evolutionary developmental biology, it is an

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

Basic Types of Life

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

But since intelligent design is calling into question many evidences and predictions of naturalistic evolution, it is reasonable to assume that all animals are not related back in time through a common ancestor. Perhaps all birds did not evolve from a single source. Maybe there are many different ancestors for the many groups of birds and other animals. Well, how would you know? How could you recognize groups of

animals that do derive from a common ancestor and those that have arisen independently? Siegfried Scherer makes an attempt in his chapter titled, "Basic Types of Life." {18}

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

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

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

combination of the third species was hidden between the two species used to form the hybrid.[\[22\]](#)

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

Notes

1. Henry F. Schaefer III, "Foreword," in *Mere Creation: Science, Faith and Intelligent Design*, William A. Dembski, Ed. (Downers Grove, Ill.: InterVarsity Press, 1998), 9.
2. Ibid., 475.
3. Ibid., 51-70.
4. Ibid., 56.
5. Ibid., 68.
6. Ibid., 93-112.
7. William A. Dembski, *The Design Inference: Eliminating Chance through Small Probabilities* (Cambridge: Cambridge University Press, 1998), 243.
8. Dembski, *Mere Creation*, 93.
9. Ibid., 94.
10. Ibid., p. 113-147.
11. Charles Thaxton, Walter Bradley and Roger Olsen, *The Mystery of Life's Origin: Reassessing Current Theories*

(Dallas: Lewis and Stanley, 1984), 228.

12. *Mere Creation*, 118-119.

13. *Ibid.*, 120.

14. *Ibid.*, 136-137.

15. *Mere Creation*, 148-174.

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

17. *Ibid.*

18. *Ibid.*, 195-211.

19. Scherer does at least mention a competing idea, baramin, initially proposed by creationist Frank Marsh (*Fundamental Biology*, 1940, Lincoln Neb., n.p., *Variation and Fixity in Nature*, Mountain View, Calif.: Pacific Press) and further explicated by Kurt Wise (K. Wise, Baraminology: "A Young Earth Creation Biosystematic Method, in *Proceedings of the Second International Conference on Creationism*, R.E. Walsh and C.L. Brooks, eds. (Creation Science Fellowship, Pittsburgh, PA, 1990, Vol. 2, 345-360 and K. Wise, "Practical Baraminology," *Creation Ex Nihilo Technical Journal*, 1991, 6(2): 122-137). Scherer chooses not to mention another attempt in fleshing out this concept, the prototype, proposed by Lane P. Lester and Raymond G. Bohlin in *The Natural Limits to Biological Change* (Dallas: Probe Books, 1984), 161-172.

20. *Mere Creation*, 197-199.

21. *Ibid.*, 200.

22. *Ibid.*, 203-204.

Why Does the University Fear Phillip Johnson?

Who Is Phillip Johnson?

Best-selling author Phillip Johnson has become the leader of the Intelligent Design movement. His books *Darwin on Trial*, *Reason in the Balance*, *Defeating Darwinism by Opening Minds* and the recently released *Objections Sustained* have become rallying points for Christian scholars across the academic spectrum. Johnson has addressed university audiences around the country, sometimes on his own, often in debate with a leading proponent of evolution. He has even addressed in private session entire science, law, and philosophy departments at top universities. Well, just who is Phillip Johnson and how does he rate such attention?

Johnson was raised in a nominally Christian family, but he grew to become a convinced skeptic of the faith. This process was greatly aided by his education, first as an undergraduate at Harvard and then at the University of Chicago Law School where he graduated first in his class. Johnson became convinced that people were basically good, education would solve whatever problems you had, the stuff of Sunday school was okay but mythology, and he could achieve success by thinking for himself and absorbing the culture around him.

This is the enticing picture the academic community paints for students and Johnson bought it. But things began to unravel in his mid-thirties. He had achieved his goals. He served as law clerk for Supreme Court Chief Justice Earl Warren and held a distinguished professorship of law at UC Berkeley, but he lacked fulfillment. He was publishing papers nobody read, or

ought to read. His marriage to a beauty queen fell apart and he was single parenting for awhile. The writings of C. S. Lewis had impacted him greatly, but he thought, "Too bad we can't believe in that anymore." Eventually he heard the gospel preached in a way that seemed plausible and attractive. Johnson envied the speaker's combination of commitment and fulfillment. "Do I have something so wonderful?" he questioned. Johnson said, "They believed it, I could too."

Johnson put his faith in Christ, but faced a dilemma. If the gospel is true, why are all the "intelligent" people agnostic? He prayed for insight. Beginning with a sabbatical at University College in London in 1987-88, Johnson embarked on an intellectual journey. This journey has developed into a project that has seen him publish four books, deliver hundreds of lectures on college campuses, and become the leader of the fledgling Intelligent Design movement over the last ten years. Primarily through his study of evolution, Johnson learned that the academic community's primary intellectual commitment is to the philosophy of naturalism. If the "facts" contradict materialistic conclusions, then the "facts" are either explained away, ignored, or just plain wrong.

Therefore, evolutionists like Richard Dawkins can say things like "Biology is the study of complicated things that give the appearance of having been designed for a purpose," and actually say it with a straight face. The appearance of design is an illusion, you see, because we "know" that organisms evolved and the primary reason we "know" this is because naturalistic philosophy demands it.

Johnson's primary task seems to be continually provoking the scientific community into facing the reality of its naturalistic presuppositions. In earlier years, the scientific establishment was able to dismiss creationists and not officially respond. But when a tenured law professor from Berkeley starts messing with your head, people start answering back. The National Academy of Sciences has issued two

publications in the last two years trying to stem the tide.[\[1\]](#)
The cracks in Darwinian evolution are beginning to show.

What Could a Law Professor Say About Evolution?

What could a legal scholar possibly have to say about evolution? Many in the academic community have raised the same question as Phillip Johnson has visited their university. In his own words Johnson states: "I approach the creation-evolution dispute not as a scientist but as a professor of law, which means among other things that I know something about the ways that words are used in arguments."[\[2\]](#)

Specifically what Johnson noticed was that both the rules of debate about the issue as well as the word *evolution* itself were defined in such a way as to rule out objections from the start. Science is only about discovering naturalistic causes of phenomena, therefore arguing against the sufficiency of natural causes is not science! Also the "fact of evolution" is determined not by the usual definition of fact such as collected data or something like space travel which has been done, but as something arrived by majority vote! Steven J. Gould said, "In science, fact can only mean 'confirmed to such a degree that it would be perverse to withhold provisional assent.'" [\[3\]](#)

In the early chapters of *Darwin on Trial*, Johnson does an excellent job of summarizing the evidence that has been around for decades calling Darwinian evolution into question. These include problems with the mechanism of mutation and natural selection, problems with finding transitional fossils between major groups when they should be numerous, problems with the molecular evidence for common descent, and severe problems with any scenario for the origin of life.

In a chapter titled "The Rules of Science" Johnson excels in illuminating the clever web evolutionists have drawn to

insulate evolution from criticism.[{4}](#) In order to limit discussion to naturalistic causes, science is defined in purely naturalistic terms. In the Arkansas creation law decision, Judge Overton said science was defined as being guided and explained by natural law, testable, tentative, and falsifiable. Overton got this from the so-called expert testimony of scientists collected for the trial by the ACLU. These criteria were used against creation on the one hand to say that a creator is not falsifiable, and also that the tenets of creation science were demonstrably false. How can something be non-falsifiable and false at the same time?

The conflict enters in when one realizes that creation by Darwinist evolution is as un-observable as creation by a supernatural creator. No one has ever observed any lineage changing into another and the few fossil transitions that exist are fragmentary and disputable. "As an explanation for modifications in populations, Darwinism is an empirical doctrine. As an explanation for how complex organisms came into existence in the first place, it is pure philosophy."[{5}](#)

In a chapter titled "Darwinist Religion" Johnson points out that despite the claims of scientists that evolution is secular, it is loaded with religious and philosophical implications. Most definitions of evolution emphasize its lack of purpose or goal. This makes evolution decidedly non-purposive in contrast to a theistic, purposive interpretation of nature. If it is the philosophic opposite of theism, evolution must be religious itself. Darwin himself constantly argued the superiority of descent with modification over creation. If scientific arguments can be made against theism, why can't scientific arguments be made for theism?

Darwin on Trial continues to sell, to be read, and to influence those open to consider the evidence. Since Johnson is not a scientist his book is highly readable to the educated layman. If you have never picked it up, you owe it to yourself to read what has become a classic in the creation/evolution

controversy.

Johnson Extends His Case against Evolution into Law and Education.

Over the years of speaking on the creation/evolution issue I have been asked many times why people get so upset over this issue. If it is just a question of scientific accuracy, why does it produce such emotional extremes? The answer, of course, is that the creation/evolution debate involves much more than science. At question is which worldview should hold sway in making public decisions.

In Phil Johnson's second book, *Reason in the Balance*, he makes this very point when he says, "What has really happened is that a new established religious philosophy has replaced the old one. Like the old philosophy, the new one is tolerant only up to a point, specifically, the point where its own right to rule the public square is threatened." [\[6\]](#)

The old philosophy Johnson speaks of is the theistic or Judeo-Christian worldview and the new philosophy is the materialist or naturalistic worldview. Johnson has referred to *Reason in the Balance* as his most significant and important work. That is because it is here that he lays the all important philosophical groundwork for the scientific, legal, and educational battleground of which the creation/evolution controversy is only a part.

That we no longer live in a country dominated by Judeo-Christian principles should be inherently obvious to most. But what many have missed is the concerted effort by the intellectual, naturalistic community to eliminate any possibility of debate of the worthiness of their position. On page 45 Johnson says,

"Modernist discourse accordingly incorporates semantic devices—such as the labeling of theism as religion and

naturalism as science—that work to prevent a dangerous debate over fundamental assumptions from breaking out in the open. As the preceding chapter showed, however, these devices become transparent under the close inspection that an open debate tends to encourage. The best defense for modernist naturalism is to make sure the debate does not occur.”{7}

Johnson is quick to point out that there is not some giant conspiracy, but simply a way of thinking that dominates the culture, even the thinking of many Christians.

Therefore, in the realm of science when considering the important question of the existence of a human mind, only the biochemical workings of the brain can be considered. Not because an immaterial reality has been disproved, but because it is outside the realm of materialistic science and therefore not worth discussing. Allowing the discussion in the first place lays bare a discussion of fundamental assumptions, the very thing that is to be avoided.

In education, “The goal is to produce self-defining adults who choose their own values and lifestyles from among a host of alternatives, rather than obedient children who follow a particular course laid down for them by their elders.”{8} The reason, of course, is if God is outside the scientific discussion of origins, then how we should live must also exclude any absolute code of ethics. This also precludes the underlying assumptions from being discussed.

In law, naturalism has become the established constitutional philosophy. Rather than freedom *of* religion, the courts are moving to a freedom *from* religion. The major justification is that “religion” is irrational when it enters the domain of science or a violation of the first amendment in public education. “Under current conditions, excluding theistic opinions means giving a monopoly to naturalistic opinions on subjects like whether humans are created by God and whether

sexual intercourse should be reserved for marriage.”[\[9\]](#) What then are the strategies for breaking the monopoly?

Can Darwinism Be Defeated?

The main thing Christian parents and teachers can do is to teach young thinkers to understand the techniques of good thinking and help them tune up their baloney detectors so they aren't fooled by the stock answers the authorities give to the tough questions.[\[10\]](#)

So says Phillip Johnson in his recent book, *Defeating Darwinism*. (For a fuller review see Rick Wade's article, [Defeating Darwinism: Phil Johnson Steals the Microphone.](#)) Johnson is at his best here, relaying the many semantic and argumentative tricks used to cover up the inadequacies of Darwinism. In the chapter "Tuning Up Your Baloney Detector," Johnson introduces the reader to examples of the use of selective evidence, appeals to authority, ad hominem arguments, straw man arguments, begging the question, and lack of testability. This chapter will give you a good grasp of logical reasoning and investigative procedure.

Johnson also explains the big picture of his strategy to weaken the stranglehold of Darwinism on the intellectual community. He calls it *the wedge*. Darwinism is compared to a log that seems impenetrable. Upon close investigation, a small crack is discovered. "The widening crack is the important but seldom recognized difference between the facts revealed by scientific investigation and the materialist philosophy that dominates the scientific culture."[\[11\]](#) In order to split the log, the crack needs to be widened. Inserting a triangular shaped wedge and driving the pointed end further into the log can do this. As the wedge is driven further into the log, the wider portions of the wedge begin widening the crack.

Johnson sees his own books as the pointed end of the wedge, finding the crack and exposing its weaknesses. Other books in

these initial efforts would certainly include the pioneering works of Henry Morris,[{12}](#) Duane Gish,[{13}](#) Charles Thaxton,[{14}](#) and even the agnostic Michael Denton.[{15}](#) Following close behind and fulfilling the role of further widening the crack are the works of J. P. Moreland,[{16}](#) Michael Behe,[{17}](#) and William Dembski.[{18}](#) What is needed now to widen the crack further and eventually split the log are larger numbers of theistic scientists, philosophers, and social scientists to fill in the ever widening portions of the wedge exposing the weaknesses of naturalistic assumptions across the spectrum of academic disciplines.

Here Johnson's strategy meshes nicely with Probe Ministries. Much of our energy is spent educating young people in a Christian worldview through Mind Games Conferences, the ProbeCenter in Austin, Texas, and our website (www.probe.org). We share with Johnson the joy of encouraging and opening doors for young people in the academic community. Johnson says,

"If you know a gifted young person, help him or her to see the vision. Those who are called to it won't need any further encouragement. Once they have seen their calling, you had better step out of the way because you won't be able to stop them even if you try."[{19}](#)

There is also an inherent risk in all this. Teaching young Christians to think critically and have the courage to join this exciting and meaningful cultural battle means they will also begin to examine their own faith critically. Some may even go through a period of doubt and deep questioning. While this may sound threatening, we shouldn't shy away. If Jesus truly is the way, the truth, and the light then any "truth" exposed to the light will endure. Our children will be stronger having put their faith to the test. The reward of possibly making a directional change in our downward spiraling culture is worth the risk.

Johnson Responds to the Intellectual Elite

One of the reasons that Phillip Johnson has become a leader in the Intelligent Design movement is the combined effect of his tenured position on the law faculty of the prestigious University of California at Berkeley and his deftness and sheer enjoyment in taking on the power brokers within the established halls of academia. Johnson has traveled extensively in the U.S. and abroad. He has also lectured and debated before university audiences and faculties. His knowledge of debate, concise prose, and his likeable demeanor allows him to bring the issues to the table skillfully. Many are able to think clearly about these issues for perhaps the first time.

Another avenue Johnson has pursued with great success has been to write articles and review books for some of the leading magazines and newspapers in the country. Johnson's fourth book, *Objections Sustained: Subversive Essays on Evolution, Law & Culture*, [\[20\]](#) is a collection of his essays since the publication of *Darwin on Trial* in 1991. While most of the essays in the book were originally published in either the journal *First Things* or the paper *Books and Culture*, Johnson's pen has also been found in the pages of *The Atlantic*, *The Wall Street Journal*, *The Washington Times*, *The New Criterion*, and many other national and local magazines and newspapers. He has openly challenged some of the leading spokesmen for naturalistic evolution such as Stephen J. Gould and Richard Lewontin of Harvard, Richard Dawkins of Oxford University, and Daniel Dennet from Tufts University.

The point of all this is to draw the Darwinists out into the open where the debate can be seen and heard by all who are interested. Previously, creation was routinely dismissed as religion, but Johnson is not so easily swept aside since he has been able to expose the house of cards behind the bluster

of Darwinism. The debate has crept more and more out in the open.

Two examples come to mind. First, the National Association of Biology Teachers (NABT) was caught with its hand in the cookie jar. In 1995, they released a statement about evolution describing it as, among other things, unsupervised and impersonal. Such theological/philosophical concepts should have no place in a “scientific” statement. A storm of controversy sparked both within and outside the teachers’ ranks culminated in a reconsideration of the statement by the NABT board. At first the board voted unanimously to uphold the statement, and then a few days later, voted to remove the offending words. The *New York Times* remarked that “This surprising change in creed for the nation’s biology teachers is only one of many signs that the proponents of creationism, long stereotyped as anti-intellectual Bible-thumpers, have new allies and the hope of new credibility.”[\[21\]](#)

Second, the prestigious National Academy of Sciences has published two official publications attacking creationism[\[22\]](#) and supporting the teaching of evolution.[\[23\]](#) Rather than taking its critics head-on, these two books timidly revert to old and tattered evidences and appeals to authority. For instance, the National Academy boldly asserts that “there is no debate within the scientific community over whether evolution occurred, and there is no evidence that evolution has not occurred.”[\[24\]](#)

Science and Creationism says on the one hand, “Scientists can never be sure that a given explanation is complete and final.”[\[25\]](#) But evolution cannot really be questioned because “Nothing in biology makes sense in biology except in the light of evolution.”[\[26\]](#) Such obfuscation is now officially in the open arena—precisely where Johnson has been trying to force it to appear. The next ten to fifteen years promise to be exciting. I hope you continue to read Phillip Johnson and observe the ever broadening wedge drive deeper into the chinks

of the Darwinian armor.

Notes

1. National Academy of Sciences, *Teaching About Evolution and the Nature of Science* (Washington, D. C.: National Academy Press, 1998), 140. Available online at <http://www.nap.edu/readingroom/books/creationism/>.

National Academy of Sciences, *Science and Creationism: A View from the National Academy of Sciences* (Washington D. C.: National Academy Press, 1999), 35. Available online at <http://www.nap.edu/readingroom/books/evolution98>.

2. Phillip Johnson, *Darwin On Trial* (Downers Grove, IL: InterVarsity Press, 1991), 8.

3. Stephen J. Gould, "Evolution as Fact and Theory" in *Hen's Teeth and Horse's Toes* (New York: W. W. Norton, 1983), 255.

4. Johnson, *Darwin on Trial*, 111-122.

5. Ibid., 115.

6. Phillip E. Johnson, *Reason in the Balance: The Case Against Naturalism in Science, Law and Education* (Downers Grove, IL: InterVarsity Press, 1995), 37.

7. Ibid., 45.

8. Ibid., 157.

9. Ibid., 29.

10. Phillip E. Johnson, *Defeating Darwinism by Opening Minds* (Downers Grove, IL: InterVarsity Press, 1997), 116.

11. Ibid., 92.

12. Henry Morris, *Scientific Creationism* (San Diego: Creation-Life Publishers, 1974).

13. Duane Gish, *Evolution: The Fossils Say No!* (San Diego: Creation-Life Publishers, 1972).
14. Charles B. Thaxton, Walter L. Bradley, and Roger L. Olsen, *The Mystery of Life's Origin* (New York: Philosophical Library, 1984).
15. Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler and Adler, 1986).
16. J. P. Moreland, ed., *The Creation Hypothesis: Scientific Evidence for an Intelligent Designer* (Downers Grove, IL: InterVarsity Press, 1994).
17. Michael Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: The Free Press, 1996).
18. William A. Dembski, *The Design Inference: Eliminating Chance through Small Probabilities* (New York: Cambridge University Press, 1998.) And, William A. Dembski, ed., *Mere Creation: Science, Faith and Intelligent Design* (Downers Grove, IL: InterVarsity Press, 1998).
19. Johnson, *Defeating Darwinism*, 96.
20. Johnson, *Objections Sustained: Subversive Essays on Evolution, Law & Culture* (Downers Grove, IL: InterVarsity Press, 1998).
21. Quoted in Johnson, *Objections Sustained*, p. 88.
22. *Science and Creationism*, see note 1.
23. *Teaching about Evolution and the Nature of Science*, see note 1.
24. Ibid., 4.
25. *Science and Creationism*, 1.
26. Ibid., ix.

Christian Views of Science and Earth History – A Balanced Perspective

Dr. Ray Bohlin and Rich Milne consider the three primary views held by Christians regarding the age of the earth and how the universe, life and man came to be: young earth creationism, progressive creationism, and theistic evolution. After considering the case for each one, they conclude with a call to work together for the cause of Christ.



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

Introduction of Three Views

How old is the earth? Did men live with dinosaurs? Are dinosaurs in the Bible? Where do cave men fit in the Bible? Did the flood cover the whole earth? How many animals were on Noah's Ark? What does the word *day* in Genesis chapter one mean?

These are all common and difficult [questions your children may have asked](#), or maybe they are questions you have. What may surprise you is that evangelical Christians respond with numerous answers to each question. In reality, answers to the preceding questions largely depend on the answer to the first one. How old is the earth?

The diversity of opinion regarding this question inevitably leads to controversy, controversy that is often heated and

remarkably lacking in grace and understanding. For those Christians who are practicing scientists, there is much at stake. Not only is one's view of Scripture on the firing line, but one's respect and job security in the scientific community is also at risk.

But we must say up front, that as important as this question is, it is of secondary importance to the quest of defeating Darwinism as currently presented to the culture. Educational leaders and evolutionary scientists are determined to present a fully naturalistic evolution as the only reasonable and scientific theory that can be discussed in the public education system. All Christians, whether old earth or young earth, should find common cause in dethroning philosophical naturalism as the reigning paradigm of education and science.

Returning to the age of the earth question, we would like to survey three general categories of response to this question that can be found among Christians today. For each of these three views, we will discuss their position on Genesis chapter one, since theological assumptions guide the process of discovering a scientific perspective. We will also discuss the basics of the scientific conclusions for each view. Finally, we will discuss the strengths of each view and what those holding the other two views think are the other's limitations.

The first view of science and earth history we will discuss is the recent or literal view. This position is often referred to as scientific creationism, creation science, or young earth creationism. Young earth creationists believe that the earth and the universe are only tens of thousands of years old and that Genesis gives us a straightforward account of God's creative activity.

The second position, progressive creationism or day-age creationism, holds that the earth and the universe are billions of years old. However, progressive creationists believe that God has created specifically and *ex nihilo* (out

of nothing), throughout the billions of years of earth history. They do not believe that the days of Genesis refer to twenty-four hour days, but to long, indefinite periods of time.

A view traditionally known as theistic evolution comprises the third position. Theistic evolutionists essentially believe that the earth and the universe are not only billions of years old, but that there was little, if any, intervention by God during this time. The universe and life have evolved by God-ordained processes in nature. Theistic evolutionists, or evolutionary creationists as many prefer to be called, believe that the first chapter of Genesis is not meant to be read historically, but theologically. It is meant to be a description of God as the perfect Creator and transcendent over the gods of the surrounding ancient Near Eastern cultures.

Before we consider each position in greater detail, it is important to realize two things. First, we will paint in broad strokes when describing these views. Each has many sub-categories under its umbrella. Second, we will describe them as objectively and positively as we can without revealing our own position. We will reveal our position at the conclusion of this article.

Recent or Literal Creation

Having introduced each position, we would like to review the theological and scientific foundations for the first one: recent or young earth creationism.

The young earth creationist firmly maintains that Genesis chapter one is a literal, historical document that briefly outlines God's creative activity during six literal twenty-four hour days. If one assumes that the genealogies of Genesis chapters five and eleven represent a reasonable pre-Israelite history of the world, then the date of creation cannot be much

beyond thirty thousand years ago.[{1}](#)

A critical theological conclusion in this view is a world free of pain, suffering, and death prior to the Fall in Genesis chapter three. God's prescription in Genesis 1:29 to allow only green plants and fruit for food follows along with this conclusion.

The universal flood of Noah, recorded in Genesis chapters six through nine, is also a crucial part of this view. On a young earth, the vast layers of fossil-bearing sedimentary strata found all over the earth could not have had millions of years to accumulate. Therefore, the majority of these sedimentary layers are thought to have formed during Noah's flood. Much research activity by young earth creationists is directed along this line.[{2}](#)

Young earth creationists also maintain the integrity of what is called the Genesis kind, defined in Genesis 1:11, 12, and 21. The dog kind is frequently given as an example of the Genesis kind. While this is still a matter of research, it is suggested that God created a population of dog-like animals on the sixth day. Since then, the domestic dog, wolf, coyote, African wild dog, Australian dingo, and maybe even the fox have all descended from this original population. Young earth creationists suggest that God created the individual kinds with an inherent ability to diversify within that kind. But a dog cannot cross these lines to evolve into say, a cat.

The literal view of Genesis chapter one has been predominant throughout Church history and it proposes a testable scientific model of the flood and the Genesis kind. Critics point out that there are immense difficulties explaining the entire geologic record in terms of the flood.[{3}](#) Principal among these problems is that it appears there are many more animals and plants buried in the rocks than could have been alive simultaneously on the earth just prior to the flood.

Progressive Creationism

The next view to discuss is progressive creationism. The progressive creationist essentially believes that God has intervened throughout earth history to bring about His creation, but not all at once over six literal twenty-four hour days. The progressive creationist will accept the long ages of the earth and the universe while accepting that there is some historical significance to the creation account of Genesis.

A popular view of Genesis chapter one is called the day-age theory. This view agrees that the events described in the first chapter of Genesis are real events, but each day is millions, perhaps billions of years in duration. The Hebrew word for day, *yom*, can mean an indefinite period of time such as in Genesis 2:4. This verse summarizes the first thirty-four verses of the Bible by stating, "This is the account of the heavens and the earth when they were created, in the *day* that the Lord God made the earth and the heaven" (emphasis added). In this case, the word *day* refers to the previous seven days of the creation week. Consequently, the progressive creationist feels there is justification in rendering the days of Genesis chapter one as indefinite periods of time.[\[4\]](#)

Therefore, the progressive creationist has no problem with the standard astronomical and geological ages for the universe and the earth. A universe of fifteen billion years and an earth of 4.5 billion years are acceptable. In regard to evolution, however, their position is similar to the young earth creationists'. Progressive creationists accept much of what would be called microevolution, adaptation within a species and even some larger changes. But macroevolutionary changes such as a bird evolving from a fish are not seen as a viable process.[\[5\]](#)

These are the basic beliefs of most progressive creationists. What do they think is the predominant reason for holding to

this perspective? Most will tell you that the evidence for an old universe and earth is so strong that they have searched for a way for Genesis chapter one to be understood in this framework. So the agreement with standard geology and astronomy is critical to them. Progressive creationists also find the biblical necessity for distinct evidence for God's creative activity so strong that the lack of macroevolutionary evidence also dovetails well with their position.

The most difficult problem for them to face is the requirement for pain, suffering, and death to be a necessary part of God's creation prior to Adam's sin. The atheistic evolutionist, Stephen J. Gould, from Harvard, commented on this problem of God's design over these many millions of years when he said, "The price of perfect design is messy relentless slaughter."[\[6\]](#) There are also major discrepancies with the order of events in earth history and the order given in Genesis. For instance if the days of Genesis are millions of years long, then when flowers were created on day three, it would be millions of years before pollinators, such as bees, were created on days five and six.

Theistic Evolution

Having covered young earth creationism and progressive creationism, we will now turn to the view called [theistic evolution](#) and then discuss our own position with a call to mark the common enemy of the evangelical community.

Most theistic evolutionists see little, if any, historical significance to the opening chapters of Genesis. They suggest that the Genesis narrative was designed to show the Israelites that there is one God and He has created everything, including those things which the surrounding nations worshipped as gods. In essence, Genesis chapter one is religious and theological, not historical and scientific.[\[7\]](#)

Another view of the account of creation according to Genesis

that has become popular with progressive creationists as well as theistic evolutionists is the structural framework hypothesis.[\[8\]](#) This literary framework begins with the earth formless and void as stated in Genesis 1:2. The first three days of creation remove the formlessness of the earth, and the last three days fill the void of the earth. On days one through three God creates light, sea and sky, and the land. On days four through six, God fills the heavens, sky, sea, and land. There was a pattern in the ancient Near East of a perfect work being completed in six days with a seventh day of rest. The six days were divided into three groups of two days each. In Genesis chapter one we also have the six days of work with a seventh day of rest, but the six days are divided into two groups of three days. So maybe this was only meant to say that God is Creator and His work is perfect.

Essentially, theistic evolutionists accept nearly all the scientific data of evolution including not only the age of the cosmos, but also the evolutionary relatedness of all living creatures. God either guided evolution or created the evolutionary process to proceed without need of interference.

Theistic evolutionists maintain that the evidence for evolution is so strong that they have simply reconciled their faith with reality. Since reading Genesis historically does not agree with what they perceive to be the truth about earth history, then Genesis, if it is to be considered God's Word, must mean something else. They do believe that God is continually upholding the universe, so He is involved in His creation.

Theistic evolution suffers the same problem with pain, suffering, and death before the Fall that progressive creation endures.[\[9\]](#) In addition, the many problems cited concerning the origin of life, the origin of major groups of organisms, and the origin of man remain severe problems for the theistic evolutionist as well as the secular evolutionist.[\[10\]](#) Some theistic evolutionists also quarrel with a literal Adam and

Eve. If humans evolved from ape-like ancestors, then who were Adam and Eve? If Adam and Eve were not literal people, then is the Fall real? And how is redemption necessary if they are imaginary?

Call for Caution and Discussion

We have discussed the biblical and scientific foundations of three different Christian views of science and earth history. In so doing, we have tried to convey a sense of their strengths and limitations. The issue of the age of the earth is very controversial among evangelicals, particularly those who have chosen some field of science as their career.

Our intention has been to present these perspectives as objectively as possible so you, the reader, can make an informed decision. We have purposefully kept our own views out of this discussion until now. We would like to take a moment and explain the reasoning behind our position.

We have studied this issue for over twenty years and have read scholars, both biblical and scientific from all sides of the question. For some ten years now, we have been confirmed fence sitters. Yes, we are sorry to disappoint those of you who were waiting for us to tell you which view makes more sense, but we are decidedly undecided. This is by no means a political decision. We are not trying to please all sides, because if that were the case, we know we would please no one. The fact is, we are still searching.

Biblically, we find the young earth approach of six consecutive 24-hour days and a catastrophic universal flood to make the most sense. However, we find the evidence from science for a great age for the universe and the earth to be nearly overwhelming. We just do not know how to resolve the conflict yet. Earlier, we emphasized that the age question, while certainly important, is not the primary question in the origins debate. The question of chance versus design is the

foremost issue. The time frame over which God accomplished His creation is not central.

Such indecision is not necessarily a bad thing. Davis Young in his book *Christianity and the Age of the Earth*, gives a wise caution. Young outlines that both science and theology have their mysteries that remain unsolvable. And if each has its own mystery, how can we expect them to mesh perfectly?[{11}](#) The great 20th century evangelist, Francis Schaeffer said:

We must take ample time, and sometimes this will mean a long time, to consider whether the apparent clash between science and revelation means that the theory set forth by science is wrong or whether we must reconsider what we thought the Bible says. [{12}](#)

“What we thought the Bible says”? What does *that* mean?



In the sixteenth century, Michelangelo sculpted Moses coming down from Mount Sinai with two bumps on his head. The word which describes Moses' face as he came off the mountain, we now know means shining light, meaning Moses' face was radiant from having been in God's presence. But at that time it was thought to mean "goat horns."

So Michelangelo sculpted Moses with two horns on his head. That is what they thought the Bible literally said. Now we know better, and we changed our interpretation of this Scripture based on more accurate information. We believe we need even more accurate information from both the Bible and science to answer the age of the earth question.



The question concerning the age of the earth comes down to a matter of interpretation, both of science and the Bible. Ultimately, we believe there is a resolution to this dilemma. All truth is God's truth. Some suggest that perhaps God has created a universe with apparent age. That is certainly possible, but certain implications of this make us very uncomfortable. It is certainly true that any form of creation out of nothing implies some form of apparent age. God created Adam as an adult who appeared to have been alive for several decades though only a few seconds into his existence.

Scientists have observed supernova from galaxies that are hundreds of thousands of light years away. We know that many of these galaxies must be this distant because if they were all within a few thousand light years, then the nighttime sky would be brilliant indeed. These distant galaxies are usually explained in terms of God creating the light in transit so we can see them today. These observed star explosions mean that they never happened in an apparent age universe. Therefore, we are viewing an event that never occurred. This is like having videotape of Adam's birth. Would supernovas that never happened make God deceptive?

Therefore, we believe we must approach this question with humility and tolerance for those with different convictions. The truth will eventually be known. In the meantime, let us search for it together without snipping at each other's heels.

Notes

1. Henry Morris, *The Genesis Record* (Grand Rapids, MI: Baker Book House, 1976), 37-81.
2. Steven A. Austin, ed., *Grand Canyon: Monument to Catastrophe* (Santee, CA: Institute for Creation Research, 1994), 284.
3. Daniel E. Wonderly, *Neglect of Geologic Data: Sedimentary Strata Compared with Young-Earth Creationist Writings* (Hatfield, PA: Interdisciplinary Biblical Research Institute, 1987), 130. Howard J. Van Till, Robert Snow, John Stek, and Davis A. Young, *Portraits of Creation: Biblical and Scientific Perspectives on the World's Formation* (Grand Rapids, MI: Eerdmans Pub. Co, 1990), 26-125.
4. Hugh Ross, *Creation and Time* (Colorado Springs, CO: NAVPRESS, 1994), 45-72.
5. Ibid., 73-80.
6. Stephen Jay Gould, "Darwin and Paley Meet the Invisible Hand," *Natural History* (November 1990):8. Mark Van Bebber and Paul S. Taylor, *Creation and Time: A Report on the Progressive Creationist Book by Hugh Ross* (Mesa, AZ: Eden Communications, 1994), 128.
7. Van Till, et al., *Portraits of Creation*, 232-242.
8. Umberto Cassuto, *A Commentary on the Book of Genesis: Part 1: From Adam to Noah*, trans. Israel Abrahams (Jerusalem Magnum Press, 1978), 12-17. Henri Blocher, *In the Beginning: The Opening Chapters of Genesis*, trans. David G. Preston (Leciester Press and Downers Grove: InterVarsity Press, 1984), 49-59.
9. Ken Ham, *Evolution: The Lie* (El Cajon, CA: Creation-Life Pub., 1987).
10. Phillip E. Johnson, *Darwin on Trial*, 2nd ed. (Downers Grove, IL: InterVarsity Press, 1993), 15-112, 166-170.
11. Davis A. Young, *Christianity and the Age of the Earth* (Grand Rapids: Zondervan, 1982), 158.
12. Francis Schaeffer, *No Final Conflict* (Downers Grove: InterVarsity Press, 1975), 24.

Evolution and the Pope

Are Science and Religion at War?

We have just passed the one hundredth anniversary of one of the more important books written about the interaction of science and Christianity. The book's title, *A History of the Warfare of Science with Theology in Christendom*, says much about the book.

Andrew White wrote the book in 1896 to justify his belief that a university should be without any religious affiliation. He was the founder and first president of Cornell University in New York and was very outspoken in his views about the hindrance religion has been to scientific progress. It was White who popularized the view that there was a war between science and Christianity, and that in all cases science had ultimately been shown to be right.

A History of the Warfare of Science and Theology in Christendom is one long polemic attempting to show that religion has always held back the advance of science. The author maintains that if only theology would quit sticking its nose into the tent of science, everyone would be better off. Well into this century the book was regarded as being an important statement on the tension between science and religion.

One hundred years, however, has changed the tone of the discussion. Today many historians of science would agree that Christianity was a significant foundation for modern science, even though it is now viewed as an outmoded belief. For

several reasons, then, it came to be commonly accepted that Christianity had played a key role in preparing the way for the development of modern science. First, Christians assumed they lived in a world that could be understood because it was created by a rational God—the same God who had also created them. This gave early scientists some reason to assume that nature might obey laws that could be known. Speaking about the view of the universe that the Church gave to the culture around it, the great mathematician and philosopher Alfred North Whitehead said early in this century, “When we compare this tone of thought [the faith in reason and the regularity of the universe] in Europe with the attitude of other civilizations when left to themselves, there seems but one source for its origin. It must come from the medieval insistence on the rationality of God.”

Second, not only was the universe understandable because a rational God made it, but the Bible encouraged believers to look at God’s creation for signs of His handiwork. For example, as early as the Psalms David had proclaimed, “The heavens are telling of the glory of God” (Ps. 19:1). Scriptures such as this one, and many others, encouraged Christians to study nature to understand how it glorified God. Christians were confident that nature’s design would show forth God’s glory.

However, in the nineteenth and twentieth centuries much happened that eroded Christian confidence that they lived in a world crafted by God. In particular, Darwin’s theory (that all organisms were descended from a common ancestor and that any appearances of design could be explained by natural selection working over long periods of time) came to have great acceptance among almost all scientists. For many the theory of evolution came to be seen as the complete answer as to why the world is as it is. For them, there was no need at all for a Creator or God to explain anything because evolution could, or would, explain everything.

A notable example of this position is the famous statement by astronomer Carl Sagan, "The universe is all that is or ever was or ever will be." With these words he began his immensely popular series about the universe, *Cosmos*. His words are the creed of the materialist (i.e., if it can be counted, measured, observed, experimented on, understood by natural laws, then it is real). Anything else is either meaningless or, at least, not scientific. According to this view, mountain goats are real because we can see them, touch them, put them in zoos. Angels, on the other hand, are not real because we can do none of these things to them. Science has to do with facts, and if there is any place for religion it is in the consideration of morals or ethics or those other areas where there are no facts.

But some people, such as Stephen Gould, a palaeontologist at Harvard, have remained open to dialogue on how religion and science can coexist. In his monthly column for *Natural History* magazine, he recently put forth his latest elaboration of how evolution, science, and religion are related. His proposed resolution of this issue is the theme of this essay.

Stephen Gould, the evolutionary writer and scientist, addresses what are the proper bounds of science and religion in a recent *Natural History* magazine. He proposes a complete answer to the problem of how they relate to one another. Simply put, they don't interact at all. "The net of science," says Gould, "covers the empirical universe: what it is made of (fact) and why does it work this way (theory). The net of religion extends over questions of moral meaning and value. These two magisteria do not overlap."

The Roman Catholic Church uses the term *magisterium* to refer to its authority to teach in areas relating to the Bible and its interpretation. Gould borrows this term and applies it as well to the legitimate area that science teaches. So the Church may speak about moral issues and science about matters of fact and theory. For this somewhat unbalanced division he

creates the wonderful phrase “nonoverlapping magisteria.”

Has the Pope’s View of Evolution Evolved?

Gould is certainly free to pontificate. However, what is somewhat mystifying is how he draws in Pope John Paul II as a prime supporter not only of his interesting distinction between science and religion, but also as a firm supporter of evolution!

On October 22, 1996, Pope John Paul addressed the Pontifical Academy of Sciences. The theme of their conference was to be the origin of life and evolution, so John Paul helpfully laid out what the Church had said over the last fifty years.

The Pope made clear that his predecessor, Pope Pius XI, had “considered the doctrine of ‘evolutionism’ a serious hypothesis.” But, John Paul says, “Today, almost half a century after the publication of the encyclical [of Pius XI], new knowledge has led to the recognition of the theory of evolution as more than a hypothesis. It is indeed remarkable that this theory has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. The convergence, neither sought nor fabricated, of the results of work that was conducted independently is in itself a significant argument in favor of this theory.”

That is as far as John Paul’s statement goes: evolution has moved from a serious hypothesis to a theory with significant arguments in its favor. Yet from this statement, Gould triumphantly draws an amazing observation:

In conclusion, Pius had grudgingly admitted evolution as a legitimate hypothesis that he regarded as only tentatively supported and potentially (as I suspect he hoped) untrue. John Paul, almost fifty years later...adds that additional data and theory have placed the factuality of evolution beyond

reasonable doubt. Sincere Christians must now accept evolution not merely as a plausible possibility, but also as an effectively proven fact.

Is this really what the Pope said? We'll now look more carefully at Gould's interpretation of the Pope's statement.

Does Evolution Fit the Truth About Man?

Stephen Gould, writing in *Natural History*, makes the Pope say something far more significant, and from Gould's point of view, a concession of defeat. How does Gould paraphrase John Paul's statement? "Sincere Christians must now accept evolution not merely as a plausible possibility, but also as an effectively proven fact."

Nevertheless, either by reading too rapidly or possessing too much enthusiasm for his own position, Gould misses critical distinctions that the Pope's announcement makes. To argue that the Pope's statement ("new knowledge has led to the recognition of the theory of evolution as more than a hypothesis") means that "sincere Christians must now accept evolution not merely as a plausible possibility, but also as an effectively proven fact" is ludicrous. Gould almost twists the Pope's statement to contradict what he does say.

In fact, in his next paragraph, the Pope states: "A theory is a metascientific elaboration, distinct from the results of observation but consistent with them...Furthermore, while the formulation of a theory like evolution complies with the need for consistency with observed data, it borrows certain notions from natural philosophy."

"Metascientific" means going beyond the realms of science into an abstract, philosophical arena. So, the Pope says, evolution is more than a hypothesis; it is a theory, but as such, it also is "distinct from the result of observation" and borrows from philosophy. His next statement is one Gould may have

skipped over:

And, to tell the truth, rather than the theory of evolution, we should speak of several theories of evolution. On the one hand, this plurality has to do with the different explanations advanced for the mechanism of evolution, and on the other, with the various philosophies on which it is based. Hence the existence of materialist, reductionist and spiritualist interpretations.

So, rather than saying the words Gould puts in his mouth, the Pope actually says that not only is evolution based on a philosophy, but there are several theories, and he goes on to rule out some of them, at least for Roman Catholics. "Theories of evolution which, in accordance with the philosophies inspiring them, consider the spirit as emerging from the forces of living matter or as a mere epiphenomenon of this matter, are incompatible with the truth about man."

Gould wants the Pope to say, "You talk about science, and I'll talk about religion. You can have the world of facts, and I'll take what's left. These areas won't overlap with each other, and we'll each stay in our own gardens." But the Pope is unwilling to follow Gould's convenient (for science) scheme. Instead, he firmly declares "The Church's magisterium is directly concerned with the question of evolution, for it involves the conception of man." This is what all of us who are Christians should be saying. Evolution, as it is usually put forward, is not just a theory about ancient data. It is also a philosophical statement about where man came from and what, if any, importance he has. While Gould claims his scientific views are not related to his moral views, his words give little support to this.

Is Christianity Concerned About

Evolutionary Theories?

Early in his essay Gould has dispatched creationists with a few quick paragraphs. "Creationism does not pit science against religion, for no such conflict exists. Creationism does not raise any unsettled intellectual issues about the nature of biology or the history of life. Creationism is a local and parochial movement, powerful only in the United States among Western nations, and prevalent only among the few sectors of American Protestantism that choose to read the Bible as an inerrant document, literally true in every jot and tittle." Well, so much for a fair, informed assessment of one's opponents.

First he defines out of existence what creationists see as a central argument by merely saying "no such conflict exists." Then he proceeds to caricature creationists as a fringe group only found among a small group of Protestants. Prior to this he has equated "scientific creation," the view that the earth was created in six days and "only a few thousand years old," with all of creationism, which he fails to note includes even those who believe in evolution and an earth billions of years old, but believe God superintended the process.

Gould's claim that "creationism does not raise any unsettled issues" ignores significant questions that have been raised about how life first arose from chemicals, about the source of the genetic code, and of the origination of new biological structures. But does the Pope truly believe in Gould's nonoverlapping magisteria? Gould's summation of the opening of John Paul's speech is that he "begins by summarizing Pius's older encyclical of 1950, and particularly reaffirming the NOMA principle [nonoverlapping magisteria] nothing new here."

Is this really what the Pope said? He begins by saying that "the origins of life and evolution [are] an essential subject which deeply interests the Church, since revelation, for its part, contains teachings concerning the nature and origins of

man. . . . I would like to remind you that the magisterium of the Church has already made pronouncements on these matters within the framework of her own competence.” This hardly sounds like there is no overlap between what the Church teaches and science. Toward the end of his remarks John Paul flatly contradicts Gould’s neat distinction: “The Church’s magisterium is directly concerned with the question of evolution for it involves the conception of man.” So it would seem that Gould has used those parts of the Pope’s speech which he likes and disregarded the rest.

Two points are important here. First, while Gould sets forth an interesting view about the relationship between science and religion and gives a new name to what used to be called “complementarity,” it is not the view espoused by the Pope, and is almost antithetical to it. Second, Gould himself does not abide by this strict separationism in his own views, even when he claims to. When Gould actually makes his own moral position clear, it is hard to escape the conclusion that it comes directly from his views and philosophy as a scientist.

Why Trust Your Mind If No One Made It?

“As a moral position...I prefer the ‘cold bath’ theory that nature can be truly ‘cruel’ and ‘indifferent.’” This is the summary of Harvard paleontologist Stephen Gould in his *Natural History* essay on how science and religion should relate to each other. “Science,” Gould says, “covers the empirical universe: what is it made of (fact) and why does it work (theory).” Religion is left to cover “questions of moral meaning and value.”

Gould calls his position nonoverlapping magisteria and claims the Pope holds the same view. As we stated earlier, this is far from true. But Gould then goes on to describe the moral view he takes.

Gould’s position, which he immediately claims is not “a

deduction from my knowledge of nature's factuality" is "nature was not constructed as our eventual abode, didn't know we were coming... and doesn't give a _____ about us (speaking metaphorically)." He says he finds such a view "liberating...because we then become free to conduct moral discourse...in our own terms, spared from the delusion that we might read moral truth passively from nature's factuality." It is indeed hard not to draw the conclusion that Gould has read his view about the process of evolution into his own moral position. How does he know that nature was not constructed for us if not from his studies of the natural world? How would he know it doesn't care about us unless somehow he saw this in his studies? Where else might he get such ideas?

In his speech, Pope John Paul II spoke quite candidly of his view of evolution:

And, to tell the truth, rather than the theory of evolution, we should speak of several theories of evolution. On the one hand, this plurality has to do with the different explanations advanced for the mechanism of evolution, and on the other, with the various philosophies on which it is based. Hence the existence of materialist, reductionist and spiritualist interpretations.

Stephen Gould has a materialist philosophy behind his theory of evolution. He believes that the material universe is all that exists, and that our own consciousness is a chance phenomena and does not come from a Creator. So, for Gould, where else can he draw his views about the meaning of life and what might be moral? His very thinking is a chance product of evolutionary processes that had no design, either to produce man or to give him a mind. Nonetheless, Gould trusts his mind not only to be able to distinguish between science and religion, he is sure that they should not influence one another.

Gould's view is a version of what is the common denominator of much of science today. At all costs religion must be kept out of science, or else science will cease to exist. Only material answers can be given to any question because the intervention of a Creator would negate the laws that govern science. What is missed in all of this is that without a Creator of some kind, not only is there no basis to trust the human mind to make true observations, but there is no reason to suppose that it would matter. Why worry about science or religion, and certainly why worry about whether they could have a negative effect on each other? If there is no God, there can only be arbitrary judgments. It is God who gives meaning to what we say and believe.

Christians serve a rational God who made both them and the world. On what does Gould base his trust in either science or the mind?