

GOD
AND
EVOLUTION

PROTESTANTS, CATHOLICS, AND JEWS
EXPLORE DARWIN'S CHALLENGE TO FAITH

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Description

This book seeks to analyze “theistic evolution,” to critique various attempts to reconcile Darwinism with traditional theistic religion, and to respond to criticisms of intelligent design. Contributors include William Dembski, Logan Gage, David Klinghoffer, Stephen Meyer, Denyse O’Leary, Jay Richards, Jonathan Wells, John West, and Jonathan Witt. Edited by Jay W. Richards.

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Introduction

Squaring the Circle

Jay W. Richards

When someone asks me: “Can you believe in God and evolution?,” I always respond: “That depends. What do you mean by ‘God’ and what do you mean by ‘evolution’?” No one seems to be very satisfied with this retort, which seems evasive; but it’s the honest answer, since the initial question, as it stands, is hopelessly ambiguous. Without more detail, it’s susceptible to almost any answer.

Asking whether one supports so-called “theistic evolution” has the same problem. Unless you define “theistic” and “evolution” very carefully, it might refer to positions that, on closer inspection, are more different than they are alike. One version might be an oxymoron, one a triviality, one an interesting proposition, and another, a complete muddle.

Besides being vague, these questions, and practically every answer to them, are controversial. Perhaps no subject now inspires more heated arguments at family reunions and cocktail parties. Whether in religious or secular, scientific or literary circles, giving the “wrong” answer can put you on the fast track to being labeled a heretic. A scientist in an academic setting who expresses any doubt about Darwinism, for instance, may find himself in a battle for tenure and funding. In his church, the same scientist may be suspected of creeping liberalism because he doesn’t think the word “evolution” means atheism. Or he may be thought a “fundamentalist” because he thinks his faith has something to do with his science, and vice versa.

Such countervailing social pressures don’t encourage clear thinking or clear speaking. So when they encounter the question, many people, especially academics, choose obfuscation over clarification. If pressed, they may attempt to stake out a moderate both-and position: “I think evolution is God’s way of creating.”¹ For the conflict-averse, this may be a reassuring response, but what does it mean?

In the century and a half since Charles Darwin first proposed his theory of evolution, Christians, Jews, and other religious believers have not only pondered its truth—or lack thereof—they have grappled with how to make sense of it theologically. So far, they haven’t reached a consensus and tend, instead, to argue among themselves. It can be quite confusing. In fact, the whole subject of God and evolution, and especially what is called “theistic evolution,” is an enigma wrapped in a shroud of fuzz and surrounded by blanket of fog.

The purpose of this book is to clear away the fog, the fuzz, and the enigma.

Getting Our History Right

One of the first patches of fog that needs to be cleared away is pop culture’s caricature of the historical relationship between evolution and religion. In America, that

caricature is epitomized by the old film *Inherit the Wind*, which reduces the debate over Darwin to a battle royal between intolerant Bible-thumpers and enlightened champions of free speech. In England, the caricature is epitomized by an exchange between a scientist and a clergyman. On June 30, 1860, a mere seven months after Charles Darwin released his *Origin of Species*, Oxford's Museum of Natural History hosted a famous debate on Darwin's theory of descent with modification, or what would later be called his theory of evolution. Among its distinguished participants were "Darwin's Bull Dog," Thomas Henry Huxley, and the Anglican Bishop Samuel Wilberforce. During the course of the debate, it is said that Wilberforce asked Huxley if it was through his grandmother or grandfather that he supposed that he was descended from apes. Huxley purportedly said that he "was not ashamed to have a monkey for his ancestor; but he would be ashamed to be connected with a man who used great gifts to obscure the truth."

The Huxley-Wilberforce repartee is often portrayed as a decisive victory for good science over bad religion. J.R. Lucas cheekily summarizes the received account:

Huxley's simple scientific sincerity humbled the prelatial insolence and clerical obscurantism of Soapy Sam; the pretension of the Church to dictate to scientists the conclusions they were allowed to reach were, for good and all, decisively defeated; the autonomy of science was established in Britain and the Western world; the claim of plain unvarnished truth on men's allegiance was vindicated, however unwelcome its implications for human vanity might be; and the flood tide of Victorian faith in all its fulsomeness was turned to an ebb, which has continued to our present day and will only end when religion and superstition have been finally eliminated from the minds of all enlightened men.²

It's a memorable story. But as Lucas' arch tone suggests, this trope, like so many stories drawn from the hallowed pages of Darwiniana, is mostly mythology.

First of all, careful historians suspect that the grandparent-ape exchange probably never happened. Even though it is the most widely recounted detail from the famous debate, there was no contemporaneous report of it.

Second, it misrepresents how Darwin's theory was initially received. To judge from the story of the debate, you would think that objections to Darwin's theory came mainly from clerics and religious believers for religious reasons, while being quickly embraced as good science by scientists.³ In truth, Darwin had a number of scientific critics, and even Bishop Wilberforce focused on scientific rather than religious objections to Darwin's theory.

Third, the Christian response to his theory was diverse from the very beginning. For instance, Charles Hodge and B.B. Warfield, two nineteenth century Presbyterian theologians at Princeton Theological Seminary, initially disagreed with each other on the merits, and theological implications, of Darwin's theory. Both were pillars of conservatism. But while Hodge saw the theory as atheism masquerading as science, Warfield thought it could be reconciled with Christian orthodoxy (though he later came to agree more with Hodge.⁴) There was similar ambivalence among Catholics. Although most traditional Catholics opposed the implications of Darwin's theory for human beings, the *Origin of Species* was never placed on the Church's Index of Prohibited Books.

Fourth, the Huxley-Wilberforce debate is often used to illustrate a larger myth about an innate war between science and religion. Tales of that warfare usually include Copernicus, Galileo, Giordano Bruno, and William Jennings Bryan. Though many science textbooks still spread this “warfare myth,” most historians of science recognize that this simplistic trope distorts a much more complicated and interesting history of interaction between science and religion in the West. Many have argued, in fact, that the Judeo-Christian tradition actually helped give rise to natural science.⁵

There is no innate war between natural science and theistic religion; nevertheless, the question of God-and-evolution remains complicated, controversial—and confused.

A Range of Views

There are practically as many views of how God relates to evolution as there are people who have pondered the subject. Still, most views fall into one of several categories. Unfortunately, before defining the categories, you have to overcome a terminological hurdle. What do you do with the troublesome word “creationist”? The word is usually used pejoratively, to bring to mind **“young earth creationists”** who believe that God created the universe in six, twenty-four hour days sometime in the last ten thousand years. Critics assume that the young earth view is so disreputable that anyone associated with it will likewise be tarnished. However you judge that uncharitable assumption, you can’t use the word “creationist” these days without carrying some of this baggage along for the ride.

This is an accident of history. In a less complicated world, the word “creationist” would not be a put-down but simply a way to refer to people—Christians, Jews, Muslims, Sikhs, and other theists—who believe in a doctrine of creation. Regrettably, that’s not how the world or the word works. Like it or not, the entire discussion about God and evolution takes place in a rhetorical context designed to misdirect and misrepresent certain views, especially those views that take God seriously.

Since we’re stuck with the word creationist, though, we’ll just have to slog ahead.

Besides “young earth creationists,” there are folks who refer to themselves as **“old earth creationists”** and others who call themselves **“progressive creationists.”** Old earth creationists generally hold to mainstream scientific views of the age of the Earth and the universe, but believe that God worked directly in nature (as a “primary” or “efficient cause”⁶) to create some things. These might include heavenly bodies like galaxies and the solar system, the first reproducing cell, various forms of life, human beings, human souls, and so forth. Old earth creationists disagree among themselves on the *loci*—the places—where they think that God acts directly, but all agree that, sometimes at least, God acts directly in natural history to bring about things that nature would not produce if left to its own devices.

Progressive creationists also believe that God acts directly at various points in cosmic history, but they tend to see more evolutionary development between the seams of God’s specific acts.

Then there are those who don’t fit simply on the “creationist” spectrum, but do challenge materialistic theories of evolution. For example, **“intelligent design”** or **“ID”** theorists argue that nature, or certain aspects of nature, are best explained by intelligent

design. On this view, repetitive, law-like or mechanistic explanations that invoke, say, the gravitational force and natural selection, explain some aspects of nature, but a full explanation of the natural world will include intelligent agency as well.

Moreover, ID theorists have argued that physical laws are themselves the result of intelligent design, even if they are not, arguably, adequate to explain everything in nature.

At the same time, ID theorists focus on the detectable effects of intelligence, rather than on the specific locations or modes of design within nature. As William Dembski, one prominent ID proponent, puts it: “Intelligent design (ID) is the study of patterns in nature that are best explained as the result of intelligence.”⁷ Since ID is minimal, it is logically compatible with almost any creationist or evolutionist view that allows for intelligent agency as an explanation within nature. (The contributors to this volume fall into the ID camp.)

Finally, there are **theistic evolutionists**, who would appear to subscribe to a hybrid position that combines both “theism” and “evolution.” Most theistic evolutionists contrast their view with “special creationism,” which would include any view that suggests that God has acted directly in natural history. However, logically speaking, a theistic evolutionist could also be an ID proponent (in fact, there are many such people). Nevertheless, most self-described theistic evolutionists distinguish themselves from intelligent design proponents, and are, in some cases, harsh critics of ID. So, like the word creationist, “theistic evolution” tends to have a meaning different from what its etymology alone would suggest.

So what exactly is theistic evolution? It would be nice to open Webster’s, find the definitions of “theism” and “evolution,” stick the definitions together, and be done with it. Alas, it’s not that simple. Behind the phrase “theistic evolution” lurks a lot of mischief and confusion.

A Dilemma

When dealing with God and evolution, most people have an intuitive feeling that there’s some contradiction lurking in the neighborhood, some dilemma that has to be resolved. Even children, at some point, begin to sense this. Most probably ask their parents what my eleven year old daughter asked me recently: “So why did God make dinosaurs that all died out millions of years before Adam and Eve?” Several years earlier, she had asked, obviously garbling the kindergarten evolution lesson: “Did we use to have tails?” Perhaps you’d have ready answers to these questions. But if you’re like millions of other parents, you might try to punt.

For punters, theistic evolution (or “evolutionary creationism” as it’s sometimes called) might seem to promise some relief. But eventually, if you tell an attentive child that evolution is just God’s way of creating, she’s going to ask you what you mean. It would be nice to have something more than a pat answer accompanied by some hand waving.

The difficulty begins when we start to dig into the common textbook definitions of the term “evolution.” Here, evolution is often *defined* by its opposition to creation. Consider just two academic sources among legion: “That organisms have evolved rather than having been created is the single most important and unifying principle of modern

biology.”⁸ And here’s the Harvard paleontologist George Gaylord Simpson: “Man is the result of a purposeless and natural process that did not have him in mind.”⁹ Darwin himself understood his theory this way. As he said, “There seems to be no more design in the variability of organic beings, and in the action of natural selection, than in the course which the winds blow.”¹⁰

These descriptions of (Darwinian) evolution don’t leave a lot of wiggle room. And notice that the idea of organisms evolving *rather than* being created is not presented as a side-light, as the private opinion of a few scientists. In the first quote, as in many others, evolution is described as the “single most important and unifying principle of modern biology.” It would be hard to put the point any more strongly.

Surely, for the sake of truth and sanity, it’s better to ask and answer the follow up questions directly than to avoid them indefinitely.

The Dilemma with Dilemmas

Before diving in, however, let’s step back and think about dilemmas in general. Whenever you’re trying to hold together ideas that seem to contradict each other, you have a *dilemma*—or trilemma if there are three ideas involved. (We don’t have a word for apparent contradictions that involve more than three ideas, perhaps because most of us just give up or think about something else when things get that complicated.)

Anyone who has studied theology or philosophy will be familiar with one famous trilemma, called the problem of evil. The problem of evil involves three ideas believed by most theists (that is, people who believe in a personal God who transcends the universe). The problem is that it seems at first blush like these three beliefs can’t all be true:

- (1) God is all powerful.
- (2) God is perfectly good.
- (3) There is evil in the world.

There’s no obvious contradiction here, as there is if you claim that 2 plus 2 equals 4 and 2 plus 2 does not equal four, or you say that your best friend is a married bachelor. In fact, the three claims above aren’t even about the same things. The first two are about God. The third is, strictly speaking, about the world. So we’re not dealing with what is called a formal contradiction. Still, most college freshmen sense trouble when they first see the problem of evil presented in Philosophy 101.

And the freshmen are surely right. The basic intuition motivating this trilemma is that if God is really all good and all powerful, it seems that he would not create a world with evil in it. Whatever world he created, he would know how things are going to turn out and would prevent evil from popping up anywhere in his creation. Since there obviously is evil in the world (premise three), something must be wrong with at least one or both of the other premises. Either God is not all powerful or he’s not perfectly good. Or maybe he’s neither.

Now there are a few basic ways to resolve any real dilemma (or trilemma in this case). If you want to be consistent, you need to drop one of the premises. Since contradictions describe impossible situations, at least one of them has to be false.

To solve the problem of evil, for example, you might decide that God is good but not all powerful, so he just can't keep all the evil out. Or maybe he's all powerful but not perfectly good, so he's not really that concerned if evil turns up. Or maybe we're mistaken and there is no evil in the world, meaning there's no reason to doubt that God is all-powerful and perfectly good. If you go in any of these three directions—problem solved.

Regrettably, each of these solutions requires that you abandon one of the beliefs that, if you're a theist, you'd prefer to retain. If you believe that God is all powerful, perfectly good, *and* that, nevertheless, there is evil in the world, then you want to find a way to reconcile the three beliefs, not sacrifice one for the others. So you may hold out hope that what looks like a contradiction is not really one at all, but just an unfortunate misunderstanding.

The traditional response to the problem of evil, for instance, is called the free will defense. According to this rejoinder, in choosing to create the world, God chose to create free beings such as humans and angels, beings so free that they could choose against him, could do evil. Even though God is all powerful, he couldn't create a world with free beings and no evil, any more than he could create a square circle. No matter how powerful God is, there is no such possible world with free beings and no evil. So God had to accept a trade-off.

Usually the free will defense is paired with the greater good defense, which says that a world with free beings and some evil is better, all things being equal, than a world that lacks both free beings and evil. This assumes that the existence of free beings has intrinsic value. And since God knows how things are going to turn out, he can bring about a greater good by allowing free beings to exercise evil than by creating a world of robots that always do what they're told. As Joseph (in the book of Genesis) explained to his brothers, who had sold him into slavery, "You meant it for evil, but God meant it for good."

There is, of course, much more that could be said about this thorny issue (for example, the problem of evil in the natural world) but this short summary should give you some sense of the basic moves for solving a dilemma. When it comes to the question of God and evolution, we're dealing with a different subject but the same basic options.

Presumably, a theistic evolutionist is someone who claims that both theism *in some sense* and evolution *in some sense* are true, that both God and evolution somehow work together in explaining the world. But of course, all the real interest is hidden behind the phrase "in some sense." So let's lay out the main senses of the two words in question.

"Theism"

Although different people understand God differently, the word "God" has a pretty stable meaning in ordinary conversation. If I tell Christopher Hitchens, an atheist, that I believe in God, he has some sense of what I mean. In ordinary English and other Western languages, "God" usually refers to a Creator, a personal being who has chosen to create the world, who is powerful and perfect in whatever ways such a being could be powerful and perfect, and who transcends the universe. That is, God would exist, would *be*,

whether or not he had chosen to create the world. The world, in contrast, exists as the result of his free choice, for his purposes and at his discretion.

Of course, “God” doesn’t refer to just any old being like a bunny resting on a down or the guy in Mumbai who answers your questions when you call Dell tech support. God, though a “being” in the sense that he “exists” (or, more precisely, *is*), is himself the source of other beings, and in that way, he is qualitatively different from all other beings. Classical theists often say that God is “Being itself.” That way of speaking is a bit obscure to the uninitiated. At the very least, however, what this means is that God doesn’t participate in some more fundamental reality called “being” along with everything else. He is the Source of all being. Moreover, unlike you, me, and the burrito I had for lunch, God necessarily exists. He exists in every possible world.

Technically speaking, you could believe that such a God exists, and be either a theist or a deist. A **theist** believes that God both created the world and continues to conserve and interact in and with it.¹¹ In fact, God is so intimately related to the world that, while being separate from the world, he still wholly pervades it. So theists speak of God as both transcendent and immanent.¹² What the theist will never do is identify God with the world.

A **deist** holds a more minimal view, believing that God created the world but doesn’t really keep up with the day-to-day activities on the ground. Or even if he keeps up, he doesn’t get directly involved. He maintains a strictly hands-off policy.

Besides theism and deism, and leaving aside polytheism, the other main options are **pantheism** and **panentheism**. Pantheism identifies God and nature. For the pantheist, God doesn’t transcend the world nor is he independent of it. He’s not really even immanent in the world. Rather, God is the world and the world is God. For most pantheists, moreover, God is not really personal either. After all, the universe just doesn’t look much like an agent with purposes and a will. So for the pantheist, “God” might be thought of as a rational principle or a life force that somehow pervades the universe; but God, for the pantheist, most certainly is not a transcendent Creator.

A hybrid position is called panentheism, which holds that God has some transcendent qualities but is nevertheless in the world, or, to put it differently, the world is in him. The world, we might say, is part of God. God and nature may be distinct but they’re inseparable. A panentheist might think of God as a Creator, but not in an absolute sense. God might push or pull or persuade or cajole things to go in a certain direction. He might have purposes. But he won’t call everything into existence from nothing simply by his free choice. God will evolve along with the world.

Though there are a few Christian academics who identify with panentheism,¹³ the vast majority of Christians, Jews and Muslims, and the historic thinkers in these traditions, are theists. That’s because the basic tenets of their religions hold that God is a transcendent Creator who at least occasionally acts directly in the world. All three of these Abrahamic faiths believe that God specially communicated with Abraham and Moses, for instance.

In addition, Christians believe that God became a man, Jesus, at a particular time and place; that Jesus was conceived by the Holy Spirit in the Virgin Mary rather than by ordinary means; and that after Jesus died, he was raised from the dead and ascended into heaven. All this implies the Christian belief that God is triune. He exists eternally as three “persons” while still being one God. Though less central to Christian doctrine, most

Christians also believe that Jesus worked certain extraordinary miracles, such as calming a storm and raising a girl from the dead.

Take away all beliefs about God acting in history, and you have at best only a shadow of theistic belief.

Of course, theists don't believe that God is aloof from the world except when he acts directly in nature. For theists, God transcends the world, is free to act directly in it, and always remains intimately involved with it.

At the same time, the theist need not believe that God always acts directly in the world. Traditionally, Christian theologians have argued that God can act in the world in two different ways. He can act directly or "primarily," such as when he creates the whole universe or raises Jesus from the dead. It's God's world, so that's his prerogative. He's not violating the universe or its laws when he does this, or invading alien territory, since he's the source of both the universe and whatever "laws" it might have.

He also can act through so-called "secondary causes." These include the choices or tendencies of the creatures he has made. For instance, he can work through the evil choices of Joseph's brothers to achieve a greater good of getting the descendants of Abraham to Egypt so that they don't die from famine.

God can also bring about his purposes through natural processes and laws that he has established, such as the electromagnetic force. An event might be both an expression of a physical law and the purposes of God. It's not as if atheists appeal to gravity while theists appeal to miracles. Gravity is as consistent with theism as are miracles. But for the theist, gravity is a creature, or rather, it describes creatures. It's like a mathematical description of how God has ordained physical objects to act in ordinary circumstances; it's not an eternal law governing God's behavior.

Christians, Jews, and other theists recognize that God can act through secondary causes when they thank God for their food, even though they know that God normally provides our food, not as manna from heaven, but through natural causes like rain, spring, and soil, and through human actions like sowing and reaping. God is so free and so powerful that he can act either directly or through secondary causes. He's like a doting gardener who creates his own sun, seeds, water, nutrients, and dirt. And he's perfectly happy to have "flowers" who can make their own decisions.

Therefore, for theists, God, while acting either directly or through secondary causes, continually upholds, oversees and superintends his entire creation in "providence," even as he allows his creatures the freedom appropriate to their station.¹⁴

We've just scratched the surface, but we've probably said enough about theism for our purposes.

"Evolution"

Though God is the grandest and most difficult of all subjects, the meaning of the word "evolution" is actually a lot harder to nail down.

In an illuminating article called "The Meanings of Evolution," Stephen Meyer and Michael Keas distinguished six different ways in which "evolution" is commonly used:

1. Change over time; history of nature; any sequence of events in nature.

2. Changes in the frequencies of alleles in the gene pool of a population.
3. Limited common descent: the idea that particular groups of organisms have descended from a common ancestor.
4. The mechanisms responsible for the change required to produce limited descent with modification, chiefly natural selection acting on random variations or mutations.
5. Universal common descent: the idea that all organisms have descended from a single common ancestor.
6. “Blind watchmaker” thesis: the idea that all organisms have descended from common ancestors solely through unguided, unintelligent, purposeless, material processes such as natural selection acting on random variations or mutations; that the mechanisms of natural selection, random variation and mutation, and perhaps other similarly naturalistic mechanisms, are completely sufficient to account for the appearance of design in living organisms.¹⁵

Meyer and Keas provide many valuable insights in their article, but here we’re only concerned with “evolution” insofar as it’s relevant to theology.

The first meaning is uncontroversial—even trivial. The most convinced young earth creationist agrees that things change over time—that the universe has a history.¹⁶ Populations of animals wax and wane depending on changes in climate and the environment. At one time, certain flora and fauna prosper on the earth, but they later disappear, leaving mere impressions in the rocks to mark their existence for future generations.

Of course, “change over time” isn’t limited to biology. There’s also cosmic “evolution,” the idea that the early universe started in a hot, dense state, and over billions of years, cooled off and spread out, formed stars, galaxies, planets, and so forth. This includes the idea of cosmic nucleosynthesis, which seeks to explain the production of heavy elements (everything heavier than helium) in the universe through a process of star birth, growth, and death. These events involve change over time, but they have to do with the history of the inanimate physical universe rather than with the history of life. While this picture of cosmic evolution may contradict young earth creationism, it does not otherwise pose a theological problem. The generic idea that one form of matter gives rise, under the influence of various natural laws and processes, to other forms of matter, does not contradict *theism*. Surely God could directly guide such a process in innumerable ways, could set up a series of secondary natural processes that could do the job, or could do some combination of both.

In fact, virtually no one denies the truth of “evolution” in senses 1, 2, or 3. And, pretty much everyone agrees that natural selection and random mutations explain some things in biology (number 4).

What about the fifth sense of evolution, universal common ancestry? This is the claim that all organisms on earth are descended from a single common ancestor that lived sometime in the distant past. Universal common ancestry is distinct from the mechanism of change. In fact, it’s compatible with all sorts of different mechanisms or sources for change, though the most popular mechanism is the broadly Darwinian one. It’s hard to square universal common descent with some interpretations of biblical texts of course; nevertheless, it’s *logically* compatible with theism. If God could turn dirt into a man, or a man’s rib into a woman, then presumably he could, if he so chose, turn a bacterium into a

jellyfish, or a dinosaur into a bird. Whatever its exegetical problems, an unbroken evolutionary tree of life *guided and intended by God*, in which every organism descends from some original organism, sounds like a logical possibility. (So there's logical space where both intelligent design and theistic evolution overlap—even if ID and theistic evolution often describe people with different positions.¹⁷)

Besides the six senses mentioned by Meyer and Keas, there is also the metaphorical sense of evolution, in which Darwinian Theory is used as a template to explain things other than nature, like the rise and fall of civilizations or sports careers. In his book *The Ascent of Money*, for instance, historian Niall Ferguson explains the evolution of the financial system in the West in Darwinian terms.¹⁸ He speaks of “mass extinction events,” survival of the fittest banks, a “Cambrian Explosion” of new financial instruments, and so forth. This way of speaking can sometimes be illuminating, even if, at times, it's a stretch. Still, no one doubts that there are examples of the fittest surviving in biology and finance. We might have some sort of “evolution” here, but not in a theologically significant sense.

Finally, there's evolution in the sense of “progress” or “growth.” Natural evolution has often been understood in this way, so that cosmic history is interpreted as a movement toward greater perfection, complexity, mind, or spirit. A pre-Darwinian understanding of “evolution” was the idea of a slow unfolding of something that existed in nascent form from the beginning, like an acorn eventually becoming a great oak tree. If anything, this sense of evolution tends toward theism rather than away from it, since it suggests a purposive plan. For that reason, many contemporary evolutionists (such as the late Stephen J. Gould) explicitly reject the idea that evolution is progressive, and argue instead that cosmic history is not going anywhere in particular.

Much more could be said, but it should now be clear that theism, properly understood, is compatible with many senses of evolution. For most of the senses of evolution we've considered, in fact, there's little appearance of contradiction. Of course, this is a logical point. It doesn't tell us what is true—only what could be true.

But there's one clear exception—the blind watchmaker thesis. Of all the senses of “evolution,” this one seems, at least at first blush, to fit with theism like oil with water. It claims that all the apparent design in life is just that—apparent. That apparent design is really the result of natural selection working on *random* genetic mutations. (Darwin proposed “variation.” Neo-Darwinism attributes new variations to genetic mutations. In the following chapters, we will follow convention and use “Darwinism” and “Neo-Darwinism” interchangeably, except where otherwise indicated.)

The word “random” in the blind watchmaker thesis carries a lot of metaphysical baggage. In Neo-Darwinian theory, “random” doesn't mean uncaused; it means that the changes aren't directed—they don't happen for any purpose. Moreover, they don't occur for the benefit of individual organisms, species, or eco-systems, even if, under the guidance of natural selection, an occasional mutation might ultimately redound to the benefit of a species.

Darwin, at least in his argument in *The Origin of Species*, assumed a form of radical deism in which God establishes general laws that govern matter, but then leaves the adaptation and complexity of life up to random variations and natural selection. (Note that Darwin's personal views are a separate matter from the structure and rhetoric of his argument in the *Origin*.¹⁹) Nowadays, though, most evolutionary biologists are more

thorough-going materialists, as least when it comes to their science. So the blind watchmaker thesis is more or less the same as the mechanism of Neo-Darwinism as its leading advocates understand it.

The blind watchmaker thesis is usually wedded to some materialistic origin of life scenario, which isn't about biological evolution *per se*, though it is sometimes referred to as chemical evolution.

From the time of Darwin, who first proposed it, to the present, Darwinists have contrasted their idea with the claim that biological forms are designed. Here's how the late Darwinist Ernst Mayr put it:

The real core of Darwinism, however, is the theory of natural selection. This theory is so important for the Darwinian because it permits the explanation of adaptation, the 'design' of the natural theologian, by natural means, instead of by divine intervention.²⁰

Notice that he says "instead of." Darwinists almost always insist that their theory serves as a designer substitute. That's the whole point of the theory. This makes it different from other scientific theories, like Newton's law of gravity. Newton didn't formulate the law to get God out of the planet business (in fact, for Newton, God was involved in every aspect of the business.) And theories that invoke ordinary physical laws are determinate: they allow the scientist to make specific predictions about what will happen, all things being equal.

Darwin's theory isn't like that. It simply says that whatever has happened, and whatever will happen, the adaptive complexity we see in organisms is (primarily) the result of natural selection and random variation, not design. From the very beginning, the theory was intended to rule out teleological (purposive) explanations. As William Dembski once said: "The appeal of Darwinism was never, That's the way God did it. The appeal was always, That's the way nature did it without God."²¹ That's why, even if not all agree with Richard Dawkins that Darwin "made it possible to be an intellectually fulfilled atheist,"²² the vast majority of Darwinists claim that Darwin's mechanism makes God superfluous. It's their theory, so presumably they have a right to tell us what it means. Theists, in contrast to Darwinists, claim that the world, including the biological world, exists for a purpose, that it is, in some sense, designed. The blind watchmaker thesis denies this. So anyone wanting to reconcile strict Darwinian evolution with theism surely has a Grade A dilemma on his hands. It's akin to reconciling theistic evolution with anti-theistic evolution.

We noted above that the easy way to solve the problem of evil is to drop one of the offending premises. The same is true with theistic evolution: the easy way out is to drop or radically redefine the theistic part (dropping the Darwinian part is usually much riskier to one's career). Dissolving a dilemma, however, is not the same as resolving it. If the adjective "theistic" in "theistic evolution" is to be an accurate description, it should include a theistic view of God.

If you're unfamiliar with the debate over God and evolution, you might already be anticipating how to be a theistic evolutionist. A theistic evolutionist, as suggested above, would be someone who holds that God somehow sets up or guides nature so that it gives rise to everything from stars to starfish through a slowly developing process. Organisms

share a common ancestor but reach their goal as intended by God. God works in nature, perhaps through cosmic initial conditions, secondary processes, discrete miracles, or some combination, to bring about his intended results, rather than creating everything from scratch. Or perhaps God created the universe as a whole primarily, but everything else he “delegates,” as it were, to natural causes. But whatever the details, by definition the process of change and adaptation wouldn’t be random or purposeless. It would implement a plan, and would have a purpose. So a theistic evolutionist, you might assume, would hold a *teleological* version of evolution, which includes cosmic evolution, the origin of life, and biological evolution, and would certainly not endorse the Darwinian blind watchmaker thesis in biology.

But it’s rarely so straightforward. Consider the view of Presbyterian pastor Timothy Keller. In his popular book, *The Reason for God*, he tells readers: “For the record I think God guided some process of natural selection, and yet I reject the concept of evolution as an all-encompassing Theory.”²³

Earlier he says: “Evolutionary science assumes more complex life-forms evolved from less complex forms through a process of natural selection. Many Christians believe that God brought about life this way.”²⁴ He also quotes approvingly from a Bible commentary, which affirms evolution as a mere “scientific biological hypothesis,” but rejects it as a “world-view of the way things are.” Thus partitioned, the reader is told, “there is little reason for conflict.”²⁵ Elsewhere Keller observes that he has “seen intelligent, educated laypeople really struggle with the distinction. . . . Nevertheless, this is exactly the distinction they *must* make, or they will never grant the importance of” evolution as a biological process.²⁶

But those “intelligent, educated, laypeople” struggle for a reason. What exactly is the distinction he is proffering, and what does it distinguish? Is he saying that while it’s okay to speculate about various evolutionary hypotheses, we should not affirm any? Surely not, since he seems to affirm a broad, semi-Darwinian evolutionary hypothesis. So is he saying that Darwinian evolutionary theory explains hearts and arms and ears and bacterial flagella, but not our love of music and our moral intuition? And if so, on what basis is he maintaining the distinction? After all, it’s not as if we have solid empirical evidence that natural selection acting on random genetic mutations can give rise to an avian lung but not to our belief in the Golden Rule. So at best, such a distinction would be *ad hoc*.

Or does Keller have something else in mind? He doesn’t say. In any case, distinguishing evolution as a hypothesis from evolution as a “world-view of the way things are” doesn’t offer much guidance one way or another. To be useful, he would need to specify exactly what he means by evolution, what he thinks it explains well, and what he thinks it leaves out that keeps it from constituting a “world view of the way things are.” Instead, we get a vague distinction without a difference. It’s no surprise that the laypeople to whom he’s commended the distinction don’t find it very illuminating.

Notice that he speaks of God “guiding some process of natural selection,” but does not mention *random variation*, which is as much a part of Darwinian Theory as is natural selection. Perhaps that avoidance is intentional. But since he doesn’t say outright that he rejects the idea that natural selection acts only on random genetic mutations, the careful reader is left guessing.

If we read him charitably, however, Keller seems to want to affirm that God guided the origin and development of life forms, all of which are linked by a chain of common ancestry, by coordinating his guidance with natural selection. So the outcome isn't really random. (Recall the generally accepted definition of "random" discussed above.)

At the same time, Keller explicitly rejects the blind watchmaker thesis. So he's apparently not an orthodox Darwinist. He doesn't quite realize that to hold this view consistently, however, he needs to embrace teleology and reject orthodox Neo-Darwinism and materialistic origin of life scenarios, and not merely reject "evolution as a worldview of the way things are," whatever that means.

I am not intending to pick on Keller, whose work I hold in high regard. I am using him to illustrate how confusing this issue can be, and how even smart, orthodox religious thinkers often get into a muddle when they try to wed their Christian beliefs with Darwinian evolutionary theory.

If we peel away these confusions and look for a straightforward, coherent position, however, we usually end up with the idea of God-guided common ancestry. This is probably what most people would think theistic evolution means. But they would be wrong, at least when it comes to describing the views of many who describe themselves as theistic evolutionists. These days most theistic evolutionists seek, somehow, to reconcile theism with *Darwinian* evolution. They may affirm design in some broad sense at the cosmic level, but things get patchy when it comes to biology. Though it's not always easy to understand what they're saying, many theistic evolutionists want to integrate the blind watchmaker thesis into their theology. Now that would be quite a trick to pull off. Is it possible? And even if it's possible, why believe it's true?

This volume is organized into four parts. Part one deals with broad thematic issues related to the God and evolution debate, such as the affinities between Gnosticism in early Christianity and the thought of certain theistic evolutionists; the unstable strategic alliance of theistic evolution and the "evolution lobby"; and the failure of theistic evolution to resolve the problem of evil. It engages the thought of a diverse group of theistic evolutionists including Karl Giberson, Kenneth Miller, and Stephen Barr.

Part two responds to several representative Protestant theistic evolutionists, including Francis Collins, Denis Lamoureux, and Howard Van Till.

Part three treats Catholic thought in particular, including the early Catholic responses to Darwinism from G.K. Chesterton, Hilaire Belloc, and St. George Jackson Mivart; the Catholic Church's response to Darwin's theory; and the often-perplexing response of certain Thomists to Darwinism and intelligent design.

Part four considers Darwinian evolution and intelligent design in light of the thought of ancient, medieval, and contemporary Judaism.

One might wonder why an ecumenical group of intelligent design proponents would write a book dealing with the subject of God and evolution. ID, after all, is not a

religious program. Yet while intelligent design is based on non-sectarian, public evidence, and uses public modes of reasoning, ID, Darwinism, and other theories of origin obviously have theological *implications*. Individual ID proponents should be just as free to explore such implications as their critics, although such explorations should not be mistaken for ID *per se*.

Moreover, the resurgence of theistic evolution, or what might more accurately be called theistic Darwinism, has made theology a central concern in the current debate. Certain theistic evolutionists have argued, for instance, that Darwinian evolution is compatible with or even useful to theology. Others have claimed that ID is theologically suspect or even “blasphemous.” This volume is, in large part, a response to these claims.

Finally, while it is often useful to distinguish natural science from, say, philosophy and theology, truth is ultimately a unity. While we may sometimes express a truth in different but complementary ways, a proposition cannot be true in theology but false in natural science. On some occasions, it is appropriate to explore the themes at the boundary of otherwise distinct academic disciplines. The chapters in this volume are intended to do just that.

Of course, the subject of God and evolution is far too big a subject for a single volume. In a sense, it touches all of the biggest questions we can ask about ourselves and the world we live in. If you find yourself perplexed by the current debate, however, the following contributions are intended to provide some relief.

Some Terms to Keep Straight

Young earth creationism: the view that God created the universe in six, roughly twenty-four hour days sometime in the last ten thousand years or so.

Old earth creationism: this view affirms that God created the universe from nothing, affirms the mainstream scientific views of the age of the Earth and the universe, and maintains that God worked directly in nature (as a “primary” or “efficient cause”) to create some things.

Progressive creationism: those who describe themselves as progressive creationists are similar to old earth creationists. For instance, they usually hold to mainstream views of the age of the Earth and universe and also maintain that God acts directly at various points in cosmic history; but they tend to see more evolutionary development between the seams of God’s specific acts than do old earth creationists.

Intelligent design (ID): ID proponents argue, on the basis of public evidence drawn from natural science, that nature, or certain aspects of nature, are best explained by intelligent agency. Most ID proponents are critics of Neo-Darwinism as an adequate explanation for the adaptive complexity of life, and of materialistic theories of the origin of life and biological information. Since ID is minimal, it is logically consistent with a variety of creationist and evolutionist views, but identical with none.

Theistic evolutionism: the view that theism and evolution are both true. The term is ambiguous because the word “evolution” means many different things. Logically, one could be an ID proponent and a theistic evolutionist, although the term is commonly used to describe individuals who affirm Darwinian evolution and are critical of contemporary intelligent design arguments in biology.

Theism: the view that a transcendent, all powerful, perfectly good, personal God created the world *ex nihilo*—from nothing—and continues to conserve and interact in and with it. Traditional Judaism, Christianity, and Islam are theistic.

Deism: the view that a transcendent God created the universe but does not interact with it or act directly in history.

Pantheism: the view that God and the universe are identical. Pantheists reject the concept of a transcendent God, and usually do not believe that God is fully personal.

Panentheism: the view that God has some transcendent qualities but is nevertheless in the world, or alternatively, that the world is “in” God. God and nature may be distinct but they’re inseparable. Most panentheists believe that God evolves along with the world and did not create the world *ex nihilo*. Panentheism is somewhat popular among religious academics, especially those involved in the dialogue between faith and science; but it is extremely rare among ordinary religious believers.

Evolution: this word has many different meanings, not all compatible with each other, and only a few of which are theologically significant. Among the meanings of evolution are the following:

1. Change over time; history of nature; any sequence of events in nature.
2. Changes in the frequencies of alleles in the gene pool of a population.
3. Limited common descent: the idea that particular groups of organisms have descended from a common ancestor.
4. The mechanisms responsible for the change required to produce limited descent with modification, chiefly natural selection acting on random variations or mutations.
5. Universal common descent: the idea that all organisms have descended from a single common ancestor.
6. “Blind watchmaker” thesis: the idea that all organisms have descended from common ancestors solely through unguided, unintelligent, purposeless, material processes such as natural selection acting on random variations or mutations; that the mechanisms of natural selection, random variation and mutation, and perhaps other similarly naturalistic mechanisms, are completely sufficient to account for the appearance of design in living organisms.²⁷
7. A metaphor describing the rise, development, success, and collapse of sports careers, business enterprises, nations, and so forth, through a process of competition.
8. Progress or development through time of something that existed initially in a nascent form, such as a child emerging from an embryo or an oak tree from an acorn. This

idea was common in pre-Darwinian views of biological evolution, which led to Darwin avoiding the word “evolution” in his *Origin of Species*. Contemporary Darwinists, following Darwin, generally reject this understanding of biological evolution, which suggests a purposeful or teleological process. Nevertheless, language that implies progress frequently appears even in the writings of those who officially reject it.

Meaning 6 (the blind watchmaker thesis) is the least compatible with theism. Meaning 8 is implicitly theistic or at least teleological.

Teleology: refers to a system, event, or process that is purposeful and goal-oriented. There are teleological and non-teleological versions of cosmic and biological evolution. A central purpose of Darwinian Theory is to explain the apparent teleology of life as merely apparent rather than real.

Darwinism: the theory that every form of life on Earth is descended from one or a few common ancestors, and that the adaptive complexity of life is largely the result of natural selection acting on random variations. Darwin proposed his theory as an alternative to the idea that species had been specially created, and most modern Darwinists have followed Darwin’s lead. Strictly speaking, it is Darwin’s mechanism of natural selection and random variation, and not common ancestry, that contradicts the intelligent design of life.

Neo-Darwinism: the modern version of Darwinism, according to which random variations are identified with random genetic mutations.

¹ This is a popular way of speaking. See for instance “Creation Through Evolutionary Means” at: <http://science.drvinson.net/creationviaevolution-online>. In the last several years, there have been a number of books that have defended some version of this thesis. See, for example, Denis Alexander, *Creation or Evolution: Do We Have to Choose?* (Oxford: Monarch Books, 2008); Ted Peters and Martinez Hewlett, *Can You Believe in God And Evolution? A Guide for the Perplexed* (Nashville: Abingdon Press, 2006); Keith Miller, editor, *Perspectives on an Evolving Creation* (Grand Rapids: Eerdmans, 2003); Denis O. Lamoureux, *Evolutionary Creation: An Evangelical Approach to Evolution* (Eugene, OR: Wipf & Stock, 2008); and Karl W. Giberson, *Saving Darwin: How to Be a Christian and Believe in Evolution* (New York: HarperOne, 2008).

Jeremy Manier reports on a number of the recent thinkers who try to reconcile God and evolution:

The religious response is simple, some believers say: God used evolution to create us. But invoking God’s direct guidance raises daunting scientific hurdles. Ever since the publication in 1859 of Darwin’s “Origin of Species,” religious writers have tried to cram the idea of design back into evolution, often without success.

In “The New Theology,” *Chicago Tribune* (Jan. 19, 2008).

² From J.R. Lucas, “Wilberforce and Huxley: A Legendary Encounter,” *The Historical Journal* 22, no. 2 (1979): pp. 313-330, available online at: <http://users.ox.ac.uk/~jrucas/legend.html>. Lucas goes on to debunk the “legendary” aspects of the story.

³ The Wikipedia entry “1860 Oxford evolution debate” characteristically perpetuates this mythology. See: http://en.wikipedia.org/wiki/1860_Oxford_evolution_debate.

⁴ I discuss Warfield's views in detail in "The Evolving Debate Over Origins," Review of *B. B. Warfield: Evolution, Science and Scripture, Selected Writings* edited by Mark A. Noll and David N. Livingstone, *Touchstone* (October 2001), at: <http://www.touchstonemag.com/archives/article.php?id=14-08-044-b>.

⁵ For a brief summary, see Guillermo Gonzalez and Jay Richards, *The Privileged Planet: How Our Place in the Cosmos is Designed for Discovery* (Washington, DC: Regnery, 2004), chapter 11. See also Rodney Stark, *For the Glory of God: How Monotheism Led to Witch Hunts, Science, and the End of Slavery* (Princeton: Princeton University Press, 2004), and Alvin Plantinga, "Religion and Science," *Stanford Encyclopedia of Philosophy*, at: <http://plato.stanford.edu/entries/religion-science/>.

⁶ Aristotle distinguished between four "causes," that is, factors that explain or are responsible for something else. To put it simply, the material cause explains what something is made of; the formal cause explains what something is; the final cause explains the ultimate purpose toward which something tends, and the efficient cause explains where something came from, or what or who produced it.

⁷ "Intelligent Design: A Brief Introduction," in *Evidence for God*, edited by William A. Dembski and Michael R. Licona (Grand Rapids: Baker Books, 2010), p. 104.

⁸ Daniel R. Brooks and E.O. Wiley, *Evolution as Entropy* (Chicago: University of Chicago Press, 1986), p. xi, quoted in M.A. Corey, *Back to Darwin: The Scientific Case for Deistic Evolution* (Lanham, MD: University Press of America, 1994), p. 3.

⁹ G.G. Simpson, *The Meaning of Evolution: A Study of the History of Life and of Its Significance for Man*, revised edition (New Haven: Yale University Press, 1967), p. 345.

¹⁰ Francis Darwin, *Life and Letters of Charles Darwin*, volume 1 (New York: Appleton, 1887), pp. 280, 283-284, 278-279.

¹¹ For a discussion of the relationship between creation and conservation, see Jonathan Kvanvig, "Creation and Conservation," *Stanford Encyclopedia of Philosophy*, at: <http://plato.stanford.edu/entries/creation-conservation/>.

¹² Here's how Merriam-Webster defines theism: "belief in the existence of a god or gods; *specifically*: belief in the existence of one God viewed as the creative source of the human race and the world who transcends yet is immanent in the world," at: <http://www.merriam-webster.com/dictionary/theist>.

¹³ This seems to be the position of theologian John Haught, for instance, who follows the thought of Teilhard de Chardin. See Haught's *Making Sense of Evolution: Darwin, God, and the Drama of Life* (Philadelphia: Westminster/John Knox Press, 2010), and *God After Darwin: A Theology of Evolution* (Boulder: Westview Press, 2007).

¹⁴ Beyond this point, the details get complicated. There is an extensive literature dating back to the medieval Catholic scholastics, who discussed the various modes of divine action, and how God's action relates to natural causation. The three main views are "occasionalism," "mere conservationism," and "concurrentism." In occasionalism, God alone brings about every effect in nature. In mere conservationism, according to Alfred Freddoso, "God contributes to the ordinary course of nature solely by creating and conserving natural substances along with their active and passive causal powers or capacities." In concurrentism,

a natural effect is produced immediately by *both* God *and* created substances, so that, contrary to occasionalism, secondary agents make a genuine causal contribution to the effect and in some sense determine its specific character by virtue of their own intrinsic properties, whereas, contrary to mere conservationism, they do so only if God cooperates with them contemporaneously as an immediate cause in a certain "general" way which goes beyond the conservation of the relevant agents, patients, and powers, and which renders the resulting effect the immediate effect of both God and the secondary causes.

Alfred J. Freddoso, "God's General Concurrence with Secondary Causes: Pitfalls and Prospects," at: <http://www.nd.edu/~afreddos/papers/pitfall.htm>. See also Alfred J. Freddoso, "God's General Concurrence with Secondary Causes: Why Conservation is Not Enough," *Philosophical Perspectives* 5 (1991): pp. 553-585, available online at: <http://www.nd.edu/~afreddos/papers/conserv.htm>. Among the Abrahamic faiths, some version of concurrentism (though not necessarily designated as such) is by the far the most common position. However, many modern theistic evolutionists seem inclined toward "mere conservationism." In that sense, these traditional debates are relevant to our current discussion. For our purposes, however, the

crucial point is that God in the theistic view is free to act in a variety of ways both within the created order and as Creator of that order.

¹⁵ In *Darwinism, Design, and Public Education*, edited by John Angus Campbell and Stephen C. Meyer (Lansing: Michigan State University Press, 2004).

¹⁶ See the explanation for the meaning of “evolution” from the BioLogos Foundation, which seeks to give a Christian interpretation and defense of evolution. The explanation begins with “change over time,” then goes on to fill out the definition with common descent and the Darwinian mechanism. But it quickly slips from defining the term to presenting the details as if they were uncontested facts. At:

<http://biologos.org/questions/what-is-evolution/>.

¹⁷ See discussion of this point in the comments of Thomas Cudworth, “Olive Branch for Karl Giberson,” *Uncommon Descent* (April 15, 2010), at: <http://www.uncommondescent.com/intelligent-design/olive-branch-from-karl-giberson/#more-13010>.

¹⁸ (New York: Penguin Books, 2008).

¹⁹ I am not referring to Darwin’s personal beliefs, which seem to have varied over time. I am referring to the actual arguments Darwin made in the *Origin*, which use deistic rather than atheistic or materialistic premises. Whether this reflected Darwin’s personal beliefs or merely a rhetorical strategy is a separate and difficult question. See, for instance, Neil C. Gillespie, *Charles Darwin and the Problem of Creation* (Chicago: University of Chicago Press, 1979), and M.A. Corey, *Back to Darwin: The Scientific Case for Deistic Evolution* (Lanham, MD: University Press of America), pp. 6-25.

²⁰ Michael Ruse, *Darwinism Defended: A Guide to the Evolution Controversy*, with a foreword by Ernst Mayr (Reading, Mass.: Addison-Wesley, 1982), xi–xii. Quoted in *Ibid.*

²¹ William Dembski, “Converting Matter into Mind: Alchemy and the Philosopher’s Stone in Cognitive Science,” *Perspectives on Science & the Christian Faith* 12 (1990), at:

<http://www.asa3.org/ASA/topics/PsychologyNeuroscience/PSCF12-1990Dembski.html#7>.

²² Richard Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design* (New York: W.W. Norton and Co., 1996), p. 6.

²³ Timothy Keller, *The Reason for God: Belief in God in an Age of Skepticism* (New York: Dutton, 2008), p. 94.

²⁴ *Ibid.*, p. 87.

²⁵ Keller is quoting from David Atkinson, *The Message of Genesis 1-11* (Downers Grove: InterVarsity Press, 1990), p. 31.

²⁶ This is in a white paper written for the BioLogos Foundation, “Christian, Evolution, and Christian Laypeople,” available online at: http://www.biologos.org/uploads/projects/Keller_white_paper.pdf.

²⁷ The first six meanings are drawn from the essay by Stephen C. Meyer and Michael N. Keas, “The Meanings of Evolution.”