

The Evolution Controversy: Who's Fighting with Whom about What?

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Like a Civil War battlefield filled with smoke and flying debris, it's difficult to get a clear picture of who is fighting whom over Charles Darwin's theory of evolution. The war correspondents who write newspaper or magazine accounts can't see clearly what is taking place, and their descriptions of the front only count some of the combatants. Worse. High school science teachers are terrorized by ringing telephones, fearing an irate parent will scold them for teaching godless evolution to their children. Still worse. College freshman, filled with fear over losing their faith—a fear drummed into them by their home congregations--avoid signing up for biology courses and bypass opportunities to consider science as a Christian vocation.

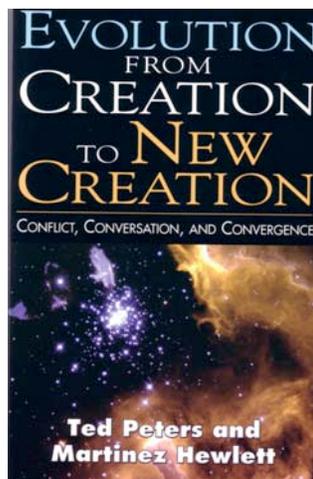
False and misleading images of what's going on are rife. Distorted pictures seem to be the only pictures available. The most misleading picture is that science and religion are at war. This is a colossal misinterpretation; because all combatants have the highest regard for science. The war is over what constitutes good science. The next distortion is the assumption that evolutionary biology and Christian faith are incompatible. We are

given the impression that a single person can't hold both. We disagree. One of the two authors of this brief is a pastor and Lutheran theologian. The other is an evolutionary biologist and a Roman Catholic. This misleading rumor that faith and science are incompatible is what needs to be combated.

Here is a list of the soldiers fighting in this war: the science of evolution, the materialist ideology associated with evolution, Biblical Creationism, Scientific Creationism, Intelligent Design, and Theistic Evolution. Now, just what are they fighting about? How does this fight affect what we should consider teaching in our congregations and our schools?

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We will provide a brief description of each of these in what follows here. What we offer here is drawn from our more thorough study of the Evolution Controversy in our book, *Evolution from Creation to New Creation* (Nashville: Abindgon, 2003). Looking ahead, expect us to support Theistic Evolution and to recommend that our churches and schools support the teaching of the best science to our children.



The Battle for Dover's Schools

In November 2004 the school district in Dover, Pennsylvania, began to require that its teachers present a statement to its ninth grade biology students. It said that "Because Darwin's Theory is still a theory, it is still being tested as new evidence is discovered. The theory is not a fact. Gaps in the theory exist for which there is no evidence." The statement followed this description of limitations of the Darwinian model

by lifting up Intelligent Design as an alternative. “Intelligent design is an explanation of the origin of life that differs from Darwin’s view. The reference book, *Of Pandas and People* is available for students to see if they would like to explore this view.” The book, *Of Pandas and People*, presents Intelligent Design as an alternative scientific theory holding that various forms of life began abruptly through intelligent agency. This explains the distinctive features already intact for fish with fins and scales, birds with feathers and beaks, and such.

A complaint was filed in the U.S. District Court for the Middle District of Pennsylvania against the reading of this statement in high schools on the grounds that “unlike the theory of evolution... intelligent design is neither scientific nor a theory in the scientific sense.” Rather, “it is an inherently religious argument that falls outside the realm of science.” When Judge Jones rendered his decision in December 2005, this is the position he took: the school board had violated the First Amendment by trying to slip their own version of Christianity into the science classroom.

In the summer of 2005, President George W. Bush entered the controversy. He sided with Intelligent Design. “Both sides ought to be properly taught,” he told reporters.

We note that this is not an example of warfare between science and religion, even if it looks that way. All parties have a high regard for science. No one advocates the defeat of science. The Intelligent Design army is fighting for a better science. The defenders of the Darwinian model of evolution would like to defeat their attackers by declaring them to be religious, not scientific.

This is the battle. Now, who are the warriors and what are they fighting about?

Just What Did Charles Darwin Say? The Science of Evolution

Just what did Charles Darwin say in his influential book of 1859, *The Origin of Species by Means of Natural Selection*? Note first what he did not say. He did not say he would explain the origin of life. Rather, Darwin tells us what he thinks accounts for the variety of species of different life forms. The theory of evolution is not a theory of origin. It is not a theory of creation.

The kingdom of nature is replete with numerous different species, a wondrous rainbow of living creatures with curious variety and stunning beauty. Where do these differences come from? Why are they changing over time? Darwin’s proposed answer is that individuals within a species are born different; they inherit slightly different traits. When a crisis in the environment confronts the group, some die before they can reproduce. Others live on. Those who survive carry a select set of inherited traits. Those who produce offspring to carry on their traits are reproductively more fit. Over long periods of time, the list of inherited traits in a population changes. New species emerge. The change in inherited traits is known as “random variation,” and the alteration of the

population is known as “natural selection” or “survival of the fittest.” Evolution means “descent with modification” over deep time, over long periods of time with a slow rate of change.

Darwin suspected that something was happening to cause variety in our inherited traits. But, he was not yet aware of the science of genetics or how DNA works. That would come much later. What Darwin saw as random variation in inheritance would later be explained as randomness in genetic mutations. By the middle of the 20th century, scientists could combine random variation in genetic inheritance with Darwin’s concept of natural selection. This produced a comprehensive theory called the “neo-Darwinian synthesis.” The entire scientific tradition beginning with *Origin of Species* and including the neo-Darwinian synthesis combined with even newer discoveries we refer to as “Darwinism” or the “Darwinian model of evolution.” Practicing scientists think of this field as simply “evolutionary biology.”

Notice that we refer to the “theory” of evolution as a “model,” the “Darwinian model.” This is the way scientists talk to each other. The Darwinian model is a scientific picture of reality—a theory—that has inspired research into retrieving fossils, digging up skeletal remains, investigating DNA to compare one species with another, and the reconstruction of biological history. It also provides the framework for studying cellular processes; and this leads to medical research and the development of new therapies. One of the two authors of this brief is a research biologist who relies upon the Darwinian model for studying viruses; and what he learns leads eventually to medical therapies. In an indirect yet important way, this theory helps to save lives. Darwinism has proven itself to be an incredibly fertile theory, generating new knowledge at a rapid rate.

Does this theory constitute absolute truth? No. It is a model that gives directions for scientists to pursue research. That is its value. Because science changes rapidly, we can almost forecast that the theory of evolution may be replaced by a still better one in the decades to come. To absolutize this theory would be like building a house on sand.

Still, the Darwinian theory of evolution constitutes the best science to date. Even if it gets replaced at some future time by a still better theory, today it offers a more progressive program of research than any of the proposed alternatives.

Atheism, Social Darwinism, Eugenics, and Progress: The Non-Scientific Ideologies That Come With Darwinism

The science of evolution, unfortunately, comes to us shrink-wrapped in ideologies. Like a supermarket purchase where the shrink-wrapping incarcerates the food, Darwin’s biology is wrapped in social and cultural coverings. It’s hard to find the pure science, sometimes. Let’s look at four layers of ideological wrapping.

The first layer of ideological wrapping is *progress*. The vague concept of progress had already appeared in Western Europe and North America due to advances in industrialization. But with Darwin it became a social doctrine with alleged biological

justification. Belief in progress appeared to be a response to what nature herself was communicating to human civilization. To evolve came to mean to progress, to advance. This continues to be the popular notion of evolution, even though today's laboratory scientists repudiate the idea that there is any progress at the biological level. Progress belongs to the cultural picture of evolution, not the scientific model. Like the scientists, most Christian theologians reject the notion of natural progress as well.

Second, *atheistic materialism*. Thomas Huxley and later his grandson Julian Huxley saw Darwin's biology as providing a scientific confirmation of their atheism. So enthusiastic were the Huxleys that they hoped a materialist religion based on evolution would dump Christianity and replace it. Contemporary sociobiologist Richard Dawkins announces that Darwin's theory of evolution makes it possible for him to embrace atheism. It is difficult to separate out the science of Darwin from the atheism of Darwin's disciples; yet we must.

Third, *Social Darwinism*. Herbert Spencer, who coined the phrase "survival of the fittest" which Darwin saw as the equivalent of "natural selection," used biological evolution to ground a social ethic. This was the ethic of *laissez faire* capitalism. This form of social organization could disregard the needs of the poor and socially unfit in favor of the wealthy and more fit who would lead to an evolutionary advance for the human race. Social Darwinism fostered belief that progress is built in to nature; and it is ethical for us to speed up progress by socially supporting the fit over the unfit. This led to eugenics, which we treat next.

Fourth, this belief in evolutionary advance led to another layer of ideology, *eugenics*. Francis Galton, Darwin's cousin, sought to take social control over human evolution through good breeding practices. He wanted to encourage the right kind of marriages; and his eugenics disciples promoted "fitter families." Castrating prisoners would help prevent unfit families from producing children in England and the USA. Eugenics included a heavy dose of racism, presuming that white English people were the most evolutionarily advanced. Adolph Hitler in Germany incorporated Darwin, Huxley, Spencer, and Galton in developing his doctrine of "racial hygiene," and used this science to support Nazi belief in Aryan superiority over the Jews. Darwinian eugenics served to justify putting mentally and physically handicapped children into gas chambers before they could reproduce.

Virtually no Christian leader wants any of these four layers of ideological wrapping, even though Liberal Protestants gave initial support to eugenics and progress. One of the reasons Christian groups such as the Scientific Creationists and Intelligent Design supporters bring such passion into the war over evolution is that they fear evolution endorses these anti-Christian and anti-compassion ideologies. We, Marty and Ted who are writing this, believe that the science of Darwinism can and should be extricated from such ideological shrink-wrapping.

Biblical Creationism and Scientific Creationism

The anti-Darwinists come in two species, Creationists and Intelligent Design advocates. Among the creationists two subspecies have evolved, the Biblical Creationists and the Scientific Creationists. The two can mate with one another, to be sure; but their arguments against Darwinism take different forms. The first argues on the basis of the Bible's authority; the second provides scientific arguments for the inadequacy of the Darwinian model.

One group of Biblical Creationists names itself "Answers in Genesis" (AIG). Headed by Australian Ken Ham, its website reminds us that all knowledge or wisdom begins with the fear of the Lord (Proverbs 1:7): <http://www.answersingenesis.org/>.

What is distinctive about the Scientific Creationists is that they proffer scientific arguments. They are *scientific* creationists, not biblical creationists. They argue against Darwinism because they believe the Darwinian model is inferior to their own model, "creation science." They are aggressive because they are fighting for the soul of civilization, to prevent our culture's deterioration into atheistic materialism and Social Darwinism that leads to a subhuman morality.

Even though many creationist groups around the world give voice to anti-Darwinism, here we'll summarize briefly the teachings of the Institute for Creation Research near San Diego. They're known as Young Earth Creationists, or YECs for short.

Scientific Creationists teach (1) the *sudden creation of the cosmos from nothing by divine action*. God created the world out of nothing. This is not unusual. Virtually all Christians affirm this. So do Jews and Muslims. What distinguishes scientific creationism from garden variety biblical theology is the assertion that the creation was mature from its birth. This means the species were fixed at the beginning. So no evolution from one species to another has ever occurred.

This leads creationists to oppose the Darwinian model on the grounds that (2) the *insufficiency of mutation and natural selection to explain development of all living kinds from a single point of origin*. Creationists believe in change over time, to be sure; they believe evolution in the form of random genetic variation takes place within a species (microevolution). What they deny is evolution from one species to another (macroevolution).

This implies (3) *changes occur only within fixed limits of originally created kinds of plants and animals*. Even though this is supposed to be a scientific argument, the creationists give special attention to the biblical word, 'kind'. In Genesis 1:1-2:4a, God creates creatures and asks them to multiply according to their own "kinds" (Hebrew: *min*). Creationist interpreters find ten "kinds" in Genesis: (a) grass; (b) herbs; (c) fruit trees; (d) sea monsters; (e) other marine animals; (f) birds; (g) beasts of the earth; (h) cattle; (i) crawling animals; and, finally, (j) the human race. Creationists believe that God

intends for each kind to remain within its own particular structure. If ‘kind’ means ‘species’, then no overlap of species is permitted by God.

One of the chief arguments raised by creationists against evolution from one kind or species to another is the alleged absence of transitional forms, what we popularly call the ‘missing links’. If one species gradually gave way to a subsequent species and then died out, one would expect its fossil remains to chronicle the transition. Yet, claim the creationists, no such fossil record of transitional species have been found. Establishment scientists dispute this, to be sure; claiming to have found numerous transitional forms such as fossils of reptiles with wings that demonstrate evolution from sea creatures to flying creatures.

Restriction of evolution to what occurs within a species means this: (4) *no common descent. Apes and humans have separate ancestry.* Creationists affirm that the human race was especially created by God, as a distinct kind. They refute the standard Darwinian claim that humanity was selected for from among a variety of pre-human higher primates. In addition, the entire human race is descended from a single pair of parents, Adam and Eve.

Ethically as well as historically, creationists are adamant in affirming that all races and all ethnicities are united. There is only one human race. Creationists fear that Social Darwinists could support racial discrimination if they say that separate races descended from separate species of monkeys. Even if Darwinists on the eve of the 20th century might have held such a view; evolutionary theorists in the 21st century do not appeal to common descent to justify racism.

How do we explain the fossil record? Creationists teach (5) that *earth’s geology is explained by catastrophism, including a worldwide flood.* Based on Genesis 6-8, flood geology provides an alternative explanation for the fossil record, an alternative to uniformitarianism which holds that fossils were formed at a uniform rate over deep time. Creationist catastrophism ascribes to Noah’s flood, dated three to five thousand years before Abraham, the reason we find so many fossils in sedimentary rock. The fossil record supports catastrophism, say creationists, because preserved remains of all life forms can be found together in the same geological strata. On this point, Darwin’s defenders contend that geological formations are due to shifting; and this explains why rock layers do not provide a nice neat ladder of time with all the fossils in their proper strata.

This group receives the name “Young Earth Creationism” because of the belief that (6) *the earth is less than 10,000 years old.* The above argument against uniformitarian deep time suggests that the earth need not be as old as the established scientific community presumes. Young Earth Creationists do not feel compelled to defend a young earth; but they do so anyway. The consensus among establishment scientists is that the earth is 4.5 billion years old, and the appearance of life first occurred about 3.8 billion years ago.

We note how significant it is that YECs call themselves “*Scientific Creationists*” because, even though they highly regard the Bible, they wish to muster arguments against Darwinism that are scientific in character. This means that science is held in high regard. What the YECs propose is a scientific model they believe is superior to the Darwinian model. It is our opinion that the YEC proposal is not superior, because it does not meet the criterion of scientific fertility. The Darwinian model has proven itself to be fertile for a century and a half; it generates new research and new knowledge. The YEC model has not yet demonstrated this quality of fertility.

Intelligent Design

Are Fundamentalists, Creationists, and Intelligent Design supporters all in the same army? What kind of an alliance do we have here? Perhaps we can clarify by offering a brief chronicle of anti-Darwinian views in North America. The Fundamentalists led the attack against the teaching of evolution in public schools from the 1920s into the 1960s; and remnants continue a rear guard action under the label of Biblical Creationism. The Scientific Creationists sustained the battle from the late 1960s through the mid 1990s. From the early 1990s to the present Intelligent Design has opened a new front. During this entire period, a rag tag group of Evolutionary Theists have simply watched the war from afar, although some are being heard on the witness stand in the Dover trial.

Why does Intelligent Design (ID) attack the Darwinian model of evolution? If we look at advanced life forms, we see complexity. Living beings are complex—that is, we cannot take them apart and reduce them to their chemicals and have them remain alive. This reduction would kill them. Complex living beings and biological systems within living beings are not like brick walls; we cannot construct them with component elements like piling bricks one on top the other. They are irreducibly complex. So, how did they develop? How did they evolve? They could not have evolved gradually step-by-step through random genetic variation and natural selection. Complex systems in nature must be the result of a designer, an intelligent designer who is transcendent and who intervenes in natural evolution to scoot it along.

Take the eye, for example. The component cells that make up the eye each have a different function. No cell individually sees. Only the system of cells provides sight for the organism. The eye is designed for sight. The eye could not have evolved gradually through uniform small increments of change resulting from random mutations and environmental selection. The entire complex system for seeing must have appeared at once. A designer who wanted creatures to see must have intervened to make this happen.

If St. Thomas Aquinas were still alive, he would call such an intelligent designer “God.” But today’s ID advocates refrain from applying the word “God” to the intelligent designer, because they want to be scientific and not religious. So, within the framework of science, the ID position supports evolution understood as change over time. Yet, ID denies that random variation and natural selection can provide an adequate explanation

for the appearance of complexity in the natural world. Appeal to an intelligent designer provides a superior scientific explanation.

Three advocates of Intelligent Design deserve brief mention here. First, Philip Johnson, a retired law professor at the University of California at Berkeley, wrote a most popular book, *Darwin on Trial*, which delineates the so-called gaps in the Darwinian model. Michael Behe, a professor of biochemistry at Lehigh University, wrote a widely read book, *Darwin's Black Box*, purporting to show how the evolution of “irreducible complexity” in organisms cannot be explained by gradual changes due to natural selection. William Dembski at Southern Seminary in Louisville draws upon mathematical probability and similar arguments to support “specified complexity,” making an argument similar to Behe’s. What these arguments share is that the evolutionary advance to higher levels of complexity cannot be accounted for by random variation and natural selection alone. Complex organs and organisms look designed; and they are. They are the product of a transcendent designer, an unknown designer. Significant here is that these three claim to be making a scientific argument to show the weaknesses of the Darwinian model and, by implication, open science to divine transcendence by another name.

In addition to scholars such as these, ID is promoted in the public square by the Discovery Institute of Seattle, Washington, www.discoveryinstitute.org. . A motto of the Discovery Institute is “teach the controversy.” The goal here is to present ID as a scientific theory that provides an alternative to the Darwinian model; and this alternative should be offered to children in the public school system.

Although defendants of the Darwinian model accuse ID of being mere creationism in disguise and trying to sneak sectarian religion into the public schools in violation of the first Amendment, ID supporters deny this. Some enemies use the term *Intelligent Design Creationism* in an attempt to force the two into a shotgun wedding; but neither the creationists nor the ID people have proposed such a marriage.

Theologically, the ID position differs from that of Scientific Creationism. The creationists, as their name indicates, are concerned about creation—that is, they assert that God created all species in their respective “kinds” at the beginning. No macroevolution has taken place since. ID, in contrast, is not concerned about creation but rather about change within the created order. ID finds it can accept something like macroevolution; but it adds that intelligent design rather than natural selection better explains macroevolution. Both creationists and ID supporters claim to be making scientific arguments, even if on Sundays they find themselves sitting next to one another in evangelical churches.

We, Ted and Marty, raise both scientific and theological objections to ID. Scientifically, the appeal to a transcendent designer to explain marvels of complexity such as the design of the eye avoids what the evidence says, namely, scientists have gathered many primitive and partially developed forms of the eye that demonstrate its evolution over time. Theologically, ID trivializes God’s work. If God intervenes in evolution to develop the eye, why do we still have to wear glasses? Is God less than a

fully intelligent designer? What appears on the ID list of designs fails to include what is important to New Testament Christians, namely, God the redeemer heals. If God the redeemer had actually designed the eye, we could all see 20' 20'.

**Theistic Evolution:
Yes, It's OK to Love Jesus *and* Like Darwin**

We have just taken a look at two arguments against the Darwinian model of evolution, Scientific Creationism and Intelligent Design. Both make distinctively scientific arguments; yet both commit themselves to some level of faith in God. Because of the vehemence with which these two groups oppose Darwinism, one could easily get the impression that to be Christian is to be opposed to Darwinism. The so-called Christian view is placed over against the Darwinian view. This is misleading, however; because for more than a century many Christians have made their peace with Darwinian evolution. Those who both affirm their Christian faith and accept natural selection as a scientific explanation for macroevolution belong to a loosely organized club we will call, "Theistic Evolution."

	<i>Method</i>	<i>God's Role</i>	<i>Nature</i>
<i>Darwinian Biology</i>	<i>Science</i>	<i>Natural Selection</i>	<i>Natural Causes</i>
<i>Darwinian Ideology</i>	<i>Philosophy</i>	<i>Atheism</i>	<i>Natural Causes</i>
<i>Biblical Creationism</i>	<i>Theology</i>	<i>Creator</i>	<i>Natural Causes</i>
<i>Scientific Creationism</i>	<i>Science</i>	<i>Creator</i>	<i>Natural Causes</i>
<i>Intelligent Design</i>	<i>Science</i>	<i>Interventionist</i>	<i>Divine Intervention</i>
<i>Theistic Evolution</i>	<i>Theology</i>	<i>Primary Cause</i>	<i>Secondary Causes</i>

Note that the creationists place God at the beginning, at origin; whereas ID has an intervening God. Note also how both Scientific Creationism and Intelligent Design claim to employ the scientific method. Their critics deny that this is science, accusing them of importing religious belief under the guise of science. We believe the assumptions here are more important than the arguments. Everyone assumes science is such a good thing that they want to be more scientific than their opponents.

Marching in the army of theistic evolutionists we can find conservatives such as B.B. Warfield, the famous Princeton theologian at the end of the 19th century. Warfield provided the American Fundamentalists with their doctrine of scriptural inspiration. What is widely overlooked, is that Warfield was also a supporter of Darwinism. He saw God's work in bringing the human race into existence through evolution as a parallel to the way the Holy Spirit inspired the writers of the New Testament. In fact, a significant minority of the early fundamentalists prior to the 1920s were theistic evolutionists.

Also, an early 20th century ally was Pierre Teilhard de Chardin, a Jesuit priest and paleontologist who is known for discovering Peking Man in 1929. Teilhard combined Darwinian evolution with the Christian doctrines of creation and redemption, creating a model of world history over deep time that traces the development of life from inanimate matter up through sentient beings into intellectual and spiritual achievements; and Teilhard projects a future in which independent human intelligences will unite with one another in a grand mystical union. Our minds will become attuned to one another's minds, and with God. Teilhard, who died in 1955, may have been the most comprehensive of the theistic evolutionists to date.

We the authors of this brief, Marty and Ted, place ourselves in the theistic evolution camp somewhere between Warfield and Teilhard. In what follows we would like to share with you some key strategies for a healthy alliance between evolutionary science and the Christian vision of creation and redemption.

Here is what we propose for your consideration. Like the seven golden lamp stands in Revelation 1:12, we offer seven principles of illumination. They provide illumination, not the brightness of absolute truth. Borrowing from science, they make up a "theological model" which we hope will shed light on further reflection and provide spiritual guidance.

1. *The Darwinian Model of Evolution should be conditionally accepted.* We accept and work with the Darwinian model as we would any other scientific theory—that is, if it's fertile for the growth of new knowledge, then it is worth embracing for the time being. No scientific theory is eternal. Eventually, all theories get replaced with better ones. It would be like building a house on sand to baptize evolution and incorporate it into Christian dogma. No sooner might we do such a thing, and evolution would go out the window while a better theory comes through the door. In the meantime, we must grant that the Darwinian model is today's best science. Scientific Creationism and Intelligent Design provide only inferior science, perhaps not even science at all.
2. *God is the primary cause while nature operates according to secondary causes.* As the primary cause, God is the creator of all things. God brought the world from nonbeing into being; and God continues to sustain the world in its existence. Within the created order, the world operates according to laws and principles. Events are contingent and sometimes free—that is, what happens in nature and in human life is unpredictable. Yet, all that happens is the result

of secondary causes, the result of one natural creature relating to another natural creature. This is the order of creation as God has established it. Science studies the realm of secondary causation, not primary causation. Science can discern the laws that govern natural processes; but it cannot perceive the source of those laws and processes.

3. *God has a purpose for nature that scientists cannot see within nature.* We do not expect a research scientist looking through the lenses of random variation and natural selection to perceive a grand design in nature or an inherent purpose toward which all things are moving. As both ID supporters and evolutionary biologists acknowledge, some systems in nature exhibit characteristics of design. The eye, for example, is designed for seeing. Yet, local design in complex systems does not in itself give evidence of a single grand design for the totality of the created universe. As Christians, we believe the entire created universe has a purpose, a divinely appointed purpose. To discern that purpose we will need to rely upon a special revelation from God.
4. *God's promised new creation provides the purpose for the present creation.* We rely on three important passages from Scripture. First, Genesis 1:31, "God saw everything he had made, and indeed, it was very good." Second, Revelation 21:1, "Then I saw a new heaven and a new earth." Third, between these two, we live with St. Paul who writes in 1 Corinthians 13:12, "now we see in a mirror dimly." We are cautious, because we can only see dimly in a mirror that reflects back what we project into it. We will not be able to behold the pure light of all truth until we reside fully in the new creation where God's light is the only light and our eyes are fully opened. In the meantime, we will stumble through our shadowed reality relying on the occasional candlelight that natural science can provide for partially viewing natural mysteries. Because science cannot shine light on the new creation promised by the Bible, we can apprehend it only in faith and trust.
5. *God creates from the future, not from the past.* We believe that God creates the world by giving it a future. This is what God did at the beginning, in Genesis 1:1-2:4a. For God to say that this world is "very good," God must already have had in mind the anticipated new creation prophesied in Revelation 21 and 22. This will be the redeemed creation. It will be the creation where all illnesses will be healed, where there will be no crying nor pain, and where death shall be no more. Further, it will be the creation where the lion will lie down with the lamb, and we the human race will live in harmony with all of nature. Only when the created world has attained this redeemed state will it finally be created and dubbed "very good." In the meantime, we believe God is not done with creation. Creation continues, and the best we can do is watch the history of secondary causation through a mirror dimly.
6. *The book of Genesis does not describe a finished event in the past; rather it describes the full sweep of God's creative activities that includes us today.* The account of creation in Genesis 1:1-2:4a., we believe, applies to the entire history of the cosmos, beginning perhaps with the Big Bang 13.7 billion years ago and extending into the future far enough to take into account the advent of

the new creation the Bible promises. Right now, God is at work. God is working as primary cause with all of nature's secondary causes—natural causes as understood by physicists, chemists, biologists, geneticists, and neuroscientists--to bring into existence an ever more complex realm of interaction between ourselves, our world, and our God. We today find ourselves somewhere between day one and day six. Day seven, the Sabbath, is scheduled for the day after the arrival of the prophesied New Jerusalem of the closing chapters of the Bible. Then God can declare that all of creation is “very good” and take that well deserved divine rest.

7. *Redemption coincides with creation.* One of the mistakes of both the creationists and the ID supporters is to limit the theological questions posed to science to the domain of creation. We believe creation cannot be understood from the perspective of faith unless it is viewed in light of redemption. So, even if creationism or ID should be successful at unseating the Darwinian model, it would not follow that the distinctively Christian viewpoint will have prevailed. What is distinctively Christian is not an explanation for a biological world replete with extinctions, predator-prey violence, suffering from disease, and falling by the wayside while only the reproductively fit survive; rather, what is distinctively Christian is reliance upon Isaiah's prophecy that in God's kingdom the lion will lie down with the lamb and all of the creation will live in harmony. Without this transformative vision, we cannot deal adequately with God's relation to the creation; and we cannot understand clearly where science can be of help or not be of help in articulating our faith in God.

Note what we have not done here. Even though we place ourselves in the camp of Theistic Evolution, we have not interpreted the long history of evolution over deep time as an account of divine providence. We do not conflate evolution with progress. We do not advocate a spirituality in which we bless the advances of Western civilization or equate Christian progress with technological progress. We do not believe that the rise of Darwinism provides a natural blessing on Western cultural or economic imperialism.

We do not try to ground social ethics in the biological struggle for survival. Note that we have not celebrated the violence of lions eating lambs as part of God's design; nor have we neutralized nature by saying that this amorality is simply the way nature does things. We have not taken evolution and simply baptized it. We have not Christianized Darwinism. Rather, we assess the Darwinian model from the standpoint of the divine promise of a new creation. We believe that God's creative work is not done yet. We anticipate its furtherance and its consummate fulfillment.

What should our churches and our schools teach?

One of our chief concerns is that young people in our congregations and in our schools—whether public schools, Christian day schools, Roman Catholic parochial schools, or even home schooling situations—receive the best science. Creationism and Intelligent Design are not the best science. Even if we agree to “teach the controversy,”

we should proceed to teach the Darwinian model as the science which has proven itself for more than a century to be a fertile theory which generates new knowledge.

We have another concern. We believe that Christian faith at its best is intellectually curious. And we should be good stewards of our minds. The historic Christian tradition provided the nursery within which modern science was born, grew, and matured. This is no accident. Faith seeks understanding, as St. Anselm said. All this leads to a very important responsibility for our churches. Our young people should be taught that *science can be a Christian vocation*. When young people pass from high school to college, they should ask themselves: “might the Holy Spirit be calling me to a lifetime of service in the sciences?” If we have contaminated the discernment process by identifying the Christian faith as something anti-Darwinian or even anti-science, we will have put barriers in the way of the Holy Spirit. God’s Spirit can overcome our barriers, to be sure; but if we have the option of cooperating and paving the way for our young people, why not take it?

Now, let us spell this out in a bit more detail. The position we are taking is this: first, children of every religious tradition, including those from Christian families, should be exposed to the best science. It is the obligation of every school system to provide the highest quality education possible, and this means its science teachers should be well trained and up to date. The ability of today’s children to function in tomorrow’s world depends on this. No theological reason exists to justify teaching or learning half baked or inferior science.

Second, it is our position that Scientific Creationism and Intelligent Design, even if conceived for wholesome reasons by well intentioned people, do not represent the best science. We measure the quality of science by its fertility. By ‘fertility’ we mean the ability of a scientific theory to generate research projects that lead to new knowledge. What fertility leads to is a progressive research program that advances human understanding of the natural world; and in many cases this advance in understanding leads to innovative technology, such as medical therapy. The theory we know as Neo-Darwinian evolution meets this criterion. It’s producing new knowledge every day. Scientific medicine among other fields benefits from the new knowledge this theory generates. It’s the theory that our young people need to know if they are to progress academically in the life sciences and professionally in medical school, nursing, veterinary medicine, or any profession requiring biochemistry. We would be cheating our children by confusing them regarding how we measure successful science.

Third, this implies a full commitment to support the teaching of evolutionary theory and laboratory practice in the public schools, Roman Catholic parochial schools, evangelical Christian day schools, and others. Once this commitment has been made, then consideration can be given to lifting up alternative models. A healthy curriculum will provide room for discussion of the cultural controversy that includes Scientific Creationism and Intelligent Design. Because the swirl of controversy whelms all our children on a daily basis, a non-anxious discussion of the spectrum of beliefs should be made available. Once the children return to the laboratory, however, we recommend that

the Neo-Darwinian model guide what takes place. In sum, we oppose the idea of “equal treatment” for non-Darwinian models.

Fourth, much more is at stake than simply showing respect for Scientific Creationism and Intelligent Design. What is at stake is faith, faith in the God who has created our beautiful world and who promises still yet more magnificent natural beauty in the future. In a religiously safe setting such as a Roman Catholic parochial school or an evangelical day school, the study of nature should be accompanied by a biblical appreciation for the God of nature. Our faith in God should not be reduced to its bare bones formulation by either the Creationists or the Intelligent Design advocates. Our faith is not dependent on either of these theories about evolution. A conscientious teacher should be able to point this out in an inspiring and edifying manner.

Fifth, we affirm that the faith of our biblical ancestors is not out of date, nor is it superseded by modern science. The temptation to disqualify religious commitments because they are pre-modern must be resisted. We object to invoking the concept of progress to suggest that science marks progress in advance of religion. Our teachers must avoid embarrassing religion simply because it is old when touting the virtues of the new sciences. Rather, the depth of reality plumbed by faith should be presented as a complement to the surface understandings of the physical world provided by science. Disrespect for religion must be avoided, even in the public school setting

In conclusion, a strong faith in God the creator and redeemer need not fear good science; rather, science should be seen as a window looking out on the magnificent complexity that inheres in the natural world. When it comes to competing models in the evolution controversy, we should allow the better theory or model to win out. Victory will be measured by fertility. As of this point in time, the Darwinian model should be declared the winner. Without baptizing evolutionary biology as absolute, Christians should encourage young people in schools to benefit from its teaching.

Ted Peters
Marty Hewlett

Suggested Resources

Overview of the Evolution Controversy

Ted Peters and Martinez Hewlett, *Evolution from Creation to New Creation*. Nashville: Abingdon, 2003.

Howard J. Van Till, *The Fourth Day*. Grand Rapids: Eerdmans, 1986.

Center for Theology and Natural Sciences website: www.ctns.org.

The Darwinian Tradition

Charles Darwin, *Origin of Species by Means of Natural Selection*, London: 6th edition, 1872.

The Cambridge Encyclopedia of Human Evolution, ed. by Steve Jones, et.al., Cambridge UK: Cambridge University Press, 1992.

National Center for Scientific Education, founded and maintained by Eugenie Scott, <http://www.ncseweb.org>.

Michael Ruse, *Can a Darwinian be a Christian?* Cambridge: Cambridge University Press, 2001.

Creationism

Henry M. Morris, *History of Modern Creationism*. Santee CA: Institute for Creation Research, 2nd ed., 1993.

Ronald L. Numbers, *The Creationists*. Berkeley CA: University of California Press, 1992.

Websites: <http://www.icr.org>; www.creationism.org; <http://www.reasons.org/>; and <http://www.answersingenesis.org/>.

Intelligent Design

Michael J. Behe, *Darwin's Black Box*. NY: Simon & Schuster, 1996.

Percival Davis and Dean Kenyon, *Of Pandas and People*. NY: Haughton, 1989.

William A. Dembski, *Intelligent Design*. Downer's Grove IL: Intervarsity Press, 1999.

Philip E. Johnson, *Darwin on Trial*. Downer's Grove IL: InterVarsity Press, 1991.

Robert T. Pennock, *Tower of Babel: The Evidence Against the New Creationism*. Cambridge MA: MIT Press, 1999.

Theistic Evolution

John Haught, *God After Darwin*. Boulder CO: Westview, 2000.

Philip Hefner, *The Human Factor*. Minneapolis: Fortress, 1993.

Niels Henrik Gregersen, "Beyond the Balance: Theology in a Self-Organizing World," in *Design and Disorder*, edited by Niels Henrik Gregersen and Ulf Görman (London and New York: T. & T. Clark, 2002)

Kenneth Miller, *Finding Darwin's God*, NY: Cliff Street Books 1999.,

Ted Peters and Martinez Hewlett, *Evolution from Creation to New Creation*. Nashville: Abingdon, 2003.

Pierre Teilhard de Chardin, *The Phenomenon of Man*. NY: Harper, 1959.

B.B. Warfield, *Evolution, Science, and Scripture: Selected Writings*, ed. by Mark A. Noll and David N. Livingstone. Grand Rapids MI: Baker Books, 2000.