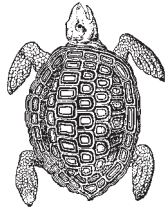

SAVING DARWIN

How to Be a Christian and Believe in Evolution



Karl W. Giberson

 HarperCollins e-books

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FOREWORD

Americans live, according to the lyrics of their national anthem, in the land of the free and the home of the brave. They also live in a land that hosts one of the great paradoxes of our time. Many of its citizens have faith in science and technology to solve society's problems, but many others have faith in a literal interpretation of the book of Genesis that is utterly in conflict with what science tells us about our own origins.

The science-religion conversation is often not a friendly debate. A spate of angry new books denouncing religious faith has appeared, some of them penned by atheist biologists who use evolution as a club to berate believers. On the other side of the great divide, the Intelligent Design (ID) movement presses on with its challenge to evolution's ability to explain "irreducibly complex" structures in living organisms, despite lack of any meaningful support in the scientific community and a recent stunning court defeat of the plan to teach ID as an alternative to evolution in the school system. As perhaps the strangest development of all, a "creation museum" has opened just outside Cincinnati, depicting humans frolicking with dinosaurs, despite overwhelming scientific evidence that they were separated in history by more than sixty million years. What's going on here? How can the most advanced technological country in the world also be home to such antiscientific thinking?

Some have dismissed this as an inevitable consequence of the fact that Americans take their religion seriously. In that context, they say that this is just one more chapter in a perpetual and irreconcilable battle between science and faith, arguing that these worldviews are simply incompatible and that individuals have to make a choice about which to believe in. But, as Karl Giberson ably describes in this much-needed book, that would be a misrepresentation

of the facts. In reality, science and religion have generally coexisted quite comfortably until about a century or so ago. Copernicus, Kepler, and Galileo were all firm believers, and Newton wrote more words about biblical interpretation than he did on mathematics and physics. Clearly the greatest threat to that harmony has been the arrival of Darwin's theory of evolution, but even that development was not initially seen by leaders of the Christian church as all that threatening to their worldview after publication of *On the Origin of Species*.

Giberson has provided a critical service by leading us carefully through a series of historical events that began in the late nineteenth century and led to the current culture wars. These events stretch from Ellen White's Seventh-day Adventist visions of creation, to the birth of fundamentalism as a response to a liberal form of Christian theology that actually denied the divinity of Christ, to the human misery wrought by those who misused Darwin's theory to justify oppressive social changes, to the ill-conceived but still widely embraced *The Genesis Flood* of Henry Morris, which proposed a scientific basis for a very young earth.

Giberson's carefully documented history provides a sobering response to the claims of those who think that the current controversy can be quickly resolved. Just as with other great world conflicts, such as the current war in the Middle East, we will be forever doomed to disappointment in an effort to find peace and harmony if we don't understand how we got to this contentious juncture.

C. S. Lewis, the great proponent of a rational approach to Christian faith, led the Socratic Club at Oxford more than half a century ago, and the motto of the group was "to follow the argument wherever it leads." *Saving Darwin* is in that distinguished tradition. We should all be able to agree, believers and nonbelievers alike, that finding the truth is our task. We may disagree about how to interpret some of the facts, of course, but we cannot dismiss them as just inconvenient.

Here are some true statements that cannot be ignored:

Darwin's theory of evolution has been overwhelmingly supported by evidence from a wide variety of sources. Those include the increasingly detailed fossil record, but even more compelling evidence now comes from the study of genomes from many organisms, providing much more proof of common descent (including *Homo sapiens*) than Darwin could have dreamed

of. Given such oddities in our own DNA record as pseudogenes and ancestral chromosome fusions, special creation of humans simply cannot be embraced by those familiar with the data, unless they wish to postulate a God who intentionally placed misleading clues in our own DNA to test our faith.

Alternatives to evolution such as young- or old-earth creationism and intelligent design find almost no support in the scientific community. Although many nonscientist Christians have been taught to embrace one or another of these alternatives as a means of opposing the perception that evolution is godless, the God of all truth is not well served by lies, no matter how noble the intentions of those who spread them.

On the other hand, a purely naturalistic worldview can be justly criticized as narrow and impoverished. Science must forever remain silent on questions such as: “What is the meaning of life?” “Is there a God?” “Do right and wrong have any real meaning?” and “What happens after we die?” And yet surely those are profoundly important questions that we humans should be trying to answer. Only a spiritual worldview can help us here.

The good news is that there is a harmonious solution at hand. Many working scientists, including Giberson and myself, find no conflict in both embracing the conclusion that evolution is true and seeing this as the means by which God implemented his majestic creation. In that synthesis of the natural and spiritual perspectives we have found much joy and peace, where our increasingly detailed understanding of the molecules of life only adds to our awe of the Creator. Put in that framework, DNA is essentially the language God used to speak us and all other living things into being.

Yet the culture wars continue. And if some resolution is not found soon, we will all be the losers. Would that we could return to the exhortations of theologians like Benjamin Warfield, who wrote these words in the late nineteenth century, fully aware of the significance of Darwin’s theory and unafraid of its consequences for the future of the Christian faith:

We must not, then, as Christians, assume an attitude of antagonism toward the truths of reason, or the truths of philosophy, or the truths of science, or the truths of history, or the truths of criticism. As children of the light, we must be careful to keep ourselves open to every ray of light. Let us, then, cultivate an attitude of courage as over against the investigations of the day. None should be more zealous in them than we. None should be more quick

to discern truth in every field, more hospitable to receive it, more loyal to follow it, whithersoever it leads. (From B. B. Warfield, *Selected Shorter Writings* [Phillipsburg, NJ: PRR Publishing, 1970, pp. 463–65.])

Saving Darwin is a powerful contribution to this critically important effort to seek an enlightened and worshipful peace. With clearly presented statements of truth like those within these pages, together with a shared confidence that scientific discoveries about nature can hardly threaten nature's Creator, perhaps we have a chance in this century to develop a new Christian theology that celebrates God's awesome creation, unafraid of what science can tell us about the details. Then perhaps we can get beyond these destructive battles to focus on the real meaning of Christianity. That actually has little to do with alternative creation stories and everything to do with God's love as demonstrated most profoundly in the life, death, and resurrection of Jesus Christ.

Francis S. Collins, M.D., Ph.D.

INTRODUCTION **THE DISSOLUTION OF
A FUNDAMENTALIST**

In 1975 I left my home in maritime Canada to attend Eastern Nazarene College on Boston's historic south shore. Among my prized possessions, as I nervously traded the potato fields for the big city, were dog-eared copies of Henry Morris's classic texts of scientific creationism and Christian apologetics, *The Genesis Flood* and *Many Infallible Proofs*.¹

Morris, who passed away in early 2006 as I was writing these words, was one of my boyhood heroes. As Willie Mays had inspired me to play center field, and Gordon Lightfoot the guitar, so Morris inspired me to master the art of Christian apologetics, to be, in the immortal words of St. Paul, "not ashamed of the testimony of our Lord." Morris, a giant of American fundamentalism, profoundly influenced religion in twentieth-century America, an influence that extended undiminished into much of Canada as well.

My childhood experiences in center field convinced me that, although I had mastered Mays's famous basket catch, baseball held no future for me. The great gulf between Gordon Lightfoot's guitar playing and my own confirmed that I would never make a living in folk music. But I was good at math and science—and arguing—and it looked as though I might follow in Morris's footsteps and become a Christian apologist. I was particularly enamored with Morris's eloquent and scientifically informed defense of the Genesis creation story and his clear-headed refutation of Darwinian evolution. I planned to major in physics, get a Ph.D., and go to work at Morris's recently created Institute for Creation Research in San Diego, where I would join those noble fundamentalist warriors as they stormed the ramparts of evolution and rescued the Genesis story of creation.

Like many young people raised in fundamentalist churches, I had been captured by the promise of scientific creationism, which Morris had

launched in the early 1960s with the publication of his remarkable book *The Genesis Flood*. In that classic and impressively technical work, Morris and his coauthor, Old Testament scholar John C. Whitcomb, argue persuasively that the Bible and the Book of Nature agree that the earth was created in its present state about ten thousand years ago. The 518-page volume, which has sold over a quarter million copies and is still available in its forty-fourth printing, had enough footnotes, graphs, and pictures to convince any intellectually oriented fundamentalist that there was no reason to take evolution seriously. Readers could rest assured in the knowledge that Darwin's theory was deeply flawed, without empirical support, and on the verge of collapse. A few celebrated and highly publicized defections from the evolutionary camp illustrated the magnitude of the problem and suggested that this was an opportune time to join the war against Darwin's evil theory. In stark contrast to the failing fortunes of evolution, Whitcomb and Morris argued persuasively that the biblical creation story became increasingly credible as scientific evidence accumulated.

My first year at Eastern Nazarene College, which wasn't the fundamentalist haven I had anticipated, was troubling. Away in a strange new city, homesick for the rolling hills of the beautiful St. John River Valley I had left behind in New Brunswick, and without close friends, I struggled in the classroom. My Bible professor assaulted my literalist reading of Genesis, suggesting that Genesis should be read as poetry rather than science, a liberal heresy that Morris had warned me I might encounter. To make matters worse, the science faculty—despite claiming to be Christians—all seemed to accept evolution. Even my fellow students, at least in the science division, had limited interest in the creationist cause to which I had heroically dedicated myself.

These experiences steeled my resolve to stay the course. My extensive reading in fundamentalist apologetics and scientific creationism—and my enthusiasm for arguing—gave me confidence I was right. I could quote credentialed biblical scholars who understood that Genesis was more than poetry and that Christian theology would come apart if Genesis was not read literally. I had books by real scientists refuting evolution with solid arguments that, strangely, many of my professors did not know. The literature buttressing my position was extensive, my authorities were unassailable, and someday I too would have the credentials to speak with authority on this topic.

During my freshman year I attended a creationist event at Boston University, where Duane Gish, the premier and highly polished creationist debater, humiliated his inarticulate and unprepared opponent, who utterly failed to defend evolution. A vision of myself in that same role, perhaps a decade hence, further inspired me. At the end of the year I had the good fortune to meet the grand old man of creationism himself—Henry Morris—at a local church, where he was giving a Saturday seminar on creation. I chatted with him afterwards, and he encouraged me on my course, suggesting that I follow through on my plans to earn a Ph.D. in physics and then contact him at the Institute for Creation Research for a possible research position. He signed my well-worn copy of his manifesto, *Many Infallible Proofs*, inscribing the following biblical reference, 2 Timothy 1:7–9:

For God hath not given us the spirit of fear; but of power, and of love, and of a sound mind. Be not thou therefore ashamed of the testimony of our Lord, nor of me his prisoner: but be thou partaker of the afflictions of the gospel according to the power of God; who hath saved us, and called *us* with an holy calling, not according to our works, but according to his own purpose and grace, which was given us in Christ Jesus before the world began.²

I WAS A TEENAGE FUNDAMENTALIST

Scientific creationism, the idea that the biblical story of creation rests on solid scientific evidence, is an integral part of the fundamentalist worldview that inspired me as a teenager. This understanding of Christianity starts with the assumption that the Bible is completely without error of any kind, having essentially been written by God. Scientific statements in the Bible are completely accurate, and historical references are utterly reliable. All statements on all topics are absolutely trustworthy in all respects. This is the fundamentalist creed, learned at mother's knee, reinforced in Sunday school, to be defended at all costs.

God inspired the biblical authors in such a way that their writings would be indistinguishable from dictation directly from God. God is thus the *author* of the Bible, and the “writers” are little more than scribes. Fundamentalist preachers quote Scripture constantly, rarely introducing it with anything other than “the Bible says” or “God says.” This view of Scripture gives the Bible both an extraordinary authority and a complete unity of perspective. It

has one author and no errors. Complex arguments can thus be securely developed by lifting bits of text from widely disparate books of the Bible and combining them, just as geometrical proofs can be constructed by combining axioms and theorems. If God wrote the entire Bible, then it is one long coherent message.

God provided the Genesis creation story so that we might understand our origins. In this account we read that God created a perfect world, with no sin, no death, and great harmony between his creatures and himself. Under the temptation of Satan, the first human couple, Adam and Eve, sinned—of their own free will—bringing death, suffering, and destruction into the world. If they had not sinned, they would still be alive, listening to music on their iPods and enjoying millions of great-grandchildren. This is the clear meaning of the text, taken at face value. Any other reading implies that God created an imperfect world and that the evils of death and suffering were part of his original creation.

Such dramatic and deeply counterintuitive elements are common in the fundamentalist reading of the Genesis creation story. The first appearance of sin in a perfect creation was a catastrophic transformation, like a crack in a magnificent glass window or a beautiful vase. Sin completely changed the *physical* as well as the *moral* structure of the world, introducing a major “break” in natural history. Women’s bodies were altered so childbirth would be painful. The ecology changed so growing crops would be hard work. Plants developed thorns, and helpful bacteria turned into sinister parasites, inflicting disease on their hosts. Elsewhere in the Bible we read that all of creation “groans” under a universal curse that an enraged God placed on the creation because of the sin of Adam and Eve.³ Many scientific creationists identify this curse with the physicists’ famous second law of thermodynamics, that mysterious statement that nature constantly grows ever more disordered as time passes. What better explanation for the origin of this law than the sin of Adam and Eve?

THE END OF CREATION

At the end of the creation story in Genesis, God rests. Whatever processes were used to “create” shut down on the sixth day of creation and are no longer a part of the natural order. Science thus has no access to these processes and is limited to studying the stable, status-quo, postcreation patterns of na-

ture. It follows that there can really be no “science” of origins, and we should not expect to understand the various mechanisms—all of them supernatural—that God used to create the world. Secular scientists err in attempting to understand origins by inspection of the fossil record and geological history. The record that the geologists and paleontologists are reading to recreate the natural history of our planet is not the story of our origins; it is, in fact, nothing more than the residue of Noah’s great flood.

The flood story is a central underpinning of scientific creationism. Genesis says that the human race, about four thousand years ago, had become so wicked it had to be annihilated. God wiped out almost all humanity with a flood—a global cataclysm that completely reshaped the surface of the earth. This flood laid down virtually all the fossil strata we find today and completely contoured the surface features of the earth, from the Grand Canyon to Mt. Everest. Tectonic activity thrust up mountains. Receding floodwaters carved out canyons, both grand and small. The flood scoured off any prior earth history, like a bulldozer removing an ancient forest to make room for a parking lot.

The classic text by Whitcomb and Morris, *The Genesis Flood*, marshals scientific evidence for this biblical story, arguing that it provides a better explanation for the fossil record and the surface geology of the earth than the conventional scientific account arising from the erroneous assumption by misguided scientists that the earth is billions of years old. *The Genesis Flood* also argues effectively that the Bible intends us to take the flood story literally and understand it as a global, rather than local, event. After the floodwaters receded, God promised Noah that he would never again flood the earth. He placed a rainbow, for the first time, in the heavens as a sign of his promise. The laws of physics changed at this time—about four thousand years ago—to enable rainbows.

Whitcomb and Morris argue convincingly that the scientific and biblical witnesses to these historical accounts agree perfectly. So why, I wondered, does such widespread opposition exist within the scientific community? How can it be that the entire academic community of geologists rejects the worldwide flood of Noah and claims the earth is billions of years old? Why are biologists so blind to the simple truth that God created the world in six days? Why do physicists and astronomers propose so many ideas—from radioactive dating to stellar evolution to the big bang—that suggest the universe is ancient? Why do so many biblical scholars—who claim to be

Christians—reject the biblical witness to all of this? Why do theologians say that none of this matters?

Morris's answers to these questions are simple. Human beings, he explains, are fallen, sinful creatures, easily deceived by Satan. Blind to God's truth, secular scientists and liberal scholars of religion are unknowingly doing the will of the devil. The existence of such a widespread conspiracy to destroy the simple truths of Genesis demands nothing less than just such a comprehensive explanation. Satan has deceived the scientific community, and a great many Christians as well.

Apparently, I wasn't the only reader convinced by the arguments of Whitcomb and Morris. A 2004 CBS poll revealed that over half the population of the United States accepts the biblical creation story, many of them embracing the exact version Whitcomb and Morris presented a half century ago.⁴ This position is thoroughly at odds with almost *all* the relevant scholarship of the past century. Today I would describe this view as sophomoric in the most literal sense of the word, which it certainly was for me, as I watched it wilt over the course of my sophomore year in college. By the middle of that critical year I was sliding uncontrollably down the slippery slope that has characterized religion since it began the liberalizing process just over a century ago.

THE EVOLUTION OF A FUNDAMENTALIST

An interesting concept in evolutionary theory is the pompous-sounding *ontogeny recapitulates phylogeny*. Originally proposed by the German evolutionist Ernst Haeckel in 1866, this idea claims that the development of the embryo of a species—its *ontogeny*—is a fast-forward version of its entire evolutionary history—its *phylogeny*. The sequence of developmental steps through which an embryo passes as it matures—in mother's womb, for humans—is a mirror of the developmental steps through which the species has passed in the course of its evolution over millions of years.

Scientists today reject much of Haeckel's once influential idea. Nevertheless, the concept provides a marvelous description of the process I went through in my sophomore year of college as I evolved rapidly from the simple intellectual life-form called *Homo fundamentalis* to something more complex, in the process passing rapidly through the various intermediate forms that emerged in the decades since Darwin.

As I studied science and mathematics, I began to doubt that science could have gotten everything as thoroughly wrong as the creationists suggested. The simple physics of radioactivity, widely used to date rocks, provides a characteristic example. Many different ways exist to date the earth, and almost all of them agree that the earth is billions, not thousands, of years old. If the earth was really just a few thousand years old as the Bible seemed to indicate,⁵ why would God plant evidence to trick us into thinking it was billions of years old?

Just as my counterparts in the eighteenth and nineteenth centuries struggled to reconcile the new geology of their day with the Bible, I tried at first to play with different, but still literal, readings of Genesis. Maybe I could salvage the Genesis story by reading the “days” of creation as long periods of time. But this didn’t seem reasonable. The Bible says, “In the beginning God created the heaven and the earth,” while science says the earth appeared some nine billion years *after* the universe began. Furthermore, God created the sun on the fourth day, *after* the vegetation, which presumably needed the sun to survive. If the third day was a billion years long, the vegetation would have been long gone before the photosynthesis of the fourth day ever got started.

Each new question made things more complicated. A billion-year-old earth demands that we reinterpret “the fall.” As long as Adam and Eve appeared in the same week as everything else, it was at least possible that their “sin” brought unintended death and suffering into the world. But now it appears that death and suffering had been present for a billion years with entire species going extinct long before humans appeared. Why would God create species only to have them go extinct long before Adam even had time to name them? Was this the same God who would later *preserve* every species on the planet by having Noah build an ark to rescue them from the flood? If extinction was normal, why did we need an ark? What, exactly, were the implications of the fall?

The acceptance of an ancient earth brings other troubles. If we take the geological record seriously, we confront fossils of what look like humans in rock strata more than a hundred thousand years old. And these fossils look as if they belong to a species that evolved from similar, earlier species. If we line up all these species in historical order, we have what certainly looks like a compelling narrative of human evolution from subhuman ancestors. Where in this history do we place Adam and Eve? No logical place appears

in the unbroken sequence of human evolution for the famous residents of the Garden of Eden. And where, exactly, *was* the Garden of Eden? The Genesis story says that God placed an angel at the entrance to keep people out, which certainly implies that it was to continue even after Adam and Eve were expelled. We have no record of God closing it down. If God didn't destroy Eden, where is it now?

Doubts about the historicity of Adam and Eve and the Garden of Eden make it hard to read the creation stories without asking additional difficult questions. And fundamentalists in the midst of their theological breakdowns look in vain to contemporary biblical scholarship for help. Al Truesdale, my freshman Bible professor, had offered many helpful suggestions just a year earlier, bless his heart, but I had rejected all of them. They now came rushing back to haunt me. I found myself in an uncomfortable alternate reality that was a strange and darkened mirror image of the fundamentalist world I had inhabited for my entire life.

Fundamentalists find a satisfying harmony between science, as they understand it, and the Bible, as they interpret it. Their "science" is scientific creationism, which gathers evidence for the Genesis creation story. Their approach to the Bible is biblical literalism, which reads the text in the simplest way possible. These approaches reinforce each other and make the whole greater than the sum of the parts. But real science, which I was studying in college, and contemporary biblical scholarship, which religion majors were studying, conspire in such a way that the whole becomes *less* than the parts. The Genesis story of creation loses all contact with natural history and starts to look strangely like an old-fashioned fairy tale that might teach a lesson, but certainly makes no claim to historicity.

I learned, for example, that the word we translate as "Adam" in our English Bibles simply means "man" in Hebrew. And "Eve" means "woman." I began to wonder how an old story about a guy named "Man" in a magical garden who had a mate named "Woman" made from one of his ribs could ever be mistaken for actual history. And yet this was exactly what I had believed just one year earlier. Talking snakes, visits from God in the evening, naming the animals—the story takes on such a different character the moment one applies even the most basic literary analysis. The literalist interpretation I had formerly embraced and defended so vigorously began to look ridiculous, as did the person I had been just one year earlier.

THE JENGA TOWER

I would have liked to find some simple alternative reading of Genesis to replace the literalist interpretation, but, if one existed, I certainly couldn't find it. I turned with some optimism to religion scholars, but found they had little to offer. Some of them strangely insisted on the historicity of *some* portions of the Genesis story, while allowing that much of it was not historical. The fall, for example, was sometimes an important part of elaborate theological systems, serving the critical function of getting God off the hook for a creation filled with so much suffering. So even though Adam and Eve were not actual characters themselves and Eden was not a real place, they at least represented *something* historical. Once upon a time human beings did *something* to ruin God's perfect creation, and this is where it all went wrong.

I was now wearing scientific spectacles almost all the time, and these explanations looked a little too convenient to me. Some theologians, for example, liked the way that Paul's reference to Jesus as the "second Adam" drew a provocative connection between the fall and redemption (1 Cor. 15:45). The first Adam made the mess; the second Adam cleaned it up. I could never see, though, how theologians could be so comfortable with a mythical interpretation of Eden, but insist on an important historical role for its first resident. Paul's "first Adam" was indeed the original sinner, but he didn't live in the Garden of Eden, he didn't name all the animals, and he may or may not have been married to Eve.

Further complicating my struggles, the religion scholars I consulted were quite accepting of evolution. An Old Testament scholar with a Ph.D. from Boston University assured me that "Genesis was never intended to be read literally." He and his colleagues had made their peace with evolution, apparently as toddlers, and had been at peace about this ever since. They were surprisingly disinterested in the struggles of those who, like me, were trying to hold on to some version of their childhood faith, while portions of its foundations were slowly removed, like the pieces of a Jenga tower that may or may not come crashing down as once extracts the tiny logs.

THE UNIVERSAL ACID OF DARWINISM

Tufts University philosopher Daniel Dennett describes evolution as a "universal acid." With undisguised glee he outlines how evolution, which he calls

“Darwin’s dangerous idea,” eats through and dissolves the foundations of religion. The theory of evolution, which he thinks is the greatest idea anyone ever had, destroys the belief that God created everything, including humans. “Darwin’s idea,” he writes with approval, “eats through just about every traditional concept, and leaves in its wake a revolutionized worldview.”⁶

Acid is an appropriate metaphor for the erosion of my fundamentalism, as I slowly lost my confidence in the Genesis story of creation and the scientific creationism that placed this ancient story within the framework of modern science. Dennett’s universal acid dissolved Adam and Eve; it ate through the Garden of Eden; it destroyed the historicity of the events of creation week. It etched holes in those parts of Christianity connected to these stories—the fall, “Christ as second Adam,” the origins of sin, and nearly everything else that I counted sacred. I discovered, however, that this was about where Dennett’s acid ran out of steam (or whatever acid runs out of when it stops dissolving everything). The acid of evolution is not universal, and claims that evolution “revolutionizes” our worldview and dissolves every traditional concept are exaggerated.

For starters, what exactly does evolution have to do with belief in God as creator? It rules out *certain* mechanisms that God might have used to create the world, but others remain. God apparently did not create the entire universe and everything in it over the course of a few busy days ten thousand years ago. Neither Rome nor the universe was built in a day. But saying that Rome was not built in a day does not imply that Rome was not built or that Rome did not have builders. The acid of evolution dissolves the claim that God created the world a few thousand years ago, but does nothing to the claim that God may have taken billions of years to create or that God even continues to work as creator.

Creation, I hasten to point out, is a *secondary* doctrine for Christians. The central idea in Christianity concerns Jesus Christ and the claim that he was the Son of God, truly divine and truly human. This extraordinary idea implies the strange notion that the creator of the entire universe chose to enter the human race in the person of an itinerant preacher from Galilee. From its beginnings Christianity had to defend itself against charges that this was a ridiculous idea. Some of the most influential early church fathers were quite clear that the claims of Christianity were, indeed, absurd, but this did not mean they were not true. A second-century theologian named Tertullian said he believed in the divinity of Jesus partly because it *was* absurd.⁷

Most thoughtful Christians, myself included, wonder about exactly how it could be that God entered the human race in the person of Jesus—the historical event called the Incarnation. Over the centuries many have been simply unable to believe that this claim was even sensible. Today thinking Christians everywhere struggle with this belief and what it means. Many have asked God for more faith, to keep doubt at bay or reestablish a foundation for belief. Darwin’s theory of evolution adds *nothing* to the complexities and challenges of believing in the Incarnation. It didn’t take Darwin to make Christianity offensive, complex, and intellectually challenging. The arguments against the incarnation have been around for two thousand years, which is why Christianity is described as a *faith*, not as the conclusion of a logical argument.

Christianity merges the Incarnation with the belief that Jesus rose from the dead. Christ’s Resurrection offers hope that we too can have eternal life and one day be united with God. Human skepticism regarding these claims is hardly new. The contemporaries of Jesus found this hard to believe, and many of them, including the infamous “doubting Thomas,” had to be convinced by more than hearsay. Human beings, including Jesus, may have evolved over billions of years, or they may have been created a few thousand years ago. The Resurrection is equally implausible in either case. Dennett’s universal acid of evolution does nothing to eat away at this central Christian belief. The “acid” of logic and reason was hard at work on this before the New Testament was even penned.

Christianity, as its name suggests, is *primarily* about Christ. To be sure, different ideas about Christ exist across the spectrum of Christian belief. But these beliefs, rather than creationist assertions, are the heart and soul of Christianity. And these beliefs are not threatened by Darwin’s dangerous idea. Evolution does, however, pose two challenges to *secondary* Christian beliefs: the *fall* of humankind, and the *uniqueness* of humankind.

DISSOLVING THE FALL

Clearly, the historicity of Adam and Eve and their fall from grace are hard to reconcile with natural history. The geological and fossil records make this case compellingly. Nevertheless, scholars have proposed many convoluted and implausible ways to resolve these tensions in the past couple centuries. One could believe, for example, that at some point in evolutionary history

God “chose” two people from a group of evolving “humans,” gave them his image, and then put them in Eden, which they promptly corrupted by sinning. But this solution is unsatisfactory, artificial, and certainly not what the writer of Genesis intended. Nor does any historical evidence suggest this interpretation. This modification also does absolutely nothing to support the idea that death did not exist in the world before sin. We must concede that the acid of evolution has indeed eaten away the literal part of this story, but I would argue that the most important part of the story remains untouched.

The idea at the center of the fall is human sinfulness. Human beings are sinful creatures, and many of us are really quite dreadful. Even the best of us dare not lay claim to anything even approaching perfection. G. K. Chesterton once quipped that the sinful nature of humans was the only Christian doctrine that we could confirm empirically.⁸ The classic story of the fall is best understood as a powerful statement that we are, when all is said and done, sinful creatures.

But what, exactly, does it mean to be *sinful*? Various theological interpretations exist, some more compelling than others. But when the rubber hits the road, *sinfulness* is mainly *selfishness*. We put ourselves ahead of others and ahead of God. We advance our own agenda as if that is all that matters.

Evolution says some interesting things about selfishness. Selfishness, in fact, drives the evolutionary process. Unselfish creatures died, and their unselfish genes perished with them. Selfish creatures, who attended to their own needs for food, power, and sex, flourished and passed on these genes to their offspring. After many generations selfishness was so fully programmed in our genomes that it was a significant part of what we now call human nature.

But an interesting tension exists in human nature. As incurably selfish as we appear to be, we also possess an innate altruism. Human beings are easily capable of actions that benefit others at their own expense—from taking a pie to a new neighbor, to giving money to charities, to risking one’s life to save a child. Although altruism is scientifically harder to understand than selfishness, it remains clear that humans are a powerful mix of selfish and unselfish tendencies.

So where does sin originate? In the traditional picture, sin originates in a free act of the first humans: God gave humans free will and they used it to contaminate the entire creation. That was the risk God took in creation. But now we have a new and better way to understand the origins of sin. We start

by enlarging our own troublesome “freedom” to include nature. In the same way that we possess a genuine freedom to explore possibilities, nature has freedom as well, although not a conscious freedom, of course. Physicists enshrine this insight in the Heisenberg Uncertainty Principle, which accords a degree of genuine “freedom” to particles like the electron.

If nature, in all its many processes, is “free” to explore pathways of possibility, then the evolutionary process would predictably lead to creatures with pathological levels of selfishness. Creatures inattentive to their own needs would not have made it. By these lights, God did not “build” sin into the natural order. Rather, God endowed the natural order with the freedom to “become,” and the result was an interesting, morally complex, spiritually rich, but ultimately selfish species we call *Homo sapiens*. This is an entirely reasonable theological speculation, at least by my amateur standards. It brings the Christian doctrine of the fall into the larger picture of an extended creation. Humankind did not appear all at once, and neither did sin.

DISSOLVING THE UNIQUENESS OF HUMANKIND

Once we accept the full evolutionary picture of human origins, we face the problem of human uniqueness. The picture of natural history disclosed by modern science reveals human beings evolving slowly and imperceptibly from earlier, simpler creatures. None of our attributes—intelligence, upright posture, moral sense, opposable thumbs, language capacity—emerged suddenly. Every one of our remarkable capacities must have appeared gradually and been present in some partial, anticipatory way in our primate ancestors. This provocatively suggests that animals, especially the higher primates, ought to possess an identifiable moral sense that is only *quantitatively* different from that of humans. Not surprisingly, current research supports this notion.

Scientists who have spent enough time with primates, especially in natural settings, are continually struck by their sophistication. In his remarkable books on primates, Emory University primatologist Frans de Waal describes primate behaviors that, were they associated with humans, would suggest a well-defined sense of right and wrong, cruelty and kindness, loyalty and manipulation. A remarkable bonobo named Kuni, to recount one example, saw a starling hit a glass wall and plummet to the ground. Kuni carefully picked up the stunned bird, set it on its feet, and waited with apparent concern for

it to fly. When it didn't fly off on its own, Kuni picked up the bird and carried it carefully to the top of a large tree. Wrapping her legs around the tree to free both hands, Kuni spread the wings of the bird and released it, only to watch it flutter to the ground. Kuni then stood watch over the bird for a good portion of the day until it finally recovered and flew off on its own.⁹ This story is close enough to that of the good Samaritan to make it hard to treat morality as a purely human attribute. And we have records of countless other examples of similar animal behaviors.

Primates have learned enough language to communicate with over a hundred symbols. They can do simple math, punching a key for "3" when they see three candies in a bowl. Primate "societies" are home to such typically human behaviors as male competition, the bullying of nerds, and female solidarity. Researchers find traits like loyalty, jealousy, and generosity among primates and other species as well. Anthropologists have even observed what look like collective spiritual gatherings of primates, in which a group of chimpanzees will gather to watch, in silence, a beautiful sunset, dispersing after the event when a leader signals it is time to go. The large number of human traits that appear in primate societies is intriguing and sobering, especially as we contemplate the ongoing threat that our activities pose to them.

Does the "acid" of our evolutionary kinship with the primates dissolve anything of importance to Christian theology? I am not convinced that it does.

The tricky issue for Christianity is teasing out which biblical and theological claims derive from a mistaken picture of science and which are central to the ongoing vitality of the faith. Until recently just about everyone in all cultures perceived a great *qualitative* distinction between humans and the higher primates. Certainly the biblical writers and the formative thinkers of the Christian tradition could not have anticipated what we have learned from primate studies in the past few decades. So we may suppose that they would frame their religious understanding in exclusively human terms. In the same way Christian cosmology was developed with the earth at the center of the universe, because that was the best understanding at the time.

Speculations such as these are above my pay grade, of course, and best left to theologians. Still, I find no compelling reason to think that the central message of Christianity is incompatible with humanity's kinship with the rest of the animal world. In fact, this continuity with the animal world

may place increasing theological significance on the welfare of animals and ecological responsibility.

THE VIEW FROM OUTSIDE

Many informed and careful Christian thinkers have made their peace with evolution and found ways to incorporate its central insights into their theology. Coming from conservative evangelical traditions are physicist Howard Van Till, in the Reformed tradition, formerly of Calvin College, and biologist Darrel Falk, from the Wesleyan tradition, who currently teaches at Point Loma Nazarene University. These respected thinkers ventured into the troubled waters of evolution and wrote popular books in an effort to bring their respective denominations out of the nineteenth century.¹⁰ Both are committed Christians with stellar records of serving at their respective denominational colleges. Yet powerful, but deeply uninformed fundamentalists who wanted them censured assaulted their works.

Recently the head of the Human Genome Project and one of America's most visible scientists, Francis Collins, has endorsed the idea that evolution is compatible with Christianity. Collins, who converted from atheism to evangelical Christianity after reading C. S. Lewis's *Mere Christianity*, wrote *The Language of God: A Scientist Presents Evidence for Belief*.¹¹ In that influential book Collins stakes out a middle ground for evolution between the dogmatism of atheistic materialism and fundamentalist creationism.

The Roman Catholic tradition currently has a significant dialog with science, and the Pontifical Academy of Science numbers many leading scientists, including evolutionists, among its members. This dialog has allowed Catholicism to avoid much of the anti-evolutionary frenzy that rained down on Falk and Van Till. Out of this tradition come Brown University biologist Ken Miller and Georgetown University theologian John Haught. Miller's 1999 *Finding Darwin's God* became something of a classic and its author an important public intellectual and symbol of the integration of evolution and Christianity.¹² Haught has written several books in this area, the most important of which is *God After Darwin*, a tweaking of traditional Catholic theology in response to evolution.¹³

In England, two influential theologians, Alister McGrath and Keith Ward, have penned several popular works apiece integrating evolution and Christian theology. McGrath holds the chair of Professor of Historical

Theology at Oxford University and Ward is the Emeritus Regius Professor of Divinity at Oxford, the most prestigious theological posting in the Anglican Church. McGrath has written the three-volume *Scientific Theology*, inaugurating a major project to reformulate Christian theology in light of recent scientific developments, particularly evolution.¹⁴ Ward's *God, Chance and Necessity* offers helpful ways to reconcile evolution with belief in the doctrine of creation.¹⁵

Philosopher Michael Ruse has also made an interesting contribution. A prolific author, Ruse has been a fixture in America's creation–evolution controversy since he testified for the American Civil Liberties Union (ACLU) at the Arkansas “Scopes II” trial in 1981. In response to claims that the truth of evolution entails the falsity of Christianity, Ruse, a nonbeliever, wrote *Can a Darwinian Be a Christian?* He looks at every imaginable point of contact between evolution and Christianity and answers yes to the question posed in his title:

If you are a Darwinian or a Christian or both, remember that we are mere humans and not God. We are middle-range primates with the adaptations to get down out of the trees, and to live on the plains in social groups. We do not have powers which will necessarily allow us to peer into the ultimate mysteries. If nothing else, these reflections should give us a little modesty about what we can and cannot know, and a little humility before the unknown.¹⁶

LOOKING AHEAD: THE PLAN OF THE BOOK

The creation–evolution controversy in America has become so overheated and loaded with half-truths and nonsense that it is all but impossible to get a clear picture of anything. Mythologies abound on both sides. Darwin's apocryphal deathbed repudiation of evolution is a popular and widely circulated myth comforting the faithful. The imminent collapse of evolutionary theory and the occasional celebrated negative comment about evolution by a leading scientist are others. These offer hope that biblical creation will make a comeback in America. Mirror-image mythologies about evolution are equally plentiful: the theory provides a solid foundation for atheism and assures the ultimate victory of secularization; every intelligent person now believes it; dissenters are “stupid, wicked, or insane.”¹⁷ We even hear that evolution will soon explain religion away. Such affirmations assure blinkered

secularists that someday religion will go extinct, eaten away by the acid of evolution.

In the pages that follow I offer readers a tour of this troubled battlefield. Darwin, we will see, began his career as a committed Christian. He planned to become a minister and certainly had no intention of undermining religion. That his theory did this kept his stomach in a constant knot. Nevertheless, the responses to his theory, even from religious conservatives, were not uniformly hostile and, almost immediately, thinkers were finding ways to incorporate this new view of origins into their theological understanding of creation. Some even welcomed the theory as a more satisfactory explanation for nature's excessive waste and carnage. The widespread hostility currently leveled at Darwin's theory is a recent development, although it has always been present to some degree.

The most interesting and often unintentionally humorous challenges to Darwinism have not been scientific, but legal. Curiously, a cavalcade of lawyers claiming to have detected logical flaws in evolutionary reasoning starts with one of Darwin's contemporaries and runs through to some prominent lawyers in the present. Some of these lawyers, strangely, actually boast of their ignorance of biology as they flail about in irrelevance.

Moving into the present we encounter "scientific creationism" (also called "creation science") and "intelligent design," sibling perspectives insisting they are unrelated. Despite being largely devoid of scientific content, these movements have captured the hearts and minds of over half the country, although they remain, for the time being at least, banned from America's public schools.

In the current controversy, science has disappeared, and the argument has turned into a culture war, with political allies in smoke-filled back rooms formulating strategies with little regard for truth. Meanwhile, off the front pages of the newspapers, the science of evolution grows increasingly robust and secure, even as America's schools find the topic increasingly harder to teach.

I wish I could promise that the story in the following pages has a happy ending, but it does not. Loud confident voices, including the echo of my own college worldview, assure us that evolution is a false theory being used by Satan to destroy faith in God; equally loud voices counter that evolution is a true theory that is destroying faith in God. Quiet but less confident voices point out the absurdity of both of these claims. This disagreement is not going away anytime soon.

Places exist on which believers can stand, however, in the midst of the controversy. We don't know anywhere near enough about evolution to infer from it that God is not the creator. And we don't know anywhere near enough about God to dismiss the idea that evolution might be a part of God's creative processes. If we can embrace a bit of humility and avoid the temptation to enlarge either evolution or biblical literalism into an entire worldview, we can dismiss this controversy as the irrelevant shouting match that it is.

These insights, of course, were nowhere in sight as I began to wrestle in college with the unwelcome truth that evolution had strong empirical support and could not be dismissed as a satanic delusion. As I look back after three decades of reflection I can see, however, that my sophomoric struggles were nothing more than my personal encounter with Darwin's dangerous idea, an encounter that was hardly original with me. Believers everywhere, especially in America, continue the search for the elusive role that evolution should play in a comprehensive and satisfying understanding of ourselves and our origins.