“What About the Water Vapor Canopy Hypothesis?”

You say that the literal translation makes the most sense, yet you say that there are things about it that make no sense. Well here is my suggestion. I am a literalist… I believe what the Bible says about creation – literal. 6 days. But read your Bible about the creation of the “sky.” God separated the waters from the waters. It doesn’t say that he created mists, or clouds from the waters to make up the sky… it says he separated the water from the water. In fact, wind, rain, and rainbows are not mentioned anywhere in the Bible until the flood… so what if the atmosphere was different in the original times? What if there was literally a solid water “layer” above the sky…. this would create an atmosphere like a green-house effect on earth… therefore totally changing the oxygen and most importantly CARBON levels in the air… which would totally ruin all “carbon-dating” tests prior to the flood… which would then in effect also explain why people lived longer prior to the flood. Not only were we closer to perfection then… but there was probably better levels of oxygen in the air… and oxygen is known to have healing properties (especially O_3). Just a thought to consider…

Thank you for reading and writing.

I am very familiar with the Canopy Hypothesis you describe. I even accepted and taught it for several years. While definitely still around, it has fallen into disfavor in many creationist circles for two primary reasons.

The first is biblical. The description of Day Two in Genesis describes the separation of the waters and that God placed an expanse in the midst of the waters. This has usually been interpreted as the atmosphere. However, on Day Four, God

places the sun, moon, and stars in this same expanse.

The second involves the inherent instability of any water vapor canopy above the earth's atmosphere. So far calculations show that it would require a miracle of constant intervention to keep it in place until the flood. There is also a difficult problem with the condensation of the canopy into water droplets to fall as rain for forty days and nights. This would release a tremendous amount of heat that would cause additional problems.

Hope this helps.

Respectfully,

Ray Bohlin

Origin Science

There is a fundamental distinction between operation science and origin science. The founders of modern science had a Christian view of creation.

Origin Science versus Operation Science

Recently Probe produced a DVD based small group curriculum entitled *Redeeming Darwin: The Intelligent Design Controversy*. It has been a great way to inform Christians about Intelligent Design and show them how to use a conversation about this topic to share the gospel.

This year also marks the twentieth anniversary of a book Norman Geisler and I published entitled *Origin Science*.{1} In light of the current controversy concerning intelligent design, I want to revisit some of the points we made in this

book because they help us better understand some of the key elements in the debate about origins.

The foundational concept in the book was that there is a fundamental difference between operation science and origin science. Operation science is what most of us think of when we talk about science. It deals with regularities. In other words, there are regular recurring patterns that we can observe, and we can do experiments on those patterns. Observation and repeatability are two foundational tools of operation science.

Origin science differs from operation science because it does not deal with present regularities. Instead it focuses on a singular action in the past. As we say in the book, "The great events of origin were singularities. The origin of the universe is not recurring. Nor is the origin of life, or the origin of major new forms of life."{2}

We argued that "a science which deals with origin events does not fall within the category of empirical science, which deals with observed regularities in the present. Rather, it is more like forensic science."{3} In many ways, origin science is more like the scientific investigations done by crime scene investigators. The crime was a singular event and often there was no observer. But CSI investigators can use the available evidence to reconstruct the crime.

Likewise, research into origin science must use the available evidence (the bones and the stones) to try to reconstruct a past event. We therefore concluded that:

> In origin science it is necessary to find analogies in the present to these events in the past. Thus, for example, if evidence is forthcoming that life can now be synthesized from chemicals (without intelligent manipulation) under conditions similar to those reasonably assumed to have once existed on the primitive earth, then a naturalistic

(secondary-cause) explanation of the origin of life is plausible. If, on the other hand, it can be shown that the kind of complex information found in a living cell is similar to that which can be regularly produced by an intelligent (primary) cause, then it can be plausibly argued that there was an intelligent cause of the first living organism.{4}

Rise of Modern Science

When we discuss the differences between origin science and operation science, it is important to point out that evolutionists and creationist differ in what they believe caused the origin of the universe, the origin of life, and the origin of major life forms. "Evolutionists posit a secondary natural cause for them; creationists argue for a supernatural primary cause."{5}

Evolutionists argue that a naturalistic explanation is all that is necessary to explain these origin events. There is no need for the supernatural. Julian Huxley, speaking at the Darwin centennial celebration in Chicago, declared: "In the evolutionary pattern of thought there is no longer need or room for the supernatural. The earth was not created; it evolved. So did all the animals and plants that inhabit it, including our human selves, mind and soul as well as brain and body. So did religion."{6}

Although most scientists today make no room for the supernatural, that was not always the case. In fact, it can be argued that it was a Christian view of reality that essentially gave rise to modern science.

In a landmark article on this topic M.B. Foster asked: "What is the source of the un-Greek elements which were imported into philosophy by the post-Reformation philosophers, and which constitute the modernity of modern philosophy? And . . .

what is the source of those un-Greek elements in the modern theory of nature by which the peculiar character of the modern science of nature was to be determined?" These are two important questions. He said: "The answer to the first question is: The Christian revelation, and the answer to the second: The Christian doctrine of creation."{7}

Foster argued that modern empirical science did not emerge from a Greek view of nature. Instead it arose because the founders of modern science had a Christian view of nature. They "were the first to take seriously in their science the Christian doctrine that nature is created."{8}

Foster argued that only when the Greek concept of necessary forms in nature had given way to the Judeo-Christian idea of a contingent creation did it become necessary to take an empirical route to finding scientific truth. Once these scientists came to view nature as contingent creation it became necessary to use observation and experimentation to understand it. From there, modern science arose.

Francis Bacon

Francis Bacon's belief in the concept of creation is well known. Bacon even confessed that his motivation to observe and experiment was based on the creation mandate in which God said to man: "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over [it]." (Gen. 1:28).

Of this mandate to subdue creation Bacon wrote, "Only let the human race recover that right over nature which belongs to it by divine bequest, and let power be given it; the exercise thereof will be governed by sound reason and true religion."{9}

Speaking of the natural world, Bacon declared, "The beginning is from God: for the business which is at hand, having the character of good so strongly impressed upon it, appears

manifestly to proceed from God who is the author of good, and Father of Lights."{10}

Bacon believed that a careful observer of nature could discover certain "fixed laws" which he could use in subduing the world and have dominion over creation. In fact, he believed that nature (like the Bible) is the revelation of God. So Christians need not fear that any discovery in God's world (science) will destroy their faith in God's Word (Scripture). For "if the matter be truly considered, natural philosophy is, after the word of God, at once the surest medicine against superstition and the most approved nourishment for faith, and therefore she is rightly given to religion as her most faithful handmaid, since the one displays the will of God, the other his power."{11}

Bacon believed he could discover the orderly laws by which God established in the creation. He described three approaches:

> The men of experiment are like the ant, they only collect and use; the reasoners resemble spiders, who make cobwebs out of their own substance. But the bee takes a middle course; it gathers its material from the flowers of the garden and of the field, but transforms and digests it by a power of its own.{12}

Therefore the modern scientist is neither a scholastic spider not an empirical ant but a Baconian bee who extracts from nature what is available for transformation.

Bacon's understanding of Scripture was shaped by the writings of John Calvin. Both Calvin and Bacon were trained in the methods of Renaissance law. Calvin had applied this new method to Scripture, the book of God's Word. Bacon adopted this legal method of inquiry and applied it to the book of God's world.{13}

Kepler and Galileo

Johannes Kepler's astronomical views were also bedded deeply in his theistic beliefs about creation and the Creator. He stated that we "will realize that God, who founded everything in the world according to the norm of quantity, also has endowed man with a mind which can comprehend these norms."{14}

Kepler viewed the universe as a great mathematical machine created by God. Thus he wrote,

> My aim in this is to show that the celestial machine is to be likened not to a divine organism but rather to a clockwork . . . insofar as nearly all the manifold movements are carried out by means of a single, quite simple magnetic force, as in the case of a clockwork all motions [are caused] by a simple weight. Moreover I show how this physical conception is to be presented through calculation and geometry.{15}

Kepler assumed (as the Pythagoreans did) that the universe was mathematically analyzable. But unlike the Greeks, Kepler believed that since the observable physical world was a creation of God, one could come to know God's thoughts by studying the physical laws of the universe.

Another great astronomer was Galileo. He believed "the Holy Scriptures and Nature are both produced by the Word of God; the former is the results of the dictation of the Holy Spirit, and the latter is the most obedient agent of the ordinances of God." Galileo also added: "I do not believe the same God who gave us our senses, our reason, and our intellect intended that we should neglect these gifts and the information they give us about nature, or that we should deny what our senses and our reason have observed by experiment or logical demonstration."{16}

Galileo believed that the observable laws of nature operate

with unalterable regularity. Therefore scientific theories must fit nature. Nature cannot be changed to fit our scientific theories. God works in regular ways in the operation of his universe. He added that mere ignorance of natural causes of the operation of the world is not a sufficient justification for positing a supernatural cause.{17}

The supernatural is the source of the natural world, but the natural is the proper domain of science. Science deals with "natural phenomena" which supernatural realm is not subject to such test.{18} Thus, mere ignorance of natural causes of the operation of the world is not a sufficient justification for positing a supernatural cause.

By this distinction Galileo hoped to secure the domain of operation science from unjustified intrusions by religious dogma while retaining nonetheless his belief in a supernatural origin of the natural world.

Isaac Newton

Isaac Newton believed that God created the solar system. He held that the entire solar system was formed from a "common chaos" which is described in Genesis 1:2. From this chaos the "spirit of God," by means of gravitational attraction, formed the separate planets." In a letter to Thomas Burnet he insisted that "where natural causes are at hand God uses them as instruments in his works, but I do not think them alone sufficient for ye creation."{19}

For Newton, "this Being governs all things, not as the soul of the world, but as Lord over all, and on account of his dominion he is wont to be called Lord God or Universal Ruler." For "Deity is the dominion of God not over his own body, as those imagine who fancy God to be the soul of the world, but over servants. The Supreme God is a Being eternal, infinite,

absolutely perfect."{20}

Newton believed that God had dominion over all His creation:

> And from his true dominion it follows that the true God is a living, intelligent, and powerful Being; and, from his other perfections, that he is supreme, or most perfect. He is eternal and infinite, omnipotent and omniscient; that is, his duration reaches from eternity to eternity; his presence from infinity to infinity; he governs all things, and knows all things that are or can be done.{21}

This Christian concept of God was at the very center of Newton's cosmology. It was the very foundation of his scientific investigation. According to Newton, the universe was God's great machine, and scientists could discover the laws by which this machine operates because these are the laws of God.{22} Thus for Newton, God is the primary cause of the universe and natural laws are the secondary causes by which God operates in the natural world.

Sadly there is a bitter irony in all of this for creationists. The scientific method we employ today was built on the belief in a Creator and His creation. Now, a few centuries later, the science has been used to replace creationist beliefs about origins.

These early scientists shifted their emphasis from a primary cause (God) to secondary causes (natural laws) through which He operates in the natural world. Over time, the subsequent preoccupation with these secondary causes caused scientists to reject the legitimacy of positing a primary cause for these origin events. "In short, natural science came to bite the supernatural hand that fed it."{23}

Notes

1. Norman Geisler and Kerby Anderson, *Origin Science* (Grand Rapids, MI: Baker Book House, 1987).

2. Ibid., 15.
3. Ibid., 14.
4. Ibid., 16.
5. Ibid., 15.
6. Ibid., 19.
7. Ibid., 37.
8. Ibid.
9. Ibid., 40.
10. Ibid.
11. Ibid., 41.
12. Ibid., 42.
13. Ibid.
14. Ibid., 44.
15. Ibid.
16. Ibid., 46.
17. Ibid., 49.
18. Ibid.
19. Ibid., 50.
20. Ibid.
21. Ibid., 51.
22. Ibid.
23. Ibid.

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A Meaningful World

The Poison of Meaninglessness

We have been drinking a poison that first infects our heads, then slowly moves to our hearts. It is the poison of meaninglessness. Many people assume that science says the universe is without purpose and everything is a result of

random, meaningless events. A recently released book, *A Meaningful World* by Benjamin Wiker and Jonathan Witt,{1} seeks to be the antidote to this poison by looking at science and how certain features of the universe do not fit within the materialistic worldview. This book will be our guide as we consider the question, How does science reveal meaning in the universe? But first, we need to understand the poison before we can discuss its antidote.

Within the scientific community, the assumption of meaninglessness is a result of its members' worldview. Most scientists hold to a materialistic worldview where everything is explained by physical or material causes, which are purposeless, random, natural events. Furthermore, a materialist reduces everything to its basic parts and claims that ultimate meaning lies in these parts. For example, when people say that we are a product of our genes, they are reducing humans to their chemical parts. By this definition, people do not have a soul, and the illusion of human genius or creativity is explained as neurons firing in the brain or animal instinct.

So if that is the poison, what is the antidote? The antidote comes from Christians who break the materialist spell by showing that the world is full of meaning and purpose because it has a Creator. This can be done by looking at scientific evidence for a meaningful world.

A good place to begin is with the idea of genius. Why study genius? Because the most poisonous effect of materialism is the way it skews our self-understanding or our worldview. In a materialistic world without a purpose, there would be no signs of creativity and genius in nature. Before Darwin's time, the evidences of creativity and beautiful design in nature were some of the best arguments against materialism. However, the theory of evolution through random, natural causes denied the masterful work of design.

First, we will learn how to recognize some common elements found in a work of genius by looking at one of the most well-known geniuses of all time, William Shakespeare. Then, we will see if those same elements show up in nature.

How Do We Know It's Genius? The Example of Shakespeare

A Meaningful World describes four elements that will show up in a work of genius: depth, clarity, harmony, and elegance. If the world is designed by an ingenious designer, then we should see these four elements of genius in nature.

How do we detect genius in nature? Let's take a look at the work of a well-known playwright, William Shakespeare, as our model for describing the elements of genius.

Consider the situation in *Hamlet* where we get the famous and often misused line, "Methinks it is like a weasel."{2} The surface reading is that Hamlet and Polonius are looking at clouds and Hamlet observes that one looks like a weasel. As we delve deeper and consider the context, we find that Hamlet is actually exposing Polonius as a weasel himself.

The deeper meaning in Shakespeare's work has intrigued academics for years. And it points us to our first character of genius, *depth* or depth of meaning.

However, depth is nothing if it cannot be detected. So here we come to our next element of genius, *clarity*. Shakespeare did not write the scene with Hamlet and Polonius for his own whimsy, but so that the reader would detect the double meaning in Hamlet's weasel comment. Ingenious works have depth and meaning that beg to be discovered. Hence, they have clarity.

The last two elements of genius go hand in hand: *harmony* and *elegance*. Harmony would describe how various parts—or in Shakespeare's case, how various scenes—are interrelated. In

all of Shakespeare's plays, the characters and scenes are related to each other; no scene is random or contradictory to the rest of the play. They are in harmony with each other.

The last element, elegance, is not about parts but about the unifying whole. When all of the parts have come together and operate harmoniously, then we have a new element, in this case a play. No one scene stands alone, but is within a context of the whole. One cannot understand the line "Methinks it is like a weasel" without setting up the context of the play itself.

So from Shakespeare we have identified four important elements to genius: depth, clarity, harmony, and elegance. Let's see if we can find these same elements in nature.

Genius in the Periodic Table of Elements

When we turn to chemistry to see if we find a conspiracy of ingenious design, we will find that, just like a cleverly crafted puzzle that was meant to be solved, when you arrange the elements according to weight, the periodic table makes a stunning natural jigsaw puzzle.

Now that scientists have solved the jigsaw puzzle, they find that it gives us amazing information about atomic properties. This insight has allowed us to make everything from pharmaceuticals to cosmetics to weapons to particle accelerators. So is it just coincidence, or does the periodic table display the properties of ingenious design?

Let's consider how the periodic table works. When you line the main elements up in groups of eight, the periodic table functions much like a Sudoku puzzle. Elements going across a row, or period, are related in their structure, while elements going down a column are related in their properties. Sudoku puzzles are designed by the puzzle maker with just the right amount of clues for the puzzle to be solved. If you look at the history of chemistry, you will find that the periodic

table was first put together because there just happened to be the right amount of clues to give us a reason to be suspicious of design.

Remember those four elements of Shakespeare's work: depth, clarity, harmony, and elegance? It turns out that when we consider the periodic table, these properties across rows and columns display a *depth* of meaning beyond the obvious weight of elements. Secondly, its properties are clear enough for us to discover them, so it has *clarity*. The jigsaw puzzle of the elements arranged in this way display a *harmony* that sings sweetly to chemists' ears; for example it turns out that elements on the right of the table generally combine with elements on the left of the table. Third, the periodic table of elements is *elegant* in how it operates as a functioning whole. We could not know the characteristics of many of the elements without having other elements to compare them to. In this sense, the table reads like a play in which each element is a character whose personality is only really seen in light of the entire cast of characters.

Although a materialist would say that we are nothing but chance chemical reactions, it seems that our chemistry is not so random after all, but that it was designed with us in mind. Next we will find mathematics and physics also have the properties of ingenious design.

Genius in Mathematics and Physics

The worldview of many scientists would have us believe that the universe is meaningless because it is the result of chance random processes. In mathematics, a language of the universe, do we find the handiwork of genius designer?

In the book *A Meaningful World*, the authors emphasized the *clarity* of mathematics because the ability of the human mind to discern mathematical principles is quite remarkable. The

universe seems to follow certain mathematical laws: the pattern of the multiplication table, musical scales, and the beauty of symmetry. These mathematical laws, however, are not elusive. Since ancient times man has been able describe truths about nature in terms of numbers, counting, and patterns.

We can easily find the *harmony* and *elegance* in the language of nature by looking at mathematics and physics. Math has harmony because, starting with basic arithmetic, you can build all the way up to complex principles like calculus and trigonometry. The elegance of mathematics is really seen when applied to physical phenomena. After many years of experiments, we have discovered that the complicated idea of gravity can be described by one simple equation. This is natural elegance.

The *depth* of mathematics is more difficult to grasp because we are so accustomed to using math. After Newton's time, mathematics seemed to be the end all, be all, of the universe. This was stretched to the point that some worshipped mathematics over God. But soon mathematicians and scientists found that we did not actually have the whole picture. With Einstein's theory of general relativity and quantum mechanics, mathematics grew as a field and continues to grow and refine.

Although mathematics is an abstract idea, it is the language of the physical world. As we have seen, mathematics and the way it describes physical phenomena displays clarity, depth, harmony, and elegance. Math is the language that God invented. And it is one of the ways that He speaks to us of His existence.

Genius in Biology

Since Darwin's day, biology has been infused with the idea that everything from bacteria to human beings has sprung from the result of random, purposeless, natural causes. But nature seems to show the fingerprints of the creative genius of our

creator, God.

Can we see those signs in biology? *A Meaningful World* describes harmony within biology at length. Let's take a look at the cell.

The cell contains many parts: the mitochondria, the nucleus, and DNA. Each of these parts has its particular job to do. And, in addition, each part has a job that is related to all of the other parts of the cell. Think of the cell like a car engine and mitochondria as the carburetor. A carburetor has a specific job in the engine. You cannot talk about what a carburetor is without explaining how it works within the engine. Its job is related to all of the other parts. This is *harmony*, one of our elements of genius.

But what about elegance, depth, and clarity? It seems that these are also apparent in biology. The *elegance* of the cell is how it functions as one intricate machine, like our car engine. The cell is a biological engine; actually it is a very efficient, self-sustaining, self-replicating engine.

What about depth in biology? Let's go back to the cell. Cells get their energy through metabolism. We used to think that this was a simple path with many useless byproducts. Upon closer inspection, one sees that those byproducts have functions within the cell that are necessary for its survival. As we continue to study the cell, we find more and more *depth* to its function.

Finally, how does biology demonstrate *clarity*? Were we meant to find the handiwork of a designer? Most biologists would agree that biology is the study of things that have the appearance of design. If it appears designed perhaps it was, and perhaps we were meant to discover that. The genius behind biology is clear enough that God says that we are without excuse.{3}

Hopefully, you can see that creation is a masterful work of a

divine genius. As the book *A Meaningful World* has shown us, nature bears the hallmark of design that has us, its students, in mind.

Notes

1. Benjamin Wiker and Jonathan Witt, *A Meaningful World: How the Arts and Sciences Reveal the Genies of Nature (Downers Grove, Ill.: InterVarsity Press, 2006).*
2. Hamlet Act 3, Scene 2
3. Romans 1:19,20 (ESV)

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Expelled: No Intelligence Allowed

Dr. Bohlin explores the key points from this documentary from a Christian perspective. He looks at three of the scientists featured on the film who were persecuted for their willingness to consider intelligent design as an option. The film may become dated but the issue of an intelligent creator versus an impersonal, random cause of creation will continue on for many years.

A film was released in April 2008 starring Ben Stein. Titled *EXPELLED: No Intelligence Allowed*,{1} this film documents the dark underside of academia in America and around the world, exposing what happens when someone questions a ruling orthodoxy. In this case, that orthodoxy is Darwinian evolution.

Evolution is routinely trumpeted as the cornerstone of modern biology, indispensable even to modern medical research.

Therefore, if someone questions Darwinian evolution and its reliance on unpredictable mutation and natural selection, you are questioning science itself. At least that's how the gatekeepers of science explain it.

Never mind that over seven hundred PhD trained scientists from around the world have openly signed a statement questioning the ability of Darwinism to account for the complexity of life. You'll find my name among them (www.dissentfromdarwin.org). We are usually dismissed as being misguided, uninformed or religiously motivated. We couldn't possibly have legitimate scientific objections to Darwinian evolution.

Many have refrained from signing that list because of the possible repercussions to their career. But isn't there academic freedom in this country? Doesn't science progress by always questioning and leaving even cherished theories open to reinterpretation? Isn't science all about following the evidence wherever it leads? Well, in theory, yes. Practically, scientists are human, too, and often don't like it when favorite ideas are reexamined.

The film *EXPELLED* explores the reality of what happens when evolutionary orthodoxy is questioned by vulnerable scientists who have yet to secure tenure.

In what follows, I will take a detailed look at just three of the scientists featured in the film. In each case I will reveal greater detail than the film is able to explore and provide resources for you to inquire further. Hopefully this will inspire you to learn more about this important issue and attend the film when it opens.

Let me briefly introduce the three scientists.

Richard Sternberg has a double PhD in evolutionary biology. As editor of a scientific journal, he oversaw the publication of an article promoting Intelligent Design and critical of

evolution. As a result, he was harassed and falsely accused of improper peer review. He has been blacklisted.

Caroline Crocker taught introductory biology and made the mistake of including questions about evolution contained in science journals. She was accused of teaching creationism and eventually lost her job, and has been unable to find work ever since.

Finally, Guillermo Gonzalez, a well published astronomer, has been denied tenure because he supports Intelligent Design. Trust me, you'll find it hard to believe what you read.

Richard von Sternberg

Richard von Sternberg was the managing editor of the biological journal, *The Proceedings of the Biological Society of Washington,* or *PBSW*. Sternberg was employed by the National Institutes of Health in their National Center for Biotechnology Information. He was also a research associate at the Smithsonian Institution's National Museum of Natural History when he served as the journal's managing editor.

Sternberg was considered a rising scientist and theorist. His multiple appointments demonstrated great confidence in his research ability. By 2004 he had accumulated thirty scientific publications in peer-reviewed science journals and books.

His fall from grace was not for something he said or did, but for what he didn't do. As managing editor for *PBSW*, he did not reject outright an article submitted for publication that supported Intelligent Design as "perhaps the most causally adequate explanation" for the explosion of new, complex life forms during the Cambrian period. He "*mistakenly*" sent the paper out for peer review, and went along with reviewers recommendations for publication after extensive revisions were made.

When the article appeared in the journal's August 2004 edition, the journal and Sternberg were assailed for allowing the publication of this heresy. He was accused of not following proper peer-review procedure. If he had, certainly the paper would have been rejected. He was accused of acting as the editor himself when normal procedure was for the paper to be referred to an associate editor. If he had, surely the article would have been rejected. He was accused of choosing reviewers predisposed to support the ID perspective of the article. If he had chosen true scientists, surely they would have rejected the article.

I think you get the point. Any scientist worth their salt would have rejected the article out of hand; Sternberg didn't and therefore was guilty of academic sin. Eventually, Sternberg claimed he was harassed by the Smithsonian where he currently worked. He claimed his office was changed, that he was denied access to museum specimens and collections, that his key was confiscated, and that he was subjected to a hostile work environment, all intended to get him to leave.{2}

The White House Office of Special Counsel was eventually called in to investigate, and although they eventually did not take the case because Sternberg was not actually a Smithsonian employee, they did issue a preliminary report documenting the inaccuracy of the charges against him and the accuracy of Sternberg's accusations.{3} He followed very standard and proper peer-review procedures and even got approval for the article from a member of the society's ruling council. You can bet that the editors of other journals were paying attention.

Caroline Crocker

Caroline Crocker, a PhD with degrees in pharmacology and microbiology, is a research scientist and former lecturer at George Mason University.{4}

As Crocker tells her story, she was an instructor at George Mason University, teaching introductory biology. One lecture was devoted to evolution, and she decided it was important for students to hear not just the evidence favoring evolution but published research that questioned certain elements of evolutionary theory. Crocker had come to this conviction not from any religious motivation but from her own research and convictions as a scientist.

The lecture was received very well with spirited discussion and she considered it a success. Days later she was called to her supervisor's office who accused her of teaching creationism. She denied this and claimed she never even used the word and encouraged her supervisor to look up the lecture herself which was online, as were all her lecture notes. Later she was demoted to only teaching laboratories and eventually dismissed altogether.

Upon getting another teaching job at a local community college, she eventually learned she was targeted for dismissal again and left on her own. Eventually, she applied for other teaching positions and, though initially offered the job at one interview, she was later called and told there was no money for the position. Someone at the National Institutes of Health eventually told her to stop looking because she was blacklisted.{5}

A young lawyer at a local law firm eventually volunteered to take her case *pro bono* [without charge]. His firm agreed with his decision and filed an initial complaint with George Mason University. The complaint was later dropped and the lawyer mysteriously asked to clean out his office. He too has struggled since, trying to find employment.

George Mason denies any wrongdoing, of course, and maintains that academic freedom is honored at their university, but they offer few specifics on just why Crocker was terminated.

Crocker always received high marks from her students and was qualified and effective wherever she went. Suddenly after questioning Darwinism, her scientific career is over. There is another viewpoint, of course. P. Z. Meyer's, for example, defends the decision to let Crocker go at the end of her contract because questioning evolution shows she was incompetent.{6}

Guillermo Gonzalez

Guillermo Gonzalez is a planetary astronomer and associate professor at Iowa State University. Gonzalez has done research and taught at Iowa State for five years and has accumulated an impressive record. He has accumulated over sixty peer-reviewed publications in various science and astronomy journals. In addition, he has presented over twenty papers at scientific conferences, and his work has been featured in such respected publications as *Science*, *Nature,* and *Scientific American*.{7}

Ordinarily, to become a tenured professor at a research institution there are specific requirements that must be met. The Astronomy Department at Iowa State requires a minimum of fifteen research papers. Gonzalez should have felt quite secure since he published nearly five times that many papers. He also co-authored an astronomy textbook through Cambridge University Press that he and others used at Iowa State. But his initial application for tenure was denied. The faculty senate indicated his application was denied because he didn't meet certain necessary requirements.

However, many suspected he was denied tenure for his support for Intelligent Design through his popular book and film *The Privileged Planet*. While having nothing to do with biological evolution, Gonzalez and his co-author Jay Richards maintain that our earth is not only uniquely suited for complex life but is also amazingly well-suited for intelligent life to observe the cosmos. This dual purpose seems to suggest design.

In denying Gonzalez's initial appeal, the university president specifically stated the denial had nothing to do with Intelligent Design. Gonzalez further appealed to the University Board of Regents. In the meantime, the Discovery Institute obtained internal university emails clearly indicating that the sole reason Gonzalez was denied tenure was due to his support of ID, despite the university's public denials. These emails also indicated that some of these university professors knew what they were doing was wrong and conspired to keep their deliberations secret.

Amazingly, the ISU Board of Regents refused to see this information or provide Gonzalez an opportunity to defend himself before they voted. Not surprisingly, Gonzalez's final appeal was denied in early February 2008.

Be Prepared for *EXPELLED*

Probe Ministries highly recommends the film *EXPELLED: No Intelligence Allowed* as it highlights the harassment and persecution of PhD scientists at the highest levels of academia and exposes signs of ugly things to come in the culture at large.{8} Usually the scientific establishment tries to cover up these activities, but when exposed, they usually resort to saying that this level of harassment is deserved since a fundamental tenet of science is being challenged, and therefore these scientists don't deserve their positions. Academic freedom apparently only applies to disagreeing with details about evolution but not evolution itself.

These three stories are just the tip of the iceberg. These scenes are being played out around the world, and publicity is an important step in seeing justice done.

Now, let's be clear about something. Just because a few scientists and scientific institutions have behaved badly on behalf of evolutionary orthodoxy doesn't mean that evolution

itself is suspect. But as I stated earlier, over seven hundred scientists have now signed a statement declaring their skepticism about Darwinian evolution as a comprehensive explanation of the complexity of life and the list is growing. The scientific underpinnings of Darwinian evolution have been unraveling for over fifty years. I've been personally involved in this revolution for over thirty years, long before Intelligent Design was even a recognized movement.

The *EXPELLED* documentary will certainly raise the visibility of this debate even further in the general public and hopefully within the church. But I have been quite surprised how many in the church are really unfamiliar with the Intelligent Design movement and are even suspicious of the motives and beliefs of those involved.

In that light, Probe Ministries and EvanTell unveiled last summer, before *EXPELLED* was announced, a small group DVD based curriculum about the Intelligent Design movement, called *Redeeming Darwin*. Check out this material at Redeeming Darwin.{9} There are small group leader kits, self-study kits, and very inexpensive outreach kits meant to be handed out to people wanting to see for themselves. We are thrilled to have Josh McDowell's endorsement, and our curriculum is being recommended to church youth leaders by those promoting *EXPELLED*.

This spring and through the summer the rhetoric will be escalating, and many just won't understand what all the fuss is about. First, make plans to attend *EXPELLED* in a few weeks and take some skeptical friends with you. Then give your friends a copy of our *Discovering the Designer* DVD and invite them to join your small group in studying Redeeming Darwin to help answer the inevitable questions about ID and evolution. In addition, Redeeming Darwin will show you how to take a conversation about ID and evolution and use it to share the gospel. That's how you can "redeem Darwin."

Notes

1. streamingmoviesright.com/us/movie/expelled-no-intelligence-allowed/.
2. www.rsternberg.net/ (last accessed 2/12/08).
3. www.rsternberg.net/OSC_ltr.htm (last accessed 2/12/08). Sternberg used well-qualified reviewers for this paper and has steadfastly refused to identify them, which is normal protocol despite repeated attempts by evolutionists to find out who they were. None of them were "creationists" as has been suggested.
4. www.washingtonpost.com/wp-dyn/content/article/2006/02/03/AR2006020300822.html (last accessed 5/18/20).
5. www.christianpost.com/news/expelled-exposes-plight-of-darwin-doubters-30277 (last accessed 5/18/20).
6. scienceblogs.com/pharyngula/2006/02/05/heck-yeahcaroline-crocker-shou (last accessed 5/18/20). Also be advised that PZ Meyers is not shy about using vulgar language.
7. To view a full list of online and print articles and to view Gonzalez's academic record, visit the Discovery Institute's section on Gonzalez at www.discovery.org/a/2939 (last accessed 5/18/20). See also post-darwinist.blogspot.com
8. streamingmoviesright.com/us/movie/expelled-no-intelligence-allowed/.
9. Also see www.probe.org and streamingmoviesright.com/us/movie/expelled-no-intelligence-allowed/.

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Life on Another Planet-Just Around the Corner?

In late April [2007], a group of European scientists made an announcement that created quite a stir in the mainstream media. For the first time, a planet which could potentially support life has been discovered outside of our solar system. One newspaper headline read "Scientists find potentially habitable planet—Discovery a big step in search for life in universe"{1}. Such an announcement raises important questions:

> *Is this newly discovered planet really a likely host for life?*
>
> *Does this discovery imply that the earth is not unique is its ability to support complex life as promoted by most proponents of Intelligent Design?*
>
> *If this planet does (or did) host life, would that detract from or support our belief in a transcendent creator?*

By considering these questions, we realize that this discovery provides more support for the theory of Intelligent Design than for Darwinism.

A Potentially Habitable Planet?

This planet orbits the red dwarf star, Gliese 581 and has been designated as 581 c. It cannot be seen from earth. It was detected by examining the effect its gravity had on the light emanating from its star. Based on that data, these scientists projected that this planet may have temperatures between 32 and 104 degrees. With this temperature range and at 1.5 to 2 times the diameter of earth, it might be able to hold liquid

water. In addition, its red dwarf star appears to be quite old and stable, suggesting that its planets may have been around for billions of years. Thus, some of the characteristics necessary for a naturalistic explanation of life may be associated with this planet.

However, a habitable planet requires much more than "just add water"{2} plus time. Further analysis of Gliese 581 c indicates that it probably has many characteristics unfavorable to life. Examples include:

> *It does not rotate around its axis, meaning one side is always in the sun while the other side remains in constant darkness. Some scientists are now suggesting that its surface temperatures will be much hotter than the original estimates.*

> *Since it orbits a red star with lower levels of electromagnetic radiation than our sun, this greatly limits the effectiveness of photosynthetic reactions.*

Uniqueness of Earth

On the Reasons To Believe Web site{3}, astrophysicist Hugh Ross has posted several articles identifying characteristics of our galaxy and earth that are necessary for life. In one paper{4}, he estimates the probability of the universe having a planet like earth exhibiting all 322 characteristics identified as critical for life. A high level analysis of the list in his paper indicates that Gliese 581 c may satisfy 112 of these characteristics (primarily because it exists in the same universe and galaxy as earth). Gliese 581 c is the first out of 220 planets identified outside our solar system that exists in the habitable temperature zone.{5} That leaves at least 210 questions unanswered such as:

> *Does it have a large enough moon to create tidal patterns?*

> *Does it have just the right size, protecting planets to*

reduce the number of asteroid hits?

Does it have the right thickness of crust?

Does it have the right atmosphere?

Does it have the right mixture of minerals?

Using the probability estimates for each remaining characteristic, a conservative estimate for the probability that this planet could support life is 1 in 10^{199} (1 with 199 zeros after it). Please remember that this extremely low probability (essentially zero) is simply to have a planet that is habitable. It does not include the similarly minuscule probability of even the simplest life forms arising from inorganic matter. As renowned astrophysicist Stephen Hawking stated, "I expect there will be planets like Earth, but whether they have life is another question. We haven't been visited by little green men yet."{6} Since we can be virtually certain that this planet does not support any life, we may not want to spend the effort to travel to it—especially, when with current technology, it would take over 400,000 years to reach this planet.

Life on another planet—What would it mean?

Would finding life on another planet be a victory for Darwinism and proponents of naturalistic evolution as the sole force behind life as we know it? Quite the contrary! Given the extremely small probability of finding another habitable planet in our universe, multiplied by the equally small probability of life generating spontaneously on a habitable planet, finding life on another planet would have to be considered a miracle.

In other words, finding even the simplest life forms on

another planet would greatly increase the scientific evidence for intelligent design. Only a transcendent intelligent designer would be able to overcome those long odds to create life in multiple places in the universe. The theological implications of such a discovery would depend upon the nature of the life forms and will be left for future ponderings.

Bottom Line

The discovery of Gliese 581 c is an interesting event in astronomy which, if anything, further supports our view that the earth is very likely unique in its ability to support complex life. If life is ever discovered on another planet, it will further strengthen the position of intelligent design as the best theory to explain the evidence.

Notes

1. *Dallas Morning News*, April 24, 2007.

2. Jay Richards, Acton Institute, formerly with The Discovery Institute, the institutional home of the Intelligent Design movement.

3. www.reasons.org

4. Hugh Ross, "Probability for Life on Earth, 2004 April Update", Reasons to Believe, 2004.

5. It is interesting to note that Ross's paper allocated a probability of 1 in 1,000 to that same factor, which is the same order of magnitude as 1 out of 220. So if we used 1 out of 220 instead, the calculated probability would be less than 1 in 10^{198}.

6. *Dallas Morning News*, April 24, 2007.

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Stem Cells for Everyone: A Breakthrough?

As far as dramas go, the stem cell saga contains all the elements of a juicy prime-time soap opera. The excitement, the promises, the characters, the politics, the lies, the scandal, the moneythe only thing missing is sex, but thats the point, isnt it?

On November 20, 2007, the journals *Science* and *Cell* announced a truly major discovery. It was a way to convert human skin cells taken from a simple skin biopsy into *stem cells* that behave like an *embryonic stem cell*but the byproduct is not an embryo and can in no way become one.{1} This has the effect, say many, of sidestepping the ethically troublesome practice of creating then destroying human embryos in order to treat diseases.

This new method is efficient. One biopsy can produce 20 stem cell lines, and can be taken from the patient himself, eliminating the risks associated with tissue rejection. We hear about stem cell breakthroughs all the time; how is this one different? Is this method ethical? Will it save as many lives as embryonic stem cells promise to? Is this the end of the stem cell controversy?

The Saga

Stem cells are simply cells that make other cells. Their job is to be a cell factory. By analogy, think of a rose. From the stem of the rose grows leaves, the flower, and thorns. The thorns dont produce flowers, the leaves dont produce thorns, and the flower doesnt produce leaves, but the stem does. The stem is versatile; it can make many parts of the plant. Stem

cells operate the same way. Some stem cells are more versatile than others. In other words, some stem cells can make many types of cells and others can only make one type of cell.

The history of embryonic stem cells dates back to the 1950s when two scientists isolated a teratoma from a mouse. A teratoma is a tumor that is composed of various types of cells from hair cells to eye cells to teeth to nails, so the scientists aptly named it a *teratoma*, or monster. When investigating this tumor, the scientists found that the stem cells that produced this array of cell types had very similar properties of embryonic cells. Thus began the investigation into embryonic stem cells.{2}

Before the term stem cells had become popular, bone marrow transplants had been used to treat patients with leukemia. Whenever a patient receives a bone marrow transplant from a donor, they are really receiving a type of stem cell therapy. At this point, scientists could only use bone marrow stem cells for very specific cell replacement. These stem cells were not very versatileat least that was the theory at the time. Since then, bone marrow stem cells have been found to be quite versatile, and can be coaxed into becoming a variety of cells. Scientists have now found a variety of adult stem cells throughout the body and have been using them in humans to cure or alleviate a number of diseases or conditions (see www.stemcellresearch.org for a complete list).

Another breakthrough with stem cells arose from tissues such as umbilical cord blood, placental tissue, amniotic fluid and even menstrual bloodall obtained without harming the life of the baby at any stage of development. Each of these stem cells are a little more versatile than the adult stem cells, meaning that they can become two or three different types of cells, and in many cases the donor/recipient need not be an exact match. The National Cord Blood Program is just one group that allows parents to put their babys umbilical cord blood in a bank so that he or she could use it for therapy sometime in

the future, or they can donate the umbilical cord for others to use. See www.nationalcordbloodprogram.org for a list of patient success stories.{3}

If these are *adult* stem cells, then what are *embryonic* stem cells? These are cells removed from the eight-day-old embryo. When these cells are removed, the embryo dies. These cells produce almost all of the cells in the human body, and therefore are the most versatile stem cells. You may have heard of these cells as being pluripotent. That simply means that they are very versatile. Some scientists believed that embryonic stem cells (ESC) research was where time, money and resources should go since we know that these cells have the potential to become any cell type.

Numerous success stories of treatments with adult stem cells have been under-reported by the media, while the supposedly cure-all ESC were hypedeven though they have shown no actual success in humans. Ironically, adult stem cells have been saving patients lives for years (bone marrow transplants), while ESC scientists have yet to control the growth rate of the ESC. In what shouldnt be a surprise to anyone, ESC tended to form grotesque tumors (teratomas) composed of various cells found in the body.

Debate over the ethics of using embryos became heated within the political arena. The individuality and dignity of the embryo came into question. Scientists wanted unfettered research{4} so that all options can be explored to cure diseases, while others considered the embryo a very vulnerable life that has the right to be protected from experimentation. Both sides claimed to be arguing for the good of humanity.

These debates, however, have taken a slightly different turn with the recent discovery of converting skin cells into pluripotent stem cells mentioned above.

Skin Cells

As mentioned, now scientists have isolated human stem cells that are as versatile as embryonic stem cells, but no embryos were used to obtain these stem cells. While more studies are needed to confirm that these cells act like ESCs in the human body, they behave just like ESCs in the lab.

There are a few concerns with this procedure. One of the biggest concerns is the way these stem cells are made. Both research groups had to use a type of virus to insert the right code into the skin cells to tell it to become a stem cell. This virus may be harmful to humans. However, both scientists are researching safer methods for coaxing the skin cells into stem cells.{5}

So is this method ethical? I strongly believe the answer is yes. As Leon Kass, former head of the Presidents Council on Bioethics, stated in a *National Review Online* symposium, Reprogramming of human somatic cells to pluripotency is an enormously significant achievement, one that boosters of medical progress and defenders of human dignity can celebrate without qualification.{6} Sanctity of life advocates can celebrate because no embryos are created or destroyed for research.

Both scientists who first published on this new discovery, Dr. James A. Thomson from the U.S. and Dr. Shinya Yamanaka from Japan, said that this research could not have been done without the knowledge that we already had from embryonic stem cells. And Thomson, who was one of the first scientists to remove a stem cell from a human embryo,{7} has specifically stated that embryonic stem cell research should continue.{8} We must keep this point in mind, but we must also remember that, contrary to what some in the scientific community are saying, both scientists had more than just economic reservations about using embryos in their research:

> *Thomson: If human embryonic stem cell research does not make you at least a little bit uncomfortable, you have not thought about it enoughI thought long and hard about whether I would do it.{9}*

> *Yamanaka: When I saw the embryos, I suddenly realized there was such a small difference between it and my daughtersI thought, we cant keep destroying embryos for our research. There must be another way.{10}*

Is This Match Point?

Most people agree that this changes the political and scientific culture of the stem cell debate. Surprisingly, some major players have come around.

Jose Cibelli, research scientist whose successful primate cloning was overshadowed by the skin cell announcement states, If their method is as good as the oocyte (the cell that forms a human egg)we will be no longer in need of the oocytes, and the whole field is going to completely change. People working on ethics will have to find something new to worry about.{11} Even Ian Wilmut, the scientist famous for creating Dolly the Sheep [see Probe article], decided to abandon cloning and work with reprogramming cells instead. As the Britains *Telegraph* reports, The scientist who created Dolly the sheep, a breakthrough that provoked headlines around the world a decade ago, is to abandon the cloning technique he pioneered to create her. I decided a few weeks ago not to pursue nuclear transfer, Prof Wilmut said.{12}

Several of the participants of *National Review Online* Symposium agree that this removes the ethical concerns from researching pluripotent cells, and, pragmatically, this seems to be significantly more efficient than cloning embryos to remove stem cells. Case closed? Not quite.

Not all agree that this is the end of using embryos to extract stem cells. As Wesley Smith, bioethicist, vocal ESC critic and Discovery Institute fellow, points out on his blog, www.bioethics.com:

> *If anyone thought that the pro-human cloners would fold up their tents and steal away after the news was released that patient-specific, pluripotent stem cells had been derived from normal skin cells, they just dont understand how fervently some scientists and their camp followers want to clone human lifeand how hopeful some are that the stem cell issue can be the vehicle that wins the culture war.{13}*

Recall that we are dealing with scientists careers and, for the most part, scientists with a utilitarian worldview. A scientist whose worldview is dictated by whatever is for the greater good and has built his entire career and reputation around embryonic stem cell research is not going to readily abandon it. To see the interplay of both career and worldview choices, Dr. Hans Keirstead, neurobiologist and stem cell researcher at the University of California-Irvine, had this to say in an interview for the *Arizona Daily Star*:

> *I do think a great deal of this work could be done with the skin-cell derived stem cells. But wed have to start completely over, from scratch, and we are not going to slow down to do that, not at this point.*

It is my personal feeling its a very ethical decision to use this tissue [Embryonic Stem Cells] to end human suffering, to better human life, than to destroy it.{14}

Conclusion:

As Christians, we operate within an ethical framework dictated by Gods word. Although the Bible does not mention stem cells, it *does* make clear that we are made in Gods image (Genesis

1:26, 27), that God knew us and knit us together within our mothers womb (Psalm 139: 13-16), and how God called prophets before they were even born (Isaiah 49:1; Jeremiah 1:4-5). God values the life of the unborn. We do not always have the privilege of seeing ethical decisions vindicated in our lifetime, but we can be confident that God is sovereign over all things.

Notes:

1. Takahashi, Kazutoshi, et al, Cell 131, 861-872, November 30, 2007; Yu, Junying, et al Sciencexpress, www.sciencexpress.org, (fee/registration to access full article) November 20, 2007.
2. From teratocarcinomas to embryonic stem cells and beyond: a history of embryonic stem cell research Solter, *Davor Nature Reviews* 326, vol. 7, April 2006.
3. See list of references from Family Research Council, www.frc.org/get.cfm?i=IS06H01. See also www.stemcellresearch.org/facts/asc-refs.pdf for a sampling of peer reviewed research articles.
4. This case history [of ESC research] again reinforces the old truism that unfettered basic research driven only by scientific curiosity is usually the best way to discover things of enormous practical value Solter, *Davor Nature Reviews* 326, vol. 7, April 2006.
5. Two Major Studies Show: Human Pluripotent Stem Cells without Cloning or Destroying Embryo analysis by Maureen Condic, Ph.D. from www.stemcellresearch.org/statement/pptalkingpointsweb.pdf.
6. National Review Online NRO Symposium, nationalreview.com, Brave New Future.
7. Thompson, James A. et al, *Science* 282, 1998.
8. Standing in the Way of Stem Cell Research by Alan I. Leshner and James A. Thomson *Washington Post*, 12-0-07, pg. A17.
9. Man Who Helped Start the Stem Cell War May End It by Gina

Kolata, *New York Times,* Nov. 22, 2007.
10. Risk Taking Is in His Genes by Martin Fackler, *New York Times*, 12-11-07.
11. Vogel, Gretchen, and Holden, Constance , Field Leaps Forward with New Stem Cell Advances *Science* 318, 23 November 2007, p. 1224.
12. Dolly creator Prof Ian Wilmut shuns cloning by Roger Highfield, *Telegraph* 11/16/07, www.telegraph.co.uk.
13. 'Lead Into Gold:' Stem Cell Counter-Attack by Wesley Smith. Posting for November 27, 2007 www.bioethics.com.
14. Human embryonic stem-cell work must go on, says researcher by Carla McClain, *Arizona Daily Star*, 11-28-2007.

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Redeeming Darwin: The Intelligent Design Controversy

Dr. Bohlin, as a Christian scientist, looks at the unwarranted opposition to intelligent design and sees a group of neo-Darwinists struggling to maintain the orthodoxy of their position as the evidence stacks up against them. In this article, he summarizes what's happening in academia and the lack of sound scientific basis for their attacks agains intelligent design proponents.

What's All the Fuss?

There's a strange phenomenon popping up around the country. Scientists are stepping out of their laboratories and speaking to the media about something that has them quite concerned. It's not the threat of a new flu pandemic; it's not the threat of nuclear weapons proliferation, or even the possible threat of global warming. It's something called Intelligent Design.

In this article we will explore what has so many people upset about Intelligent Design. To do that we will need to establish just what ID is and what the major complaints are about evolution that may be answered by a theory like ID. We will take a closer look at some of the most common examples of ID from astronomy and biology. Then we will take a closer look at the cultural confusion and reaction to this rather simple hypothesis.

So what are scientists and journalists saying? A *Baltimore Sun* reporter put it this way: "In the border war between science and faith, the doctrine of 'intelligent design' is a sly subterfuge—a marzipan confection of an idea presented in the shape of something more substantial."{1}

In other words, Intelligent Design is little more than a sugar cookie promising more than it can deliver.

A science journal editorial said this: "The attack on Darwinism by supporters of Intelligent Design is a straightforward attack on science itself. Intelligent Design is not science because it proposes a supernatural designer as explanation for evolutionary change."{2}

Uh-oh! Science and the supernatural indeed rarely go well together, at least over the last 150 years. But is that what ID actually says? We'll explore that a little later but for now let's find out what's really at stake in this debate over evolution and Intelligent Design.

One college textbook said this: “Evolution is a scientific fact. That is, the descent of all species, with modification, from common ancestors is a hypothesis that in the last 150 years or so has been supported by so much evidence, and has so successfully resisted all challenges, that it has become a fact.”{3}

Let’s look at a few reasons why some scientists are skeptical of the confidence shown by so many other scientists about Darwinian evolution.{4}

Is There Scientific Proof for Evolution?

Evolution is always portrayed as a slow gradual process. Organisms are portrayed as so well adapted to their environment that they could only afford to change very slowly. But one of the most dramatic events in earth history is something called the Cambrian explosion. The Cambrian is a period of earth history that many earth scientists and paleontologists estimate to have begun over 540 million years ago.{5}

Instead of slow steady evolutionary change, we see a sudden burst of change. The subtitle to a *Time* magazine article put it this way: “New discoveries show that life as we know it began in an amazing biological frenzy that changed the planet almost overnight.”{6}

For most of the previous 3 billion years of earth history only single-celled organisms were found. “For billions of years, simple creatures like plankton, bacteria and algae ruled the earth. Then, suddenly, life got very complicated.”{7}

So the appearance of most of the major categories of animals happened in a very short period of time, some say less than five million years, when it should have taken tens and maybe even hundreds of millions of years. One geologist who helped pinpoint the very short time frame of the Cambrian explosion

expressed this challenge: “We now know how fast fast is. And what I like to ask my biologist friends is, how fast can evolution get before they start feeling uncomfortable?”{8}

The evolutionary process that biologists study in nature today is far slower than what is found in the Cambrian explosion. This is evidence that doesn’t fit the theory. Yet the Cambrian explosion is left out of most textbooks.

Another problem for evolution is its dependence on mutations to bring about major changes in organisms. But for all our studies of mutations we haven’t seen much change. The late French evolutionist, Pierre Paul Grasse, said, “What is the use of their unceasing mutations? . . . a swing to the right, a swing to the left, but no final evolutionary effect.”{9}

Mutations only produce alternate forms of what already exists. New functions don’t suddenly arise by mutations.

Evidence for Intelligent Design, Part One

Intelligent Design is an intellectual movement that challenges Darwinism and its dependence on random/chaotic processes coupled with selection. If people are not alerted to the fact that Darwinism is less than sufficient, then other theories are wasting their time. They will never get a fair hearing.

Intelligent Design is also a scientific research program that investigates the effects of intelligent causes, which are effects of high specificity coupled with extremely small probabilities.

Now that was a mouthful. What do I mean by high specificity coupled with small probability? Think of the lottery. Someone always wins the lottery despite the long odds. So improbable things do indeed happen.

But let’s make this specific. Let’s say your sister wins the lottery. Now that is someone you specifically know; but again

someone always wins the lottery so the fact that it's your sister doesn't warrant any special attention.

Now let's make things a bit *less* probable and much *more* specific. Let's say your sister wins the lottery not once but three weeks in a row. Now what are you thinking? Like most people you're thinking something is not right. The same person doesn't win the lottery three weeks in a row.

You suspect cheating. You suspect Intelligent Design. Someone with a clever mind is somehow manipulating the lottery.

In astronomy, it has been assumed for several decades that our earth is not likely to be very special. As huge as the universe is, with billions of galaxies, each with billions of stars, surely there are thousands if not millions of planets like ours that are suitable for life.

But lately, more and more planetary astronomers, astrophysicists, cosmologists, and philosophers are realizing that earth is actually quite unique. The recipe for earth is more than just a planet plus mild temperatures plus water.

Our earth is 93,000,000 miles from the sun. Five percent closer and we would be a hothouse like Venus with no chance for life. If we were twenty percent farther away, we would be a frozen wasteland like Mars. We're just right. Liquid water is necessary for life and our earth has an abundance all year long.

Evidence for Intelligent Design, Part Two

It's really quite amazing to realize that biologists universally recognize the design of living things. Oxford biologist and atheist Richard Dawkins said on page one of his book *The Blind Watchmaker*: "Biology is the study of complicated things that give the appearance of having been designed for a purpose."{10}

Now notice he said, “give the appearance of having been designed for a purpose.” Living things certainly look designed, but according to Dawkins, it’s an illusion. He spends the rest of his book trying to show how mutation and natural selection, the “blind watchmaker,” has created this illusion.

But he does admit things look designed. Well, if it looks designed, maybe it is.

Michael Behe introduced the concept of irreducible complexity in his book *Darwin’s Black Box*. Something is irreducibly complex if it is composed of two or more *necessary* parts. Remove one part and function is not just impaired but destroyed. His well-known example is a mousetrap.

A mousetrap is composed of five integral parts: the platform to which everything is attached, the hammer which does the dirty work, the spring which provides the force, the holding bar to keep the hammer in tension, and finally the catch to keep the holding bar in tenuous position. Remove any one of these parts and the mousetrap is not just less efficient; it ceases to function at all. All five parts are necessary. You can’t build a mousetrap by natural selection by adding one piece at a time because it has no function to select until all five parts are together.

Behe showed that the cell, Darwin’s “Black Box,” is filled with irreducibly complex molecular machines that could not be built by natural selection. In Darwin’s time, scientists could only see the cell under very low power microscopes that told little about what was going on inside. It was a black box. Over the last fifty to sixty years, the cell has been revealing its secrets. We have discovered a maze of complexity and information.

If it looks designed, maybe it is!

ID, Science, Education, and Creation

The legitimacy of Intelligent Design as science was at the heart of a recent federal court case, pitting a group of parents and students against the school board from Dover, Pennsylvania. The Dover School Board adopted a policy that mandated a statement be read before all biology classes, indicating that evolution was a theory that needed critical evaluation and that intelligent design was a rival theory that students could seek information about from the library.

Judge Jones not only struck down the policy as unconstitutional, he went further to declare that ID is not science and was motivated purely by religion since it was just a repackaged creationism. His written opinion was scathing. This of course delighted proponents of evolution and many have declared that ID now is dead.

Judge Jones claimed that ID simply is not science and is religiously motivated; therefore it should not even be mentioned in a high school science classroom.

The first question that should occur to you is, Why does a federal judge with no training in science use his courtroom as a means of determining what is and is not science? This problem has been referred to as the demarcation problem. How do we demarcate science from non-science? People putting down ID often refer to it as "pseudo-science" or simply "unscientific." But philosopher of science Larry Laudan writes, "If we would stand up and be counted on the side of reason, we ought to drop terms like 'pseudo-science' and 'unscientific' from our vocabulary; they are just hollow phrases which do only emotive work for us."{11}

Judge Jones claims that ID has been refuted by mainstream scientists. He cites the work of Kenneth Miller in particular. This is rather strange indeed. For ID to be refuted means that it has been tested by science and found wanting. If it is

testable scientifically to the degree that it can be refuted, then it is science after all. This logical contradiction does not seem to occur to Judge Jones.

ID uses empirical data to demonstrate the plausibility of a design inference. It's as scientific as Darwinism.

Notes

1. Baltimore *Sun*, August 13, 2006.
2. *Cell*, January 13, 2006.
3. Douglas Futuyma, *Evolution* (Sinauer Assoc., Sunderland, Mass., 2005), xv.
4. To learn more about Intelligent Design and Evolution visit our website, probe.org, or call us at 1-800-899-PROB, for information about our new DVD based small group curriculum, "Redeeming Darwin: The Intelligent Design Controversy." Once again we have teemed up with EvanTell to produce a small group curriculum designed to inform the church about Intelligent Design and how to use a conversation about this controversial topic to share the gospel.
5. Meyer, Stephen C., Marcus Ross, Paul Nelson and Paul Chien, 2003, *The Cambrian explosion: Biology's Big Bang in Darwinism, Design, and Public Education*, John Angus Campbell and Stephen C. Meyer, eds., East Lansing, Michigan: Michigan State University Press, pp. 323-402.
6. *Time*, December 4, 1995 (cover).
7. Ibid., 67.
8. Samuel Bowring, *Time*, 1995, 70.
9. Pierre-Paul Grassé quoted in *The Natural Limits to Biological Change*, Lane P. Lester and Raymond G. Bohlin, Richardson, Texas: Probe Books 1984., p. 88.
10. Dawkins, Richard, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe without Design*, Nerw York, New York: Norton, 1986.
11. Larry Laudan, (1983) "The demise of the demarcation problem," in Michael Ruse (ed.) *But Is It Science?*, Amherst, Prometheus, 337-350.

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Darwinism and Truth

Darwinism and the Fact/Value Split

Nancy Pearcey writes in her book *Total Truth* that Christians must counter the effects of our secular culture and mindset by developing a consistent and comprehensive biblical worldview.{1} In the middle chapters of her book, she demonstrates how Christians should do this with the question of origins.

Earlier in her book she notes that our society has divided truth into two categories. She calls this the sacred /secular split or the private/public split or the fact/value split. They are different ways of saying the same thing. Religion and moral values are subjective and shoved into the upper story where private opinions and values reside. And in the lower story are hard, verifiable facts and scientific knowledge.

There is another key point to this split. The two spheres should not intersect. In other words, it would be bad manners and a violation of logic to allow your personal and private choices and values to intersect with your public life. As the popular saying goes, that would be "shoving your religion down someone's throat."

Ray Bohlin's review of Pearcey's book provides further explanation for how this idea plays out in society.{2}

Darwinists accept this split and have even tried to convince Christians that in this way religion is safe from the claims and conclusions of Darwinian evolution. But a brief glance at

the best seller list shows that evolutionists regularly invade this upper story of values with their harsh criticism.

In *The God Delusion*, Richard Dawkins says that religious belief is psychotic, and arguments for the existence of God are nonsense. Sam Harris echoes that sentiment in his bestselling book, *Letter to a Christian Nation*. Daniel Dennett, in his book *Breaking the Spell*, believes that religion must be subjected to scientific evaluation.

Nancy Pearcey shows that Darwinism leads to naturalism. And this is a naturalistic view of knowledge where "theological dogmas and philosophical absolutes were at worst totally fraudulent and at best merely symbolic of deep human aspirations."{3} In other words, if Darwinian evolution is true, then religion and philosophical absolutes are not true. Truth, honesty, integrity, morality are not true but actually fraudulent concepts and ideas. If we hold to them at all, they were merely symbolic but not really true in any sense.

Daniel Dennett, in his book *Darwin's Dangerous Idea,* says that Darwinism is a "universal acid" which is his allusion to a children's riddle about an acid that is so corrosive that it eats through everything including the flask that holds it. In other words, Darwinism is too corrosive to be contained. It eats through every academic field of study and destroys ethics, morality, truth, and absolutes. When it is finished, Darwinism "eats through just about every traditional concept and leaves in its wake a revolutionized world-view."{4}

Darwinism and Naturalism

Pearcey writes that "Darwinism functions as the scientific support for an overarching naturalistic worldview."{5} Today scientists usually assume that scientific investigation requires naturalism. But that was not always the case.

When the scientific revolution began (and for the next three

hundred years), science and Christianity were considered to be compatible with one another. In fact, most scientists had some form of Christian faith, and they perceived the world of diversity and complexity through a theistic framework. Pearcey points out that Copernicus, Galileo, Kepler, Newton, and others sought to understand the world and use their gifts to honor God and serve humanity.

By the nineteenth century, secular trends began to change their perspective. This culminated with the publication of *The Origin of Species* by Charles Darwin. His theory of evolution provided the needed foundation for naturalism to explain the world without God. From that point on, social commentators began to talk about the "war between science and religion."

By the twentieth century, G. K. Chesterton was warning that Darwinian evolution and naturalism was becoming the dominant "creed" in education and the other public arenas of Western culture. He said it "began with Evolution and has ended in Eugenics." Ultimately, it "is really our established Church."{6}

Today, it is easy to see how scientists believe that naturalism and science are essentially the same thing. They often slip from physics to metaphysics. In other words, they leave the boundaries of science and begin to make philosophical statements about the nature of the universe. While scientists can tell us how the universe operates, they cannot tell us if there is anything outside of the universe.

But that didn't stop astronomer Carl Sagan in the PBS program "Cosmos." The first words you hear from him are: "The Cosmos is all that is or ever was or ever will be."{7} In other words, the universe (or Cosmos) is all there is: no God, no heaven.

Now, Carl Sagan's comment is not a scientific statement. It's a philosophical statement. And it set the ground rules for the

rest of the program. Nature is all there is. In many ways it sounds like a creed. It is as if Carl Sagan was attempting to modify the *Gloria Patri*: "As it was in the beginning, is now, and ever will be."

Do those ideas end up in our children's books? Nancy Pearcey tells the story of picking up a science book for her son, *The Bears' Nature Guide*, which featured the Berenstain Bears. The Bear family goes on a nature walk. Turn a few pages in the book and you will see a sunrise with these words in capital letters: "Nature . . . is all that IS, or WAS, or EVER WILL BE!"{8} Sounds like a heavy dose of Carl Sagan's naturalism packaged for young children courtesy of the Berenstain Bears.

If you are looking for a resource to counter this Darwinian and naturalistic indoctrination, let me recommend Probe's DVD series on "Redeeming Darwin." It will give you the intellectual ammunition you need.

In *Total Truth*, Nancy Pearcey discusses many of the so-called "icons of evolution" that Jonathan Wells documents in his book by that title.{9} These examples show up in nearly every high school and college biology textbook. But these examples which are used to "prove" evolution are either fraudulent or fail to prove evolution.

Let's start with a piece of evidence for evolution that was found where Charles Darwin first got his inspiration for his theory of evolution: the Galapagos Islands. The islands can be found off the coast of South America. On those islands are finches, which have come to be known as Darwin's finches. It's hard to find a biology textbook that doesn't tell the story of these finches.

One study found that during a period of drought, the average beak size of these finches increased slightly. The reason cited for this is that during these dry periods, the most available seeds are larger and tougher to crack than at other

times. So birds with larger beaks do better in conditions of drought.

I spent an afternoon looking at specimens of Darwin's finches when I was in graduate school at Yale University and should point out that the changes in beak thickness is minimal and thus measured in tens of millimeters (thickness of a thumbnail). Moreover, the changes seem to be cyclical. When the rains returns, the original size seeds appear and the average beak size returns to normal.

This is not evolution. It is an interesting cyclical pattern in natural history. But it's not evolution. Nevertheless, one science writer enthusiastically proclaimed that this is evolution happening "before [our] very eyes."{10}

If this is evolution occurring then we should be seeing macro changes that would allow these finches to evolve into another species. But this cyclical pattern shows just the opposite. These minor changes in beak size and thickness actually allow them to remain finches under changing environmental conditions. It does not show them evolving into another species.

So what has been the response from the scientific establishment? The National Academy of Sciences put out a booklet on evolution for teachers. The booklet did not even mention that the average beak size returned to normal after drought. Instead the booklet makes unwarranted speculation about what might happen if these changes were to continue indefinitely for a few hundred years. "If droughts occur about once every ten years on the islands, a new species of finch might arise in only 200 years."{11}

Is this an accurate conclusion based upon the facts of natural history? It seems to be a clear example of misleading teachers (who in turn will unintentionally mislead their students). The booklet teaches that the beak sizes in Darwin's finches are

directional and evolutionary rather than cyclical and reversible.

A column in the *Wall Street Journal* made this point. "When our leading scientists have to resort to the sort of distortion that would land a stock promoter in jail," Phillip Johnson said, "you know they are in trouble."{12}

Ray Bohlin's review of Jonathan Well's book, *Icons of Evolution*, provides further detail on some of these examples.{13}

Peppered Moths

One example that appears in most biology textbooks is the story of the peppered moths in England. The moths appear in two forms: dark gray and light gray. During the Industrial Revolution, the factories produced pollution that darkened the tree trunks. This made it easier for birds to catch and eat the lighter colored moths. Later, when pollution was cleaned up, the tree trunks were lighter and it made it easier for the birds to catch the darker colored moths.

On its face, all this example proves is that the ratio of dark colored and light colored moths changed over time. In many ways, this is nothing more than another example of cyclical changes that we just discussed concerning Darwin's finches.

But there is much more to the story. Peppered moths don't actually perch on tree trunks. Actually they are quite torpid during the daylight hours and rest in the upper canopy of the trees.

If you have ever been in a biology class you have seen pictures of these moths on the tree trunks. You might even have seen a film that was made decades ago of birds landing on the trees and catching moths. It turns out that in order to create the photos and the film scientists put the moths in a

freezer to immobilize them and then glued them to the tree trunks.

How did this example become such an enduring icon of evolution? Scientists accepted it for many years uncritically because they wanted to believe it and needed a visual example to show evolution. The peppered moth story fit the bill and quickly became "an irrefutable article of faith."{14}

Now there are journal articles, and even books, that document the scientific scandal surrounding the story of the peppered moths. One leading evolutionist noted that the story was a "prize horse in our stable of examples." He goes on to say that when he learned the truth, it was like learning "that it was my father and not Santa Claus who brought the presents on Christmas Eve."{15}

But what is so amazing is that this example still shows up with regularity in biology textbooks, even though most scientists and textbook writers know the story is untrue. One reporter even interviewed a textbook writer who admitted that he knew the photos were faked but used them in the biology textbook anyway. "The advantage of this example," he argued, "is that it is extremely visual." He went on to add that "we want to get across the idea of selective adaptation. Later on, they can look at the work critically."{16}

The examples of the falsified "icons of evolution" demonstrate the extremes to which many Darwinists will go to "prove" the theory of evolution. They keep an incorrect example in the textbooks simply because it is visual and supports the theory of evolution and worldview of naturalism.

Fraudulent Embryos

Nearly every textbook has pictures of developing vertebrate embryos lined up across the page to demonstrate an evolutionary history being replayed in the womb. These

pictures are placed there to show common ancestry and thus prove evolution. During this day, Charles Darwin called the similarity of vertebrate embryos "by far the strongest single class of facts in favor of" his theory of evolution.{17}

In biology class many of us learned the phrase "ontogeny recapitulates phylogeny." That means that these developing embryos go through similar stages that replay the stages of evolution. So this supposedly was embryological proof of evolution.

But it turns out that the pictures were and are an elaborate hoax. German scientist Ernst Haeckel drew them in order to prove evolution. He deliberately drew the embryos more similar than they really are.

What is so incredible about this hoax is that is was known more than a century ago. Scientists knew the drawings were incorrect, and his colleagues accused him of fraud. An embryologist, writing in the journal *Science*, called Haeckel's drawings "one of the most famous fakes in biology."{18}

Now you would think that a hoax uncovered more than a hundred years ago would certainly not make it into high school and college biology textbooks. But if you assumed that, you would be wrong. Many textbooks continue to reprint drawings labeled as a hoax a century ago.

So why do Darwinists continue to believe in the theory of evolution and even use examples to "prove" evolution that are not true. It may be due to a bias in their worldview. The only theories that they believe are acceptable are those that are developed within a naturalistic framework.

Richard Dawkins noted: "*Even if there were no actual evidence* in favor of the Darwinian theory . . . we would still be justified in preferring it over rival theories."{19} Think about that statement for a moment. Even if there were no evidence for evolution, Darwinists would still believe it

because it is naturalistic.

Another professor made an even more incredible statement. He said: "Even if all the data point to an intelligent designer, such an hypothesis is excluded from science because it is not naturalistic."{20} Now think about that. Even if the evidence points to intelligent design rather than to evolution, it is excluded from consideration because it is not naturalistic.

As you can see from these two quotes (as well as from some of the other material presented here), the commitment to evolution is more philosophical than scientific. Nancy Pearcey concludes that "the issue is not fundamentally a matter of evidence at all, but of a prior philosophical commitment."{21}

Again, let me also recommend Probe's DVD series on "Redeeming Darwin" that is available through Probe's website www.probe.org.

Notes

1. Nancy Pearcey, *Total Truth: Liberating Christianity from Its Cultural Captivity* (Wheaton, Ill.: Crossway Books, 2004).
2. Raymond Bohlin, "Total Truth," Probe, 2005, www.probe.org/total-truth/.
3. Edward Purcell, *The Crisis of Democracy* (Lexington, KY: University Press of Kentucky, 1973), 8.
4. Daniel Dennett, *Darwin's Dangerous Idea* (NY: Simon and Schuster, 1995), 63.
5. Pearcey, *Total Truth*, 207.
6. G. K. Chesterton, *Eugenics and Other Evils* (NY: Dodd, Mead, 1927), 98.
7. Carl Sagan, *Cosmos* (NY: Random House, 1980), 4.
8. Pearcey, *Total Truth*, 157.
9. Jonathan Wells, *Icons of Evolution* (Washington, DC: Regnery, 2000).
10. Jonathan Weiner, "Kansas anti-evolution vote denies students a full spiritual journey," *Philadelphia Inquirer*, 15

August 1999.
11. *Teaching About Evolution and the Nature of Science*, National Academy of Sciences, chapter 2, page 19, www.nap.edu/readingroom/books/evolution98.
12. Phillip Johnson, "The Church of Darwin," *Wall Street Journal*, 16 August 1999.
13. Ray Bohlin, "Icons of Evolution," Probe, 2001, www.probe.org/icons-of-evolution.
14. Peter Smith, "Darwinism in a flutter," book review of: *Of Moths and Men: Intrigue, Tragedy, and the Peppered Moth*, *The Guardian*, 11 May 2002.
15. Jerry Coyne, "Not black and white," book review of: *Melanism: Evolution in Action, Nature* 396(5 November 1998), 35.
16. Bob Ritter quoted in "Moth-eaten Darwinism: A disproven textbook case of natural selection refuses to die," *Alberta Report Newsmagazine*, 5 April 1999.
18. Michael Richardson, quoted in Pennisi, "Haeckel's Embryos: Fraud rediscovered," *Science* 277 (5 September 1997), 1435.
19. Richard Dawkins, *The Blind Watchmaker* (NY: Norton, 1986), 287, emphasis in original.
20. S.C. Todd, "A view from Kansas on that evolution debate," *Nature*, 30 September 1999, 423.
21. Pearcey, *Total Truth*, 169.

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Amniotic Stem Cells

On January 8, 2007, the Associated Press reported that scientists from Wake Forest University and Harvard University discovered a new type of stem cell found in the amniotic fluid within the wombs of pregnant women. Furthermore, once these

stem cells are removed to the laboratory setting, scientists can coax them to become a variety of cell types including brain cells, liver cells, and bone cells.



Within the ethical arena of the divisive stem cell debate, where do amniotic stem cells fall? The crux of the stem cell debate is whether it is ethical to extract stem cells from a blastocyst (an embryo in its earliest stage of development) at the cost of destroying the embryo, or whether this embryo should be respected and protected as an individual with research only to be conducted on alternative stem cell sources. The debate is exacerbated by emotional appeals and political agendas that are coupled with the media's sometimes uninformed or misconstrued reporting and the scientific community's vying for funds.

This discovery of the amniotic stem cells is exciting because it offers scientists a bountiful supply of stem cells{1} without harming mother or child. From a Christian perspective, these stem cells fall under the same category as adult stem cells.{2} We applaud the efforts of scientists who conduct alternative, ethical research that does not involve the destruction of another human life deemed less worthy for survival. Scientists have discussed the possibility of setting up a stem cell bank with amniotic stem cells from willing donors, but it will be several years before these stem cells are ready for human trial use. Dr. Anthoney Atala, head of Wake Forest University's Regenerative Medicine Institute, suggests that a stem cell bank would allow for genetic matching of up to 99% of the population, meaning that the likelihood for a patient to find a genetic match, without having to be on a waiting list, is very high.

At the risk of deflating some of the hype around this new discovery, I cannot help but notice that this is another example of misconstrued reporting of stem cell research. The reports would have the reader believe that this is some kind of breakthrough that may be the solution to all of our stem cell differences, but stem cells have been discovered in fetal tissue before. Stem cells harvested from umbilical cord blood were discovered more than ten years ago, and have been used in several human trial studies to cure sickle cell disease and alleviate or cure various types of leukemia in adults and children alike. Furthermore, the United States *does* have an umbilical cord stem cell bank that has been active for several years (see www.cordblood.com—the Web site for the National Cord Blood Registry). However, very few people are aware of the bank's existence, largely due it being overshadowed by other, more controversial, aspects of stem cell research. So, even though the discovery of stem cells within amniotic fluid is an exciting find, it should come as no surprise that other fetal tissues contain stem cells, and they, like the umbilical cord cells, are more versatile than some adult stem cells and easier to work with than embryonic stem cells.

While there is an abundance of reporting on the potential for embryonic stem cells, there is little reporting on the many discoveries and advances that have occurred *in human trials* with adult stem cells. Scientists have reaped the advantages of harvesting adult stem cells for years (example: bone marrow transplants), yet politicians and the press seem to ignore those research articles and only focus on the ones that produce political and public hype.

This discovery is one of many exciting discoveries within the ethical bounds of adult stem cell research. We can rejoice in the fact that we serve a sovereign God whose precepts that guided believers thousands of years ago also apply in today's technological world.

For more information see Dr. Ray Bohlin's article The

Continuing Controversy Over Stem Cells www.probe.org/the-continuing-controversy-over-stem-cells/. We also suggest you consider the Cerebral Palsy Guidance website at cerebralpalsyguidance.com.

Notes

1. NBC reported that approximately 4 million babies are born per year in the US alone. See www.msnbc.com.
2. Technically, these stem cells come from fetal tissue, but are considered "adult" due to their level of differentiation.

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Is Intelligent Design Dead?

What Is Intelligent Design?

On December 20, 2005, Judge Jones handed down his decision in the lawsuit brought by several citizens from Dover, Pennsylvania, who objected to a new policy adopted by the Dover School Board. This policy mandated a statement be read before all biology classes indicating that evolution was a theory that needed critical evaluation and that Intelligent Design was a rival theory that students could seek information about from the library.

Judge Jones not only struck down the policy as unconstitutional; he went further to declare that ID is not science and was purely motivated by religion since it was just a repackaged creationism. His written opinion was scathing. This of course delighted proponents of evolution and many have declared that ID now is dead.

In what follows I will examine this “death certificate” and declare it null and void. ID is alive and well, and the coming months and years will demonstrate convincingly the health of ID. But first, let’s make sure we know what ID really is.

The media often simply portray ID in a negative context. One student reporter from Southern Methodist University recently put it this way: “Essentially ID is a theory that proposes that there are parts to a cell that are simply too complex to have been evolved.” He adds as an afterthought the idea “that rather they have been altered by some sort of ‘designer.'”{1} But ID is truly more than just a critique of evolution. The Discovery Institute’s Web site describes ID this way: “The theory of intelligent design holds that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.”{2}

It’s interesting to realize that many evolutionists recognize that living things in particular *look* as if they have been designed. British evolutionist Richard Dawkins said, “Biology is the study of complicated things that give the appearance of having been designed for a purpose.”{3} Many in the ID community simply reply, “If it looks designed, maybe it is!” So ID is simply an attempt to quantify scientifically what most people clearly recognize: the design of the universe and of living things.

The major contention with evolution is the claim that mutation and natural selection can account for everything we see in living things. ID accepts that evolutionary processes do account for some change in organisms over time. But ID says certain structures, like the bacterial flagellum that closely resembles a human designed rotary motor, are better explained through an intelligent cause.

In particular, the universal genetic code has all the distinguishing characteristics of coded information or

language. Our experience tells us that language only comes from a mind. If so, then the genetic code also likely came from a mind.

Is ID Science?

Judge Jones made several errors in his reasoning. The recent book from the Discovery Institute, *Traipsing Into Evolution,* answers Judge Jones on several levels.{4} I will focus on three areas: first, how a federal judge can tell us what science is and is not when philosophers of science continue to struggle with this; second, Judge Jones' claim that ID has been refuted by scientists; and third, Judge Jones' claims that ID has not been accepted by the scientific community. For these and other reasons, Judge Jones claimed that ID simply is not science and is religiously motivated; therefore it should not even be mentioned in a high school science classroom.

The first question that should occur to you is, Why does a federal judge with no training in science use his courtroom as a means of determining what is and is not science? This problem has been referred to as the "demarcation problem." How do we demarcate science from non-science? Philosopher of science Larry Laudan writes, "If we would stand up and be counted on the side of reason, we ought to drop terms like 'pseudo-science' and 'unscientific' from our vocabulary; they are just hollow phrases which do only emotive work for us."{5}

In addition, philosopher Del Ratzch argues that there are very real possible payoffs for science in considering ID.{6} Judge Jones knew of these positions but chose to ignore them.

Judge Jones claims that ID has been refuted by mainstream scientists. He cites the work of Kenneth Miller in particular. This is rather strange indeed. For ID to be refuted means that it has been tested by science and found wanting. If it is testable scientifically to the degree that it can be refuted,

then it is science after all. This logical contradiction does not seem to occur to Judge Jones.

The judge ruled further that ID cannot be science because it is not accepted by the scientific community. But science is not a popularity contest. New and controversial theories are never accepted by a majority of scientists at the beginning, but that doesn't make them unscientific. The Discovery Institute now lists over six hundred scientists from around the world who are willing to sign a list saying they are skeptical of Darwinism. Surely that counts for something.

ID uses empirical data to demonstrate the plausibility of a design inference. It's as scientific as Darwinism.

Is ID Just Reinvented Creationism?

Several parents challenged a directive by the Dover School Board allowing the mention of Intelligent Design in the science classrooms of this district. Judge Jones ruled the directive unconstitutional. One of his reasons was that ID is just reinvented creationism which the Supreme Court has already ruled is substantially a religious doctrine and not appropriate as science.

One of the texts that the Dover school board members made available was the supplemental text *Of Pandas and People.*{7} Having subpoenaed early drafts of the book from the late '80s, the ACLU tried to show that *Pandas* only began using the phrase "Intelligent Design" after the Supreme Court struck down the Louisiana creation law. Therefore Judge Jones ruled that ID is in fact just creationism with a new label.

While it is true that the Supreme Court decision did indeed affect editorial decisions in *Pandas*, it's not for the reasons Judge Jones assumed. The authors and editors of *Pandas* knew their ideas were not the same as creationism and were wrestling with what to call it. Once the Supreme Court ruled

that “creationism” meant a literal six day creation, the authors of *Pandas* knew they needed to use a different term.{8}

In addition, the term Intelligent Design had been floating around for several years before *Pandas* was in print. Lane Lester and I used the term in our book *The Natural Limits to Biological Change* in 1984, three years before the Supreme Court decision in *Edwards vs. Aguillard* struck down the Louisiana creationism law. We said, “The simple point is that intelligent design is discernibly different from natural design. In natural design, the apparent order is internally derived from the properties of the components; in creative design, the apparent order is externally imposed and confers new properties of organization not inherent in the components themselves.”{9}

Furthermore, none of the leading scientists of the Intelligent Design movement were ever a part of the creationist movement. People like Phil Johnson, Michael Behe, William Dembski, Charles Thaxton, and Steve Meyer never considered themselves to be part of this group. Their ideas were always similar but definitely not the same.

Some creationist groups today even go to great lengths to distance themselves from the ID movement because ID essentially maintains that the Designer cannot be known from the science alone. Therefore, because of ID’s attempts to stop short of naming the Designer, some creationist groups will sell some ID books but not endorse their program. This would be very strange indeed if ID is just relabeled creationism.

Once again, Judge Jones got it wrong.

Traipsing Into the Dover Court Decision

In their excellent discussion of the Dover decision, the authors of *Traipsing into Evolution* attack six accusations against Intelligent Design used by Judge Jones.{10}

On page sixty-two of the Dover decision Judge Jones said, “ID violates the centuries-old ground rules of science by invoking and permitting supernatural causation.”{11} The main problem for Judge Jones is that ID scientists said repeatedly prior to the trial and in direct testimony during the trial that the science of ID is not able to identify the Designer. It was expressly pointed out to Judge Jones during the trial that the type and identity of the intelligent agent supposed by ID is only identified by religious and philosophical argumentation. That does not mean that design itself cannot be detected scientifically. Indeed, if we ever receive an obviously intelligent message from outer space, we will most certainly be able to determine it has an intelligent cause even though we may have no idea who or what sent it.{12}

Judge Jones also states that “the argument of irreducible complexity, central to ID, employs the same flawed and illogical contrived dualism that doomed creation science in the 1980s.” What Judge Jones is referring to is his notion that ID is just a negative argument about Darwinism. If Darwinism can be shown to be false, then ID wins.

But this grossly misrepresents ID. Michael Behe’s formulation of irreducible complexity asserts that Darwinian evolution does not predict irreducibly complex machines in the cell where Intelligent Design expressly does predict such machines. So there is definitely a negative component to irreducible complexity. But Darwin himself said that “If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.”{13} Darwin invited a negative critique.

But there is also a clear positive case for irreducible complexity. When we come across a machine, we intuitively understand it to be intelligently caused, whether we think it functions effectively or not. Intelligent agents can and do produce machines. The concept of irreducible complexity is one

way to determine what a machine is.

Judge Jones' third complaint against Intelligent Design was that the attacks on evolution by ID advocates have all been refuted by the scientific community. Judge Jones ignored the fact that at the time of the decision, over five hundred scientists had signed a statement acknowledging their dissent from Darwinism. That list now stands at over six hundred.{14} Certainly some scientists have challenged Behe, Dembski, and others. But their criticisms have been answered effectively both online and in print.{15}

Judge Jones' fourth accusation was that Intelligent Design had failed to gain acceptance in the scientific community. But this is clearly a matter of opinion. As I mentioned previously, over six hundred scientists now express their dissent from Darwin, and most of those also support Intelligent Design, many of them at mainline universities.

No doubt there has been and continues to be strident opposition to Intelligent Design in the scientific community, especially among biologists. But there is always resistance in science to new ideas. And much of the opposition is for philosophical reasons, not scientific ones. Many Darwinists such as Will Provine from Cornell and Richard Dawkins from Oxford are very up front that their adherence to evolution and their disdain for Intelligent Design is over the issue of a Designer by any name. The science is just a backdrop.

Judge Jones' fifth complaint against Intelligent Design was that proponents of ID have not published in the scientific peer-reviewed literature. This is simply not true. De Wolf et al., in their book *Traipsing Into Evolution,* document in Appendix B a list of thirteen different peer-reviewed articles and books by ID scientists advocating different aspects of the theory. This is admittedly a small number, but that is because there is clear evidence, documented in the same book, of

editors having to shy away from ID papers and responses for fear of intimidation by the scientific community. One editor who followed established procedure in getting an ID article reviewed and published was nearly run out of his institution for the offense.

Finally, Judge Jones declared that ID has not been the subject of testing and research. Indeed, any scientific theory needs to be testable in some form or it is not likely to be of some use. But ID microbiologist Scott Minnich testified right in Judge Jones' courtroom that in his laboratory at the University of Idaho he has demonstrated the irreducible complexity of the bacterial flagellum. Minnich also testified to other research he was familiar with which also was testing principles from ID.{16}

As I have summarized, Judge Jones failed to make a reasonable and fair evaluation of the evidence. Intelligent Design is far from dead. Rather, such a poor decision in the Dover case may actually serve ID well as it self-destructs in the years to come.

Notes

1. Brian Wellman, April 26, 2006, Merits of intelligent design, evolution debated, www.smudailycampus.com/vnews/display.v/ART/2006/04/26/444ef833078bc
2. The Web site of the Discovery Institute's Center for Science and Culture, www.discovery.org/csc/topQuestions.php.
3. Richard Dawkins, *The Blind Watchmaker* (New York: W. W. Norton, 1986), 1.
4. David De Wolf, John West, Casey Luskin, and Jonathan Witt, *Traipsing Into Evolution: Intelligent Design and the Kitzmiller vs. Dover Decision* (Seattle, WA: Discovery Institute Press, 2006), 25-57.
5. Larry Laudan, "The demise of the demarcation problem," in Michael Ruse (ed.), *But Is It Science?,* (Amherst, MA:

Prometheus, 1983), 337-350.
6. Del Ratzch, *Nature, Design, and Science: The Status of Design in Natural Science* (Albany, NY: State University Press of New York, 2001), 147.
7. Percival Davis and Dean H. Kenyon, *Of Pandas and People: The Central Question of Biological Origins* (Dallas, TX: Haughton Publishing Co., 1989), 166 pp.
8. DeWolf *et al.,* 22.
9. Lane P. Lester and Raymond G. Bohlin, *The Natural Limits to Biological Change* (Richardson, TX: Probe Books, 1984), 153-154.
10. DeWolf *et al*., 29-45.
11. *Kitzmiller et al. v. Dover Area School Board*, No. 04cv2688, 2005 WL 3465563, *26 (M.D. Pa. Dec. 20, 2005).
12. I don't expect we ever will hear from any extraterrestrials. Earth appears to be more and more unique with every passing day. See my article "Are We Alone in the Universe?" at www.probe.org/are-we-alone-in-the-universe-2/.
13. Charles Darwin, *On the Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life* (New York: New American Library [A Mentor Book], 1958), 171 (this is a reprint of the 1872 sixth edition).
14. From the Web site of the Center for Science and Culture, www.dissentfromdarwin.org/ accessed October 11, 2006. The statement reads; "We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged."
15. William Dembski, *The Design Revolution: Answering the Toughest Questions About Intelligent Design* (Downers Grove, IL: InterVarsity Press, 2004), 334 pp.
16. De Wolf *et al*., 56.

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