Darwinist Arguments Against Intelligent Design Illogical and Misleading

I recently attended a debate on "Intelligent Design (ID) and the Existence of God." One of the four debaters was Dr. Lawrence Krauss{1} representing an atheistic, anti-ID position. I was looking forward to hearing what Dr. Krauss would say when speaking in the presence of other knowledgeable members of academia. Would he go beyond the tired, illogical talking points passed on without question by the mainstream media? Or would he present some thoughtful arguments *against* the validity of intelligent design concepts and/or *for* the current state of Darwinist explanations for life as we know it?

Since I believe there are some thoughtful, interesting arguments that could be raised against intelligent design, I was sorely disappointed to discover that Dr. Krauss did not deviate from the shallow arguments which consistently appear in media coverage of this topic. As one of the other debaters, Dr. David Berlinski {2}, commented after Dr. Krauss' opening statement, "Everything you have said is either false or trivial."

However false and trivial they may be, these arguments are blindly accepted as reasonable by many people. As thinking Christians, we have a responsibility to be prepared to tear down these façades raised up against the knowledge of God. One way to do this is to be able to discuss with others the prevailing arguments in ways that reveal their weaknesses and inconsistencies. To help in that process, the remainder of this article will list several of the standard arguments offered up by Dr. Krauss and examine their reasonableness and validity.

Argument: **Evolution is a proven fact**. Scientific experiments and observation over the last 100 years have conclusively demonstrated that evolution is a fact.

> ***Analysis: Faulty logic resulting in false conclusion***. *In the context of the debate, "evolution is a proven fact" is implied to mean that random mutation coupled with natural selection is the sole process through which life evolved on this planet.* ***This meaning of evolution is not a proven fact.*** *What has been demonstrated through observation and experimentation is that the frequency of certain characteristics in a species will vary over time through random mutations and natural selection. These results provide some support to the theory that these undirected natural causes could be responsible for the development of life as we know it, but they do not come close to proving it. In logical terms, we would say that what science has demonstrated is necessary for the premise to be true but not sufficient to prove that it is true. That would be like saying, "Since we can demonstrate that wind and water erosion can produce regular geometric patterns, this proves the Statue of Liberty is the result of undirected natural forces."*

Argument: **Origins science is the same as observational science**. Both the study of origins (or other one-time events) and the study of ongoing natural processes are the same because they both look at data that was observed in the past. Therefore we can apply the same criteria to origins science as to observational science. Since observational science depends on repeatable experiments, we should reject out of hand any hypothesis (e.g. ID) that considers intervention by a designer because we cannot recreate it.

> ***Analysis: False premise resulting in faulty conclusion***. *The study of origins is more akin to archaeology and forensic science than to observational science. In these fields, scientists look at the evidence left over by past events to*

help evaluate hypotheses on what caused the event to determine the ones that are most likely. As an example, consider the question, "Why does the earth have a large moon?" Scientists have a number of different theories on when and how our earth acquired a moon, but they would all agree that we can never be certain what actually happened (apart from the development of a time machine which would allow us to go back and observe the event). It is true that in observational science fields, scientists do look at results from experiments done in the past. But, they can choose to repeat those experiments in the future.

Regardless of whether one is considering the role of natural selection or the role of an intelligent designer, when you are developing hypotheses for the origins and development of life on earth the best that can be done is to access which processes had the highest probability of contributing to the end results. If you eliminate all options other than random variations in natural processes, you tie the hands of scientists in considering how the evidence best fits all hypotheses.

Argument: Some things that have the appearance of being designed are not. Therefore, we cannot detect the presence of design.

***Analysis: Faulty logic resulting in false conclusion**. Yes, there are things found in nature from the geodesic shapes of carbon structures to the results of erosion that mimic shapes designed by man. Yet, most of us seem to have no problem distinguishing between the remains of ancient civilizations and the results of undirected natural processes. If you search enough beaches and tidal pools, you can probably find every letter of the alphabet produced by the interaction of tides and currents. But, if you come across the words "John loves Mary" in the sand, you will be very confident that*

these were the result of intelligent intervention.

Argument: The theory of evolution is a foundation of modern science.

> ***Analysis: Switching definitions results in false conclusion.*** *Understanding the processes by which bacteria, viruses, species and societies change in response to changes in their environment are important concepts in modern science. However, whether one believes these processes are solely responsible for the origin and development of life on earth or not has little or no impact on one's ability to make advances in science. To date, I have not been made aware of a single positive advance in modern science or engineering that required the developer to fully believe in Darwin's view of the origins of the species in order to make that advance. One's beliefs on origins are foundational to answering the metaphysical questions of life, but don't preclude someone from making contributions in science. Advances in science have been made by Christians, Hindus, Buddhists, Jews, atheists, etc.*

Argument: Scientists understand how the bacterial flagellum evolved, disproving the concept of irreducible complexity.

> ***Analysis: False statement coupled with faulty logic.*** *The bacterial flagellum is a complex device used to propel some types of bacteria. It is comprised of over 30 different proteins. Not only do these proteins perform different complementary functions, but they must be assembled in the bacteria in exactly the right sequence by other proteins. Since the flagellum will not function without all of these elements in place (i.e., it meets the definition of irreducible complexity established by Dr. Behe in his book Darwin's Black Box), the premise is that all of these parts would have to appear simultaneously in order for natural selection to favor carrying forward any of these mutations in*

the gene pool.

Dr. Krauss stated that scientists have shown that the bacterial flagellum is not irreducibly complex. To the best of my knowledge, this is a gross overstatement. The arguments I have seen presented fall far short of developing a plausible explanation for how the flagellum could have evolved{3}. If a plausible argument coupled with experimental evidence exists, I am very interested in having my understanding updated. However, even if such evidence did exist, it would not demonstrate that the concept of irreducible complexity was false or that this unknown plausible path was the way the flagellum came onto the scene.

Argument: Intelligent Design can never be science because it is not falsifiable. You must have ways to prove a scientific theory is false in order for it to be a valid theory. Any observation that does not agree with the theory can be attributed to supernatural intervention.

***Analysis: Arbitrary, inconsistent definition**. Academics in the field of philosophy of science do not agree that the ability to falsify establishes a boundary on what is and is not science. Professor of philosophy and atheist Dr. Bradley Monton {4} pointed this out during the debate. He argued that we should not exclude a potentially valid hypothesis simply on the basis of a narrow definition of science. In addition, origins science cannot meet this standard. Proponents of neo-Darwinism have clearly demonstrated over the last few decades that it is not falsifiable either. Whenever the theory disagrees with the evidence, its proponents claim that natural selection found a way around the problem; we just don't know what it is yet. As Richard Dawkins stated, "Evolution is more clever than we are."*

Hopefully, this summary will help you sort through the

smokescreen of “conclusive” arguments offered up by the proponents of naturalistic Darwinism. Perhaps someday they will engage in a genuine discussion where both sides can state: 1) the reasons they believe their theory has merit and, 2) the observations that create problems for their theory. Such a discussion might actually prove helpful to someone trying to sort through the evidence to make an evidence-based faith decision.

Notes

1. Dr. Lawrence Krauss is the Foundation Professor in the School of Earth and Space Exploration and the Physics Department, Co-Director of the Cosmology Initiative, and Inaugural Director of the Origins Initiative at Arizona State University.

2. Dr. David Berlinski is a lecturer, essayist and a Senior Fellow of the Discovery Institute’s Center for the Renewal of Science and Culture. Dr. Berlinski received his Ph.D. in philosophy from Princeton University and was a postdoctoral fellow in mathematics and molecular biology at Columbia University.

3. Additional information from the Reference Guide to Redeeming Darwin available at *RedeemingDarwin.com*.

Example of Darwinist argument: Since design cannot be considered as an explanation, evolutionists maintain that complex structures like flagellum evolved slowly over time from less complex structures performing other functions in the cell. Kenneth Miller states: “At first glance, the existence of the type III secretory system (TTSS), a…device that allows bacteria to inject these toxins through the cell membranes of its unsuspecting hosts, would seem to have little to do with the flagellum. However, molecular studies of proteins in the TTSS have revealed a surprising fact—the proteins of the TTSS are directly homologous to the proteins in the basal portion

of the bacterial flagellum…. The existence of the TTSS in a wide variety of bacteria demonstrates that a small portion of the "irreducibly complex" flagellum can indeed carry out an important biological function. Since such a function is clearly favored by natural selection, the contention that the flagellum must be fully assembled before any of its component parts can be useful is obviously incorrect. What this means is that the argument for intelligent design of the flagellum has failed." Response to Darwinist argument: The flagellum is an excellent example of an irreducibly complex function in one of the simplest life forms. Different proteins and structures work together to create a swimming mechanism. This complex interaction cannot be adequately explained by evolutionary processes. Mutations creating only one piece of the flagellum in a life form without the other pieces would not create any value to be carried on to the subsequent generations. Miller's statement that "the argument for intelligent design has failed" misses the point of irreducible complexity. The fact that one component of an irreducibly complex system may have another useful function does not remove the barrier that the irreducibly complex system requires the simultaneous appearance of multiple cooperating components to perform a function that has not been performed in that way before. In addition, William Dembski points out another problem with Miller's argument:

> *The best current molecular evidence, however, points to the TTSS as evolving from the flagellum and not vice versa…. Miller has nothing more than the TTSS to point to as a possible evolutionary precursor. Behe and the ID community have therefore successfully shown that Darwinists don't have a clue how the bacterial flagellum might have arisen.*

4. Dr. Bradley Monton is a philosophy professor at the University of Colorado at Boulder. His areas of specialization include the Philosophy of Science (especially Philosophy of Physics), Probabilistic Epistemology, Philosophy of Time and

Philosophy of Religion. Previously he was on the faculty of the University of Kentucky, an Assistant Professor at The American University of Beirut and a Teaching Assistant at Princeton University. He earned his Bachelor of Arts in Physics and Philosophy at Rice University and his Ph.D. in Philosophy from Princeton University.

The Complex Realities Behind Global Warming

Dr. Ray Bohlin says that global warming is over-hyped and not the danger that environmental alarmists would have us believe. We need to look carefully at what's really going on.

Is the Earth Warming?

Global warming is a very controversial and complicated topic. A few years ago I addressed my growing concerns about how certain scientists and the media were only telling part of the story.{1} I have hesitated to go further with a critique with what has become a global warming scare campaign because I wanted to be sure before getting overly critical.

Unfortunately, because of controversies over origins, embryonic stem cell research, the lack of solid information about sexually transmitted diseases for young people, and other issues, the Christian community has been given a tag of being anti-science. We are somehow afraid of science because it has the potential of arguing against the idea of a truly supernatural God.

As one trained in the disciplines of science, this reputation grieves me. I love science and nature. I always have. I studied ecology as an undergraduate and early in my graduate studies. I was a member of SECS, Students for Environmental Concerns, at the University of Illinois. I recycle my newspapers, plastic, aluminum, and tin cans and glass. I have always driven a fuel efficient vehicle.

As I grew as a believer I read Francis Schaeffer's *Pollution and the Death of Man: The Christian View of Ecology.* In those pages, I saw that only a Christian environmental ethic could supply a real and workable framework for environmental action while still respecting man's unique position as being made in the image of God and man's place as God's steward of Creation. One time I even represented evangelical Christians on a panel at a meeting of environmental journalists. They were genuinely cordial and very curious about how a conservative evangelical could even have concerns about the environment.

But I could still find many points of agreement with the more secular environmental movement. Therefore, I have hesitated to criticize what has become a primary issue for the environmental movement until I was more up to date on the facts. My basic point about global warming is that there is much more controversy about what the data is telling us than what is usually communicated to the public.

The one thing just about everybody agrees with is that the earth has warmed about one degree Fahrenheit or a half degree Celsius since 1900. The controversy revolves around what has caused that increase, what its effects will be, and whether the steep increase in global temperature, especially since the 1970s, will continue to escalate out of control.

But is it realistic to think such escalation will continue? Does the data really predict such an extreme? Can computer models be that accurate?

If the Earth Is Warming, Are Humans Responsible?

As I noted above, just about everyone is convinced the earth has warmed by about one degree Fahrenheit since the year 1900. That doesn't sound particularly ominous. But some computer models suggest that global temperatures could increase by five to ten degrees Celsius or nine to eighteen degrees Fahrenheit by the year 2100!

That sounds like a very unattractive possibility. But is it real? The engine that really drives the global warming freight train is not just the fact that the earth has warmed over the last century but the suspected cause. Those who support a radical view of global warming, such as former Vice President Al Gore, believe that the warming is due to increased levels of carbon dioxide in the atmosphere. The increase in carbon dioxide is caused by humans burning too many fossil fuels such as oil, gas, and coal.

So how much carbon dioxide in the atmosphere is too much? In 1958, carbon dioxide levels in the atmosphere were 315 parts per million (ppm). In 2008, fifty years later, carbon dioxide had risen to 385 ppm, about a twenty percent increase. Carbon dioxide is referred to as a greenhouse gas. That means that the carbon dioxide in the atmosphere absorbs energy from the sun and radiates it back out as heat. Therefore, the more carbon dioxide in the atmosphere, the warmer it becomes.

That would seem to say that increased carbon dioxide means a warmer atmosphere. But how much heat carbon dioxide accounts for is hotly debated among scientists. Some say it's the major cause of global warming; others say it probably has little effect. There has been a little reporting that the earth cooled slightly after 1998, and that the earth's temperature has stabilized for the last ten years. In fact, from January 2007 to May 2008, the earth cooled by a full degree

Fahrenheit.{2} Yet, CO_2 levels have continued to rise! Something seems backwards.

Australian climate scientist David Evans used to solidly believe that there was a large role for carbon dioxide in the global warming scenario. But Evans then looked at the data independently. He summed up his research by saying, "There is no evidence to support the idea that carbon emissions cause significant global warming. None."{3} The data has completely changed his mind.

Besides, the earth has warmed and cooled significantly in the last two thousand years without any human interference.{4} The Medieval Warming Period from AD 900 to AD 1300 was warmer than today (which, incidentally, was a period of great economic expansion, demonstrating that the alarmist claims that global warming will ruin the economy are groundless).

If the Earth Is Warming, What Will Be the Consequences?

As I have said earlier, the earth has warmed slightly over the last century. Some have even pointed to 1998 as the warmest year on record. Although a re-analysis of the data questions that conclusion, the 1990s was still a very warm decade compared to any other decade in the century.

But what if the temperatures continue to rise? Perhaps the most common projection is of wildly rising sea levels. The 2001 IPCC (Intergovernmental Panel on Climate Change) report suggested sea levels could rise as much as two to three feet by the year 2100. Many of our coastal cities and wetlands would be inundated.

But what does the data show? First, sea levels have been rising steadily since the last ice age over eleven thousand years ago. The melting of the vast continental glaciers caused

significant sea level increases. Second, over the last hundred and fifty years, sea levels have increased by about six inches every one hundred years. Third, many scientists see no reason that this rate will change significantly this century or the next. Reports of Indian Ocean or Pacific Ocean islands being inundated by rising sea levels just don't stand up to investigation.

Venice has been succumbing to rising sea levels for over a hundred years. But the problem is not just rising sea levels.{5} The land mass that the city of Venice rests on has also been sinking for decades due the weight of the city and the unstable ground underneath.

Many glaciers are retreating, and that could cause sea levels to rise. But some glaciers are growing and advancing. While one portion of Antarctica has warmed, most of the continent is cooling and the ice mass is growing. The realities are more complex that we are being told.

Another major projection is that storms will be increasing in frequency and intensity. This has usually been applied to hurricanes, especially after the destructive storms, Katrina and Rita, in 2005. But again something curious went underreported. Hurricane forecasters were predicting another harsh hurricane season in 2006 and 2007.

But neither of these years panned out that way. Both were relatively quiet with fewer and less intense storms. The peer reviewed journal *Natural Hazards* focused an entire issue on this question in 2003, and experts from across the climate fields found no reason to expect storms of any variety to increase in intensity or frequency.{6}

There are also positive benefits of warming and increased carbon dioxide. Carbon dioxide and increasing temperatures are good for plants. Vegetation has increased by six percent globally from 1982 to 1999. We forget that carbon dioxide is

not a pollutant. It is a necessary fertilizer for plants.

If the Earth Is Warming, What Should We Do About It?

Because of all this, I conclude that, at the very least, the evidence for anything resembling a catastrophic global warming due the increase of the greenhouse gas carbon dioxide from burning fossil fuels is remote at best. Certainly the earth is warming, but at a very slow rate. The warming is likely due to a well observed cycle of warming and cooling that occurs about every fifteen hundred years.{7} This cyclical trend is probably due to cycles in the sun's intensity over this same period of time.

But those who are pushing a more alarming scenario of catastrophic global warming demand drastic action. Since many have concluded that the major component to the warming has been human produced carbon dioxide from the burning of fossil fuels, they unsurprisingly want to curtail the use of fossil fuel. The now infamous Kyoto Protocol has called on the major developed countries to curtail their carbon emissions due to fossil fuels to seven percent below 1990 levels by the year 2010, only two years away. But increasing levels of technology have increased our demand for electricity. This means we would need to reduce our emissions by twenty-three percent of today's levels.{8} Needless to say, cutting our fossil fuel use by nearly one quarter would be catastrophic to our economy.

Renewable energy sources like wind and solar should be a part of our energy future, but they will always be intermittent. Storing and transporting these energy sources will continue to be expensive. Current costs indicate these power sources are four to ten times as expensive as fossil fuels.

Economic forecasting groups estimate that Kyoto will cost the

U.S. economy between 200 and 300 billion dollars per year. Over two million jobs will disappear and the average household will lose $2,700 each year.{9} These enormous economic costs will be hardly noticed in households making six figure salaries. The largest impact of increasing energy costs will be largely felt by low and middle income families. The combined costs of electricity and gasoline will drive even more below the poverty line and force small businesses into bankruptcy.

The worst part of this economic news is that the actual gain in lowered global temperatures will be hardly noticeable. The U.N. itself admits that even full compliance with Kyoto will only result in a 0.2 degree Centigrade slowing of global warming by 2047.

There are numerous other scientific, economic, and political problems with alarming scenarios of human caused global warming. Check the additional resources at the end of this article to get better informed about this crucial issue.

What Is a Christian Environmental Ethic?

To summarize: First, the likelihood that the increasing levels of carbon dioxide in our atmosphere through the burning of fossil fuels is responsible for this warming is very small and growing smaller. Second, the evidence is increasing that this period of warming is not unusual in the earth's history. Third, the warming trend has stalled over the last decade as carbon dioxide levels have continued to increase. Fourth, even if the burning of fossil fuels has contributed significantly to this one-hundred-year warming trend, the proposed remedy of cutting back drastically on our use of fossil fuels would cost hundreds of billions of dollars every year and dramatically affect the worldwide economy and trap even more people in poverty for little or no reduction in the rate of warming.

And last but not least, over 30,000 scientists, 9,000 of them with Ph.D.s, have signed a statement rejecting the claim that "human release of greenhouse gases is damaging our climate."{10} There is no consensus in the scientific community about human-caused global warming.

I have a growing suspicion that global warming alarmism is simply a tool to bring about a redistribution of wealth from rich to poor countries, gain higher levels of government regulation, energize and empower the extreme environmental movement, and to impose an unnecessary lifestyle designed to drastically reduce the impact of humanity on the earth.

What this perspective reveals is an environmental policy based on a naturalistic worldview. The earth is viewed as a place where all manner of species have evolved through natural process and no one species has preference over another. The earth "belongs" to all species. Humans, therefore, are just another species, whose negative impact on the earth far outweighs its presence or numbers. Correcting this imbalance vetoes any concerns about human welfare and prosperity.

But from a Christian worldview, we learn that the earth belongs to God as Creator, and by His decree we have been given stewardship of this creation. But as human beings are made in the image and likeness of God, human welfare arises as an equally valid priority. We can't callously disregard the poor and human welfare in general to satisfy a politically motivated call for environmental action based on skewed science. Check the additional resources below to help you find your way through the minefield of conflicting evidence, rhetoric, and opinion.

Notes

1. Dr. Ray Bohlin, "Global Warming," probe.org/global-warming/.
2. wattsupwiththat.wordpress.com/2008/06/03/uah-global-

temperature-dives-in-may/ accessed September 12, 2008.
3. David Evans, www.theaustralian.news.com.aU/storv/Q.25197.24036736-7583.00.html accessed September 3, 2008.
4. On top of that, ice core data from various places around the world now confirm that carbon dioxide levels have risen as the temperature rises well before humans could have had any worldwide impact. More precise measurements indicate that the rise in carbon dioxide trails the rise in temperatures by several hundred years. Climate specialists speculate that as the atmosphere and oceans increase in temperature, the oceans release more of their dissolved carbon dioxide into the atmosphere. So in the past, rising temperatures has caused the rise in carbon dioxide, not the other way around.
5. Ibid, p. 161-171.
6. Natural Hazards 29, No. 2 (June 2003).
7. S. Fred Singer and Dennis T. Avery, Unstoppable Global Warming (Rowman & Littlefield Publishers, 2008).
8. Ibid., 60.
9. Acton Institute, Environmental Stewardship in the Judeo-Christian Tradition (Grand Rapids, Mich./Acton Institute, 2007), 92-93.
10. Melinda Zosh, "31,000 Signatures Prove 'No Consensus' About Global Warming," Accuracy in Media, www.aim.org/briefing/31000-signatures-prove-no-consensus-about-global-warming/. May 22, 2008.

Additional Resources

www.cornwallalliance.org/articles/read/an-open-letter-to-the-signers-of-climate-change-an-evangelical-call-to-action-and-others-concerned-about-global-warming/

www.cornwallalliance.org/docs/a-call-to-truth-prudence-and-protection-of-the-poor.pdf

www.we-get-it.org

Singer, S. Fred, and Dennis T. Avery. *Unstoppable Global*

Warming Every 1500 Years. Rowan and Littlefield Publishers, New York, 2007, (especially page 260).

Acton Institute, *Environmental Stewardship in the Judeo-Christian Tradition*, Grand Rapids, Mich./Acton Institute, 2007, (especially page 119).

Driessen, Paul. *Eco-Imperialism: Green Power, Black Death*. Bellevue, Wash./ Free Enterprise Press, 2003-2004, (especially page 182)

Schaeffer, Francis A. *Pollution and the Death of Man: The Christian View of Ecology*. Wheaton, Ill./ Tyndale House Publishers, 1970, (especially page 125)

Only Science Addresses Reality?

Dr. Ray Bohlin comments on the hubris of Drs. Coyne and Cobb in their op-ed in Nature*, in which they claim that only science addresses reality. Religion, they say, must be silenced. This alarming sentiment has already met reality in California.*

Would it surprise you to hear that churches may eventually be prohibited from teaching any ideas contrary to Darwinian evolution? “No way!” you say. “The Constitution guarantees freedom of speech! The first amendment guarantees that Congress can pass no law restricting or promoting any religious exercise!”

Well, yes the Constitution does that, but be patient with me

and I'll show why the answer to the opening question could be "yes."

In the current issue of Nature, probably the most prestigious science journal in the world, a letter to the editor appeared in the August 28, 2008 issue on page 1049. Two well-known evolutionary biologists, University of Chicago's Jerry Coyne and University of Manchester's Matthew Cobb wrote the letter to complain about a previous editorial expressing hope that the Templeton Foundation, which funds research into the relationship between science and religion, might bring about some helpful resolutions.

Coyne and Cobb couldn't disagree more:

> We were perplexed by your Editorial on the work of the Templeton Foundation…. Surely science is about material explanations of the world—explanations that can inspire those spooky feelings of awe, wonder and reverence in the hyper-evolved human brain.
>
> Religion, on the other hand, is about humans thinking that awe, wonder and reverence are the clue to understanding a God-built Universe…. ***There is a fundamental conflict here, one that can never be reconciled until all religions cease making claims about the nature of reality*** (emphasis added).
>
> The scientific study of religion is indeed full of big questions that need to be addressed, such as why belief in religion is negatively correlated with an acceptance of evolution. One could consider psychological studies of why humans are superstitious and believe impossible things….
>
> …***You suggest that science may bring about "advances in theological thinking." In reality, the only contribution that science can make to the ideas of religion is atheism*** (emphasis added).

Coyne and Cobb clearly state that religion has no authority to

make claims about reality. If science is allowed to persist in this audacious distortion of religion and science, then any kind of teaching that is critical of any aspect of naturalistic evolution would be considered a negative influence on society as a whole. Religion is seen as crossing its constitutionally protected borders.

Biology teachers constantly complain now that what they teach about evolution is contradicted by the churches their students attend. This is obviously quite frustrating. If science is the only branch of knowledge that is allowed to make claims about reality, then religious teachings should not be allowed to interfere.

You may still be thinking that I'm taking this too far. Consider though that the California state university system already refuses to give credit for high school science courses that include anything beyond naturalistic evolution. Many Christian private school graduates in California are finding that their science courses are not accepted at state universities. Essentially that means you don't get in unless you can make those credits up by taking junior college science courses that meet the evolution-only standard.

State governments may easily decide that they need to help these religious school graduates out by requiring that these religious schools not be allowed to teach religious material that contradicts state-mandated standards. It's a violation of the separation of church and state, after all!

If you ever questioned the importance of the evolution/Intelligent Design controversy, I hope you see the point now. Unless we can convince a sufficient minority in the science community that science is limited and the subject of origins is one of those limitations, we may not be able to legally teach students anything about creation or Intelligent Design.

While Coyne and Cobb certainly don't represent all scientists, they are not alone! Trust me. I watched a video recently of Jerry Coyne making a presentation at a scientific meeting where he basically made the very same claim. NO one objected. He was applauded enthusiastically. Watch it for yourself here. While the whole lecture is worth watching, the last eight minutes when he presents a slide with just the word "Religion" is the key segment.

Coyne and others are trying to establish what Nancy Pearcey called the fact/value split in her book *Total Truth*. To Coyne science is based on fact. Only material explanations are allowed in science since religion is based on personal values and have nothing to do with facts. Therefore if you try to inject your personal values (Creation, Intelligent Design) into the world of facts (science) this is a violation of the rules of science. It's not allowed.

According to Jerry Coyne speaking in the video, the only way to increase the acceptance of evolution is to reduce or eliminate the influence of religion. The two are incompatible! Coyne is unable to see that he also has a worldview, materialism, which influences how he interprets the data of science. He erroneously believes he is being objective about his interpretation.

This is a cultural battle as well as a scientific battle. For more information and resources from Probe to help you educate yourself and others about evolution and Intelligent Design see browse our articles at www.probe.org. If we don't "tear down strongholds" like this, we may find ourselves behind impenetrable, silent walls.

Healthcare and the Common Good

One of the hot topics in the presidential election campaign is healthcare and healthcare reform, but is there a Christian perspective on healthcare? If so, what is it? I had the privilege of attending the annual bioethics conference hosted by the Center for Bioethics and Human Dignity and Trinity International University this past July. Guided by this year's theme, "Healthcare and the Common Good," some of the health profession's leading practitioners discussed issues of healthcare and the health profession from a Christian perspective.

What Is "The Common Good"?

Dr. Edmund Pellegrino, chairman of the President's Council on Bioethics, began the conference by distinguishing between first-order healthcare questions and second-order healthcare questions. First-order questions in this case involve the moral or ethical implications of healthcare. These questions include: What do we do with the poor and ill? What are our moral obligations to them? By what criteria do we judge healthcare programs? And, is the healthcare system providing for basic human needs? Second-order questions, often covered by the media, include economic issues, systems, and politics. Usually, this level of inquiry seeks to answer questions like "How is healthcare to be structured?"

Dr. Pellegrino used Aristotelian philosophy to discuss the idea of common good. He describes common good as everyone being enabled to fully achieve their own perfection as men. Essentially, everyone is valuable because he is a human being, and part of giving them value is to provide for them relief from suffering and the opportunity to flourish, whether they merit it or not. Dr. Pellegrino asserts that this is similar

to the biblical idea of being not only your brother's keeper, and your enemy's keeper, but also ministering physically to those who are irresponsible. As Christians we have an obligation to care for the weak and the infirmed, and we, furthermore, cannot make value judgments on the worth of someone's life because of their personal behavior.

Human Dignity

Underlying any area of bioethics based on a Christian worldview is the concept of man as a special part of creation made in God's image.{1} This means that our views on healthcare should reflect the inherent dignity of the individual. Dr. Pellegrino discussed this essential element that part of common good is valuing man because he is man, and I would add that it is expressly because he is made in the image of God.

Many of the sessions at the conference, whether they were on doctor/patient relationships or public policy, centered on this point that man is made in the image of God and that individuals should be valued as unique and important. This presupposes a theistic worldview.

During my paper session at this conference, I emphasized the importance of a worldview approach for laying the foundation of how to evaluate specific bioethical issues. This is also essential in evaluating healthcare policies and our moral obligation to the weak and infirmed. How does one's worldview affect their various views on healthcare?

As Nancy Pearcey points out in *Total Truth*,{2} every worldview answers three basic questions: Where did we come from? What happened to us (why is there evil)? And, how can things be made right? As Christian theists we would answer these questions with "Creation-Fall-Redemption." Naturalists, on the other hand, would answer with the triad "Darwinism–Evil is an illusion–Survival of the fittest." A naturalist's creation

story is that of Darwinism.{3} Therefore, man is nothing more than a product of natural selection. He does not hold a unique position above other animals, and he was not specifically created with a purpose.

One's view on origins is fundamental to how man is regarded, and it determines which ethical system is used to determine right and wrong views on healthcare. The tension is between the theistic view that man has inherent dignity and worth, despite his capabilities or lack thereof, and the naturalistic view that man's worth is based on whether or not he is a burden on society as a whole.

One view places an absolute value on a person while the other places a relative value. This, in turn, determines whether or not we share a moral obligation to help the weak and infirmed.

But We Vote on Second-order Questions!

While the ethical implications on healthcare are of primary importance, usually we are asked to evaluate healthcare based on second-order questions: How much does healthcare cost? Who should get subsidized? How are they subsidized? Should healthcare and health insurance be privatized? Which candidate's plan do I agree with?

Several of the speakers at this bioethics conference addressed specific plans by candidates and their opinions about them (For more information on second-order analyses, see the *Women of Faith Blog post* which summarizes Dean Clancy's discussion on McCain/Obama Healthcare plans. See also James Capretta's discussion on policy analysis, PowerPoint® presentation from the conference and a related article.) But the emphasis at the conference was not in endorsing one candidate over another as much as evaluating healthcare from the perspective of a Christian worldview. In other words, we first must answer the primary questions and then use that analysis to guide our views on the secondary questions in healthcare.

I came away from the conference with an understanding that there are several problems with the current healthcare system, from overuse of technology to doctor/patient relationships to how the government subsidy system works. However, these problems are really the fruits of a deeper problem having to do the worldview approach that medical health professionals, politicians, and we, as a culture, take on the issue of health and healthcare. Healthcare is becoming more and more a consumer business or a commodity, and less and less a moral obligation to help those that are weak and infirmed (or a moral obligation to help prevent people from becoming weak and infirmed).

There is no one solution; thus, no one candidate has *the* solution to all of our healthcare problems. And deciding between expanding government subsidies and privatization is not the root of the problem, so it is not the ultimate solution. As Dean Clancy, former member of the President's Council on Bioethics, pointed out in his session on "Solutions," society can achieve four levels of "happiness": 1) the ultimate good, 2) good beyond oneself, 3) personal achievement, and 4) immediate gratification.

As a culture we are stuck at levels 3 and 4 (personal achievement and gratification), and this means our priorities and decisions are stuck there. This is directly tied to our worldview. From a naturalistic vantage point, it would be logically inconsistent to move beyond levels 3 and 4. However, on a theistic worldview, 1 and 2 follow from the biblical perspective on priorities such as, "You shall love the Lord your God with all your heart and with all your soul and with all your mind…You shall love your neighbor as yourself."{4} God is the ultimate good, and then we are to love others by doing good beyond what benefits ourselves.

What Can I Do?

We can serve a witness to our culture by modeling the biblical perspective on healthcare and human dignity. Maybe not necessarily on the voting ballot, but oftentimes this mindset is modeled on a very personal level by providing for the weak and infirmed in our churches and communities. Or by treating individuals with value, even if they are irresponsible with their health. Or through the way doctors and nurses treat their patients. These are all very tangible ways that people can see the love of Christ and may very well be one way to change some of the problems in our healthcare system from the grassroots level.

Notes

1. “So God created man in his own image, in the image of God he created him; male and female he created them” Genesis 1:27 (ESV).
2. Pearcey, Nancy, *Total Truth: Liberating Christianity from Its Cultural Captivity*, Crossway Books, 2004, pgs. 45-46.
3. This is referring to Darwinism as a philosophy: The presupposition that there is no God, only nature.
4. Matt 22:37, 39 (ESV).

The Spiritual Brain

Heather Zeiger keys off The Spiritual Brain *by Beauregard and O’Leary to critique the materialist position that belief in God is simply in the neurons of the material brain. The Christian worldview is non-materialist and recent experiments bear out its power of explanation over and against the*

materialist worldview.

The Worldview of Neuroscience

The popular worldview held in neuroscience, or the study of the brain, is materialism. Materialism says that humans are only physical beings, which means there is no possibility of an immaterial mind or a soul. On the other hand, non-materialists would say that humans have both a physical aspect and a spiritual aspect. As Christians, we are non-materialists, and would say that we are both physical and spiritual because God, a spiritual being, created us in His image. However, our physical bodies are important because God gave us bodies suited for us.

But what if materialism were true? First, self-consciousness would just be an evolutionary bi-product; something that randomly evolved to help our species survive. Secondly, we would just be a product of our genes and our environment, so free will or the ability to make decisions would be an illusion. This implies that our thought life, our prayers, and everything that dictates our identity is nothing more than neurons firing.{1} And from this we can conclude that our beliefs are unimportant because we really can not trust them anyway. They might be caused by a misfiring neuron. But is this what the data shows us?

In this article we will be looking at some examples in neuroscience that seem to contradict materialism, and to guide us we will be using the recently released book, *The Spiritual Brain* by Mario Beauregard and Denyse O'Leary. We will look at some experiments materialists have tried to do to explain religious experiences and their effects on the body. Then we will look at some experiments that can only be explained from a non-materialistic worldview. Finally, we will see how the data from neuroscience fits within a Christian view of the mind and brain.

The Spiritual Brain does not take a distinctly Christian perspective. So while the studies within this book do not necessarily confirm or deny that Christianity is the "best" religion, it is still useful for apologetics. First, it allows us to break through the language barrier between a materialist and a Christian by looking at data in general neuroscience terms. Second, science studies the world around us, which is God's general revelation, and while this gives us truths about the character of God and His creation, our interpretation of the data must be filtered through the lens of the special revelation of God's Word.

Is God All in Our Heads?

Is there a part of our brain that creates God? Are some people genetically predisposed to being religious? A materialist would say "yes" to these questions. However, as the book *The Spiritual Brain* shows us materialists have not been successful in proving this.

Dean Hamer, geneticist and author of the book *The God Gene*, proposed that some people are more religious than others because they have one DNA letter that is different from non-religious people.{2} While this story was touted as a breakthrough in the media, the scientific community was not amused. Hamer's experiments were not well-defined, and no one could replicate them.{3}

Another popular theory is that people that have a religious experience may be suffering from mild forms of temporal lobe epilepsy. Basically, a misfiring in the brain causes people to be obsessive about something, like religion. These scientists speculate that people like Mother Teresa, Joan of Arc, and the apostle Paul are likely candidates for temporal lobe epilepsy.{4} Epilepsy specialists, however, do not believe that religious experiences are characteristic of temporal lobe epilepsy, and usually seizures are not associated with peace, tranquility, or religious visions. Also, temporal lobe

epilepsy is quite rare, yet over sixty percent of Americans have reported having some kind of religious or mystical experience. And as we will see, many parts of the brain are involved in religious experiences, while temporal lobe epilepsy is much more centralized.{5}

Perhaps one of the strangest experiments to hit the popular media was that of the God Helmet. Neuroscientist Michael Persinger claimed that religious people were more sensitive to magnetic fields, and that electromagnetic radiation was what prompted religious experiences. He developed a helmet that produced strong electromagnetic waves. Several people who tried on the God Helmet reported having a religious or mystical experience of some sort. However, there were some fundamental flaws in the whole setup, including the fact that Persinger never published his results and did not have brain scans to back up his statements. Eventually, a group of scientists from Sweden, using a double-blind test, proved that the God Helmet was really the power of suggestion. The electromagnetic waves didn't cause the religious experiences.{6}

Experiments That Don't Mind

All of these failed experiments presumed that there is no God and there is no spiritual component to people. We have shown, however, how the evidence from neuroscience doesn't seem to fit the materialistic worldview. As we will see, some experiments reported in *The Spiritual Brain* cannot be explained from this worldview. What we will find is that they fit nicely within a Christian worldview.

The first example is obsessive compulsive disorder therapy. Obsessive compulsive disorder, or OCD, occurs when a person has distressing or unwanted thoughts that dominate their thinking, and these obsessions trigger an urge to do some kind of ritual behavior, also known as a compulsion. The interesting thing about OCD is that the person knows that the

obsession is irrational and the ritual won't really fix it, but their feelings tell them otherwise. Scientific studies have shown that the brain is actually misfiring. The part of the brain that tells a person, "There's a problem, do something to fix it," is firing at the wrong times. OCD is a clear case of a healthy mind and a malfunctioning brain.

A materialistic worldview would say that the only way to treat OCD is by *physically* fixing the bad neurons. However, the treatment that actually works involves the patients *mentally* fixing the bad neurons. Patients learn to take control of their OCD by recognizing when their brain is misfiring, and try to starve the urges to do the ritual. After treatment, brain scans show that the brain of an OCD patient is starting to fix itself. The patient is changing his physical brain with his mind![7]

Similar kinds of therapies have been applied to depression and phobias.[8] In both cases, *The Spiritual Brain* reports instances where a patient's brain chemistry was directly affected by their mind.

Another phenomenon that can't be explained from a materialist's worldview is the placebo effect. The patient is given a medicine that they are told will help them, but in actuality they are given a sugar pill. Interestingly, the patient's belief that the sugar pill will help them has caused measurable, observable relief from symptoms. Many doctors say that a patient's attitude oftentimes can help or hinder real medicines or therapies from working.[9]

The ability of the mind to change the brain's chemistry does not fit within a materialistic worldview. But as Christians we know that our minds are very real and can have a very real effect on our physical bodies.

Can We Take a Brain Scan of God?

As noted previously, the popular worldview among neuroscientists is materialism, which essentially means they do not account for or acknowledge spiritual effects on the brain nor do they believe that there is a spiritual component to the person. This would mean that even religious experiences are just our neurons firing. Materialists would claim that either the effects of religious experiences, including prayer, are neurons misfiring, or the person is faking it.

On the other hand, Christians believe that there is a spiritual realm, and there is a spiritual component to human beings that we call the mind or the soul. We believe that when we pray that we are actually praying to God who is real and separate from us, not just a figment of our imagination.

Mario Beauregard, one of the authors of *The Spiritual Brain*, took brain scans of Carmelite nuns while they were remembering the deepest and most poignant religious experience they had had.{10} Using functional MRI and QEEG he hoped to see what parts of the nuns' brains were active.{11}

Dr. Beauregard and his lab found that religious experiences involved many brain regions at once, which rules out materialists' suggestion that there is some kind of "God spot" in the brain.{12} They also found that brain scans during these religious experiences were very complex and consistent with something other than merely an emotional state. Lastly, they determined that the data did not have any of the markers one would expect to see if the nuns were faking it or lying.

This is all that the data can tell us. Physical machines cannot prove the existence of a spiritual God. But as the authors of *The Spiritual Brain* point out, what these experiments do show is that certain explanations, namely materialistic ones, are inadequate for explaining the data in neuroscience. The nuns are experiencing something beyond what

materialism can account for.

Prayer is complex and more than just emotional contrivances, so from a Christian worldview, the results are not surprising.

The Christian View of the Mind and Brain

Experiments such as the God Helmet and theories about temporal lobe epilepsy did not work because their premise was that God was something we made up ourselves. However, as Christians we know this is false. The Bible says that God is the creator and is distinct from His creation, not made from it.

The results of experiments with OCD, phobias, depression, and the placebo effect do not make sense to materialists because the mind seems to affect the physical brain. However, we know from Scripture that the mind, or the soul, is an essential part of our being. James 2:26 and Luke 8:55 show us that when the soul leaves, the body is dead, and when the soul returns, the body is alive. Also, passages such as Matthew 26:41 and Romans 8:10 and 11 tell us that our spirit can affect what our bodies do and keep us from sinning. Passages about the resurrection such as in 1 Corinthians 15 discuss the distinction between our spirit and our physical body.

Lastly, the experiment with the Carmelite nuns showed that during a deeply prayerful experience, their brains display signs of a very complex interaction that is going on. As Christians, we believe prayer is a way to interact with the Creator Who is separate and distinct from us. While this experiment does not prove God’s existence, it is reasonable to conclude that it is the level of complexity we would expect to see if someone were interacting with something distinct from themselves.

At one time people feared that neuroscience would be the death of God. The fear was that science might prove that everything that we do, including prayer and worship could be reduced to

neurons firing in our brains. Hopefully, you are convinced that neuroscience actually points us towards God. There is evidence for a spiritual component of the human self. And, the evidence is consistent with what we would expect from a Christian worldview.

Notes

1. Mario Beauregard and Denyse O'Leary, *The Spiritual Brain* (New York: Harper Collins, 2007) 3, 4.
2. Ibid., 48-50.
3. Ibid., 51, 52.
4. Ibid., 58, 64.
5. Ibid., 72, 71.
6. Ibid., 79-100.
7. Ibid., 126-130.
8. Ibid., 133-140.
9. Ibid., 141-142.
10. For a detailed account of the Carmelite nun experiment see Beauregard and O'Leary, *The Spiritual Brain*, 255-288.
11. Two things we must keep in mind. First, usually the brain will take the same pathways when it remembers an event as when the event actually happened. Second, this experiment can't tell us what the nuns were actually thinking, but it can tell us what kind of brain activity was occurring.
12. Beauregard and O'Leary, 42-44.
13. For more articles and information on the subjects covered in *The Spiritual Brain* see Denyse O'Leary's blog, Mindful Hack, at mindfulhack.blogspot.com.
14. See also Kerby Anderson's article "Mind, Soul and Neuroethics" at www.probe.org/mind-soul-and-neuroethics/.

Hope in the Midst of the Growing Malaria Pandemic

The Growing Scourge of Malaria

We don't know much about malaria in the United States anymore. The disease was once prevalent in the Southern States as far north as Washington D.C. George Washington suffered from malaria as did Abraham Lincoln. A million casualties in the Civil War are attributed to malaria. But malaria was eradicated in the U.S. and much of Europe by 1950 with the use of pesticides, eliminating the sole transmitting agent of the malarial parasite, Anopheles mosquitoes.{1}

Malaria not only continues elsewhere but is a growing threat in the tropics around the world and especially in Sub-Saharan Africa. Half the world's population is at risk for malaria with some estimates as high as 500 million cases every year and over 2 million deaths. Most of those deaths are in Sub-Saharan Africa, and over half of them are of children under five years of age. In some parts of Zambia there are over thirteen hundred cases of malaria for every thousand children under five. That means some children are infected more than once per year.

The economic effects are just as severe. Malaria drains the Indian economy of nearly $800 million each year due to lost wages from death, absences, fatigue and money spent on insecticides, medicines, and research. Uganda spends over $350 million annually on malaria control, and forty percent of their health care dollars are spent on treating malaria. Still eighty thousand die every year.

The disease begins with a painless bite of the female Anopheles mosquito that needs blood to feed her eggs every

three days. To prevent coagulation of her victim's blood she injects a little saliva which also may contain only a couple dozen one-celled organisms of the genus *Plasmodium*, the human malarial parasite. These make their way to liver cells where they multiply by the tens of thousands. After several days these liver cells rupture, releasing the parasite into the blood stream. The new parasites infect red blood cells and multiply again by the tens of thousands. Still the victim is unaware anything is wrong.

Once the parasites have consumed the red blood cells from the inside out, they rupture the cells and tens of millions of parasites are loose inside the blood. The first immune response begins, and muscle and joint aches are the first sign something is wrong. But the parasites infect new red blood cells within thirty seconds of release and hide from the body's defenses for two more days. When the next wave of parasites release, the immune system can be overwhelmed. Fever, cold sweats, and chills ensue and the fight is on. At this stage if an uninfected mosquito bites the sufferer, she will ingest a new form of the parasite and the cycle begins anew.

We need to get this scourge under control.

New Hope with DDT

As noted previously, malaria was prevalent in the U.S. until the late 1940s. We rid ourselves of this scourge through the use of the "miracle" pesticide DDT (dichloro-diphenyl-trichloroethane). Malaria was eliminated in Europe and North America by eliminating the species of mosquito that carried the disease-causing parasite.

DDT was used during WWII essentially as a secret weapon against malaria in the Pacific war. Not only were American bases sprayed with DDT to rid them of malaria carrying

mosquitoes, but freed prisoners of war were dusted with DDT powder to rid them of insect parasites. DDT was used to great effect and was deemed entirely safe to humans.

After WWII, Europe and America began applying DDT to their malarial and agricultural problems in mammoth proportions. Malaria was eliminated in Europe and the U.S. in a few years. Greece reportedly eradicated malaria within one year. Sri Lanka used DDT from 1946 to 1964 and malaria cases were reduced from over three million to twenty-nine.{2}

Recent studies have shown repeatedly that DDT causes no harmful effects to human health, and when used as currently prescribed there is little possibility of harm to the environment.{3} In South Africa, Sri Lanka, Mozambique and other nations, DDT has been extremely effective in reducing the rates of malaria, as much as an eighty percent reduction in one year.{4}

DDT is not sprayed out in the natural environment but on the walls of homes and huts. This use repels Anopheles mosquitoes, agitates those that do enter the home so they don't bite, and kills only those that actually land on the wall. Since most mosquitoes are not killed, just repelled, little opportunity exists for resistance to DDT to build up. Even mosquitoes that are known to be resistant to DDT are still repelled by it.

South African Richard Tren, president of Africa Fighting Malaria, says that "In the 60 years since DDT was first introduced, not a single scientific paper has been able to replicate even one case of actual human harm from its use."{5}

The World Health Organization in 1979 deemed DDT the safest pesticide available for mosquito control, and estimates from reputable scientists indicate DDT has been responsible for saving up to 500 hundred million lives.{6}

DDT is effective, cheap, long lasting, and safe. By itself, DDT is not a magic bullet, but it's pretty close. Certainly

more aggressive use of bed nets and newer drug treatments for those already infected still need to be used, but without DDT, these are only putting band aids on inches-deep open wounds. But some third world countries still do not know about DDT or are afraid to use it.

The Objections of the Environmentalists

For some, the reemergence of the pesticide DDT in the escalating fight against malaria raises concerns as it did for me since we are aware of the troubles allegedly caused by DDT for birds, particularly hawks and eagles in the ‘60s and ‘70s.

When the U.S. eradicated malaria, DDT was almost too effective and too cheap. Agricultural use was stepped up, and since DDT is a long-lasting chemical, it built up in the environment and in the food chain. Fish particularly began harboring large amounts of DDT in their tissues and Bald Eagles, which feed on fish, began a build-up of the chemical in their tissues as well. Eventually, Rachel Carson’s 1962 book, *Silent Spring*, blamed the declining numbers of Bald Eagles on the use of DDT. By 1972, the U.S. Environmental Protection Agency had banned the use of DDT in the U.S. despite mountains of evidence that this ban was unwarranted.

Bald Eagle numbers were plummeting before the use of DDT, and were recovering before the chemical was banned.{7} Specific tests done with numerous birds found no correlation between thinning egg shells and DDT. But the damage was done. The U.S. and European nations banned DDT and expected other countries to do the same. Both governments and non-governmental organizations (NGOs) began rejecting goods from other countries that used DDT.

When Sri Lanka and South Africa stopped use of DDT, malaria rates soared.

The indoor residual spraying method offers no risk to humans

or to the environment, yet environmental groups still resist its use. “If we don’t use DDT, the results will be measured in loss of life,” says David Nabarro, director of Roll Back Malaria. “The cost of the alternatives tend to run six times that of DDT.”{8}

But this truth seems to be lost on many activists and aid agencies. The human toll of malaria worldwide is far more important than imagined environmental risks and discredited scare campaigns. International aid agencies need to free up important aid dollars to secure DDT for countries whose people can’t afford the latest malaria medicines and whose government’s health budgets are stretched to the breaking point simply taking care of already sick patients.

Obviously there is something more going on than just unrealistic objections to a particular chemical. DDT is environmentally safe, without risk to human health, extremely effective and incredibly cheap.{9} The environmentalist worldview comes clearly into focus, even though their policies mean death and disease throughout over one hundred countries where malaria is endemic.

“Sustainable Development” Keeps Billions in Poverty, Disease and Malnutrition

DDT was unfairly criticized and banned in 1972 in the U.S. and eventually around the world despite clear evidence to the contrary. Places where malaria had been nearly eradicated, such as Sri Lanka, saw an immediate surge in malaria after its use was discontinued. But even now as the scientific credibility of DDT has been restored, many continue to fight its use.

Environmentalists and officials at the World Health Organization seek to reverse recent decisions to rehabilitate DDT and begin its effective use in malaria stricken countries.

But why? If DDT is so effective, safe, and inexpensive, why would some continue to fight its use? The answer is bigger than just misinformation or stubborn adherence to worn out doctrines.

In his book *Eco-Imperialism: Green Power, Black Death*, Paul Driessen exposes an intricate web of conspiracy to keep third world countries energy deficient, disease plagued, chronically poor, and malnourished, all in the name of "sustainable development." The bottom line is that sustainable development means that, if there is any supposed or imagined risk to the environment, then economic development must be curtailed to insure that whatever development occurs is sustainable by the environment with no risk at all.

Therefore, drugs like DDT for malaria control, fossil fuel-burning power plants, and even dams providing irrigation, safe drinking water, and cheap electrical power are resisted by powerful and well-funded environmentalist groups.

The Narmada dam project was killed in India by environmentalist groups concerned by a particular fish species that might be threatened. They persuaded international lending agencies to withdraw their support. Local residents were incensed. The project would have provided low cost electricity, sewage treatment plants, irrigation and clean water for 35 million people. People displaced were to be given new homes and farmland. But when a tiger and wildlife preserve was formed, displaced peoples were given no place to go and threatened with extreme measures if they returned.{10}

But why would seemingly well intentioned people appear to be so harsh and cruel to people simply wanting a better life? At the heart of this problem is a foundational worldview issue.

The Difference a Worldview Makes

It's alarming to see how frequently environmental groups will deliberately distort the truth and outright lie to achieve their ends. They have been caught many times, but are never held accountable.

In 1995, Shell Oil was announcing plans to sink one of its offshore oil rigs in the Atlantic with a permit from the UK Environment Ministry. Greenpeace, an international environmentalist group, launched a $2 million public relations campaign that accused Shell of planning to dump oil, toxic wastes, and radioactive material into the ocean. Shell eventually backed off and spent a fortune to dismantle the platform onshore.

A year later, Greenpeace actually published a written apology, effectively admitting the entire campaign had been a fraud. There were no oil or toxic wastes, and the admission was buried with small headlines in the business page or obituaries.{11}

The Alar apple scare of 1989 has been exposed as a gross misuse of science that ended up bringing in millions of dollars to the National Resource Defense Council that orchestrated the campaign. Never mind that grocers, apple growers, and UniRoyal lost millions of dollars as well as the use of Alar, an important cost-saving and harmless chemical.{12}

But why such fraud and misinformation in the name of a safe environment? My analysis indicates a clear difference in worldview. Many of the leaders in the environmental movement are operating under the banner of a naturalistic worldview. In that context, nature as a whole takes precedence over people. Anything that they perceive as even potentially causing harm should be avoided. Nature must be preserved as it is.

Invariably, the one species asked to make sacrifices is always human beings. This is clearly reflected in third world countries struggling to overcome the crippling effects of poverty and disease. Rather than develop cheap electricity through fossil fuel power plants, millions are forced to burn dung and local wood products, causing large increases in toxic fumes and other indoor pollutants.

Nearly a billion people worldwide suffer from increased incidence of asthma, pneumonia, tuberculosis, lung cancer, and other respiratory diseases linked to indoor pollution caused by burning raw biomass fuels to heat their homes and cook their food.{13}

As Christians, we recognize that people are made in the image and likeness of God. While we are always responsible for carrying out our responsibility to rule and have dominion over God's creation, a larger, primary concern is to look after human needs and relieve human suffering. Let's start allowing people the right to make their own decisions concerning electricity and malaria with our advice and not unreasonable pressure.

Notes

1. Michael Finkel, "Malaria: stopping a global killer," *National Geographic*, July 2007, 46.
2. Richard Tren and Roger Bate, *Malaria and the DDT Story* (London, UK: Institute of Economic Affairs, 2001), 35-37.
3. Tren and Bate, 45-47.
4. Paul Driessen, *Eco-Imperialism: Green Power, Black Death* (Bellevue, Washington: Free Enterprise Press, 67.
5. Richard Tren, quoted by Driesen, *Eco-Imperialism*, 69.
6. Driessen, *Eco-Imperialism*, 69.
7. J. Gordon Edwards and Steven Milloy, 100 things you should know about DDT, www.junkscience.com/ddtfaq.html (accessed on Jan 10, 2008).
8. David Nabarro, quoted by Driessen, *Eco-Imperialism*, 70.

9 . Interactive presentation on DDT and malaria, Africa Fighting Malaria, www.fightingmalaria.org/ddt-interactive.aspx, accessed on March 3, 2008.
10. Driessen, *Eco-Imperialism*, 39-40.
11. Ibid., 25.
12. Michael Fumento, The anatomy of a public scare, www.fumento.com/ibdalar.html. Accessed on March 3, 2008. Also see Michael Fumento, *Science Under Siege* (New York: William Morrow and Co., 1993), 19-42.
13. Driessen, *Eco-Imperialism,* 38-39.

"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.

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)

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/.