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PREFACE

For most of my adult life, I have been interested in the relationship of science and faith. I have invested much time and effort balancing my professional life and my scientific interests. In more than three decades in the ministry, I have come to believe that faithfulness to one's theological heritage may mean a willingness to challenge that same heritage. My denomination is part of the North American Protestant evangelical culture. Over the years, our U.S. sister synod has maintained a long-standing relationship with, and provided significant support to, young-earth creationism.

In the early years of my ministry, my understanding of scripture's creation narratives was inadequate. I knew that young-earth creationism was an important part of my denomination's history and systematic theology, but I wasn't sure what I personally believed, or why. This seems to be the case for many church workers and laypeople as well. Comments about evolution by fellow Christians have convinced me that many professional church workers, as well as laypersons, do not possess even a basic understanding of evolutionary theory. I cannot recall evolution being on the agenda of any denominational meeting or conference I have attended. My denomination argues that there are significant theological reasons why evolution must be rejected. That makes it a "third-rail issue," similar to the high-voltage third rail in some electric railway systems, something to be wary of, potentially destructive to a church worker's reputation or career. Church workers know that should they depart from the party line, it is best to keep their views to themselves. Even though I have not attended a church conference where evolution was on the agenda, that's not necessarily the case everywhere in my church culture. A colleague mentioned a denominational conference where a representative from *Answers in Genesis* will be promoting young-earth creationism to six hundred church workers. Unfortunately, these presentations tend to be one-sided affairs. Alternate points of view are either not mentioned, or are presented in an entirely negative light.

As a young pastor, I had read some young-earth creationist material, including a book defending so-called "flood geology" written by Lutheran seminary professor Alfred Rehwinkel (1887-1979).¹ I wanted to know what scientists, especially believing scientists, had to say on the subject. Two incidents sparked my interest. The first was a Canadian Broadcasting Corporation (CBC) science broadcast back in 1989. The topic was the Cambrian Explosion and the Burgess Shale, which, I was told, was the home of a large number of exceedingly rare and unusual soft-bodied fossils dated to approximately 540 million years ago. The second was a book written by paleontologist Stephen Jay Gould, titled *Wonderful Life*². It, too, focused on the Burgess Shale. Gould's books opened a

PART 1

A REVOLUTION LIKE NO OTHER

From the sixteenth century onward, a scientific revolution took place, a revolution very different from any other the world has ever known. The scientific revolution challenged the way people thought about natural phenomena. It pulled back the curtain on that aspect of reality. Francis Bacon (1561-1626) said that the untutored human mind is prone to all kinds of error. Scientific methodology fosters critical thinking that seeks to overcome these biases and the inclination to interpret information in a way that confirms views already held. The scientific revolution took humanity beyond simple common-sense explanations of natural phenomena. Scientific methodology revealed the counter-intuitive discoveries, for example, that the earth was incredibly ancient, that it travelled around the sun, that there was a hidden world of microscopic life in a drop of water, and that light emanating from stars revealed their chemical makeup. Science and its associated technologies revealed phenomena previously inaccessible to human senses. Scientific methodology keeps people from fooling themselves. As this world-changing revolution gained momentum, scientific methodology made important discoveries in the areas of cosmology, geology and biology.

CHAPTER 1

INTRODUCTION

OVERVIEW

In evangelical Christian circles, the theory of evolution is near the top of the list of controversial topics. Evangelicals have a great deal of spiritual capital invested in the creation accounts. So say that a correct understanding of creation validates the truth of the gospel. It supports the doctrines of biblical inspiration and inerrancy and upholds the authority of God's Word. In the sixteenth century, Francis Bacon argued that God speaks through the Book of His Word and also through the Book of His Works. For evangelicals, the Bible is God's Word. The cosmos as well as the earth and its precious cargo of living things are His Works. Both Books reveal important truths about God, His will, and His ways. Rightly understood, these two Books should not contradict each other.

With Bacon, I propose that science, with its study of God's Works, assists Christians in understanding God's Word. Although the Bible often speaks of natural phenomena, it is not a science book. Science has revealed much about what the ancients did not (and could not) know about the natural realm. The Bible's ancient science was the best science of the day. But, from today's perspective, that information is often inaccurate, incomplete, and sometimes downright misleading. The Bible's ancient science is a common-sense knowledge based on limited and often fallible human senses. The motivation of those who sought to explain natural phenomena in ancient times was honorable. Through no fault of their own, they lacking the proper tools which would have allowed them a fuller understanding.

In the sixteenth century, in the early days of the scientific revolution, most scientists were believers. Even today, a substantial minority of scientists (around 40 percent) fit into this category. Surprisingly, that number has remained stable for quite some time. Most mainline Christian denominations have a positive relationship with science. Many evangelicals and conservative Christians, on the other hand, find themselves at odds with science. For many evangelicals, the theory of evolution is an expression of an atheistic point of view. Anti-evolutionists almost always reject evolution for theological rather than for

CHAPTER 5

THE BIOLOGICAL REVOLUTION

OVERVIEW

Charles Darwin was born into an upper middle-class family, the son of a physician. After a short, unsuccessful stint studying medicine at his father's insistence, he turned to theology, but did not complete his degree. Darwin was then mentored by several outstanding British scientists, including botanist John Henslow (1796-1861), historian William Whewell, and anatomist Sir Richard Owen (1804-1892). Young Charles eventually turned his attention to geology, which became a life-long passion. A five-year (1831-1836) voyage on *HMS Beagle*, a Royal Navy surveying ship, was a transformative experience. Despite struggles with seasickness and having to deal with an authoritarian sea captain, Robert Fitzroy (1805-1865), Darwin's time on the *Beagle* admirably prepared him for a scientific vocation.

Charles Darwin had been previously exposed to evolutionary ideas by his grandfather, Erasmus (1731-1802), and by popular publications of the day which discussed what was then called the "transmutation of species." A major shift in Darwin's thinking occurred when he read a book by The Rev. Thomas Malthus (1766-1834) that discussed rapid population growth competing for a limited food supply. Darwin was an introvert who had a few close friends. After the *Beagle* journey, his health was poor. Because his wife Emma (1808-1896) was a member of the wealthy Wedgwood family, the Darwins enjoyed financial independence, which afforded Charles the time he needed to devote to his studies. Daily walks around his property, on a path he called the Sandwalk, allowed him to organize his thoughts. In 1844, he began to reveal his theory to his closest friends, a theory he kept to himself for many years prior. He correctly anticipated that his views, especially his assertions about human origins, would cause a great deal of controversy and he wanted to be prepared to deal with objections that would be raised.

Darwin's relationship with the Christian faith was complicated. His faith was strongest, and most traditional, when he was a young adult. It began to fade during his voyage on the *Beagle* and was severely challenged when his ten-year-

old daughter, Annie Elizabeth (1841-1851), second child and eldest daughter in the family, died of tuberculosis in 1851. Darwin's wife, Emma, was a person of strong faith and told her husband that she was concerned about the status of his salvation. As the years passed, Darwin's faith faded. He was buried with full honors in Westminster Abbey in 1882.

CHARLES DARWIN

Charles Darwin was born February 12th, 1809, the same day as Abraham Lincoln. In 1825, when he was 16 years old, his father, Dr. Robert Darwin, (1766-1848) sent young Charles off to the University of Edinburgh to study medicine. Ill-suited for a medical career, Charles dropped out two years later. During that time, Dr. Darwin criticized his son for being a layabout: "You care for nothing but shooting, dogs, and rat catching. You are a disgrace to yourself and to your family."¹ From 1828 to 1831, Darwin studied theology at Cambridge, before turning his energies to his lifetime passion, the pursuit of scientific knowledge. As a student, Darwin was fortunate to be mentored by several outstanding scientists. At Cambridge, for example, he was encouraged by botany professor, John Henslow. It was Henslow, a British Royal Navy surveyor, who persuaded Darwin to study geology.²

Henslow recommended the 22-year-old Darwin for a position as ship's naturalist on *HMS Beagle*, a surveying ship. At that time, Darwin was also acquainted with Dr. William Whewell, Master of Trinity College, Cambridge. At this point in his life, Darwin was a conventional British catastrophist strongly influenced by Adam Sedgwick (1785–1873), one of the founders of modern geology. Geologist Charles Lyell introduced Darwin to uniformitarianism. Darwin came to adopt Lyell's point of view and was later to say, "I always feel that my books came half out of Lyell's brains."³ Darwin was acquainted with anatomist Sir Richard Owen, an outstanding naturalist with a remarkable gift for interpreting fossils. Sir Richard examined the specimens Darwin brought back to England on *The Beagle*.⁴

The *Beagle* voyage was a critical component of Darwin's intellectual growth and maturity. Originally planned as a two-year surveying trip, the journey stretched to five years. Darwin's meticulous observations became the foundation of his theory. In his autobiography, Darwin observed, "My mind seems to have become a kind of machine for grinding out general laws."⁵ During the voyage, Darwin struggled with sea sickness and endured a continuing clash of personalities with the captain, Robert Fitzroy. Fitzroy was a strict disciplinarian, and an ardent Tory. Darwin, on the other hand, was a Whig (a liberal), constantly stifled in his opinions by Fitzroy. Fitzroy has been described as "... a hard-working and competitive aristocrat with a short fuse and a melancholy heart."⁶

PART 2

GRAPPLING WITH DARWIN'S DANGEROUS IDEA

In the mid-nineteenth century, Charles Darwin extended the scientific revolution into the biological realm. Darwin's theory of evolution by natural selection had a particularly significant impact on the Christian church and its scriptural accounts of creation. Evolutionary theory challenged the way individuals, both religious and secular, thought about the history of living things, including humans. Evolutionary theory led some to rejoice and caused tremendous anxiety for others. Atheists saw in Darwin's theory a powerful tool for attacking religious faith. Believers on the other hand quickly realized that Darwin's theory challenged some of their most basic doctrines. There were several different responses to Darwin's theory. Atheists happily removed God from a discussion of origins. Some Christians revisited the scriptures to see if there was any God-pleasing way to accommodate the scientific consensus regarding an ancient earth. Others came to the conclusion that God used evolution as his creative method. Still others rejected Darwin outright, arguing that the earth is young – as young as six thousand years – and that evolution contradicts their version of a plain reading of the word of God. And some argued that the universe bears abundant evidence of design and God's direct intervention in the creative process, claiming that evolution by natural selection is just not up to the task.

CHAPTER 8

EVOLUTIONARY CREATION

OVERVIEW

Evolutionary Creation, also known as Theistic Evolution, brings God into the evolutionary process. For an evolutionary creationist, evolution is God's method of creation. Atheistic evolution, on the other hand, excludes God from the process. Both perspectives appeared after the publication of Darwin's *Origin of Species*. Theistic evolution, the original name for this perspective, was soon adopted by a number of Christians on both sides of the Atlantic. In the early twentieth century, as we have seen, American fundamentalists summarized their beliefs in a series of essays titled *The Fundamentals*. Surprisingly, some of those essays supported the concept of theistic evolution. Fundamentalism at that time was more concerned about theological liberalism and the higher critical method of biblical interpretation than it was in attacking Christians who had adopted the theory of evolution.

Evolutionary creation acknowledges validated scientific discoveries and allows them to inform its theological deliberations. It asserts that when biblical authors wrote about nature, they were limited to what was known at the time. As we have noted, much of that information, when viewed from a contemporary scientific perspective, is inaccurate and out of date. On the other hand, evolutionary creation recognizes that the limits imposed on science by its own methodological ground-rules allow Christians in scientific vocations to practice their faith without hindrance. It is cognizant of the fact that divine intervention in the evolutionary process is not a scientific concern. The same is true for teleology, that is, whether evolution has a goal or purpose.

Evolutionary creationists are fully aware that critically important theological issues are raised when scientific discoveries are applied to Christian theology (see Chapter 12). But this is seen as an opportunity to revise and clarify earlier theological pronouncements that were made without scientific input. Evolutionary creation obviously challenges those who claim that the theory of evolution is inherently atheistic. A growing number of evangelical Protestants

CHAPTER 9

YOUNG-EARTH CREATIONISM

OVERVIEW

For more than a century, a close relationship has existed between the Seventh-Day Adventist Church and young-earth creationism. In 1864, Adventist prophet Ellen G. White (1827-1915) experienced a vision which she believed provided her with previously unknown details about Noah's flood. That vision became the basis for what was later to be called flood geology. White was convinced that her vision revealed how Noah's flood had literally changed the geology of the whole earth, carving out canyons and laying down fossils. White's ideas were later taken up by Canadian amateur geologist and fellow Adventist, George McCready Price.

It is noteworthy that young-earth creationism was not well-known until the 1961 publication of *The Genesis Flood*, an attitude-changing book co-authored by Henry Morris and John Whitcomb. This book, written primarily for Christian laypeople, delivered McCready Price's flood geology to a much wider, mostly evangelical audience. *The Genesis Flood* strongly criticized the willingness of some Christians (Morris and Whitcomb were thinking of Bernard Ramm here) to accommodate their theology to scientific discovery. If there is one reason why young-earth creationism grew so rapidly in popularity among U.S. evangelicals, it would have to be *The Genesis Flood*.

Young-earth creationism came into its own in the 1960's. Previously, the day-age and gap theories were the preferred views, especially among Protestant fundamentalists. Much like the Seventh-Day Adventists, the LCMS also had a significant impact on young-earth creationism. The LCMS has a lengthy track record opposing evolution. In the 1950's and 1960's, in the formative years of young-earth creationism, the LCMS provided expert leadership to the cause, including professors from its seminary in St. Louis.

Contrary to the geological consensus regarding deep time and an ancient earth, established by the 1830's, young-earth creationists insist that the earth is between 6,000 and 10,000 years old. And, contrary to the findings of biological sciences and genomics, this perspective denies evolution and common descent.

CHAPTER 10

INTELLIGENT DESIGN CREATIONISM

OVERVIEW

Intelligent design creationism seeks to demonstrate God's existence based on the evidence of design in nature. In order to accomplish its goal, intelligent design has refurbished some nineteenth-century natural theology arguments, giving William Paley (1743-1805) and his venerable watchmaker analogy a new lease on life. The intelligent design movement has been given a boost by the strong version of the anthropic principle, which states that the presence of life and consciousness in the cosmos seems to be intentional, not fortuitous. All the dials, intelligent design proponents would argue, have been set at just the right position by a Divine Designer.

One of intelligent design's main arguments, irreducible complexity, was formulated by biologist Michael Behe. Behe argues that in an irreducibly complex biological system such as the bacterial flagellum, all subsystems must be present in order for that system to work properly. Remove one part, he says, and it fails. The implication for evolutionary theory, according to Behe, is that an irreducibly complex system could not have evolved in a step-wise fashion because it needs all of its parts in place to work properly. It must arise as a unit, and that is where a Designer comes in. Critics, however, argue that this is a "God-of-the-gaps" argument, placing God into a gap in scientific knowledge.

Like its young-earth cousin, intelligent design creationism exists at a distance from the mainstream scientific community. The various groups gathered under intelligent design's big tent share a common goal, which is to discredit evolutionary theory. Intelligent design's mischaracterization of basic scientific methodology is designed to make science appear inherently atheistic. Like young-earth creationism, intelligent design refuses to acknowledge the self-imposed limits of science. Despite its intention to support the Christian message, intelligent design creationism is a liability to the church. The Dover, PA. intelligent design trial was very revealing. During the trial, proponents did their best to conceal intelligent design's religious roots. In recent years, however, the quality of scholarship in the intelligent design movement has greatly

PART 3

AN OPPORTUNE TIME

Correctly understanding the Bible's accounts of origins is primarily a hermeneutical task. In other words, in order to correctly understand the Bible accounts of the origins of life, we need to accurately interpret the biblical text. Paradoxically, rather than weakening faith and eroding Biblical authority, evolutionary biology provides the evangelical wing of the Christian church with an opportunity to improve the accuracy of its scriptural interpretation. Science invites believers to view the scriptures in a new light. Scientific discoveries remind Christians that the science in the scriptures is simply the common-sense understanding of an ancient people living in a prescientific world. Rather than inappropriately reading modern notions back into the scriptures, evangelical Christians are learning to let the scriptures speak for themselves, uncovering the message intended by the original authors.

CHAPTER 11

RESPECTFUL CONVERSATION

OVERVIEW

In the sixteenth century, the Christian church experienced a serious conflict over issues of Biblical interpretation. Martin Luther rejected a system of doctrine that, in his opinion, allowed unscriptural teachings to contradict and obscure the gospel. For Luther and his followers, a new tripartite paradigm was adopted: faith alone, scripture alone, grace alone. Luther's desire that these issues be discussed without fear of retribution were rebuffed. Contemporary evangelicalism is dealing with scientific discoveries that directly impact traditional interpretations of Biblical creation accounts. A growing number of evangelical Christians are willing to acknowledge that, in order to break the current impasse, science and theology must engage in respectful conversation. So far, the results have been less than encouraging.

Around 1514, Nicolaus Copernicus proposed the radically counter-intuitive idea that the earth orbits the sun, not vice versa. After an extended period of time considering the implications of such a controversial idea, which at first seemed to contradict the plain reading of scripture, (and the plain experience of the sun passing across the sky each day) the Church came to acknowledge this cosmological reality and take it into account in its theological deliberations. For the last 150 years, a similar situation has existed with the theory of evolution. In many cases, the findings of evolutionary biology do not align well with a traditional interpretation of the Genesis creation accounts. As we have seen in previous chapters, scientific concordism, the argument that the Bible's statements about the natural realm are always accurate, is being called into question.

As we noted in Chapter 8, evolutionary creation endeavors to take science seriously while at the same time upholding historic Christian doctrines such as the incarnation, the substitutionary death of Christ, and his resurrection from the dead. Evolutionary creation asserts that science can make a positive contribution to the understanding of the creation accounts in scripture. A great deal was at stake at the time of the Reformation as the church grappled with

In an article posted on its website, Gallup summarized results from the previous surveys they have been conducting over the 37-year period. During that time, support for evolutionary creation ranged from 31 to 40 percent, currently at 33 percent. Support for atheistic evolution (defined as those who believe God was not involved in the process, not whether the respondents believe in God) rose substantially from 9 to 22 percent, currently at 22 percent. Young-earth creationism has ranged from 38 to 47 percent, now stands at 40 percent. The number of individuals claiming “No Opinion” has ranged between 5 to 10 percent.

PEW RESEARCH

Another example of a survey made up of multiple choice type questions is the research conducted by the *Pew Research Center*. In December 2013, the Pew Research Center released the results of a survey of the public’s views on human evolution. Conducted in March and April 2013, with a representative sample of 1,983 adults ages 18 and older, the survey found that:

- 60 percent of Americans believe in evolution in some form;
 - approximately two-thirds of this group believe in atheistic evolution;
 - approximately one-third of this group are evolutionary creationists; and
- 33 percent of Americans are creationists who reject the idea of evolution and an old earth.

Pew’s research shows that white evangelical Protestants are the least likely group to support evolution, while white mainline Protestants are the most likely group to support evolution. Surprisingly to this author, higher even than those religiously unaffiliated individuals.

The Pew Research poll found that younger people are more accepting of evolution than are their parents or grandparents:

- 68 percent of 18 to 29-year-olds accept evolution; and
- 49 percent of those who are 65 or older do the same.

Older people tend to be more religious than younger people and creationists as a whole are more religious than the general population.

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