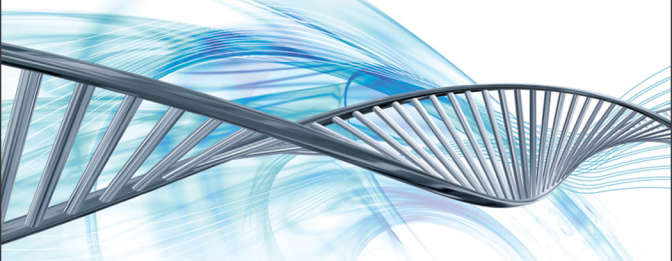


REVEALING A TESTABLE MODEL
for CREATION



MORE

— THAN A —

THEORY

—
HUGH ROSS
—

“Today, the benefits of the scientific community are sometimes mixed, especially when faith in the Creator is mocked as a concept. In this milieu, I know of no leader standing as a voice with clarity, dignity, and respectability like Hugh Ross. He provides believable and balancing insights that strengthen reasons to believe for any honest, thoughtful hearers. Scholarly insights join to an irenic tone—the truth and the temperament he brings unite to gain a climate that is at once enlightening and engaging.”

Jack W. Hayford, president, International Foursquare Churches;
chancellor, The King’s College and Seminary;
founding pastor, The Church On The Way

“This is a bold presentation that integrates many scientific disciplines into a fascinating, comprehensive view of the universe. Given the Big Bang’s well-accepted implication of a metaphysical cause for our universe, and string-theory awareness that reality exists in more than four dimensions, it’s worth the effort to reconcile artificial disciplines of pervasive physics with life science. The Bible’s challenge to test all things was bundled with a model procedure known today as the scientific method. The book contains concise but specific, scientifically testable proposals representing a spectrum of philosophical positions from materialistic evolution to theism to intentional design on an ancient earth to the very distinct position of young-Earth creationism. I invite anyone interested in this unnecessarily contentious and timely subject to take some reading time for a stimulating challenge to clarify issues and even be amazed at this big picture.”

Lynn Carta, research biologist, Silver Spring, MD

“Ever since I built a telescope in the seventh grade, I have been fascinated by astronomy and the physical laws that govern our universe. Dr. Hugh Ross reinvigorates that interest with a compelling presentation of the order and magnitude of creation from the smallest subatomic particle to huge galaxies billions of light years distant from Earth. His latest book is a must-read for anyone interested in our origin.”

Loren Leman, P.E., former lieutenant governor, Alaska

MORE

— THAN A —

THEORY

REVEALING A TESTABLE MODEL *for* CREATION

HUGH ROSS



BakerBooks

a division of Baker Publishing Group
Grand Rapids, Michigan

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Published by Baker Books
a division of Baker Publishing Group
P.O. Box 6287, Grand Rapids, MI 49516-6287
www.bakerbooks.com

Paperback edition published 2012
ISBN 978-0-8010-1442-0

Printed in the United States of America

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The Library of Congress has cataloged the original edition as follows:

Ross, Hugh (Hugh Norman), 1945–

More than a theory : revealing a testable model for creation / Hugh Ross.

p. cm.

Includes bibliographical references.

ISBN 978-0-8010-1327-0 (cloth)

1. Creation. I. Title.

BS651.R766 2009

231.7'652—dc22

2008046407

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12 13 14 15 16 17 18 7 6 5 4 3 2 1

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To all the students and faculty whose thoughtful questions
and comments at RTB's campus forums
contributed both shape and substance to this book

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ACKNOWLEDGMENTS

For invaluable help in assembling and refining Reasons To Believe's (RTB's) testable creation model, my colleague Fazale Rana deserves huge credit and thanks. My partner in presenting the model on university campuses, Fuz also coauthored *Origins of Life* and *Who Was Adam?* (doing the lion's share of the work). Each of these books sets forth a core component of RTB's model. Recently he added another pivotal part with his book *The Cell's Design*. Fuz's diligence and impeccable scholarship have contributed both scope and balance to the model as well as to this book.

A significant challenge in the writing process was deciding which aspects of the model to include and which would best be left to future books. RTB's editorial team, headed by Patti Townley-Covert, invested countless hours helping me select and craft the content in these pages. They also labored over multiple drafts to make the book readable and useful for readers without science degrees.

Marj Harman, along with Andrew Coleman and Linda Kloth, checked the citations and quotations for accuracy. Jonathan Price assembled the photo images and prepared the figures. And Sandra Dimas handled multiple tasks from copyediting to preparing the index. I could not have gotten the manuscript ready without them.

I owe thanks to Kenneth Samples for his review and recommendations on the theological and philosophical content and to Jeff Zweerink for similar help with regard to the scientific material. My executive assistant, Diana Carrée, played a crucial role by protecting my time and shouldering

extra work over the past year. If not for her, my writing deadline would not have been met.

My thanks also to Baker Publishing Group for their enthusiastic support of this project and their commitment to the purposes for which Reasons To Believe exists. I especially appreciate the hard work of Bob Hosack, Kristin Kornoelje, and Wendy Wetzel, plus the entire Baker team for their efforts on this book.

Most of all I thank my wife, Kathy, for her wisdom, grace, time, and patience over the past thirty years in helping me, step-by-step, to improve the manner in which I communicate our creation model. She has served as my sounding board during all the years of the model's development and refinement, processes that continue to this day. During the past year she also took on many of my executive responsibilities at Reasons To Believe so I could focus on writing.

Hugh Ross

IS IT SCIENCE?

My family insists that I'm a compulsive scientist. Experiments I performed before I could talk convinced my father and mother. And scientific tests involving my sons flabbergasted my wife. To me, testing just seemed like the natural thing to do.

One experiment took place when my two sons were infants. I wanted to find out whether babies could tell the difference between a particular toy and a full-size two-dimensional look-alike.

Why did I do such a thing? During my wife's first pregnancy, an idea occurred to me, and performing tests was the only way to determine if my hypothesis was correct. Could it be that human beings are born thinking two-dimensionally and that it takes time, experience, and education for them to transition to three-dimensional thinking?

For each of my sons, I observed the same results. Between two and four months of age, neither Joel nor David appeared able to distinguish the difference between the real toy and its two-dimensional representation. At five to seven months old, often they could; sometimes they could not. However, from seven months on, the pictures could not fool them.

The ideas of creation and evolution also involve discerning realities from pseudo representations. The universe, life, and humanity were either designed with purpose and meaning, or they were not. The entire cosmos either explains itself, or it does not. Creation either happened, or it's a figment of someone's imagination.

What a person believes about his origin colors every other part of his view on life. Strictly natural outcomes reflect no care, no reason, no hope. Yet these characteristics belong inherently to the concept of bibli-

cal creation. Because individuals behave as they believe, perspectives on evolution and creation embody a critical determinant for how people choose to live and plan their lives.

Personal Faith versus Real Religion

Religion (defined as a belief system about the cause, nature, and purpose of the universe and humanity¹) has always been an emotionally charged subject. People of many belief systems often use emotion to further their own agendas. One might think of extremists who incite hate against infidels. But sometimes unthinking Christians do the same kind of playing on “righteous anger” as they forward emails designed to heighten fears about a particular political candidate or cause.

Outspoken atheist and Oxford biologist Richard Dawkins evokes similar emotions by claiming that the Creator described in the Bible is nothing but “a pernicious delusion,”² and that “faith can be very very dangerous, and deliberately to implant it into the vulnerable mind of an innocent child is a grievous wrong.”³

Dawkins made a valid point, however, in explaining why religious beliefs are inherently scientific and why it is absurd to consider creation-evolution debates as nonreligious. He says that “a universe with a supernaturally intelligent creator is a very different kind of universe from one without.” Therefore, “the presence or absence of a creative super-intelligence is unequivocally a scientific question.”⁴

So the Creator’s role, or lack thereof, is either real or imagined. One’s interpretation of the origin and history of the universe and life could be judged as real religion or pseudo religion but certainly not nonreligion.

Unfortunately, leaders on all sides of the creation-evolution controversy resort to political and legal efforts to force their particular interpretation of the issue upon others. Such attempts typically create more confusion and suspicion for people who want to discern what’s true and what’s not.

Personal Assessments versus Real Science

Several years ago Patrick Henry College, a small but prestigious Christian institution, was denied accreditation. The American Academy for Liberal

Education (AALE) acknowledged the high test scores and outstanding achievements of Patrick Henry's students but rejected an accreditation bid because of the college's stance on a young-earth creation.⁵ In defending the rejection, AALE president Jeffrey Wallin explained, "They teach creation as a science which it is not."⁶ He justified this conclusion by pointing out "there is nothing in a [*sic*] scientific literature that would ever cough up to you the creationist view."⁷

Wallin's defense was reasonable. To qualify as science, a particular explanation of nature's record must cite at least some physical evidence in support of its claims.

At the same time, Wallin clarified that the complete lack of supporting scientific evidence applied to only one specific interpretation of creation—young-earth creationism. This position asserts that the universe and Earth are less than 10,000 years old.⁸ However, many creation and evolution proponents overlook this nuance, just as they have in interpreting the United States District Court and United States Supreme Court rulings on teaching creationism (see chapter 15, pp. 219–29).

A presumption that the courts and accrediting institutions ruled against all creation positions gave rise to the intelligent design movement (IDM; see p. 31). In an attempt to remain religiously neutral, leaders within the IDM proposed that an undefined intelligent designer played an undefined role in bringing about an undefined history of life on Earth. However, this lack of specificity prevents the IDM from using the testable approach essential to science.

The Importance of Testing

To adhere to objective principles, scientists must present their positions in the form of models that can be tested. In science, the term "model" refers to the schematic description of a system (or set of phenomena) that accounts for its observed and inferred features. A model is much more than a mere idea, inference, method, hypothesis, or rudimentary theory. It's a scenario that offers reasonable explanations for the entire origin and history of a particular system in nature, as well as for its relationship to other phenomena.

Using a model approach supplies researchers with enough detail to determine whether they are on the right track. A model offers explanations

of how, when, where, in what order, and why a phenomenon takes place. The best models yield specific suggestions for how near-future research may improve understanding of the systems or phenomena that a particular model intends to explain. This approach anticipates the discoveries that can either verify or falsify the model's explanations.

The lack of detail and scope in the IDM's positions makes them difficult to fully falsify or confirm through observations or experiments. This lack of definitive means to put the IDM ideas to the test propels the widespread charge that ID is not science.⁹

Creation Can Be Science

Not all creationist explanations for the origin and history of the universe, Earth, and life are nonscientific. An explanation cast in the form of a comprehensive and detailed model (with citable scientific research findings in support of its primary premises and suggesting specific scientific tests or observations to either confirm or falsify its premises) qualifies as science—regardless of what that model depicts, even if it is creation. Such a model earns legitimacy as a scientific enterprise.

When a model suggests research projects that will improve scientific understanding of the record of nature and when that model makes specific predictions of what scientists will discover in the near future, it is not only science, it is also science at its best. If a model offers more comprehensive and detailed explanations of nature's record than competing models and if its predictions prove more accurate than those of competing models, then that model sheds valuable scientific light on the origins and history of the universe and life.

The purpose of this book is to present a creation explanation for the record of nature in an acceptable scientific form. For the creation model developed at Reasons To Believe (RTB) to have a fair evaluation, however, certain censorship efforts must be overcome, while others are encouraged.

Truth Discriminates

The greatest resistance to a creation explanation of nature's record I've encountered over the past thirty years is the fear that bad science will creep

into scientific research and education. Technological advance provides definitive data on the age of the universe and Earth. There's simply no scientific basis for thinking that the universe and Earth are not billions of years old. As a result, scientists have pleaded with me to use whatever influence I have in the Christian community to bring about a strong and unequivocal repudiation of young-earth teaching and advocacy.

Scientists' greatest concern about the intelligent design movement (even more than its ambiguity and lack of a model) is the failure of the movement's leaders to publicly declare young-earth creationism a failed hypothesis.

Christians should be equally concerned. To force a creation timescale of only a few thousand years on an interpretation of Genesis 1 would make other biblical passages on the origin of the universe and Earth (see chapter 5, p. 61) contradict each other.¹⁰ According to the appropriate interpretive methodology (see chapter 4, pp. 50–51, and Appendix B), it is not sufficient to interpret the Bible literally. Rather, the Bible must be interpreted both literally (unless the context indicates otherwise) and consistently.

The Bible explicitly declares that the physical world is not an illusion and that nature's record reliably reveals truth (see for example Numbers 23:19; Psalm 12:6; 19:1–4, 7–8; 119:160; Romans 1:18–20; Hebrews 6:18). Scientific evidence for an ancient universe and Earth¹¹ cannot be swept under the proverbial rug.

The bottom line is that no model (or portion thereof) should be insulated from testing. For both science and theology to remain objective, appropriate discrimination must be exercised. In a free market economy, savvy consumers evaluate and choose, eventually eliminating inferior or overpriced products. In the past, Christians and non-Christians alike rejected both belief in a flat Earth and the doctrine of an Earth-centered solar system. Pursuers of truth have nothing to fear in a discriminating search for reality.

Abandoning a Bottom-Up Approach

Some young-earth creationists and intelligent design proponents are committed to a bottom-up approach in attempts to change the course of science. This strategy may be symptomatic of laypeople's frustrations with

what is often perceived to be a strong anti-God, anti-creation bias on the part of many top-level research scientists. Ben Stein sensationalized this perceived bias in the movie *Expelled: No Intelligence Allowed*.

A bottom-up approach can do serious damage to the scientific enterprise. This was the case with the Lysenko affair in the Soviet Union, which stalled both genetics research and agricultural development. When less-credible positions threaten to gain a foothold among educators and students at the high school and undergraduate level, researchers at the highest levels of scientific and academic endeavor become increasingly protective of their freedom to conduct research as they see fit. In a backlash against this political approach, some influential evolutionists understandably attempt to stonewall all creation advocates in a similarly problematic manner.

Redefining Science

Since the birth of the scientific method (see pp. 50–51), science has been defined as the pursuit of systematized knowledge and understanding about the way the universe, with its governing laws and all it contains, operates.¹² Such a definition leaves the investigation open to consideration of the causal agent(s) that may be responsible for these operations.

However, in an attempt to shut down perceived abuses of science perpetrated by young-earth creationists and some intelligent design proponents, certain prominent leaders within the scientific community have tried to narrow the definition of science. Eugenie Scott, executive director of the National Center for Science Education, redefines science as “an attempt to explain the natural world in terms of *natural* processes, not supernatural ones” (italics in the original).¹³

Lawrence Krauss, director of the Center for Education and Research in Cosmology and Astrophysics at Case Western Reserve University, echoes this restrictive definition: “Science assumes that natural phenomena have natural causes.”¹⁴ In an official response to creationism and intelligent design, the board of directors of the American Association for the Advancement of Science wrote, “Science is a process of seeking natural explanations for natural phenomena.”¹⁵

By attempting to exclude supernatural explanations from scientific consideration, these naturalists demonstrate a bias equal to that of young-

earth and IDM proponents. They insist the natural realm has no Creator. They assume a priori that an atheistic perspective is the only possible basis for doing scientific research and education.

Acknowledging the blatant censorship inherent in such redefinitions of science, Scott has tried to soften her stance by saying it's not that science denies God's existence or his possible role as a Creator. It's just that science is incapable of ever detecting it. Because it is not possible to "hold constant the actions of supernatural forces" under laboratory conditions, Scott concludes that the possibility of a supernatural cause is "outside of what science can tell us."¹⁶ She claims that science and scientific testing must be limited to direct observations of events occurring in nature or under controlled laboratory conditions.

However, many scientists realize that Scott's definition guts much, if not most, of the scientific endeavor. It eliminates historical and theoretical science disciplines including theoretical physics, astronomy, paleontology, geophysics, theoretical chemistry, and physical anthropology, as well as mathematics.

Top-Down Approach

Shifts in science almost always occur when the most talented and well-trained researchers become persuaded of the need for change. As ongoing testing confirms the validity of a more plausible theory, that finding trickles down to lower-level researchers, where more testing occurs, then to the broader community of science professors and graduate students. Eventually public school teachers and journalists begin to inform younger students and the general public.

Some may complain that the scientific community would never grant evolution critique, much less grant creation proponents top-level access. Yet *Proceedings of the National Academy of Sciences, USA* recently published an article critical of the evolutionary paradigm (see chapter 10, pp. 169–70).¹⁷ And RTB scientists have had opportunities to present their testable creation model before faculty and researchers at several leading universities.¹⁸ These opportunities have yielded much valuable critique for improving and extending RTB's model. Our book *Origins of Life* garnered a commendable review in the journal *Origins of Life and Evolution of Biospheres*,¹⁹ and some components of the RTB creation

model have been published in reputable science journals.²⁰ RTB resources even prompted a Nobel laureate in chemistry to change his worldview perspective from stridently anti-Christian to ardently Christian.²¹

A Viable Creation Model

RTB respects the standards for good science. Our creation model is comprehensive as well as flexible and self-correcting. In its ongoing development, there's an openness to understanding how new discoveries either strengthen or falsify various aspects of it.

Comprehensive

Many people treat creation/evolution issues as involving only the life sciences—the disciplines of biology, paleontology, and anthropology. They typically ignore how the disciplines of mathematics, astronomy, physics, geology, and chemistry come to bear on the preparation of a suitable home for life. Most intelligent design proponents, in attempts to maintain religious neutrality and to avoid offending either young- or old-earth creationists, often limit their arguments to biochemistry. Drawing from other disciplines would force them into a position they are unwilling to take.

The creation model outlined in this book demonstrates how a more comprehensive and integrated explanation for the origins and history of the universe and life can be developed by incorporating multiple scientific disciplines. This approach engenders greater robustness—more tests of the model and more predictions of the discoveries that can be anticipated if the model indeed is correct.

Flexible and Self-Correcting

One serious critique of young-earth creationist attempts to explain the natural realm is that their explanations, typically rooted in religious dogma, have no flexibility to adapt and self-correct as knowledge increases. Nor has a young-earth explanation proven very effective in guiding research endeavors.

RTB suggests that the application of appropriate biblical interpretative techniques actually supports a scientifically plausible model. The Bible,

unlike any other holy book I've encountered, provides at least two dozen creation accounts (see chapter 5, p. 61), and a careful integration of these descriptions yields a well-defined outline for the origin and history of the universe, Earth, and life. These explanations, however, are by no means exhaustive. For example, while stipulating the means by which God created birds, mammals, and humans, the Bible leaves open a wide range of possibilities for God bringing forth plants and lower animals. Yet the major elements of nature's record are accounted for.

According to the familiar Reformation creedal statement, the Belgic Confession, God's second revelation, the book of nature, supplies additional information.²² The International Council on Biblical Inerrancy states that "in some cases extrabiblical data have value for clarifying what Scripture teaches, and for prompting correction of faulty interpretations."²³

Ongoing

The RTB creation model is dynamic. It has been under development for more than thirty years. While the basics of the model remain unchanged, the model's extent and depth have grown significantly. Many details in the original model have been refined. (The model's growth and development can be clearly seen over the four editions—1973, 1979, 1983, and 2006—of my booklet presenting a scientific perspective on Genesis 1.²⁴)

Even after so many years of development, the RTB model remains a work in progress. My fellow scholars at RTB and I continue to invite researchers with appropriate training and expertise to offer critique and constructive advice that will further improve and extend the model.

A driving force behind the development of RTB's model is the desire to go beyond the *what* and *how* of an issue and ask the *why*. The RTB model demonstrates how asking the right kinds of *why* questions can lead to deeper scientific insights and clearer answers to some of the most polarizing issues.

Putting a Variety of Models to the Test

After more than two centuries of vigorous debate on the topic of creation/evolution, proponents of various positions have developed surprisingly few serious tests of their own (or other) models. Nor have they produced

many model-based predictions of future scientific discoveries. The RTB creation model illustrates how to build tests and develop predictions that can either falsify or confirm the components of any model.

Recognizing that such tests and predictions are most effective when contrasted with comparable ones from competing models, I've spent considerable time over the past two decades interviewing advocates of other models. My goal was to learn what they would consider to be significant tests of and predictions from their models. In Appendix C, these tests and predictions are contrasted with those that arise from RTB's creation model. (Though it may seem presumptuous, perhaps even arrogant to speak on behalf of competing models, my goal is only to stimulate their proponents to either correct this list or produce their own.)

All these ideas and more unfold in the chapters ahead. They show how to test competing models for validity and vitality. Through vigorous development of competing models, researchers can produce distinctive tests and predictions to help determine which models produce the best and most comprehensive explanation of the record of nature and which best anticipate future scientific advances.

Please keep in mind, though, that this book contains merely a descriptive outline of the RTB creation model. No single volume could possibly include extensive explanations, tests, and predictions for the origin and complete history of the universe, Earth, life, and humanity. Fortunately, several RTB books already present some of that detailed material: *The Creator and the Cosmos*, *Origins of Life*, *Who Was Adam?*, *A Matter of Days*, *The Cell's Design*, *A World of Difference*, *Why the Universe Is the Way It Is*, and *Lights in the Sky and Little Green Men* are some of them.²⁵ Others are in the research and writing stage.

One Step at a Time

The first step in any model-building process is to gain greater understanding of the array of explanations. Chapter 2 examines the major positions. Chapter 3 looks at the strategies used by proponents of competing positions in attempts to gain an advantage. The birth and development of the scientific method and ways to apply that method in the construction of creation/evolution models are discussed in chapter 4. Chapter 5 explains RTB's model-building principles and organizes those elements of data

from both the record of nature and the Bible that are most critical for any comprehensive creation model. Then chapter 6 sets forth the biblical foundations of RTB's testable creation model.

Chapters 7–12 describe how well the RTB model explains observed natural phenomena and experiments in the most relevant scientific disciplines, progressing from the simple sciences to the more complex. For simpler natural phenomena (stars, for example, are much simpler systems than humans), more definitive and comprehensive descriptions and interpretations can be discerned. Rather than avoid the simple sciences, these chapters use that which is simple and more comprehensively examined to frame and interpret more complex and less completely researched disciplines.

Challenging *why* questions for RTB's model are posed in chapter 13, questions such as “Why would a Creator make carnivores and parasites?” and “Why are there so many apparently bad designs in nature?” Some possible answers also show how such *why* questions provide some of the most penetrating tests for all creation/evolution models. Chapter 14 tests the validity of the most recent attempts by atheists to explain away the most compelling astronomical evidences for a cosmic Creator. Chapter 15 examines recent creation/evolution court cases for legal constraints on science education and research. A few examples of how predictions of future discoveries can be used to test the various creation/evolution models are offered in chapter 16.

Chapter 17 comments on how well the RTB model has fared in its past predictions of scientific discoveries. The book concludes in chapter 18 by introducing new avenues of testing—beyond explanatory power and predictive success—that may make the RTB model more than a theory.

Scientists love testing. I did as a child and still do. I want to find out the what, when, and how. I also want to know why. Such research adds to scientific understanding. My hope is that by developing RTB's creation model and testing it against other explanations, we may see scientific progress on the origins and history of the universe, Earth, and life. The first step for developing and testing any model is to understand the competing positions. Chapter 2 sets them forth.

MULTIPLE CHOICE

For the first four years of my life I lived with my parents and two sisters in a small apartment near McGill University in Montreal. Then, after a business setback, my father went to look for work in Vancouver, while the rest of us stayed with my grandmother in Calgary.

Grandmother Ross had a large wood-burning stove in the middle of her home for heating and cooking. One day I watched her start a fire inside that stove. The next morning I decided to test whether it was possible to start one outside the stove. I picked a place in the middle of the kitchen, gathered some kindling from the wood storage box, crumpled an old newspaper, found a book of matches, and in no time had a nice fire burning.

My grandmother woke to the smell of smoke. She quickly put out the fire and gave me the worst licking of my life. That day I learned a couple of lessons about testing. First, what I consider an acceptable experiment may not always be considered acceptable by others. And that people tend to be very protective of their turf.

Danger, Danger!

Some people consider my willingness to challenge cherished beliefs about the origins of the universe, Earth, and life as unacceptable and dangerous

as that fire. Almost every position across the creation/evolution spectrum appears as protective of their turf as my grandmother was of her home. This battle is not one of ideas alone. It's a war over the very soul of humanity. Each participant issues dire warnings about the consequences of the other positions.

In 1984 biochemistry professor Isaac Asimov wrote "The 'Threat' of Creationism," an article which has since appeared in several books, magazines, and Web postings. It warns fellow scientists and the public that creationists are "a strong and frightening force, impervious to, and immunized against, the feeble lance of mere reason."¹ Although creationists are a relatively small group, Asimov sees them as a threat since "smaller groups have used intense pressure and forceful campaigning—as the creationists do—and have succeeded in disrupting and taking over whole societies."² Asimov concludes by warning that "with creationists in the saddle, American science will wither. We will raise a generation of ignoramuses. . . . We will inevitably recede into the backwater of civilization."³

These fears continue on a larger scale today. Parliamentarians from the forty-seven nation Council of Europe issued a resolution on October 4, 2007, in which they alerted both their member states and the world that "creationism could become a threat to human rights."⁴ The council members saw this threat emerging from the creationists' "total rejection of science."⁵ They wrote,

We are witnessing a growth of modes of thought which challenge established knowledge about nature, evolution, our origins and our place in the universe. . . . The "intelligent design" idea, which is the latest, more refined version of creationism, does not deny a certain degree of evolution. However, intelligent design, presented in a more subtle way, seeks to portray its approach as scientific, and therein lies the danger.⁶

On the other hand, Henry Morris, past president of the Institute for Creation Research (ICR) and for several decades the leading young-earth creationist spokesman, declared in 1988 that the theory of biological evolution must be strenuously opposed by all Christians. He said that "the bitter fruits of widespread amorality, materialism, the drug culture, abortionism, pornography, social diseases and a host of other ills—not to mention communism and fascism" spring from the roots of evolutionary humanism.⁷ Henry Morris also accuses evolutionists of stultifying the progress of science. He wrote that evolution has produced "not one

good fruit in the form of real scientific advance in either living standards or altruistic behavior.”⁸

Even more recently, the movie *Expelled: No Intelligence Allowed* intimated that public universities, museums, and research institutes terminate any academic who dares to disagree with the hypothesis that life on Earth originated and evolved by strictly natural means. Jewish narrator and interviewer Ben Stein also blames the Holocaust and the evils of both communism and Nazism on Darwinian beliefs.⁹

Meanwhile, young-earth creationists loudly denounce any attempt to integrate creation and evolution, popularly referred to as theistic evolution. In an article “10 Dangers of Theistic Evolution,” ChristianAnswers.net charges that “the doctrine of theistic evolution undermines this basic way of reading the Bible. . . . Events reported in the Bible are reduced to mythical imagery.”¹⁰ Answers in Genesis (AiG) doesn’t like old-earth creationism any better. AiG spokesmen say my old-earth perspective “(1) contradicts the clear teaching of Scripture, (2) assaults the character of God, (3) severely damages and distorts the Bible’s teaching on death, and (4) undermines the gospel.”¹¹

To sum up, many young-earth creationist leaders consider anyone who disagrees with their particular doctrine as a dangerous enemy that must be strenuously opposed until their credibility is destroyed. On the other end of the creation/evolution spectrum, British biologist Richard Dawkins in his book *The God Delusion* asserts that faith is fundamentally evil.¹² He describes belief in God as a mental virus.¹³ The back cover of his book claims that “faith is not just irrational but potentially deadly.”¹⁴

Is It A, B, C, D, E, F, G, or H?

Each of the major participants in the controversy wants exclusive rights to the story of the cosmos and life. It’s a powerful story, one that carries enormous significance for every person on Earth.

All sides seem to agree that the origins scenario holds the key to answering the great questions of life: Where did the universe and Earth come from? How did humanity get here and why? Where is life headed? Did humans invent God (or gods) out of insecurity or wishful thinking? Or is there really a God who endowed individuals with his creative and imaginative powers? Ultimately, what’s at stake is who or what determines the meaning of life.

Wielding authority over the story of life's origin and history appears to have eclipsed all other objectives. However, understanding the variety of choices for origins' scenarios supplies a context for testing which positions are indeed the most viable. Any hope of understanding creation/evolution issues requires a comprehension of the various positions.

A. Evolutionists

Scientists initially used the term "evolution" with reference to nature's change over time—change brought about by whatever means. By this broad definition, even the Bible describes evolution, and creationists are evolutionists.

In recent decades, however, the word "evolutionist" has generally been applied to someone who asserts that all the changes observed in the record of nature (including the origin and history of the universe, Earth, and all life) can be attributed to natural causes alone. Some evolutionists argue that the natural causes are not random. For example, quantum evolutionists posit that quantum mechanics gives cells and organisms the ability to initiate tiny, undetectable "directed" actions that are advantageous to their survival and well-being.¹⁵ For our discussion, unless otherwise qualified, the terms "evolutionist," "evolutionism," and "evolution science" refer to the belief that the entirety of the natural realm can be attributed to strictly natural causes.

B. Young-Earth Creationists

Historically, "creationist" referred to anyone who acknowledges that a Creator is responsible for bringing the universe and life into existence. According to that definition, nearly half of all practicing scientists are creationists (see chapter 3, pp. 36–37).¹⁶ Over the past several decades, however, the term has taken on a much narrower meaning. Today "creationist" typically is used to refer to someone who believes:

- the Genesis creation days must be six consecutive 24-hour periods; that is, God created all things within 144 hours;
- the Genesis genealogies contain few if any gaps. Thus, the creation week occurred between 6,000 and 10,000 years ago;

- Neanderthals, archaic *Homo sapiens*, and *Homo erectus* are the human descendents of Adam and Eve. All other supposed bipedal primate species are either fraudulent or misidentified as such;
- the flood of Noah's time (Genesis 6–9) was a global event that submerged all the continents and destroyed all land-dwelling, air-breathing animals (except those aboard the ark). This flood, lasting about a year, accounts for virtually all of Earth's geological features, fossils, and biodeposits (coal, oil, natural gas, limestone, marble, top soil, etc.);
- all land animals alive today naturally descended from pairs of creatures on Noah's ship.

Several parachurch organizations have advanced these teachings, commonly referred to as “creationism” and “creation science,” so effectively and so exclusively that many evangelical pastors, congregations, schools, broadcasters, ministry leaders, and missionaries adhere to them by default and remain largely unaware or distrustful of any alternate biblical view. Most reporters and secular scientists see these teachings as part of the evangelical belief system.

C. Intelligent Design Movement

For thousands of years, scholars from various cultural and religious backgrounds have proposed intelligent design as an explanation for many of the special properties of the universe, Earth, life, and humanity. For over a century, every student at Britain's Cambridge University was required to study William Paley's famous text, *Natural Theology*. In it Paley draws the inference from his detailed study of nature that the properties of living organisms demand a divine Designer.¹⁷

Even apart from questions about how the universe and life began, intelligent design has long been acknowledged as a legitimate scientific conclusion. In such disciplines as archaeology, anthropology, and forensics, researchers evaluate, differentiate, and interpret evidence or artifacts based on various indicators of intentionality or purposeful design.

About a decade ago, however, a diverse group of creation advocates formed an alliance widely known as the intelligent design movement (IDM). Their goal is to advance public instruction about the intelligent design concept, the inference that an intelligent designer is responsible

for the origin and history of life. By refraining from making a specific identification of the designer or of any specific history of the universe or life, the movement has sought to remove any religious bias and, therefore, any apparent legal basis for disallowing the teaching of intelligent design in classrooms.

D. Old-Earth Creationists

Coupled with the old-earth adjective, this “creationist” refers to someone who, in contrast to a young-earth view, believes not only the biblical account of creation but also the findings of mainstream science. These individuals typically embrace both the truthfulness of Scripture and the scientific evidence for a multibillion-year history of the universe, Earth, and life on Earth.¹⁸

Old-earth creationists, however, hold a variety of positions on the correct interpretation of the Genesis creation days and genealogies, on the bipedal primates that preceded human beings, and on the nature and extent of Noah’s flood.

E. Theistic Evolutionists

During the latter part of the nineteenth century and early part of the twentieth, the term “theistic evolutionist” typically referred to anyone who believed that God’s creation work took place over a long period of time—millions or billions of years rather than thousands. Many theistic evolutionists of that era held that God’s creative involvement went beyond merely working through natural processes and laws and included countless miraculous interventions, particularly when new species appeared on Earth.

Though a few still suggest that God may have miraculously intervened at the origin of the universe, the origin of the first life-form, the Cambrian explosion (when a broad diversity of complex life-forms suddenly appeared 543 million years ago; see chapter 10, pp. 162–63), and/or at the origin of humanity, by the end of the twentieth century the term theistic evolutionist had changed. The vast majority now take the view that the Creator intervened only on extremely rare occasions. And, most theistic evolutionists claim that he transcended the natural order only once, at the origin of the universe.

Fully gifted creationists assert that God personally intervened in the natural order on just one occasion, the origin of the universe. According to this view, God so gifted the laws of physics and the universe at that cosmic beginning that thereafter, strictly natural processes brought about God's desired outcomes specifically as he had planned. This particular subset of theistic evolution is scientifically indistinguishable from deism, the belief that God is responsible only for the initial creation of the universe.

While some fully gifted creationists allow for the possibility of divine interventions beyond the cosmic creation event, they claim scientists can never detect such interventions. For example, the interventions of God are hidden underneath the umbrella of the Heisenberg uncertainty principle of quantum mechanics. (One implication of the Heisenberg uncertainty principle is that causality at the quantum level remains concealed.)

Evolutionary creationists claim that God created the universe and all life through an evolutionary process. They see this process as planned and directed by God with every aspect and entity in the natural realm serving a specified purpose. Many (though not most) evolutionary creationists are more willing than most theistic evolutionists to entertain the possibility that God intervened in more dramatic and frequent ways. Unless otherwise qualified, in this book the terms "theistic evolution" and "theistic evolutionist" refer to the fully-gifted creationist position.

F. Framework Theorists

The framework view upholds the accuracy of events described in the biblical creation accounts. Framework theorists, however, see little or no chronological ordering of the biblical creation events. Furthermore, they consider these events primarily as pictures or metaphors for God's creative activity in the kingdom of heaven.

For framework theorists, there is no creation-evolution debate. With the Bible silent on the chronology and timescale of creation events and ambiguous on the physical details of creation, they see few, if any, points of contact between the findings of mainstream science and the message of Scripture.

G. Progressive Creationists

Like many of the previous descriptors, progressive creationism has changed over the past several decades. About sixty years ago, the label applied to those who believe the universe and Earth are billions of years old and that God created life several billion years ago, miraculously intervening numerous times throughout biological history to produce new life-forms. In this type of progressive creationism, microevolution occurs within a species or a genus but new genera and, with few exceptions, new species do not descend from a common ancestor.

Today some scientists who call themselves progressive creationists believe that all life-forms are linked by common ancestry in a natural way. Thus their position is virtually indistinguishable from a number of the theistic evolutionary views. While some progressive creationists agree with the mainstream science that shows the universe and solar system as billions of years old, they also concur with young-earth creationists that life has been present on Earth for only thousands of years.

H. Concordists

Concordism is the view that the scientific record and the biblical message of creation extensively overlap. In that overlap concordists see complete harmony and consistency between the biblical account and nature's record. Any conflict or discordance between the two sets of data arises from incomplete understanding or faulty interpretation. Concordists express confidence that ongoing scientific and theological research will always resolve any perceived contradictions.

Distinct from framework theorists and most theistic evolutionists, concordists draw considerable scientific detail from the biblical creation texts. They believe the descriptions offer a dependable depiction of the origin and history of the universe, Earth, and Earth's life. Moreover, they believe the Bible presents those events in a specified chronological sequence and frequently designates the manner in which God brings them about. Concordists accept the historic Christian creed that the record of nature serves as a second "book" of God's revelation to humanity.

A Not-So-Simple Choice

To say that people must choose between atheistic naturalism and young-earth creationism—between science and the Bible—oversimplifies an extremely complex issue. Not only are there many more options, but the different positions also employ a wide diversity of strategies to advance their own particular perspectives. The next chapter takes a brief look at these tactics in an effort to establish an accurate context for testing the viability of various views.