

“Would Clones Have Souls?”

If we were ever able to clone humans, would they have souls?

This is a common and important question. The tough part is that we don't know for certain the origin of individual souls. One view in theology is a creationist view that supposes that God individually creates each new soul some time after fertilization or perhaps even just before fertilization (Jeremiah 1:5). Another view suggests that something in the union of sperm and egg contributes to the origin of the soul. However the Bible does not give us direct testimony one way or the other. We do know that identical twins form when the early embryo—in the 2–8 cell stage—somehow divides completely in two. If sperm and egg were necessary for each individual, then only one person from an identical twin pair would have a soul and the other would be soulless. I think we can all agree that that doesn't make sense. So I assume a clone would have a soul since it is a form of technological twinning.

I hope that helps. An interesting question to ask is, What if clones did not have souls and were biologically viable? You would face the possibility of having a *homo sapiens* standing in front of you with no soul. If so, how would you know they *didn't* have a soul? The question is not as easy to answer as you might expect.

Respectfully,

Ray Bohlin, Ph.D.

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“In Redeeming Darwin Are You Saying God Used Evolution?”

I read [the description of “Redeeming Darwin”](#) and [an email](#) supposedly explaining what you mean by “redeeming Darwin.” Neither explain exactly what you do in this program; are you saying that God used evolution? If so, I find this extremely unbiblical. Or are you saying that Darwinism as it now stands (“molecules-to-man” – i.e., macro-evolution) is true but that it can somehow be used to evangelize? Or are you saying that Darwinism as I described above is NOT valid, but that an actual 6-day Creation by God is what IS true?

I apologize that our description is not clearer. We will take another look at it to see what we can do to increase the clarity.

At Probe Ministries we reject the Darwinian evolutionary mechanism proposed for the origin and diversity of life. The [Redeeming Darwin](#) curriculum explains a few of the problems with Darwinism and explores the alternative provided by the relatively new Intelligent Design Movement.

Since Intelligent Design principles are used by both young and old earth creationist perspectives we use scientists in the film from both ICR (John Morris) and Reasons to Believe (Fuz Rana) to explain what they like and don't like about ID.

As a ministry we do not take [a position on the age of the earth](#) question.

Respectfully,

Ray Bohlin, PhD

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“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 O₃). 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

“Why Are Dating Methods Unreliable?”

I'm a Christian who believes in a six day literal creation and I have been looking at lots of material on the Grand Canyon to see if it can shed any light on how it was formed and how old it is, and in my search I come across your report which to me seems a very honest and an unbiased report.

Could you help me by telling why dating methods of rocks are unreliable and sometimes come into contradiction? As since I have been doing my own research into how old some things are, I keep getting different answers from different scientists, whether they be young earth or old earth scientists.

Also, I have been informed that only a geologist with a Ph.D can tell the age of rocks and no one else in any other field; is this true?

Your confusion is reasonable. There are many conflicting messages on this topic from people who ought to know what they are talking about. This is one of the reasons why I am undecided about the age question. I simply am unable to discern the reason for these conflicting views. Is it because of prior assumptions? Is it because of truly conflicting data? Is it because of incomplete knowledge of the facts? Is it because of a deep-seated prejudice against a particular position? As a biologist, I find myself unable to follow the technical critiques that go back and forth and so I am unable to truly answer the above questions for myself.

The conflicting age estimates can be due to a number of problems. The dating methods themselves can be unsound, based on faulty presuppositions (the position of young earth creationists). They can be due to local anomalous conditions that do not apply to most great age estimates (position of most old age creationists and evolutionists). Old earth creationists maintain that the preponderance of the evidence should hold sway over the few exceptions that young earth creationists have found. Yet some young age research is being submitted to the scientific community for scrutiny and is holding up well. But is it a local exception or something more significant?

Your last statement about only geologists being able to tell the age of something should be treated suspiciously. While it is reasonable to say that they have a better grasp of the details of geological dating methods, it is also an unveiled appeal to authority: "Only I know what I am talking about therefore you should trust me and me only." Scientists shouldn't communicate this way. Science has always been marked by humility before nature and openness to new information and theories. This view is not very open. It sounds like they have

something to hide.

ICR has come up with some new data on dating methods and some of the information is online at <http://www.icr.org/research/>. Articles 3-10 in the first list all relate to your concern. These papers were all presented at the 2003 International Conference on Creationism here in the US. They might help to clarify some things for you.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries

“Can You Rebut the Google Video ‘Zeitgeist’?”

Please have someone watch the Google video “Zeitgeist” (<http://video.google.com/videoplay?docid=5547481422995115331>) and provide an answer to this. If you have any energy to do this, you will be activating it from a deeper source. Please. Someone tell me why I should believe—or you for that matter!

I just finished watching the movie as you requested of someone at Probe Ministries.

I took several pages of notes but eventually stopped because the information and misstatements flowed much too rapidly. I stopped about 2/3 of the way through. But I watched till the bitter end.

Let’s start with the attack on Christianity. A quick Google search of Horus, the Egyptian Sun god whom Jesus and almost all other “savior” types are supposedly modeled after, is

misrepresented in the film. He was the Falcon god and only later became known as the Sun god. [<http://www.touregypt.net/featurestories/horus.htm>] Nothing is said about being born on Dec 25th or having twelve disciples, or being born of a virgin, or dying and being raised three days later.

Sirius has never been known as the supposed star of Bethlehem, another astrological reference touted in the film. They also mention that somehow the Southern Cross constellation played a role in identifying the time of Jesus' birth. That's impossible since the Southern Cross is only visible in the Southern Hemisphere. Israel is simply not far enough south to ever have The Southern Cross visible. I have seen it once, from the Equator off the Galapagos Islands.

They summarily dismiss the testimony of Roman historians Tacitus and Pliny the Younger who only speak of the Christ, not Jesus. They also show a quick list (where is that from?) of numerous 1st century historians who say nothing about him. Well, of course! Christianity was barely on anybody's radar screen in that first century. Nero just found them a convenient scapegoat for the burning of Rome precisely because there were so few and hardly anybody knew much about them. Josephus is a reliable historian in just about everything he writes about 1st century Judaism. The forgery spoken of is known, but it is a forgery of added phrases in a reliable entry about Jesus. What was added was Josephus' claims that this Jesus was the Christ, the Messiah. Other entries about Jesus say nothing about that. Also the film ignored the entries in the Jewish Talmud about Jesus from their perspective. Even critical historians today DO NOT dispute that there was a real man Jesus of Nazareth who his followers claimed was the Messiah.

The 9/11 conspiracy talk is also out of line. For online versions of a *Popular Mechanics* article debunking many of the conspiracy myths of 9/11 see:

[Debunking 9/11 Myths: About the Airplanes](#)

[Debunking the Myths About the 9/11 Attack on the Pentagon](#)

[Debunking the 9/11 Myths: Special Report – The World Trade Center](#)

These *Popular Mechanics* editors consulted scientists, engineers, and other experts. They are neutral. Their list of experts is impressive. You'll find evidence against conspiracy contentions about the collapse of the towers, what hit the Pentagon, and why fighters did not shoot them down.

You can also check this out:
www.minutemanreview.com/9-11-myths-debunked/.

I have no doubt there is a conspiracy, but it's a satanic conspiracy that is millennia old. These types of films—"Loose Change" is another older 9/11 conspiracy film—prey on fear and paranoia. There is much more that could be said about all their claims but I just don't have the time right now.

Friend, the Gospels are reliable: Jesus is the incarnate God who died for our sins and rose on the third day. Astrology is forbidden in the Bible, it's not founded on it. If you have a copy, read Lee Strobel's *The Case for Christ*.

Respectfully,

Ray Bohlin, Ph.D.

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“Should a Single Christian Woman Use In Vitro Fertilization?”

We have an unmarried, believing woman in our church who is considering in vitro fertilization. I believe this is against God's intent for marriage and the family according to Genesis 2:21-25, and also Paul's teaching about marriage in Ephesians 5:18ff. Your input with other Scriptures and your ideas would be much appreciated. Perhaps you can suggest a good book or pamphlet on this subject that we could give this woman who seems intent on her mission.

I am in full agreement with your reasoning.

In your discussion of Genesis 2 may I suggest including that the notion of the two becoming one flesh certainly includes the production of children that are a clear expression of this principle. From two people has come one person or one (new) flesh. While the children of single parents are to be honored and supported in our culture once they are conceived, it is certainly not a part of God's initial plan. To deliberately plan on being a single parent from the beginning implies selfish motives. The child is a commodity, something to meet a need or provide something for the parent. The story of Hannah and Samuel in 1 Samuel 1 indicates that Hannah saw parenting as a gift and Samuel himself as a gift from God, not a right.

If this unmarried woman is going to seek parenthood via in vitro she will also need a sperm donor. That directly violates the one-flesh principle above since the sperm donor will not be her husband. This also creates a necessary “relationship” with this man as the father of her child. This is inherently unwise and creates the very real possibility of future disputes and tensions with no clear guidelines for resolution.

She would be at the mercy of the court and that particular judge as to what relationship this man will have with her and her child. Even when the donation is anonymous, it won't necessarily remain anonymous throughout the life of the child. Children have been granted access to the identity of anonymous sperm donors who fathered them. Some men simply won't care. But what if he does? What if he desires to know something about the mother of his child as well as the child himself/herself?

A booklet I can recommend is from the BioBasic series from Kregel Publications titled *Basic Questions on Sexuality and Reproductive Technology*. While this circumstance is not directly addressed, questions 5, 6, 7 and 13 do relate some of the principles I have discussed above. This booklet can be obtained from the Center for Bioethics and Human Dignity at www.cbhd.org.

I pray this helps.

Respectfully,

Ray Bohlin, Ph.D.
President

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Expelled: No Intelligence Allowed

Dr. Bohlin explores the key points from this documentary from a Christian perspective. He looks at three of the scientists featured on the film who were persecuted for their willingness to consider intelligent design as an option. The film may

become dated but the issue of an intelligent creator versus an impersonal, random cause of creation will continue on for many years.

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

Evolution is routinely trumpeted as the cornerstone of modern biology, indispensable even to modern medical research. Therefore, if someone questions Darwinian evolution and its reliance on unpredictable mutation and natural selection, you are questioning science itself. At least that's how the gatekeepers of science explain it.

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

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

The film *EXPELLED* explores the reality of what happens when evolutionary orthodoxy is questioned by vulnerable scientists

who have yet to secure tenure.

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

Let me briefly introduce the three scientists.

Richard Sternberg has a double PhD in evolutionary biology. As editor of a scientific journal, he oversaw the publication of an article promoting Intelligent Design and critical of evolution. As a result, he was harassed and falsely accused of improper peer review. He has been blacklisted.

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

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

Richard von Sternberg

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

Sternberg was considered a rising scientist and theorist. His

multiple appointments demonstrated great confidence in his research ability. By 2004 he had accumulated thirty scientific publications in peer-reviewed science journals and books.

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

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

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

The White House Office of Special Counsel was eventually called in to investigate, and although they eventually did not take the case because Sternberg was not actually a Smithsonian

employee, they did issue a preliminary report documenting the inaccuracy of the charges against him and the accuracy of Sternberg's accusations.[\[3\]](#) He followed very standard and proper peer-review procedures and even got approval for the article from a member of the society's ruling council. You can bet that the editors of other journals were paying attention.

Caroline Crocker

Caroline Crocker, a PhD with degrees in pharmacology and microbiology, is a research scientist and former lecturer at George Mason University.[\[4\]](#)

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

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

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

Health eventually told her to stop looking because she was blacklisted.{5}

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

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

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

Guillermo Gonzalez

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

Ordinarily, to become a tenured professor at a research institution there are specific requirements that must be met. The Astronomy Department at Iowa State requires a minimum of fifteen research papers. Gonzalez should have felt quite secure since he published nearly five times that many papers.

He also co-authored an astronomy textbook through Cambridge University Press that he and others used at Iowa State. But his initial application for tenure was denied. The faculty senate indicated his application was denied because he didn't meet certain necessary requirements.

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

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

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

Be Prepared for *EXPELLED*

Probe Ministries highly recommends the film *EXPELLED: No Intelligence Allowed* as it highlights the harassment and persecution of PhD scientists at the highest levels of academia and exposes signs of ugly things to come in the culture at large.[\[8\]](#) Usually the scientific establishment tries to cover up these activities, but when exposed, they

usually resort to saying that this level of harassment is deserved since a fundamental tenet of science is being challenged, and therefore these scientists don't deserve their positions. Academic freedom apparently only applies to disagreeing with details about evolution but not evolution itself.

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

Now, let's be clear about something. Just because a few scientists and scientific institutions have behaved badly on behalf of evolutionary orthodoxy doesn't mean that evolution itself is suspect. But as I stated earlier, over seven hundred scientists have now signed a statement declaring their skepticism about Darwinian evolution as a comprehensive explanation of the complexity of life and the list is growing. The scientific underpinnings of Darwinian evolution have been unraveling for over fifty years. I've been personally involved in this revolution for over thirty years, long before Intelligent Design was even a recognized movement.

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

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

recommended to church youth leaders by those promoting *EXPELLED*.

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

Notes

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

8. streamingmoviesright.com/us/movie/expelled-no-intelligence-allowed/.
9. Also see www.probe.org and streamingmoviesright.com/us/movie/expelled-no-intelligence-allowed/.

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“How Do I Answer My Friends’ Questions About The Da Vinci Code?”

I am a Graduate Student of Chemical Engineering at _____ and I hail from India. I was born in a Christian Family and I am a believer.

The book *The DaVinci Code* by Dan Brown has caught the attention of lot of Indians who are unaware of Jesus and the true meaning of Christianity.

Some of these Indians are my friends and are predominantly Hindus. As a rule I haven’t read the book but when they tell me that the book is compelling and “real”, I have no answers to the questions that are posed to me. I must confess that I am not as well versed with the Bible and the history of Christianity as I ought to be.

How do I read *The DaVinci Code* knowing the facts and not getting fascinated by the fictional “facts”?

Thank you for writing, and I understand your dilemma.

First, Probe has an article by Michael Gleghorn which addresses many of the issues in the book. See www.probe.org/redeeming-the-da-vinci-code-2.

Second, the book is definitely an entertaining read. It's worth it as long as you can separate the fact from fiction.

Third, look at the bright side. Your Hindu friends are asking questions about the Bible and Jesus. See it as an evangelistic opportunity, and we can thank Dan Brown rather than curse him.

Respectfully,

Ray Bohlin, PhD
Probe Ministries

Addendum from Probe Webservant:

You can now download Powerpoints of four Probe lectures in our "Decoding *The DaVinci Code*" series [here](#).

"Aren't the Bonds in Peptides More Easily Formed?"

Dr. Bohlin: I have been in contact with a good friend and we have been having a wonderful discussion regarding a series of topics centering around intelligent design. As typical of our conversations we tend to head down tangential trails that avert our focus momentarily. This week's parley has to do with chemical bonding as associated with protein synthesis. Specifically, your position that the probability of amino

acids forming proteins on their own is astronomical. My friend sent you an email recently asking why covalence is not a possibility when considering formation of amino acids and eventually proteins. In your response you referred to two primary problems: chemical and informational. In regards to the chemical you briefly stated that using the early earth scenario (where earth scientists envision a watery world) the energy required to release the water molecule during the peptide bonding process is high especially in an aqueous solution. Further, you state that this barrier can be overcome by the cell through the use of ribosome in a protein fold devoid of water but that the early earth had no RNA to overcome this barrier. Here is my long drawn out question to you.

First, I contend that the weak hydrogen bond (not covalent) associated with the loss of the two hydrogen and one oxygen atom during the formation of an amino acid with the peptide bond is easily broken through a heat catalyst such that existed during the high radioactive decay of the early earth as it cooled from its molten stage (and still does today but to a much lesser degree). This loss of a water molecule would heighten the affinity of the amino acid to the peptide bond thus strengthening their mutual attraction. The early earth model also indicates that pH (percent hydrogen) levels were probably very different which would also act as a catalyst to break the hydrogen bond as the hydrogen and oxygen atoms try to degas from solution and neutralize the solution. The earth's closed system perpetuated this process indefinitely by trapping the heated gases laden with other hydrous compounds such as sulfuric acid. The formation of the amount of water on earth certainly could not be accomplished by the release of water molecules through the formation of proteins alone. This begs the question of which came first the chicken or the egg? If it were the amino acids, then we would have a sea of amino acids greater than the volume of the oceans. If the amino acids were formed outside of an aqueous solution then where

did the water molecules come from that were eventually released? Both hydrogen and oxygen had to be abundantly present and together they form many, many more molecules other than just amino acids and water. The information concern you were referring to suggests that 10 to 65^{th} power is unobtainable. However, when there exists many times more that number of amino acids the odds quickly reduce and become more favorable. 10 to the 65^{th} sounds astronomical but 10 to the 6500^{th} is even more astronomical thus diminishing the former. Further, amino acids can be synthesized in the laboratory which suggests that the building blocks are present on earth. In time, with the correct agents in place (such as powerful radioactive isotopes {neutrinos perhaps?}) the left-handed stereoisotopes of amino acids may also be laboratorily synthesized.

Finally, I would like to know your thoughts on why you believe that proteins were designed. Is it purely philosophical or have you developed a hypothesis that has been tested by others that lends further credence to your postulation? Thank you for your time in advance.

Thank you for your consideration of my earlier response and I am glad to answer your questions and objections.

First, the bonds that are broken to form a peptide bond formation with the subsequent release of water are not hydrogen bonds, they are covalent. That is why peptide bond formation is endothermic or uphill in relation to energy. Simply providing heat is not going to overcome this problem. Sydney Fox attempted thermal synthesis of proteins in early earth conditions, the results of which he termed proteinoids. Beginning with amino acids (in solution or dry) he heated the material at 200°C for 6-7 hours. The water produced by bond formation (and any original water from the aqueous solution) is evaporated. The elimination of water makes a small yield of polypeptides possible. The increased temperature plus the elimination of water makes the reaction

irreversible. However, this process has been rejected for four reasons. First, in living proteins only alpha peptide bonds are formed. In Fox's reactions, beta, gamma and epsilon peptide bonds are also found in abundance. Second, these thermal proteinoids are composed of both L and D amino acids. Only L amino acids are found in living proteins. Third, these are randomly sequenced proteins with no resemblance to proteins with catalytic activity. "Fourth, the geological conditions indicated are too unreasonable to be taken seriously. As Folsome has commented, 'The central question [concerning Fox's proteinoids] is where did all those pure, dry, concentrated, and optically active amino acids come from in the first place.'" (*Mystery of Life's Origin*, 1984, Thaxton, Bradley, and Olsen, p. 155-156)

I am sorry you got the impression that I believed that the formation of peptide bonds and the concomitant release of a water molecule produced the original water on the planet. That is not the nature of the chicken or egg dilemma. The chicken or egg dilemma refers to the fact that in living systems today, proteins are required for DNA and RNA to function with specificity. Histones are required to maintain DNA folding structure and more importantly, proteins are required for DNA and RNA replication. However, it is the DNA which contains the code for the construction of proteins. DNA needs proteins, proteins need DNA. Which came first in the early earth? DNA or protein, chicken or egg? The proposed RNA world, RNA molecules which can perform some limited enzyme (protein) functions is negated by the fact that there is no mechanism for the production of RNA in an abiotic early earth. Even if this is accomplished, the enzyme-like functions of some small RNA molecules are not sufficient to support life in any shape or form.

Just because $1/10$ to the 65th power is large compared to $1/10$ to the 6,500 power does not minimize $1/10$ to the 65th as a very small probability. It is estimated that there are 10 to

the 80th power particles in the universe. The smallest amino acid, glycine is comprised on 13 atoms, each atom (either hydrogen, carbon, nitrogen or oxygen) is composed of multiple protons, electrons and neutrons and each of these is composed of multiple quarks. You can readily recognize that a sea of 10 to the 65th amino acids is a physical impossibility. Current estimates suggest that the concentration of amino acids in the early earth could never have exceeded, 10 to the -7 molar, which is the same as the present Atlantic Ocean (*Mystery of Life's Origin* cited earlier, p. 60). Sheer numbers are not going to help. Most researchers rely on some form of concentration mechanism to get enough amino acids together for protein formation. Even when this happens, many of the same problems that Fox's experiments run into are difficult to eliminate.

Finally, I believe that proteins are designed for both philosophical and scientific reasons. Proteins as stated earlier, contain information. The sequence of the 20 different amino acids in a protein consisting of 100 amino acids is crucial to its function. William Dembski (in the *Design Inference*, Cambridge University Press, 1999 and *Intelligent Design*, Intervarsity Press, 2000) rigorously defines this information as complex specified information or CSI. It is complex because the sequence of a protein is not a simple repetition as in a nylon polymer. And it is specified because it can tolerate only a small range of substitution at any one of the 100 positions, indeed at some positions, no substitution can be tolerated. Summing these up is where the 10 to the 65th power came from.

Most biologists readily admit today that chance alone is incapable of overcoming these odds. Therefore, they hold out for some undiscovered natural law that will allow information to arise out of the chaos of a mixture of amino acids. But law is also an unlikely candidate. Some have suggested that perhaps certain amino acids have an affinity for certain other

amino acids. This could give some level of sequence specificity. This fails on two counts. First no such pattern is observable when nearest neighbors are analyzed in modern proteins. Second, this would defeat the entire process since the sequence would no longer be complex but simple. Simple because the sequence could now be predicted once the first amino acid is put in place. This would lead to a very limited number of possible combinations and not the millions of possibilities currently residing in living cells.

The only known source for CSI today is intelligence. Even the fundamentalist Darwinian Richard Dawkins, said in his book *The Blind Watchmaker*, "Biology is the study of complicated things that give the appearance of having been designed for a purpose." Perhaps they appear to be designed because they were designed. There is certainly nothing unscientific about wanting to explore that possibility.

Respectfully,

Ray Bohlin
Probe Ministries

Redeeming Darwin: The Intelligent Design Controversy

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

lack of sound scientific basis for their attacks against intelligent design proponents.

What's All the Fuss?

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

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

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

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

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

Uh-oh! Science and the supernatural indeed rarely go well together, at least over the last 150 years. But is that what ID actually says? We'll explore that a little later but for

now let's find out what's really at stake in this debate over evolution and Intelligent Design.

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

Let's look at a few reasons why some scientists are skeptical of the confidence shown by so many other scientists about Darwinian evolution.[\[4\]](#)

Is There Scientific Proof for Evolution?

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

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

For most of the previous 3 billion years of earth history only single-celled organisms were found. "For billions of years, simple creatures like plankton, bacteria and algae ruled the earth. Then, suddenly, life got very complicated."[\[7\]](#)

So the appearance of most of the major categories of animals happened in a very short period of time, some say less than five million years, when it should have taken tens and maybe

even hundreds of millions of years. One geologist who helped pinpoint the very short time frame of the Cambrian explosion expressed this challenge: “We now know how fast fast is. And what I like to ask my biologist friends is, how fast can evolution get before they start feeling uncomfortable?”[\[8\]](#)

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

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

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

Evidence for Intelligent Design, Part One

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

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

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

But let's make this specific. Let's say your sister wins the lottery. Now that is someone you specifically know; but again someone always wins the lottery so the fact that it's your sister doesn't warrant any special attention.

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

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

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

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

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

Evidence for Intelligent Design, Part Two

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

designed for a purpose.”[\[10\]](#)

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

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

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

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

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

If it looks designed, maybe it is!

ID, Science, Education, and Creation

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

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

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

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

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

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

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

Notes

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

