

The Causes of War

Meic Pearse's book The Gods of War gives great insight into the charge that religion is the cause of most war. History shows this is not true: the cause of most war is the sinful human heart, even when religion is invoked as a reason.

The Accusation

Sam Harris, the popular author and atheist, says that “for everyone with eyes to see, there can be no doubt that religious faith remains a perpetual source of human conflict.”[\[1\]](#) Writing for the Freedom from Religion Foundation, fellow atheist Richard Dawkins adds, “Only the willfully blind could fail to implicate the divisive force of religion in most, if not all, of the violent enmities in the world today.”[\[2\]](#) Speaking more bluntly, one British government official has said, “theocrats, religious leaders or fanatics citing holy texts . . . constitutes the greatest threat to world peace today.”[\[3\]](#)

War is the ultimate act of intolerance, and since intolerance is seen as the only unforgivable sin in our postmodern times, it's not surprising that those hostile to religion would charge people holding religious convictions with the guilt for causing war.



This view is held by many others, not just despisers of religion. A 2006 opinion poll taken in Great Britain found that 82% of adults “see religion as a cause of division and tension between people. Only 16% disagree.”[\[4\]](#)

To be honest, religion has been, and remains, a source of conflict in the world; but to what degree? Is it the only source of war, as its critics argue? Is it even the primary source? And if we agree that religion is a source of war, how

do we define what qualifies as a religion? This leads to another question. Are all religions equally responsible for war or are some more prone to instigate conflict than others? Once these issues are decided, we are still left with one of the most difficult questions: How does a religious person, especially a Christian, respond to the question of war?

When confronted with the accusation that religion, and more importantly, Christianity, has been the central cause of war down through history, most Christians respond by ceding the point. We will argue that the issue is far too complex to merely blame war on religious strife. A more nuanced response is needed. Religion is sometimes the direct cause of war, but other times it plays a more ambiguous role. It can also be argued, as Karl Marx did, that religion can actually restrain the warring instinct.

In his provocative new book, *The Gods of War*, Meic Pearse argues that modern atheists greatly overstate their case regarding religion as a cause for war, and that all religions are not equal when it comes to the tendency to resort to violence. He believes that the greatest source for conflict in the world today is the universalizing tendencies of modern secular nations that are pressing their materialism and moral relativism on more traditional cultures.

The Connection Between Religion and War

When someone suggests a simple answer to something as complex as war, it probably is *too* simple. History is usually more complicated than we would like it to be.

How then should Christians respond when someone claims religion is the cause of all wars? First, we must admit that religion can be and sometimes is the cause of war. Although it can be difficult to separate political, cultural, and religious motivations, there have been instances when men went

off to war specifically because they believed that God wanted them to. That being said, in the last one hundred years the modern era with its secular ideologies has generated death and destruction on a scale never seen before in history. Not during the Crusades, the Inquisition, nor even during the Thirty Years War in Europe.

The total warfare of the twentieth century combined powerful advances in war-making technologies with highly structured societies to devastating effect. WWI cost close to eight and a half million lives. The more geographically limited Russian Civil War that followed the Bolshevik Revolution in 1917 resulted in nine million deaths. WWII cost sixty million deaths, as well as the destruction of whole cities by fire bombing and nuclear devices.

Both Nazi fascism and communism rejected the Christian belief that humanity holds a unique role in creation and replaced it with the necessity of conflict and strife. By the end of the nineteenth century, Darwin's ideas regarding natural selection and survival of the fittest had begun to affect philosophy, the social sciences, and even theology. Darwin had left us with a brutal universe devoid of meaning. The communist and fascist worldviews were both firmly grounded in Darwin's universe.

Hitler's obsession with violence is well known, but the communists were just as vocal about their attachment to it. Russian revolution leader Leon Trotsky wrote, "We must put an end once and for all to the papist-Quaker babble about the sanctity of human life." Lenin argued that the socialist state was to be "a system of organized violence against the bourgeoisie" or middle class. While critics of the Russian Tsar and his ties with the Orthodox Russian Church could point to examples of oppression and cruelty, one historian has noted that when the communists had come to power "more prisoners were shot at just one soviet camp in a single year than had been executed by the tsars during the entire nineteenth

century.”{5}

So, religion is not the primary cause of warfare and cruelty, at least not during the last one hundred years. But what about wars fought in the more distant past; surely most of them were religiously motivated. Not really.

Meic Pearce argues that “most wars, even before the rise of twentieth century’s secularist creeds, owed little or nothing to religious causation.”{6} Considering the great empires of antiquity, Pearce writes that “neither the Persians nor the Greeks nor the Romans fought either to protect or to advance the worship of their gods.”{7} Far more ordinary motives were involved like the desire for booty, the extension of the empire, glory in battle, and the desire to create buffer zones with their enemies. Each of these empires had their gods which would be called upon for aid in battle, but the primary cause of these military endeavors was not the advancement of religious beliefs.

Invasions by the Goths, Huns, Franks, and others against the Roman Empire, attacks by the Vikings in the North and the Mongols in Asia were motivated by material gain as well and not religious belief. The fourteenth century conquests of Timur Leng (or Tamerlane) in the Middle East and India resulted in the deaths of millions. He was a Muslim, but he conquered Muslim and pagan alike. At one point he had seventy thousand Muslims beheaded in Baghdad so that towers could be built with their skulls.{8}

More recently, the Hundred Years War between the French and English, the American Revolution, and the Napoleonic Wars were secular conflicts. Religious beliefs might have been used to wrap the conflicts with a Christian veneer, but promoting the cause of Christ was not at the heart of the conflicts.

Pearce argues that down through the millennia, humanity has gone to war for two main reasons: greed expressed by the

competition for limited resources, and the need for security from other predatory cultures. The use of religion as a legitimating device for conflict has become a recent trend as it became less likely that a single individual could take a country to war without the broad support of the population.

It can be argued that religion was, without ambiguity, at the center of armed conflict during two periods in history. The first was during the birth and expansion of Islam which resulted in an ongoing struggle with Christianity, including the Crusades during the Middle Ages. The second was the result of the Reformation in Europe and was fought between Protestant and Catholic states. Even here, political motivations were part of the blend of causes that resulted in armed conflict.

Islam and Christianity

Do all religions have the same propensity to cause war? The two world religions with the largest followings are Christianity and Islam. While it is true that people have used both belief systems to justify armed conflict, are they equally likely to cause war? Do their founder's teachings, their holy books, and examples from the earliest believers encourage their followers to do violence against others?

Although Christianity has been used to justify forced conversions and violence against unbelievers, the connection between what Christianity actually teaches and these acts of violence has been ambiguous at best and often contradictory. Nowhere in the New Testament are Christians told to use violence to further the Kingdom of God. Our model is Christ who is the perfect picture of humility and servant leadership, the one who came to lay down his life for others. Meic Pearce writes, "For the first three centuries of its history, Christianity was spread exclusively by persuasion and was persecuted for its pains, initially by the Jews but later, from 63, by the Romans." [\[9\]](#) It wasn't until Christianity

became the de facto state religion of the Roman Empire around AD 400 that others were persecuted in the name of Christ.

The history of Islam is quite different. Warfare and conflict are found at its very beginning and is embodied in Muhammad's actions and words. Islam was initially spread through military conquest and maintained by threat of violence. As one pair of scholars puts it, there can be no doubt that "Islam was cradled in violence, and that Muhammad himself, through the twenty-six or twenty-seven raids in which he personally participated, came to serve for some Muslims as a role model for violence."[\[10\]](#)

Much evidence can be corralled to make this point. Muhammad himself spoke of the necessity of warfare on behalf of Allah. He said to his followers, "I was ordered to fight all men until they say, 'There is no God but Allah.'" [\[11\]](#) Prior to conquering Mecca, he supported his small band of believers by raiding caravans and sharing the booty. Soon after Muhammad's death, a war broke out over the future of the religion. Three civil wars were fought between Muslims during the first fifty years of the religion's history, and three of the four leaders of Islam after Muhammad were assassinated by other Muslims. The Quran and Hadith, the two most important writings in Islam, make explicit the expectation that all Muslim men will fight to defend the faith. Perhaps the most telling aspect of Islamic belief is that there is no separation between religious and political authority in the Islamic world. A threat to one is considered a threat to the other and almost guarantees religiously motivated warfare.

Pacifism or Just Wars?

Although most Christians advocate either pacifism or a "just war" view when it comes to warfare and violence, Pearse argues that there are difficulties with both. Pacifism works at a personal level, but "there cannot be a pacifist state, merely

a state that depends on others possessed of more force or of the willingness to use it.”{12} Some pacifists argue that humans are basically good and that violence stems from misunderstandings or social injustice. This is hardly a traditional Christian teaching. Pearse argues that “a repudiation of force in all circumstances . . . is an abandonment of victims—real people—to their fate.”{13}

Just war theory as advocated by Augustine in the early fifth century teaches that war is moral if it is fought for a just cause and carried out in a just fashion. A just cause bars wars of aggression or revenge, and is fought only as a last resort. It also must have a reasonable chance of success and be fought under the direction of a ruler in an attitude of love for the enemy. It seeks to reestablish peace, not total destruction of the vanquished, and to insure that noncombatants are not targeted.

However, even WWII, what many believe to be our most justified use of force, failed to measure up to this standard. Massive air raids against civilian populations by the Allies were just one of many violations that disallow its qualification as a just war. As Pearse argues, “war has an appalling dynamic of its own: it drags down the participants . . . into ever more savage actions.”{14}

How then are Christians to think about war and violence? Let’s consider two examples. In the face of much violent opposition in his battle for social justice, Martin Luther King said, “be ye assured that we will wear you down by our capacity to suffer. . . . We shall so appeal to your heart and conscience that we shall win *you* in the process.”{15} Reform was achieved, although at the cost of his life, and many hearts and minds have been changed.

However, another martyr, German minister Dietrich Bonhoeffer, rejected pacifism and chose to participate in an attempt on the life of Adolf Hitler, mainly because he despaired that an

appeal to the hearts and minds of the Nazis would be effective.

Neither King nor Bonhoeffer were killed specifically for their faith. They were killed for defending the weak from slaughter, as Pearse puts it. Perhaps Pearse is correct when he argues, "If Christians can . . . legitimately fight . . . , then that fighting clearly cannot be for the faith. It can only be for secular causes . . . faith in Christ is something for which we can only die—not kill. . . . To fight under the delusion that one is thereby promoting Christianity is to lose sight of what Christianity is."[\[16\]](#)

Notes

1. Meic Pearse, *The Gods of War* (Downers Grove, IL: InterVarsity Press, 2007), 16.
2. *Ibid.*, 15.
3. *Ibid.*
4. *Ibid.*, 14.
5. *Ibid.*, 31.
6. *Ibid.*, 53.
7. *Ibid.*, 54.
8. *Ibid.*, 55.
9. *Ibid.*, 134.
10. *Ibid.*, 58.
11. *Ibid.*, 59.
12. *Ibid.*, 173.
13. *Ibid.*, 175.
14. *Ibid.*, 173.
15. *Ibid.*, 180.
16. *Ibid.*

The Five Crises in Evolutionary Theory

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



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

The Case of the Missing Mechanism

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

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

Much of the reason for evolution's privileged status has been due to confusion over just what people mean when they use the word evolution. Evolution is a slippery term. If evolution

simply means "change over time," this is non-controversial. Peppered moths, Hawaiian drosophila fruit flies, and even Galapagos finches are clear examples of change over time. If you say that this form of evolution is a fact, well, so be it. But many scientists extrapolate beyond this meaning. Because "change over time" is a fact, the argument goes, it is also a fact that moths, fruit flies, and finches all evolved from a remote common ancestor. But this begs the question.

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

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

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

function of a particular structure. What is necessary is to explain the mechanistic origin of these structures!

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

The Origin of Life

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

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

Coacervates, microspheres, the "RNA world," and other scenarios all have serious flaws obvious to everyone in the

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

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

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

But all of these difficulties together, as staggering as they are, are not the real problem. The major difficulty in chemical evolution scenarios is how to account for the informational code of DNA without intelligence being a part of the equation. DNA carries the genetic code: the genetic blueprint for constructing and maintaining a biological organism. We often use the terms of language to describe DNA's activity: DNA is "transcribed" into RNA; RNA is "translated" into protein; geneticists speak of the "genetic code." All these words imply intelligence, and the DNA informational code requires intelligent preprogramming, yet a purely naturalistic beginning does not provide such input. Chemical experiments may be able to construct small sequences of nucleotides to form small molecules of DNA, but this doesn't make them mean anything. There is no source for the informational code in a

strictly naturalistic origin of life.

The Inability to Account for Complex Adaptations

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

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

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

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

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

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

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

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

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

The Bankruptcy of the Blind Watchmaker Hypothesis

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

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

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

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

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

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

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

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

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

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

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

The Prevalence of Stasis over Mutability

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

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

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

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

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

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

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DNA, Information, and the

Signature in the Cell

Where did we come from? Heather Zeiger uses Stephen Meyer's book *Signature in the Cell* to *logically show that the best answer is an intelligent cause—God—rather than natural causes.*

Where Did We Come From?

Where did we come from? A simple question, but not an easy answer. Darwin addressed this question in his book, *On the Origin of Species*. Although he never really answered how the universal common ancestor first came to life, he implied that it was from natural causes. In this article, we are going to look at Darwin's method of deducing occurrences in the past based on observations we see today. This is now referred to as the *historical* or *origins science* method. We will find that purely naturalistic causes fall short of explaining what we know about DNA, but intelligent design seems to be a promising alternative. Then we will look at scripture and see how Christians can use these evidences for design to talk about who that designer is. We will be using Stephen Meyer's new book, *Signature in the Cell*, to guide us on the science and method of approaching this question.

Charles Darwin's book, *On the Origin of Species* discusses his theory on how natural selection acts on living things so that the fittest organisms for a particular environment survive, and how this process eventually leads to novel species and body plans. Implied in his work is the notion that all living things came from nature and from natural causes. So his presupposition is that life must have first come from impersonal things like matter and energy. Because of this, origin-of-life scientists have been trying for years to demonstrate how life may have come from non-life.

Let's try to figure out how a cell could form from purely naturalistic processes. Better yet, since we now know that

natural selection acts on random mutations within the genome, let's focus in on DNA, the instruction booklet for the cell. Without DNA, cells would not function.

DNA is part of a complex information-processing systems^{1} DNA is a long, helical structure found inside the nucleus and mitochondria of the cell. It is made of a four-molecule alphabet arranged in a very specific order. This sequence is like an instruction book telling the cell what parts to use to build a protein. But this instruction book needs to be decoded with other proteins. The difficult thing is that proteins are needed to make more DNA, but DNA is needed to make proteins. And the cell cannot function without proteins. This means that the first DNA molecule must have been made differently than how it is made today.

DNA is a very complex information processing system. In fact, Bill Gates has compared it to a computer program but far, far more advanced than any software ever created.^{2} DNA is more than just an improbable sequence of bases; it is functional. It tells the cells what to do. So the question we really need to answer is, how can this kind of information arise in the first place?

Origins and Operations Science

We are investigating what science can tell us about the origin of life. Did we just come out of a chemical soup, or was it something else? First, we need to answer this question: How did DNA, the body's instruction book, first get here? In order to answer the question, we need to decide what method to use to investigate this question. Since we are looking at the science, we should use the scientific method. However, we need to make a distinction between approaching something that is a re-occurring, testable phenomenon, and a singular event in the past.

As a scientist, I usually work in the area of *operations science*. This is the type of science we learn in school. You start with a hypothesis, then you conduct an experiment to test your hypothesis. Repeat your experiment several times, collect data, and make conclusions about your hypothesis. Operations science deals with regular, repeatable things that can usually be described by mathematical formulas. Oftentimes, operations science is looking at some kind of naturally occurring process.

But there is another type of science that forensics experts and archeologists use. It is called *origins science*. Origins science determines what caused a singular event in the past. The role of origins science is to first determine if something was caused by chance, natural laws, or intelligence. For example, one could find a rock formation that looks very similar to a human head. Was this formation caused by chance and natural laws, such as wind and rain wearing away the rock? Or was it caused by intelligence? Did someone carve the rock to look this way?

Origins science operates under a different set of rules than operations science because the event in question has already happened, and it is not a reoccurring, observable phenomenon. The best that we can do is look at clues to give us a reasonable guess as to what might have happened. In *Signature in the Cell*, Meyer uses origins science to determine if DNA is a result of chance, natural laws, or intelligence:

Thaxton and his colleagues argued that inferring an intelligent cause was legitimate in origins science, because such sciences deal with singular events, and the actions of intelligent agents are usually unique occurrences. On the other hand, they argued that it was not legitimate to invoke intelligent causes in operations science, because such sciences only deal with regular and repeating phenomena. Intelligent agents don't act in rigidly regular or lawlike ways, and therefore, cannot be described mathematically by

laws of nature.[{3}](#)

DNA replication happens all of the time, but it requires proteins. But proteins are made by instructions from DNA. So the first DNA molecule must have been made in a special, atypical way, meaning it qualifies as origins science. Origins science allows for singular acts of intelligence to explain certain phenomena.

This means we need to investigate, using origins science, how the first DNA molecule with its information-carrying capacity was produced.

What Are the Possibilities?

DNA is the code for life. If we determine where it came from, then we are one step closer to determining the origin of life. Let's look at the typical origin of life theories posed by scientists as our first step in our origins science method, and see where theories are lacking or where they are helpful. Two things these theories all have in common is that they presume no designer, but only natural causes, and none of them can explain the origin of information.

The first option is that DNA might have arisen by chance. When scientists talk about chance, they are not saying that some entity called Chance did something. They mean random chemical shuffling, and out of that came DNA. But it's not good enough to explain how random chemicals came together. Think of scrabble pieces. To say that DNA came about by chance would be similar to saying that someone shook a bag of scrabble pieces and threw them on the floor and it spelled out a sentence. And this would not be just any sentence, but step-by-step instructions on how to build a cellular machine. Chance is not a good explanation for the origin of DNA, because the probability of getting something as specified and complex as DNA is well beyond the accepted probability of zero.

The other option is DNA might have come about because of necessity or natural law. Maybe there is some chemical or natural reason that forced the DNA molecules to form. Two examples of this type of origin of life theory are *self-organization* and *biochemical predestination*. The idea behind both of these is that the molecular alphabet in DNA arranged itself because of chemical properties or environmental factors. Unfortunately, scientists have found that the molecules in DNA do not chemically interact with each other because they are stuck to a phosphate backbone, not to each other.[\[4\]](#) On top of that, there isn't even a chemical attraction between these DNA sequences and the protein parts they code for (known as a *codon*). Since there is not a self-organizing motivation for this, and there is not an environmental factor that would favor certain combinations over others, necessity seems to fall short of explaining the functional information of DNA.

Some scientists propose that it is a combination of chance and necessity. The most popular origin of life models are based on this theory. However, Stephen Meyer shows in his book that the two most popular models, the *RNA-first world* and the *Oparin* model, do not explain how functional information first arose. Ultimately these theories boil down to claiming that random chance causes functional information.

So if all of the naturalistic theories of origin of life fall short, then perhaps we should expand our options to theories that allow for intelligent agents.

What if We Allow Intelligence?

It seems that all of the naturalistic explanations for the origin of life fall short of accounting for the information-rich molecule, DNA. As Meyer points out, apart from DNA and the machinery in cells, such specified information is not found anywhere in the natural world.[\[5\]](#) The only time we see

these properties is in human language and writing. So if DNA has the properties of something that was designed, then why not entertain the idea that it was designed?

Today design is not permitted as an explanation in science. However, historically, this has not been the case. In fact, it was a belief in an intelligible and coherent world created by God that motivated early scientists such as Newton, Boyle, and Pascal.[\[6\]](#) However, after the Enlightenment (mid-1700s), many scientists started operating under different assumptions. They assumed that only natural causes, such as chance and necessity, are permitted to explain observations.

Flash forward to Charles Darwin's time (1860s). Darwin looked at presently acting conditions to extrapolate back to the origin of all living things. He saw that environmental factors select for certain traits, such as beaks on finches. And he saw that things like dog breeding will select for certain desired traits. He therefore concluded that maybe the various animals and body plans came from conditions similar to this. He named this selective force, this breeder, natural selection. This was based on what Darwin knew in the 1850s, and some assumptions about intelligent causes influenced by Enlightenment thinking. At that time Darwin knew nothing about DNA. It would not be discovered until the 1950s.

Stephen Meyer discusses how presently there are no known natural causes for the kind of functional information we see in DNA. The only place we see this is in human language and writing. So perhaps we cannot assume natural causes. Maybe DNA arose by intelligent design. Furthermore, experimental efforts to try to produce DNA or RNA in the lab show that a chemist or a computer programmer must be involved in the experiment in order to obtain functional information. Natural selection cannot act as a breeder, because it does not have the end goal in mind.

Intelligent Design is a strong possibility for explaining the

origin of DNA. It is something that we see in operation today. And it is experimentally justified.

What Does This Have to Do with Christianity?

We have been looking at the properties of DNA and how it has all of the characteristics of a written code. Using the methods of origins science that Stephen Meyer used in *Signature in the Cell*, we can conclude that intelligent design is the best explanation for the origin of DNA. Intelligence is causally adequate to produce a code like DNA. It is observable, in the sense that today intelligent agents produce codes. And any experiments that try to reproduce DNA seem to require the input of information by an intelligent agent to make anything meaningful. This is why Meyer calls DNA the signature in the cell. However, the science alone cannot tell us whose signature it is, so we need to look elsewhere for that. That's where Christianity comes in.

As Christians we believe that God reveals himself through general and special revelation. General revelation is God revealing things about himself in nature. Think of it like God's fingerprints on creation. Special revelation is what God has specifically revealed in the Bible. If we want to find out whose signature is in the cell, we need special revelation to inform us on that. And the Bible says this much. Right before Paul says that creation reveals the attributes of God in Romans 1:18-20, he says it is the gospel that brings salvation in verses 16 and 17.

From the science it is reasonable to say DNA first arose by intelligent design. DNA is one of many extra-Biblical clues pointing us to a designer. This evidence, taken with many other extra-biblical evidences such as the fine-tuning of the universe for life, the moral law on our hearts, and even the way that we know gravity works the same today as it did

yesterday, makes one suspicious that there must be a designer. Now take the evidences for the authority of Scripture from archeology and the Bible's internal structure and consistency and we have many reasons to believe that this designer is the God of the Bible. As Paul says in Romans 1, "His invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse" (v. 20). So, even though the science will not bring someone to a saving knowledge of Christ, they are without excuse because it does reveal God's attributes. Maybe when someone sees the Signature in the Cell, they will ask, whose signature is it?

Notes

1. "After the early 1960s advances in the field of molecular biology made clear that the digital information in DNA was only part of a complex information-processing system, an advanced form of nanotechnology that mirrors and exceeds our own in its complexity, storage density, and logic of design." Stephen C. Meyer, *Signature in the Cell* (HarperOne, 2009), 14.
2. Bill Gates, *The Road Ahead* (Viking, 1995), 188; quoted in Meyer, *Signature*, 12.
3. Meyer, *Signature*, 29.
4. The only time the nucleotides in DNA interact with each other is when they are paired, A-T, C-G, and they do this through hydrogen bonding. However, this pairing is with nucleotides across from each other and serves to protect the DNA molecule. The coding has to do with the sequence of bases next to each other, and there is no chemical reason for one nucleotide to "prefer" being next to another.
5. "Apart from the molecules comprising the gene-expression system and machinery of the cell, sequences of structures exhibiting such specified complexity or specified information are not found anywhere in the natural—that is, the

nonhuman-world." Meyer, *Signature*, 110.

6. In the radio transcript, I included James Maxwell in this list. While he is among scientists whose belief in God did influence his work, he lived from 1831-1879 which was after the beginning of the Enlightenment. I chose to take his name out here for clarity, although he is a good example of someone who did not hold to the typical presuppositions of the Enlightenment.

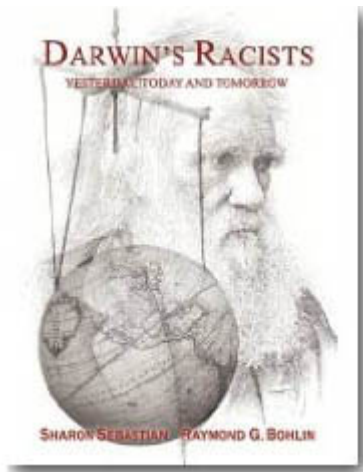
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Was Darwin a Racist?

In some circles to even ask this question and impugn Darwin's integrity conjures up charges of secular blasphemy. After all, Darwin is well documented as holding views on slavery commensurate with the great William Wilberforce himself. Darwin was repulsed by any cruelty of humans on humans.

Darwin was by all accounts an affectionate husband, loving father, defender of the oppressed, and just an all round good and decent man. So how could one accuse him of racism? You simply need to read his second major work on evolution, *The Descent of Man*.

As Benjamin Wiker makes clear in his recent biographical book, *The Darwin Myth: The Life and Lies of Charles Darwin*, Darwin insisted that his theory of natural selection and evolution be understood as a purely natural and undirected process. Consequently, he could only see humans and apes as the result of a real struggle for survival. By all accounts, humans were winning. There was also a severe struggle going on between the races of man.



I recently coauthored a book with Sharon Sebastian entitled *Darwin's Racists: Yesterday, Today, and Tomorrow*. In chapter three we discuss Darwin's explanation of the differences between men and apes from *The Descent of Man*.

In Chapter 6, On the Affinities and Genealogy of Man, Darwin argues that he expected the civilized races of men to fully exterminate the savage races of men in just a few centuries. He also expected the anthropomorphous apes [Ed. note: those most like humans] (gorillas and chimpanzees) to become extinct. As a result, he believed that the gap between humans and animals would eventually be much greater than exists. Darwin postulated that this higher form of man would come from the current Caucasian race. In his book, Darwin states that the current gap between apes and humans is between the gorilla, on the ape side, and the Negro or Australian aborigine, on the human side:

The break will then be rendered wider, for it will intervene between man in a more civilized state, as we may hope, than the Caucasian, and some ape as low as a baboon, instead of as present between the Negro or Australian and the gorilla.

Darwin's foremost German disciple, Ernst Haeckel, made even more dramatic statements. According to Haeckel, if you want to draw a sharp boundary between the human races and the apes, "you must draw it between the most highly developed civilized people on the one hand and the crudest primitive people on the

other, and unite the latter with the apes." Elsewhere Haeckel identifies these cruder and primitive races as the Australian aborigines and the South African Bushmen, which he says, still live in herds, climb trees and eat fruit. According to Haeckel, certain more primitive groups of "people" are more ape than human.

Darwin certainly did not invent racism. Prejudice because someone is "other" than us has always been a part of human existence. What Darwin did provide was a scientific rationale that justified racial prejudice. Implicit in Darwin's struggle for existence is that some forms of a species would be more fit for the current environment than others. From Darwin's vantage point, the Caucasian or European race was well underway to surpassing the other "human" races because of their intelligence, culture, and superiority in war as demonstrated routinely in conflicts between Europeans and any other race or culture to that point.

Darwin's ideas were used to launch the first eugenics society in Britain headed by his cousin, Francis Galton. Darwin's son, Leonard, later served as President of the same society. Margaret Sanger drew her inspiration for what became Planned Parenthood from Darwin and saw a need to control the breeding of poorer and less fit humans.

If humans are a part of a naturalistic struggle for existence, then it logically follows that some tribes and races of humans will be more fit than others. And since with Darwin's help, we now understand this struggle, why not help it along by slowing down the breeding of those less fit? Or, as Hitler rationalized, eliminate them altogether.

To be sure, Darwin himself would likely have been horrified by the excesses of the early 20th century eugenics societies and the national excesses of Nazi Germany, Stalinist Russia, Mao's Cultural Revolution and Pol Pot's regime of extermination. But they all thought they were simply aiding and abetting the

process of natural selection.

You can order [a copy of the book](#) at the Probe Online Store.

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The Effect of Origins on Society

Why Is the Subject of Origins Important?

Every worldview addresses the question, “Where did we come from?” The Christian worldview says that we are a special part of creation made in the image of God. A materialistic worldview says that we are the product of natural selection and random mutations acting on organisms. The Christian view of origins is called Creation; the materialistic view of origins is called Darwinism. The Christian worldview is based on faith in the creative work of God of the Bible. The materialistic worldview is based on faith in the creative power of natural selection acting on mutations.

There are evidences for and against these worldviews from scientific research being conducted in the areas of intelligent design, evolutionary biology, genetics, mathematics, astronomy, and many other fields. However, people will often confuse the worldview with the scientific evidence. Worldviews are a way of explaining the evidence. For example, we see that during a drought birds with longer beaks are selected over birds with shorter beaks. This is an observation. Saying that this is evidence for natural selection’s creative ability to make totally new types of

creatures is an extrapolation based on a worldview. Just as there is a right and a wrong interpretation for observations, there are right and wrong worldviews. And one way to test for a worldview is whether or not it is livable.

So does your view of origins affect other areas of life than just science? Yes, these two views of origins have a profound effect on how we value people and how we view personhood and personal responsibility. Using John West's book *Darwin Day in America* as a resource, we will look at how the materialistic worldview has trickled down into areas of society that affect us every day.

West argues in his book that the logical end materialistic worldview leaves nothing for an ethical standard other than to survive. The materialistic worldview says that non-living chemicals came together to make genetic material which then made an organism and that organism evolved until we got human beings. This view claims that man is made from chemicals and is no more valuable than any other animal. The logical end to this perspective is that everything a man does is a result of his genes and his environment. He therefore has no choices or free will of his own. His actions are the result of natural selection acting on him. This has important consequences for how we deal with crime, personhood, the embryo, the infirmed, and education.

West says, "Darwin helped spark an intellectual revolution that sought to apply materialism to nearly every area of human endeavor. This new, thoroughly 'scientific' materialism affected the entire span of culture, from economics and politics to education and the arts".[\[1\]](#) Darwin published *Origin of Species* one hundred fifty years ago, but it is in the mid-twentieth century that we begin to see how his theory has trickled down into society.

Crime and Responsibility

How does a materialistic worldview affect society? For one thing, a Darwinian view of man has changed our criminal justice system.

How are the courts and science related? In our culture, the scientists are the holders of truth and the courts are the arbiters of law. And while the idea that law coincides with truth is good and even biblical, the idea that scientists, and only scientists, are the ones who dictate truth is a dangerous position. If the pervading worldview in science is materialism, then a materialistic view of man is reflected in the courts.

According to a materialistic worldview, man is the product of his genes and his environment with no real ability to act differently than what his genes and environment would have him do. If this is the case, then how can he be held responsible for his crimes? Why not just blame bad genes or a bad home life? Often this is what is argued in the courts.

West describes the crux of the problem. In order to provide protection and have an orderly society, the criminal justice system needs to punish wrong behavior. But from a materialistic worldview, there is no moral foundation for individual responsibility. A materialist perspective does not blame the individual but their genes or the way that they were raised (their environment). West outlines a history of criminals getting off in the name of very loose definitions of insanity, and other criminals undergoing treatment instead of punishment.^{2} And the treatment, at times, amounts to something closer to coercion or torture.^{3} Whether we are talking about being overly lenient by giving criminals excuses or coercing them to treatment, both diminish the value and dignity of the individual as a person.

The Christian view of man is that, although differences in our

genetics or our environment may mean that we have different struggles or temptations than others, we are made in God's image. Therefore, just as God treats us with dignity by exacting punishment for our actions, so, too, do we treat people with inherent dignity by exacting punishment and allowing for atonement. The Darwinian view says that we are not responsible because we are a product of our genes, but it also says that we are not redeemable because we will remain flawed.

Our entire criminal justice system is based on the idea that man can be held accountable for his crimes, that he has a choice in what he does. Furthermore, it is based on the inherent dignity that every individual has, so that a wrong done to one individual must result in the wrong-doer being punished. This maintains equal dignity and value in both individuals.[\[4\]](#) However, this system crumbles under a materialistic worldview.

So man is a product of his genes and his environment, a view which, taken to its logical end, has conflicting and dangerous results for exacting justice in society. Now we turn to how this view of man affects how we treat others that are different from us and how we define "normal."

Personhood

At the beginning of the twentieth century, during the rise of the scientific revolution, the idea of atonement for a guilty crime changed to an idea of fixing a broken machine. Criminals were treated as if they were machines with broken parts, instead of individuals with value and free will, because scientists had supposedly found a materialistic cause for crime. Something in their genetic code went wrong, so many were subjected to some kind of institutionalization or treatment. As John West points out in *Darwin Day in America*, the idea is if science can explain the problem, then science

can fix it.{5} One way that scientists attempted to fix this problem was to try to breed out the bad traits. Scientists in the '30s, '40s and '50s reasoned that bad behavior, stupidity, and emotional instability were passed down from parent to child just like physical traits, and the only way to cleanse our society of these ailments was to sterilize those who carry these traits.

It began with criminals being sterilized; then it turned to those who were mentally handicapped; then those who were deemed less intelligent, poor, or unproductive in society were sterilized. In hindsight it is easy to see how this slippery slope happened. One group changes the standards by which we value other groups. No longer is the foundation in the Judeo-Christian concept that all individuals have inherent value, but in the Darwinian concept that some are less valuable than others and deemed less worthy of life than the more "fit" in society. This was the breeding ground for what would become the eugenics movement. [Editor's note: Eugenics is the idea that the human race can be improved by careful selection of those who mate and produce offspring. The word comes from the Greek word *eugenes*, "well-born, of good stock," from *eu*—"good" + *genos* "birth."]

We saw the logical end of the eugenics movement in Nazi Germany. Darwinism was not necessarily the cause for Nazi Germany, but eugenics was justified with a Darwinian view of man. This is an important picture of how one can promote one's worldview (and one's prejudices) in the name of science. Darwinism allows for race discrimination and even genocide. As West points out, "Historically speaking, the eugenics movement is important because it was one of the first—and most powerful—efforts to use science to expand the power of the state over social matters. Eugenists claimed that their superior scientific knowledge trumped the beliefs of nonscientists, and so they should be allowed to design a truly scientific welfare policy." {6}

Today this attitude is still seen when doctors, lawyers, and family members evaluate individuals based on their physical abilities and their cost to society. Oftentimes individuals are assessed based on their perceived “quality of life.” Unfortunately, this usually reflects what the doctor, lawyer, or family member would hate to have happen to themselves than the actual desires of the individual in question. Judging others unworthy of life based on physical features or capabilities ignores the inherent value and dignity God has given man as being made in His image.

The Beginning and End of Life

We have looked at how a society that promotes a materialistic worldview results in a degraded view of personhood. This degraded view includes basing a person’s value on how well they physically function and how much they cost society. However, from a Christian view, humans were created with a purpose and in the image of God. They have inherent value beyond their physical bodies.

How does a Darwinian view of man’s origin affect the way we look at the most vulnerable in society—the embryo and the aged or infirmed?

West traces a historical record of the legalization of abortion and demonstrates why we have the debate about embryonic stem cell research today.[\[7\]](#) Darwinism is not the cause of the legalization of abortion and destruction of embryos, but it provided an ideology that allowed people to justify it. It began with a scientist named Haeckel who influenced Darwin. Haeckel discussed how all embryos go through stages of development and how the earliest stages look very similar to each other. In his famous drawings, he shows how a human embryo goes from a small fish-like creature that looks similar to other animal embryos, to a human-looking embryo. He said that the fetus goes through a mini version of

evolutionary development.{8}

What conclusions were drawn from this? If the fetus is no more than a fish, then it is as ethical to discard it as it would be to discard a fish. The only problem with this idea is that it is now well-documented that Haeckel's drawings were faked, and the similarities were more contrived than real. Despite this finding, people still latched on to the concept and refused to accept that the fetus does not go through evolutionary stages. It is from this concept that many justify early stage abortion and embryonic stem cell research; the clump of cells or the mass does not look human.{9} This is an example of basing a person's value on their physical appearance and function.

Today we not only see this idea played out in the unborn, but also in the elderly and the infirmed. Many family members and doctors elect to end someone's life because they have deemed them less valuable. Again, the basis of this is on how well they physically function. One group is putting value on another group.

Both of these examples demonstrate how our culture has bought into a materialistic worldview which devalues the person that does not have certain physical characteristics. As Christians we value human life and believe that the embryo, the aged, and the infirmed have inherent dignity despite how they might function or appear.

Education

We have been looking at how a Darwinian view of man led to a slow and steady dehumanization of man. Our view of origins affects other areas of life as well. In this section, we will address how a Darwinian view of man has influenced how we educate our children. A Darwinian view says that there is no absolute authority; there is merely survival of the fittest.

In academics that means teaching based on what works, not on what is right.

One of the biggest influences on our educational system, both in public and private schools, has been John Dewey. As Nancy Pearcey points out in her book *Total Truth*, Dewey thought education should be like biological evolution where students construct their own answers based on what works best. Pearcey calls this “a kind of mental adaptation to the environment.”[{10}](#) It is easy to see how this leads to moral relativism. Students are not taught character or values. Instead, they learn that an idea or a concept is deemed valuable if it works, not if it is right. Teachers are taught in certification classes to guide students along and help them to come up with their own moral code. Teachers are not allowed to punish students for wrongdoing, because they have no moral basis to do so, but are still expected to have an orderly classroom. In some cases teachers are not permitted to give a failing grade to a student who is genuinely failing. Also they are not permitted to give A's to good students for fear that they may not continue putting forth effort. Students are stripped of the concept of an objective standard or absolute morals, and by the time they are high school seniors, they are more educated in how to play the system than in reading, writing, or arithmetic. This is the very fruit of Dewey's pragmatism, and it continues through the university level. When students are stripped of any set of beliefs and a moral foundation, they are left empty and ready to be filled with the pervading worldview of academia. What we end up with is a fully indoctrinated student with a materialistic worldview.[{11}](#)

Contemporary materialism's view of origins, known as Darwinism, has profound effects on our society. As Christians we need to be a light unto the world by showing that human beings are more than their genes and environment, that they have inherent value, and that there are moral foundations

beyond survival of the fittest.

Notes

1. John West, *Darwin Day in America* (Wilmington, DE: ISI Books, 2007), 41-42.
2. Ibid., 73.
3. Ibid., 79-101
4. For a good article on capital punishment and human dignity see Kerby Anderson, "Capital Punishment," Probe, 1992, www.probe.org/capital-punishment/.
5. West, *Darwin Day*, 80.
6. Ibid., 162.
7. Ibid., 325-335.
8. See Jonathan Wells, *Icons of Evolution* (Washington, DC: Regency Publishing, 2000), chap. 5.
9. Ibid., 330.
10. Nancy Pearcey, *Total Truth* (Wheaton, IL: Crossway Books, 2005), 239.
11. See Don Closson, "Humanist Psychology and Education" Probe, 1991, www.probe.org/humanistic-psychology-and-education/; Closson, "Grading America's Schools," Probe, 2002, www.probe.org/grading-americas-schools/; and Kerby Anderson, "Cultural Relativism," Probe, 2004, www.probe.org/cultural-relativism/.

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Redeeming Darwin: The

Intelligent Controversy

Design

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.
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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.

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Was Darwin Wrong? A Rebuttal to the November 2004 National Geographic Cover Story

Our authors examine arguments for evolution commonly brought out by evolutionists. They show these arguments are not as strong as they purport and in many instances make a stronger case for intelligent design. Every person, especially Christians, should be aware of the information presented in this article.

Over the last few decades more and more scientists from every field of discipline have voiced concerns with Darwinian evolution's ability to explain the origin and diversity of life on earth. However, you would not know that from reading a recent article in *National Geographic*. The cover of the November 2004 issue grabs the reader's attention with the question, "Was Darwin wrong?" To few people's surprise, upon

turning to the first page of the article you see the boldfaced words, “NO. The evidence for Evolution is overwhelming.” But how can this be when so many scientists are in disagreement? Is it possible that the five lines of evidence presented in the article aren’t as indisputable as the reader is led to believe? What if each one of these evidences for evolution is fatally flawed? What would evolution have left to stand upon? It is my opinion, as well as many others’, that this is indeed the case. Let us critically evaluate each of these five lines of evidence (embryology, biogeography, morphology, paleontology, and bacterial resistance to antibiotics) and see what, if anything, we can conclude from them.

Embryology

First let’s examine the so-called evidence from embryology, which Darwin himself considered to be “by far the strongest single class of facts in favor of” his theory.^{1} *National Geographic* asks the question, “Why does the embryo of a mammal pass through stages resembling stages of the embryo of a reptile?”^{2} This, however, is a loaded question.

This line of evidence presented by *National Geographic* is known as Embryonic Recapitulation, or in other words, as the embryo develops it passes through stages that retrace its evolutionary past. This idea was originally developed in the mid 1800’s by Ernst Haeckel, which he illustrated with drawings of embryos of various species. However, as Jonathan Wells points out in his book *Icons of Evolution*, this has been known to be false for over 100 years! Not only were Haeckel’s drawings fraudulent but the late Stephen J. Gould called them “the most famous fakes in biology.” Furthermore, embryologist Walter Garstang also stated in 1922 that the various stages of embryo development of different species “afford not the slightest evidence” of similarities with other species supposed to be their ancestors, stating that Haeckel’s proposal is “demonstrably unsound.”^{3} In 1894 Adam Sedgwick

wrote, "A species is distinct and distinguishable from its allies from the very earliest stages all through the development." {4}

So how is *National Geographic's* question, "Why does the embryo of a mammal pass through stages resembling stages of the embryo of a reptile?" a loaded question? Because mammalian embryos never pass through such stages in the first place! Darwin's "strongest" evidence for evolution turns out to be no evidence at all.

Biogeography

Biogeography, as defined by *National Geographic*, "is the study of geographical distribution of living creatures—that is, which species inhabit which parts of the planet and why." {5} *National Geographic* asks, "Why should [such similar] species inhabit neighboring patches of habitat?" {6} Why are there several different species of zebras found in Africa, or dozens of species of honey creepers in Hawaii, or thirteen species of finches in the Galapagos Islands? The answer given is that "similar species occur nearby in space because they have descended from common ancestors." There is nothing controversial about that. But I don't believe that this in anyway supports the kind of evolution that *National Geographic* is trying to promote. Allow me to explain by taking a closer look at the term "evolution."

There are two different kinds of "evolution" within the biological sciences. The first kind of evolution is *macroevolution*, or, big change over time. Macroevolution requires a vast amount of new genetic information and describes the kind of evolution required to make a man out of a microbe. It is this kind of evolution that is being propagated by *National Geographic*.

The second kind of evolution is *microevolution* which describes small changes or variations within a kind. For example, you

may breed a pair of dogs and get another dog which is smaller than both its parents. You may then breed the new smaller dog and get an even smaller dog. However, there are limits to this kind of change.[{7}](#) No matter how often you repeat this procedure the dog will only get so small. It is also important to note that the offspring will always be a dog. You will never get a non-dog from a dog through this kind of change. Not to mention this kind of evolution tells us nothing about where the dog came from in the first place.

So what about *National Geographic's* examples? They are all examples of microevolution. Why, for example, are there several species of zebras in Africa? Because they had a common ancestor that probably lived in Africa—a zebra. Or why are there thirteen species of finch on the Galapagos Islands? Because they are all descended from a single pair or group of finches. To use this kind of observation and try to explain where a zebra or finch came from in the first place goes beyond the data and the scientific method, and enters into the realm of imagination.

Evolutionists are still puzzling over the connection between these two forms of evolution, macro and micro. Perhaps the puzzle remains because macroevolution is just wishful thinking.

Morphology

Morphology is a term referring to “a branch of biology that deals with the form and structure of animals and plants.”[{8}](#) It is presented by *National Geographic* as having been labeled by Darwin the “‘very soul of natural history.” So what is this evidence from morphology that lends itself as “proof” for microbes-to-man evolution? Simply put, it is that similarities in shape and design between different species may indicate that those species have originated from a common ancestor by way of descent with modification. *National Geographic* gives a few examples such as the “five-digit skeletal structure of the

vertebrate hand,” and “the paired bones of our lower legs” which are also seen “in cats and bats and porpoises and lizards and turtles.”[{9}](#)

Perhaps an easier to follow illustration concerning this is evolutionist Tim Berra’s famous illustration which he used in his book *Evolution and the Myth of Creationism*. In it he states the following:

If you look at a 1953 Corvette and compare it to the latest model, only the most general resemblances are evident, but if you compare a 1953 and a 1954 Corvette, side by side, then a 1954 and a 1955 model, and so on, the descent with modification is overwhelmingly obvious. This is what paleontologists do with fossils, and the evidence is so solid and comprehensive that it cannot be denied by reasonable people [emphasis in original].[{10}](#)

So why is this illustration famous? It’s because Berra, although an evolutionist, unwittingly demonstrated why similar structures across different species is just as naturally attributed to intelligent design. For what do each of these various Corvette models have in common? They were all designed and manufactured by the same company, General Motors. In fact, the Corvette has many design features in common with other automobiles as well, such as four wheels, a gasoline engine, brakes, a steering wheel, etc. Why do most cars share these things, and many others things, in common? Because they are effective and efficient features designed for the proper operation of the vehicle. Maybe this is the same reason we find commonalities between many different kinds of plants and animals.

It must be granted that if evolution were true, then one would expect to see similarities between closely related species. However, as illustrated above, they could also be explained as the result of a common designer. So how can we tell which it

is?

There are at least two ways. First, if similar structures did truly descend from a common ancestor, then those structures should have similar developmental pathways. In other words, they should develop in a similar manner while still in the embryonic stage. However, as early as the late 1800's scientists observed that this simply isn't the case. Embryologist Edmund Wilson in 1894 noted that structures which appear similar between adults of different species often differ greatly either in how they form or from where they form, or both.[\[11\]](#)

Secondly, if similar structures are the result of descent with modification, then you would expect the development of those structures to be governed by similar genes. Concerning this very point biologist Gavin de Beer said, "This is where the worst shock of all is encountered . . . the inheritance of homologous structures from a common ancestor . . . cannot be ascribed to identity of genes."[\[12\]](#) In other words, different genes govern the development of similar structures which runs contrary to what evolution would predict.

It would appear then, that morphology, the "'very' soul of natural history," is more the "ghost" of natural history than supporting evidence for evolution. There are certainly many features of organisms resulting from a common ancestry, such as the beak of the Galapagos finches; but that doesn't mean that the beaks of all birds are also related by common ancestry. Perhaps applying the perspective of Intelligent Design can help clarify the difference.

Paleontology

Paleontology simply put is the study of the fossil record. So how does the fossil record support the "theory" of evolution? According to *National Geographic*, Darwin observed that species presumed to be related tend to be found in successive rock

layers.[{13}](#) *National Geographic* asks if this is just coincidental. The answer provided, of course, is a firm no. Rather, they say, it is “because they are related through evolutionary descent.”[{14}](#) Is this conclusion truly supported by scientific observation?

The biggest problem with identifying a gradual change from one species into another within the fossil record is that by and large no such gradual sequence of fossils exists! With the exception of a few disputed examples, such as the horse and whale, what truly stands out in the fossil record is sudden appearance. The late Stephen J. Gould, a world renowned evolutionist, noted concerning this, “The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils.”[{15}](#) This is especially true within the Cambrian rock layer, dated by evolutionists at over 500 million years old, where complex species appear for the first time with no sign of gradual development from simpler forms.

To illustrate this point, imagine, if you will, that you covered the entire state of Texas with playing cards. If someone were to then go for a walk across Texas and periodically pick up a card at random, what might they begin to think if all they ever picked up were 2s and aces, and never any of the cards in between? He might begin to wonder if those other cards were there at all.

This is precisely what we find within the Cambrian rock layer. We always find fully formed species, like finding just 2s and aces, and never any intermediates, like your 3s, 4s, and so on. In fact, *National Geographic* even acknowledges this problem when it compares the fossil record in general to a film with 999 out of every 1,000 frames missing.[{16}](#) It's more likely that there are few if any missing frames; rather those frames never existed in the first place.

Darwin himself, observing the lack of transitional forms within the fossil record, noted this problem to be “perhaps the most obvious and serious objection which can be urged against [his theory of evolution].”[\[17\]](#) Today, with nearly 150 years of advancements in the area of paleontology, the fossil record still fails to meet the expectation of Darwin’s theory. This problem goes unaddressed by *National Geographic*.

Bacterial Resistance to Antibiotics

National Geographic derives a fifth line of evidence from more recent scientific data. They state, “These new forms of knowledge overlap one another seamlessly and intersect with the older forms, strengthening the whole edifice, contributing further to the certainty that Darwin was right.”[\[18\]](#) Is this really the case? The most lauded of these “new forms of knowledge” is from the study of bacteria that acquire resistance to modern medicines. *National Geographic* states that “there’s no better or more immediate evidence supporting the Darwinian theory than this process of forced transformation among our inimical germs.”[\[19\]](#)

These adaptations are in fact evidence for change over time, but not the kind that would change a microbe into a man. Rather, all examples of bacterial resistance are that of micro-evolution, i.e. change *within* a kind. For example, a staph infection is caused by a bacterium known as a *Staphylococcus* or “staph” for short. Whenever a staph bacterium acquires resistance to a particular antibiotic, it still remains a staph. It doesn’t change into a different kind of bacterium altogether. In fact, no matter how much it changes, it always remains a staph.

Secondly, when we take a closer look at how bacteria become resistant to a particular treatment, we find something very interesting. Just like in humans, information on how bacteria grow and survive is stored in the bacteria’s DNA. Therefore, if any change is to take place to turn an organism from one

kind to another “more complex” kind, such as a microbe into a man, it must add new information to that organism’s DNA. However, that is not what we observe taking place in bacteria at all. New information is *never* created. Existing information may be modified, lost, or even exchanged between bacteria, but never created.

Thirdly, and perhaps most significantly, is that nothing which *National Geographic* presents even begins to explain where the information to make a bacterium came from in the first place. Rather, and to no surprise to the creationists, the study of bacterial resistance testifies to an intelligent Designer who created all living organisms with an ability to adapt to changing environments.

Conclusion

Modern science has indeed offered us great insight into the complexities of life and the inner workings of all living things. Advances in population genetics, biochemistry, molecular biology, and the human genome will surely result in greater understanding of life on our planet. But unlike what *National Geographic* suggests, it is these advances which have served to convince an increasing number of scientists to abandon Darwin’s theory as an explanation for the origin of life on earth. Rather, these advancements point to the necessity of intelligent design as an added tool in the toolbox.

Notes

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4. Ibid., 97.
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11. Edmund B. Wilson, "The Embryological Criterion of Homology," pp.101-124 in *Biological Lectures Delivered at the Marine Biological Laboratory of Wood's Hole in the Summer Session of 1894* (Boston: Ginn & Company, 1895), p. 107.
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13. Quammen, "Was Darwin Wrong?," 12.
14. Ibid., 13.
15. Stephen J. Gould, "Evolution's Erratic Pace," *Natural History* 85(5).
16. Quammen, "Was Darwin Wrong?," 25.
17. Charles Darwin, *On the Origin of Species by Means of Natural Selection* (New York, New York: The New American Library of World Literature, Inc., 1958), 287.
18. Quammen, "Was Darwin Wrong?," 20.
19. Ibid., 21.

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"Did the Human Genome Project

Prove that Darwin Was Right?"

Help! I read Arthur Caplan's article ["Darwin Vindicated!"](#) about the results of the Human Genome Project and it is seriously shaking my faith!

Caplan has never been a friend of Christians or creationists. In this inflammatory article, designed to stimulate public opinion, he has outdone himself. If Darwin were alive today, he would be astounded and humbled by what we now understand about the human genome and the genomes of other organisms. In some respects, it is difficult to know where to begin. So let's just pick a few of the more glaring statements to help us understand that little else should be trusted.

First, he says, "Eric Lander of the Whitehead Institute in Cambridge, Mass., said that if you look at our genome it is clear that evolution must make new genes from old parts."

While it may be true that we can see some examples of shared sequences between genes, it is by no means true that we see wholesale evidence of gene duplication throughout the genome. According to Li, et. al., (*Nature* 409, 15 Feb 2001:847-848) less than 4,000 genes belong to superfamilies that show sequences sharing at least 30% of their sequence. Over 25,000 genes demonstrated less than 30% sequence identity, indicating that as much as 62% of the human genes mapped by the Human Genome Project were unique, i.e., not likely the result of gene duplication. Determining that similar genes are the result of gene duplication is tricky business, not the least of which is trying to find out just how duplicated genes (which does occur) ever arrive at a new function. There are lots of guesses out there, but no observable mechanism exists at this time.

Second, he says, "The core recipe of humanity carries clumps of genes that show we are descended from bacteria. There is no

other way to explain the jerry-rigged nature of the genes that control key aspects of our development.”

Not everyone agrees. The complexity of the genome does not mean necessarily that it has been jerry-rigged by evolution. There is still so much we do not know. Caplan is speaking more out of ignorance and assumption than data. “Junk DNA” used to be a common term in genetics circles. Since only about 1.5% of the total human genome sequence codes for actual genes and proteins, the rest was thought to be junk, useless DNA. The term “Junk DNA” is rarely used in academic papers anymore because much of this “junk” is now known to have a purpose, usually a regulatory function. Even the highly repetitive elements are demonstrating patterns that indicate some kind of function. Listen to this comment from Gene Meyers, one of the principal geneticists from Celera Genomics:

“What really astounds me is the architecture of life,” he said. “The system is extremely complex. It’s like it was designed.” My ears perked up. Designed? Doesn’t that imply a designer, an intelligence, something more than the fortuitous bumping together of chemicals in the primordial slime? Myers thought before he replied. “There’s a huge intelligence there. I don’t see that as being unscientific. Others may, but not me.” (“Human Genome Map Has Scientists Talking About the Divine – Surprisingly low number of genes raises big questions,” Tom Abate, Monday, February 19, 2001, *San Francisco Chronicle*)

Jerry-rigged? Hardly! Confusing at the moment? Certainly! But more likely to reveal hidden levels of complexity than messy jerry-rigging.

Finally, Caplan says, “No one can look at how the book of life is written and not come away fully understanding that our genetic instructions have evolved from the same programs that guided the development of earlier animals. Our genetic instructions have been slowly assembled from the genetic

instructions that made jellyfish, dinosaurs, woolly mammoths and our primate ancestors."

This comes partly from the documenting of fewer genes (30,000-45,000 genes instead of the expected 100,000 or more) and the fact that some of these genes are indeed very similar in nearly all species looked at. Are there similarities? Certainly! Are the similarities only explainable by evolution? Not at all!

First, the fewer genes are not a given number yet since the computer programs used to look for new genes relied on already known gene sequences to spot potential genes. Only crude estimates were used for the possibility of completely novel genes. Even if the number is correct, this means that the organization of the genome is as important as the actual genes. We already know that many genes can be used to make several different proteins through complex patterns of regulation. This only raises the stakes for evolution. More organization, more complexity are the hallmarks of design, not messy natural selection.

Also even though we only have two or three times as many genes as a fruit fly, Svante Paabo, writing in *Science* (Feb. 16, 2001, vol 291, p. 1219) said, "A glimpse of what this will show us comes from considering the fact that about 26,000 to 38,000 genes are found in the draft version of our own genome, a number that is only two to three times larger than the 13,600 genes in the fruit fly genome. Furthermore, some 10% of human genes are clearly related to particular genes in the fly and the worm."

Basic cellular processes require many of the same proteins and therefore the same genes. Even if flies and humans are not related, why would these genes be expected to be dissimilar? Human engineers frequently reuse common elements because they work. Besides, Paabo states that only 10% of the genes show any relationship. That means 90% do not. Far too much

attention has been focused on the similarities and not enough on the differences. I welcome a sequence of the chimpanzee genome because I expect that among the many striking similarities, there will be uniquenesses unexplainable by Darwinian natural selection.

Arthur Caplan simply shows himself to be a part of the evolutionary establishment that appears to be worried by the inroads of intelligent design theory and is fighting back using only authority and bluster. "If I, Arthur Caplan, a bioethicist and Ph.D., say something loud enough and forcefully enough, some will believe it simply because of the position I hold." This strategy is slowing falling apart as the clear and ever increasing weight of the evidence causes more and more people to say, "Wait a minute, these guys (Phil Johnson, William Dembski, Mike Behe, Jonathan Wells, etc.) aren't dummies. Surely they can't be dismissed as easily as that." The bluster and appeals to authority are wearing thin and some are asking hard questions. Some will stop and begin to reevaluate; others, like Caplan, will only shout a little louder and ultimately lose credibility.

Stay tuned.

Respectfully,

Ray Bohlin
Probe Ministries

Cracking of human genome confirms theory of evolution

By Arthur Caplan, Ph.D.

SPECIAL TO MSNBC

Feb. 21, 2001 – The media flubbed the headline for the biggest news event in the past 50 years of science. The reporters and TV talking heads who crammed the Washington, D.C., press conference on Feb. 12 did understand that the details they were hearing about the human genome offered the

story of a lifetime. But, they missed the real headline. Their stories should have simply said, "Darwin vindicated!"

Most reporters ballyhooed the fierce competition between scientists working for the publicly funded Human Genome Project and those employed by the privately funded Celera Genomics Corporation of Rockville, Md., to gain credit for the discovery. Others wondered about the financial implications of allowing human genes to be patented.

Still other headlines were meant to give us pause about whether it would be good or bad to know more about the role genes play in determining our health. Knowing more about our genes, after all, might not be so great in an era in which there is not much guarantee of medical privacy but a pretty good chance of discrimination by insurers and employers against those with "bad" genes.

There were even a couple of headlines that suggested that humanity should not be quite so arrogant since we do not have as many genes as we thought relative to other plants and animals. In fact, as it turns out, we have only twice as many genes as a fruit fly, or roughly the same number as an ear of corn, about 30,000. Reductionism may not be all that it has been cracked up to be by molecular biologists.

But none of these headlines capture the most basic, the most important consequence of mapping out all of our genes. The genome reveals, indisputably and beyond any serious doubt, that Darwin was right—mankind evolved over a long period of time from primitive animal ancestors.

Our genes show that scientific creationism cannot be true. The response to all those who thump their bible and say there is no proof, no test and no evidence in support of evolution is, "The proof is right here, in our genes."

Eric Lander of the Whitehead Institute in Cambridge, Mass., said that if you look at our genome it is clear that

evolution must make new genes from old parts.

The core recipe of humanity carries clumps of genes that show we are descended from bacteria. There is no other way to explain the jerry-rigged nature of the genes that control key aspects of our development.

No one can look at how the book of life is written and not come away fully understanding that our genetic instructions have evolved from the same programs that guided the development of earlier animals. Our genetic instructions have been slowly assembled from the genetic instructions that made jellyfish, dinosaurs, woolly mammoths and our primate ancestors.

There is, as the scientists who cracked the genome all agreed, no other possible explanation.

Sure the business side of cracking our genetic code is fascinating. And we all need to be sure that our government does not leave us in the genetic lurch without laws to ensure our privacy and protect us against genetic discrimination.

All that, however, is concern for the future. Right now the big news from mapping our genome is that mankind evolved. The theory of evolution is the only way to explain the arrangement of the 30,000 genes and three billion letters that constitute our genetic code.

The history of humanity is written in our DNA. Those who dismiss evolution as myth, who insist that evolution has no place in biology textbooks and our children's classrooms, are wrong.

The message our genes send is that Charles Darwin was right.

Arthur Caplan, Ph.D., is director of the Center for Bioethics at the University of Pennsylvania in Philadelphia.

The Galapagos Islands: The Bohlins' Visit



The Galapagos Islands, off the coast of Ecuador, are where Charles Darwin received the inspiration for the theory of evolution. In observing the islands' ecosystem and how its bird and reptile inhabitants compared to similar South American cousins, Darwin assembled what has become the driving philosophy of science.

In May 2003, Dr. Ray and Sue Bohlin visited the Galapagos Islands with a different perspective, focusing on intelligent design and the natural limits to biological change. Here is their report.

[1 – Why Visit the Galapagos Islands?](#)

[2 – Thursday PM: Bartolome](#)

[3 – Friday AM: Punta Espinosa](#)

[4 – Friday PM: Tagus Cove](#)

[5 – Saturday AM: Punta Moreno](#)

[6 – Saturday PM: Urbina Bay](#)

[7 – Sunday AM: Darwin Research Station](#)

[8 – Sunday PM: Santa Cruz Highlands](#)

[9 – Monday AM: Beach Visit](#)

[10 – Galapagos Wrap Up: ICR Lecture, What It All Means](#)

The Galapagos Islands: Evolution's Sacred Ground

Dr. Bohlin helps us understand the significance of the Galapagos Islands in the birth of the evolutionary theory of Charles Darwin. Based on personal observation on these unique isolated islands, he explains why he is not convinced that the animals of these islands make a case for the evolution of all living things.

What's So Important About the Galapagos Islands?

The Galapagos Islands are located in the Pacific Ocean, 650 miles off the coast of Ecuador in South America. They are isolated from any other island group or land form.

What's so important about the Galapagos Islands? Here are four reasons:

First, because they are extremely isolated, the Galapagos Islands are home for dozens of species of both plants and animals found nowhere else in the world. The Galapagos Tortoise, for example, is the largest reptile found anywhere on the planet, and it lives longer than any animal known to man. The oldest is currently over 170 years old and lives in a zoo in Australia. Other unique animals include the Flightless Cormorant, the Marine Iguana, the Galapagos Penguin, and Darwin's Finches.

There are even unique forms of plants including numerous forms of cacti and at least thirteen species of sunflower or daisy-like plants, one of which is a "sunflower" tree with bark and no tree rings.

Second, Darwin's visit to the Galapagos for five weeks in 1835 on the HMS Beagle provided the starting point for the development of his theory of natural selection. Darwin had believed that God individually created each species. However, when he saw and studied variations between similar species from island to island, he correctly reasoned that a natural process made more sense. However, he eventually threw the baby out with the bathwater by reasoning that all species arose by a natural process through natural selection. Darwin's Finches continue to be used as a textbook example of evolution today.

Third, similar to the Hawaiian Islands, the Galapagos Islands are volcanic. There is a geological hotspot deep in the earth's crust underneath the Pacific tectonic plate where magma flows to the surface. The hotspot remains stationary. However, as the Pacific plate moves from west to east, new volcanic islands begin to appear beneath the sea until they eventually poke above the surface to create a new Galapagos island. The youngest of the islands is the island of Fernandina which is the westernmost island. It is estimated geologically to be 800,000 years old. The oldest islands off to the east are estimated to be 3 million years old.

Fourth, two major ocean currents affect the climate of the Galapagos. First, from the south comes the Humboldt Current from Antarctica. Second, a deep-water current comes from the west. Upon reaching the islands, this cold deep water current brings with it a large supply of nutrients that feed the bottom of the food chain. Consequently the western waters of the Galapagos are colder and richer in marine life. These cold-water currents keep the temperature of the islands rather moderate for islands on the equator. In the Galapagos, the waters usually range from the 60s to the 70s F (15-22 degrees Centigrade), creating a more temperate climate for these equatorial islands.

All these factors combine for a most unique experience. The Galapagos have been a "poster child" for evolution ever since

Darwin. We'll see how well that holds up.

What Evidence of Evolution Do Darwin's Finches Provide?



[Click to see Ray's picture report of his trip to the Galapagos Islands](#)

In May 2003 I had my first opportunity to visit the Galapagos Islands with a group led by several scientists from the Institute of Creation Research. Our goal was simply to see for ourselves many of the unusual animals and plants which so heavily influenced Darwin in the development of his theory of natural selection.

Look in almost any high school biology textbook and you will find some mention, if not a whole section, on what are now known as *Darwin's finches*. Darwin's finches are comprised of thirteen different species of small finches that arose from a single species that colonized the islands. The finches have adapted to differing food sources ranging from different size seeds, to insects, to cactus flowers, to even blood. The major feature of these finches that has changed is the size and shape of their beaks, but the differences are very subtle.

When we got our first glimpse of the finches we found out just how subtle the differences in beak size and shape really are. Without being able to compare two or three birds right next to each other, we found it virtually impossible to identify them. This observation confirms recent research by Princeton researchers Peter and Rosemary Grant. The Grants have come to

the Galapagos Islands every year since the mid-1970s. They have banded, measured, and weighed literally thousands of finches of nearly all species.

Of the thirteen species, six are called ground finches, and they feed on different size seeds and cactus flowers. These finches particularly differ almost exclusively in their beak size or shape. The Grants have found that these finches will “evolve” to larger and smaller beaks depending on the seed availability based on a wet or dry rainy season.

They also learned that most of these six ground finches will interbreed, and the hybrids are fertile, meaning they can also breed among themselves. This information is quite startling because it means that these six species may actually be one species. And the actual degree of change is quite miniscule. The average beak size may change by only a half a millimeter from dry to wet season. These six finches are also indistinguishable in their mtDNA.

These species are so similar in the field that some of the workers and guides from the Darwin Research Station on the Galapagos have a saying: “Only God and Peter Grant can identify Darwin’s finches.”

As an icon of evolution, the finches are far less than hoped for.[\[1\]](#) Yes, they do document the reality of natural selection. But the degree of selection is quite small and seemingly insignificant. They are a wonderful example of the ability God has given His creatures to be fruitful and multiply in a fallen world.

Why Save the Galapagos Tortoise?

The word Galapagos is Spanish for *saddle*. The islands were named for a particular variety of Galapagos tortoise known as the saddleback. These tortoises inhabit the drier islands and feed primarily on many varieties of prickly pear cactus. The

saddle refers to a striking feature of their shell that forms a large space just above the neck that allows the tortoise to reach high to grab a succulent piece of cactus.

Since the islands were named for the saddleback tortoise they are a symbol of the islands. As I mentioned earlier, these tortoises are the largest living reptiles. They are also the longest living animals in the world. There is a female Galapagos tortoise in a zoo in Australia by the name of Harriet. Harriet was reportedly taken from the Galapagos Islands by Charles Darwin himself. She eventually was taken to Australia and is reported to be 173 years old, born around 1830. This would make her the oldest living creature on earth.

Harriet is a dome tortoise as opposed to the saddleback variety. Dome tortoises eat low-lying grasses, vegetation and fruits. When Darwin came to the Galapagos Islands in 1835, there were approximately 300,000 tortoises on eleven islands. There are five different varieties on the largest island, Isabella. The five varieties are found associated with the five large volcanic craters where water accumulates and grass is abundant. The other ten varieties inhabited a specific island, one variety of tortoise per island.

The islands were a favorite stopping place for whaling ships and ships crossing the Pacific. Sailors would come on shore and round up twenty to thirty tortoises to be used as food on the long voyage. A tortoise could remain alive with little or no food or water for months, providing fresh meat for the long voyage.

In addition, as people began colonizing the islands, they brought with them rats and mice that would eat the tortoise eggs. Introduced goats and pigs competed with the tortoises for food. Consequently, the tortoise population has been reduced to around 20,000. Some of the specific island varieties have gone extinct. Lonesome George has become the symbol of the plight of the giant tortoise. He is the only

remaining member of the tortoises from Pinta Island, and he seems to be refusing to breed.

The Darwin Research Station on Santa Cruz Island in the Galapagos is involved in an extensive captive breeding program, trying to reestablish the tortoises in areas where they have disappeared. But why? If evolution is true, then let natural selection take its course. If they survive, fine. If not, that's just life in an evolutionary world. In Genesis, however, we are commanded to have rule and dominion over God's creatures. Wherever practicable, we have a biblical mandate to preserve the creatures He has made in the environment He provided for them (Psalm 104). So the Darwin Research Station is unwittingly acting on a Biblical worldview.

Strange Creatures of the Galapagos

Though the Galapagos Islands are world famous, they didn't particularly impress Darwin when he first arrived. In his book, *Voyage of the Beagle*, he wrote, "Nothing could be less inviting than the first appearance. A broken field of basaltic lava, thrown into the most rugged waves, and crossed by great fissures, is everywhere covered by stunted, sunburnt brushwood, which shows little signs of life."[\[2\]](#)

Though we may disagree with Darwin on many of the conclusions he drew from his observations of the Galapagos wildlife, he was nonetheless an excellent observer and rather humorous reporter. For instance, one of the well-known inhabitants of the Galapagos is the marine iguana, the only lizard in the world to feed in the sea. Darwin described it this way,

"It is extremely common on all the islands throughout the group, and lives exclusively on the rocky sea-beaches, being never found, at least I never saw one, even ten yards from shore. It is a hideous-looking creature, of a dirty black colour, stupid, and sluggish in its movements."[\[3\]](#)

Darwin aside, these creatures are fascinating. They feed on algae and seaweed close in to shore. They swim easily with a serpentine movement with their limbs tucked close to their body. Since the water is so cool, they need several hours to sun themselves before entering the water for breakfast. They will only stay in the sea for about twenty minutes and never longer than an hour. When warming themselves, they lie perpendicular to the sun so their body is fully exposed to the sun. When maintaining their temperature they will face the sun directly and lift their chests off the ground to allow the sea breeze to provide ventilation.

The marine iguana's cousin, the land iguana eats cactus pads and leafy vegetation and never ventures toward the sea. They also didn't impress Darwin terribly much. He described them this way.

"We will now turn to the terrestrial species, . . . Like their brothers the sea-kind, they are ugly animals, of a yellowish orange beneath, and of a brownish red colour above: from their low facial angle they have a singularly stupid appearance. . . . In their movements they are lazy and half-torpid."[{4}](#)

Evolutionists suggest that these two species derived from a common ancestor over ten to twenty million years ago (although the oldest island is only 3 million years old!). But we learned that these two species would interbreed on occasion. The hybrids live for only seven to eight of the usual forty years, and their eating habits are strangely intermediate. The hybrids will eat cactus but not leafy vegetation, and will eat seaweed and algae but only at low tide when they can scramble over the rocks to get it. They won't enter the water. This level of hybridization makes it unlikely they are as old as evolutionists suggest.

Evidence for Evolution on the Galapagos Islands?

Thus far we have reviewed some of the amazing animals and plants found on the Galapagos Islands in the Pacific Ocean. The mockingbirds, tortoises, and finches played a role in the formulation of Darwin's theory of natural selection. The Galapagos Islands and their varied and diverse wildlife continue to serve as examples of evolutionary change.

In my brief five-day visit to the Islands, I made a number of observations that cast doubt on the evolutionary significance of these islands.

Earlier this week we talked about Darwin's finches. These thirteen finches most likely are descended from a flock of more than thirty finches that colonized the islands about 2 million years ago according to evolutionists. They vary considerably in their beak size and shape as they have adapted to different food sources. As much as these finches have been studied, there is still a great deal we don't know.

For instance, we know nothing of the genetics of beak size and shape. It's certain that beak size is a heritable trait, but just what the genetic cause of the variation is, we don't know. As we said earlier, there may be as few as six actual species of finches on the islands, not thirteen. The changes in beak size and shape may simply have been due to genetic variation the original flock carried with them to the islands in the first place.

The changes between species are very small as we found out trying to identify them. The selection that has been documented varies only from dry to wet years and no overall trend has been observed. So Darwin's finches are not much of an example of evolution after all.

Another strange creature on the Galapagos Islands is the

flightless cormorant. Cormorants are birds that inhabit the shores of lakes, rivers, and oceans. They usually feed by diving into the water for fish. Cormorants will then perch above the waters surface and dry their feathers by holding their wings out for maximum air exposure. Flying requires dry wings.

The flightless cormorants of the Galapagos have wings so reduced that they are unable to fly at all. They catch fish by swimming in the water much as a penguin does using their large powerful feet for propulsion. The reduced wing size is probably due to a single mutation that short-circuits wing development in the cormorant chick. The change is indeed quite dramatic, but the change involves a loss of a feature, not the gain of a new adaptation. This is often the case in the origin of new adaptations. Something is lost, not gained. Evolution must be able to explain the gain of new features, not simply explain how an organism managed to survive when it lost an important structure. So even the dramatic case of the flightless cormorant is not real evidence for evolution.

The Galapagos are a naturalist's wonderland. They guard their mysteries in a shroud of isolation and time. They are a good example of the fact that there is much to learn about the world God created.

Notes

1. Jonathan Wells, *Icons of Evolution* (Washington, DC: Regnery Publishing 2000), p. 159-175.
2. Charles Darwin, *The Voyage of the Beagle*, Harvard Classics (Cambridge: Harvard University Press), p. 377-378.
3. Ibid, p. 390.
4. Ibid, p. 392.