

Spring 2011

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# Perspectives Human Beginnings

SCIENCE TEXTBOOK

MAN'S WORD

THE LIGHT OF THE WORLD

HOLY BIBLE

GOD'S WORD



Spring 2011 Vol. 44, No. 2

### A PUBLICATION OF CONCORDIA UNIVERSITY, SEWARD, NEBRASKA

### Perspectives on Human Beginnings

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BEGINNING WITH THIS EDITION, the publication of Issues in Christian Education will be available online only.

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### reflections

Welcome to the first online edition of *Issues in Christian Education*. It is my continued prayer that this journal will edify you and bless your service to church and world. As you have feedback about the new format of *Issues*, please contact the editor, Rev. Dr. Marvin Bergman, or me.

The editorial committee of *Issues* has had the current edition, "Perspectives on Human Beginnings," on its agenda for some time. Some outside the committee have suggested, "It's about time you took up this issue." Others have asked, "What are you thinking? Do you want to enter where 'angels fear to tread'?" So you might ask: "What are we thinking as we explore a variety of perspectives on one of the more controversial and vexing issues in Christian education today?" Fair question.

Let me speak for the editorial committee. The goal of this edition of *Issues* is to foster study and discussion of the issues presented in the articles, editorials, and book reviews. When the editor presented a proposal for this edition to the committee, we agreed on the following focus and rationale.

"Focus: Questions related to human beginnings will be explored in the context of biblical, theological, evolutionary, Creationism, Intelligent Design and educational perspectives. The focus is the perspective of each discipline, with inter-disciplinary questions and critiques being the responsibility of the reader. With each discipline making its own case, the goal is to foster study and dialogue."

"Rationale: Ever since Charles Darwin in *The Descent of Man* wrote (described by a literary critic as the most explosive sentence in the English Language), "We thus learn that man is descended from a hairy quadruped, furnished with a tail and pointed ears ..." a debate of the origins of humankind has been ongoing. Today, when students who are Christians encounter evolutionary perspectives in the sciences, they often question the validity of biblical perspectives, with some even rejecting the faith. This edition will provide teachers of the church and other readers with an opportunity to become clearer about the purpose, goals, and methods of the sciences and biblical studies and their perspectives on the origins of humankind, the issues that are raised, and educational approaches to the issues."

The theme for Concordia University, Nebraska's 117th academic year is: "You give life to everything" (Nehemiah 9:6b). May the study, reflection, discussion and debate that this edition engenders give praise to our Creator God and Father for life that only He can give and sustain.



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### editorials

### Do You Know Where You Are From?

Have you noticed how interest in tracing one's roots is increasing? You can now even pay to have your DNA analyzed and learn what 'secrets" there may be in your family history. A recent TV show featured celebrities finding out what their genetic history actually is, with some interesting surprises. It is said you can never really know where you are going, unless you understand where you came from. As God's dearly loved children, we know precisely where we are from and where we are going.

The question of origins is of intense interest and ever more so among people who feel cut adrift from their roots, from a life that has meaning. Science can offer help to only a degree with such issues. When Charles Darwin developed his theories about the origins of the species, he had no idea just how complex life really is. Life is irreducibly complex, to use a key phrase from the Intelligent Design movement. The advent of quantum physics has thrown everything we thought we knew about how things work into chaos, so to speak. We now face a reality that is more fantastical than the best science fiction ever written. It seems that the Creator has a way of staying one step ahead of curious onlookers.

It seems that the more we learn about the nature of this planet, and the universe itself, the more mysterious it becomes. The closer we are able to look into the atom itself, we find yet more to see, more to find, more to discover. The farther out into the universe we can see with orbiting telescopes and satellites, the more amazing and beautiful is the cosmos that God created. How can we not say in wonder: "O LORD, when I look at the heavens, the work of your fingers, the moon and stars, which you have set in place, what is man that you care for him, and the son of man that you care for him? Yet you have made him a little lower than the heavenly beings and crowned him with glory and honor. You have given him dominion over the works of your hands; you have put all things under his feet" (Psalm 8).

As for questions of human origins, or the origin of life, it remains our duty and joyful privilege to confess what Scripture reveals, that "in the beginning" God created the heavens and the earth, and created a man and a woman, human beings. God delights in community and fellowship, and it is little surprise that His whole creation reflects that awesome mystery we call the Holy Trinity, which is a unity of persons, an eternal fellowship of divine communion within the very Godhead itself. He created man and woman to enjoy fellowship and community with one another, and most importantly, with Him. This is what the God who is Love intends for us and His creation.

It is tempting for Lutherans today to think they can wed the theories of evolution with the biblical account, but finally, and ultimately, there are substantial philosophical tenets of evolution that are incompatible with Holy Scripture, try as we might either to pretend this is not so, or work to make it seem as if it is not so. Anyone advancing any view of origins that involves a creating intelligence is going to be ridiculed and scorned by secular academia as hopelessly irrelevant.

Thoughtful, intelligent engagement with the sciences has been a hallmark of classic Lutheranism since the time of the Reformation itself. Lutheranism has never viewed science as some sort of "bad guy" that must be opposed; rather, Lutherans have recognized the vocation of scientist to be a noble one. After all, it was the Lutheran mathematician, George Lauchen, a student at the University of Wittenberg, who was instrumental in the publication of Copernicus' On the Revolutions of the Heavenly Spheres, published just before Copernicus died in 1543. But when science begins to work against the revealed truth of God as we have it in the Scriptures, this is where we will have conflict.

Do you know your roots? Do you know where you are from? If you do happen to have a DNA test, you may discover that your long lost relatives from generations ago are people from places in the world you never imagined they could be from. Should that come as a surprise? Since we are all children of Adam and Eve, it should not. And most importantly, in Christ, we are all children of Abraham, sons and daughters of the promise of eternal life, given to our first parents, and throughout all generations. The God who created us male and female, is the God who loves His whole creation, to the point of becoming Incarnate among us, to redeem us and make it possible to enjoy the everlasting fellowship with Him that was His intention in the beginning.

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### Human Beginnings: Seven Issues

Can we teach the church about human origins issues? Maybe, but not easily. Origins is a problematic subject for us because sustaining the discussion demands that we manage no fewer than seven related issues, any of which can move the origins topics in different directions—directions in which the Gospel may or may not be rightly exercised.

Before we inventory those seven issues, note that complex teaching challenges are not unique to origins. For example, teaching John's Revelation presents several hermeneutic and historical hurdles and is not suitable for a brief, light treatment given the many distortions this book has suffered in both the church and the media. Or consider Paul's intricate argument for grace in Romans I - II. Another example is the two kingdoms doctrine. Niebuhr's variations of Christ and Culture alert us that the church has attempted at least five ways to understand how the church and the world are related (and Niebuhr's concepts are not final and definitive.) So the church always has teaching challenges.

But origins issues present a special challenge because for many participants the matter engages personal convictions (not simply academic positions) about their sense of self in relation to their understanding of God. Does my existence have any design and purpose? Am I made in the image of God? Or is my sense that I am a meaningful self merely an illusion within a network of mirror neurons, an illusion that exists for no particular reason and ends when those cells die? Does any spiritual reality exist that relates to the material reality around me? What are others teaching my children about these sources of the self? And what sources, such as Scripture and science, should we consider and weigh? Teaching the origins issues is not only complex but can quickly stall when the stakes understandably become personal for the participant.

Yet we must resist the temptation to truncate the discussion or merely indoctrinate. Briefly and without detail, here's the inventory on teaching origins issues. (The point for now is not to examine the content of each but to appreciate our teaching challenge.) First, \*we have at least four or five different models for relating science and religion (see the Royuk article in this *Issues* on S-and-R models). Each model sets up the origins issues in a different way. What's more, the science part of the model

can use any of four different \*definitions of science (Google definitions of science). And science works with theory. Does science generate theory or assume theory, or both? That depends on the model of science, but the sciences have operated with \*at least five different definitions of what a theory is (Google definitions of scientific theory), so now we have another layer of complication. If the teacher, preacher, or presenter is unaware of the variations of these factors or does not disclose them and instead presents only some preselected version of theory, science, and an S-and-R model, we get an oversimplified caricature of the issues rather than teaching for the church.

On the religion side of the models we have perhaps three or four \*theological traditions that approach the sciences and humanities in somewhat different ways. For example, readers here readily recognize distinctions in the Lutheran, Reformed, and classic Roman Catholic views about \*Biblical anthropology. Thoughtful Christians do not entirely agree on the condition of human nature after the Fall and the extent to which humanity has retained God's image and likeness. These different traditions regard human rationality with different degrees of reliability. Lutherans are sensitive to the limits of human rationality and our sinful inclination to distort God's world and Word. Despite its doctrine of total depravity, Reformed theology (which influences much of the origins discussions) tends to place more confidence in human reason and its ability to read what some like to call God's "two books," Scripture and nature. And Roman Catholic traditions are comparatively optimistic about human reason. Thus, these traditions approach origins issues with different expectations about what sinful humans can reason and know.

Continuing our inventory, and related to rationality, is \*the problem of truth. Your intro to philosophy book includes multiple views on truth and the degree to which our sensations, perceptions, and concepts correspond or cohere to "what's out there." Those who present the science or religion or both of the origins issues often presume but don't explain or compare and contrast the ways they mean that science or theory or the Bible are true. (And notice how close this factor takes us to varying views on the inerrancy of Scripture.)

So is it all a matter of interpretation? Now we come to the \*hermeneutics factor and the degree to which a set of data in science connects us to nature and a set of texts in Scripture connects us to the riches and wisdom and knowledge of God (Romans 11:33-35). Again, the theological traditions address biblical interpretation with different nuances and emphases just as the sciences continue to struggle with methods of interpreting data. (See for example, "The Truth Wears Off: is there something wrong with the scientific method?" http://www.newyorker. com/reporting/2010/12/13/101213fa\_fact\_ lehrer.) Teaching the origins issues means also helping participants understand why our use of hermeneutic principles in both the sciences and biblical interpretation influences our views on origins.

There, then, is a laundry list of challenges when teaching the origins issues. Each factor in its variations combines with others to generate assorted S-and-R models. These seven or so factors are always lurking in the background. As you read about Intelligent Design, Creation Science, views on evolution, human beginnings, and treatments of Genesis, examine the position for these factors and whether the presenter assumes them or explains them. No wonder we often feel we're talking past each other-origins is a tough topic. And now consider how effectively we can teach origins issues in the fellowship hall or the classroom. I'll opine that it can't be done in three sessions after coffee or near the end of a semester.

I'll close by suggesting that the Lutheran tradition with its two kingdom doctrine provides a context for addressing origins issues that is not offered by the usual S-and-R models. This rich Reformation insight sustains a creative tension between our study of the world and God's re-entering this world through his Word. This creative rather than conflicting tension enables us to study without vilifying science and to proclaim the Gospel without subordinating it to human hubris or limitation, exploring the intersections between the two. But this two kingdoms discussion of human origins will have to wait for another time and another article.

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### Christ, the Centre That Holds

Paul tells the church in Colossae that everything was created by Christ and that "in him all things hold together" (Colossians I: 16-17, ESV). An implication is that neither human beings nor the universe can be rightly understood independently of Christ. While God's Law saves no-one, it does reveal that lives without Christ do not 'hold together." In his great poem, *The Second Coming*, W. B. Yeats laments modernity's loss of rooted meaning:

"Turning and turning in the widening gyre The falcon cannot hear the falconer; Things fall apart; the centre cannot hold; Mere anarchy is loosed upon the world, The blood-dimmed tide is loosed, and everywhere

The ceremony of innocence is drowned; The bestlack all conviction, while the worst Are full of passionate intensity."

If people cannot hear their maker, they will listen to other voices, to those of the world, the flesh and the devil. But these other sources encourage human beings to be their own gods, leading to rivalry, envy and pride. The result is a fractured, cacophonous world where might masquerades as right.

The natural man is an enemy of God, who seeks to suppress His voice wherever it is found. This includes the messages inscribed by God in His "other" book, the natural world (Romans I: 18-20). Although knowing about God is not saving faith, even that knowledge is perceived as a threat. As the renowned atheist philosopher Thomas Nagel admits, "It isn't just that I don't believe in God, and naturally, hope that I am right in my belief. It's that I hope there is no God! I don't want there to be a God; I don't want the universe to be like that."<sup>11</sup> It should not surprise as then that unbelievers would like 'science" to be defined so that it cannot point to the divine. But even many Christians think that science cannot tell us about God. This may be because the old Adam still struggles for independence inside the Christian (Romans 7). But it is also because many Christians have accepted as final a historic change in the definition of science.

For Francis Bacon, Rene Descartes and Galileo Galilei, final causes-those citing the goal or purpose for which something happened-play no role in physical science, which should focus instead on the geometrical qualities of physical bodies, like extension, shape, location and motion. It was no longer thought explanatory to say, with Aristotle, that stones fall because they wished to return to their natural resting place. The successes enjoyed when final causes were banished from physics led others to seek their elimination from all science. When Charles Darwin argued that the apparent design of living things can be explained away by blind, natural causes, he was not merely proposing a new scientific theory but attempting to redefine what counts as science. From now on, there could be no such thing as scientific evidence for intelligent design. This is the received view of science today.

The trouble is that the received does not hold together, either historically or philosophically. As a matter of historical fact, giants of the scientific revolution, including Robert Boyle, Johannes Kepler, John Ray and Isaac Newton were all guided by design principles in their scientific work. For example, Kepler's search for laws of planetary motion was motivated by his belief that God sustained the solar system through a providential plan written in the language of mathematics. What design contributes is that there will be a coherent order to discover, and that even fallen creatures made in the image of God can detect some of that order.

Among philosophers of science, the consensus view is that all attempts to draw strict lines of demarcation between science and non-science are failures. Atheists Bradley Monton<sup>2</sup> and Thomas Nagel<sup>3</sup> agree that excluding design in principle undermines science's aim of providing objective knowledge about the natural world. And Stephen Meyer<sup>4</sup> points out that in the contest between design and nondesign, what counts as the best explanation depends on the current data and the current pool of competitor theories. Darwin did not know that the cell is an automated system for assembling protein machines run by the digital code of DNA, and had not seen the rigorous reformulation of the design hypothesis in terms of modern information theory.

And yet, the best scientific case for design points only to a vague intelligence, and the natural man will try to paint in a god of his own devising. To know God we must turn to His self-revelation in Christ and be remade in His image. Whatever someone thinks about the right way to do science, they will see Christ's work in this world when they know Him.

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### Notes

- <sup>I</sup> Thomas Nagel, *The Last Word* (New York: Oxford University Press, 2000), p. 130.
- 2 Bradley Monton, "Is Intelligent Design Science? Dissecting the Dover Decision," draft available at: http://philsci-archive. pitt.edu/2592/.
- 3 Thomas Nagel, "Public Education and Intelligent Design," *Philosophy and Public Affairs*, 36, No. 2 (2008).
- 4 Stephen Meyer, Signature in the Cell: DNA and the Evidence for Intelligent Design (New York: HarperOne, 2009).



# OLD WOODEN CROSS DNA T А LARGER VIEW DOUBLE HELIX **DISCOVERED IN 1953** JAMES D. WATSON FRANCIS CRICK SPLINTERED WOOD G A T С

Adenine

Thymine

Guanine

Cytosine



ISSUES

"Private theories about what the Bible ought to mean, and premature theories about what the world ought to mean, have met in loud and widely advertised controversy ... and this clumsy collision of two very impatient forms of ignorance was known as the quarrel of Science and Religion." (G.K. Chesterton, St. Thomas Aquinas, New York: Sheed & Ward, Inc., 1933:98).

As an anthropologist, I identify myself as a scientist, admittedly of one of the so-called "soft sciences." A primary task for anthropologists is to stand between two cultural worlds and interpret them for each other. It is not unwarranted to view the disciplines of theology and science as two cultures. As scientists and theologians, we approach our tasks with our discipline's traditions, assumptions, ways of knowing, views of the nature of reality, common sense, language, and values. As fully enculturated participants, we are mostly oblivious to the limiting nature of our own cultures. As a Christian and anthropologist, in this context, I might be thought of as "bi-cultural." This positions me to stand between two disciplines and translate.

Cross-cultural dialogue is difficult. Beyond pleasantries exchanged in tourist situations or with a nod toward sensitivity, few of us attempt it. It can be frustrating and exhausting, but for those willing to engage, it is remarkably broadening. Both theology and science have something to contribute toward our understanding of human beginnings. Are we willing to listen to each other?

My focus here is on theology and science, both of which are academic disciplines in the pursuit of knowledge. Be mindful of how I apportion the use of "theology" and Scripture. In the following discussion, the focus is the academic discipline of theology, that is, the study or reasoning and discussion concerning God that is being contrasted to science. The authority of Scripture is fully acknowledged, and no parts of the canonical texts are being questioned or challenged.

The following discussion examines the roles of theology and science in the maintenance and use, production and distribution of knowledge regarding human beginnings. Both disciplines speak about the

Dr. Jack M. Schultz is Professor of Anthropology Concordia University, Irvine. Jack.Schultz@cui.edu nature of the world, the place of mankind, and identify problems and solutions. Yet both of these use vastly different means and reach vastly different conclusions. It has become apparent that both science and theology have their roles and their limitations, and that it is imperative to recognize, and in good Lutheran fashion, to distinguish these properly. Some observations follow.

### Science and theology both speak about the world around us (they both present a cosmogony).

Both theology and science are concerned with and provide ordered and useful accounts of human origins and destinies, with each defining concomitant meanings. At times, the cosmogonies of science and theology overlap, and at other times they are diametrically opposed. The primary distinction between a scientific cosmogony and a theological cosmogony is that the former presupposes a strictly materialist account, while the latter presupposes a Creator.

The fundamental data from which a scientific cosmogony is developed are drawn from the observable empirical world. When viewed in strictly materialist terms, one investigates the world around us and concludes that what is here is the product of natural forces, some random and some predictable, which are presently observable and assumed to have been at work in the past. This cosmogony generated from such an approach explains origins in light of these impersonal forces, with human beginnings resulting from random forces.

The fundamental data of the theologian used to develop a cosmogony is the revealed Word of God as contained in Scriptures. This Word of God describes human beginnings as the direct result of God's creative activity. The revealed Word explains the who and why of creation, but does not explain the how and when of creation (questions of particular interest to many of the sciences).

While both science and theology are human enterprises, it is recognized that theology involves an extra-human component. The text that is being studied is the revealed Word of God and by way of that Word, the Holy Spirit continues to reveal the truth of God and work faith. But that the Holy Spirit is active in the Scripture does not preclude that human beings are reading, interpreting and applying the texts. Human beings read the Scriptures, and as fallen creatures, they may misunderstand or willfully misread or misrepresent that faithful Word and frustrate the work of the Spirit (one needs only consider the great variety of theologies arising out of or giving birth to the profusion of Christian denominations). Theology is a human enterprise, yet not only a human enterprise.

# Science, in its essence, is a data gathering methodology.

The scientific method is a means to generate or collect data. Those who utilize the scientific method assume that the phenomena of reality are knowable and that materials and forces which make up and organize reality are consistent. Science and the instruments of science are limited to empirical data, that is, data which are available to sensory observation (sight, sound, and touch). Non-empirical concepts such as beauty, faith, or love are not subject to scientific inquiry because science as an empirical methodology does not have the instruments to reliably and validly view and quantify such phenomena. The scientific method generates data which are empirical, and requires that only empirical data be cited as proof. This is what confers science's authoritative status. Each step away from this empirical base is a step away from its authority.

# From empirical observations come explanatory theories.

Scientific theory must be understood as what it is-tentative statements about how data are related. Scientific theory is not opposed to facts, as in "that's just theory, not facts." Rather, scientific theory is composed of facts which can lead to a tentative model which suggests how specific data are related to generate an outcome, or resultant. Theories, which are built upon empirical data, are recognized as being abstracted out of the data. Theories therefore must be viewed as less authoritative than the data itself. Theories are actually ideas about data, not the data itself. It is this step of abstraction that many fail to see and therefore grant to scientific theory the weight of empirical validity when in actuality theories are ideas about data.



Empirical data are not theory. The data gathered via a scientific method must still be organized into a theory. Empirical data are not explanatory; they are what *need* to be explained. Many don't recognize this salient distinction and assume that scientific theory is as authoritative as empirical facts.

Theories are by definition tentative, subject to testing and change as more data comes available. These gaps should not be viewed as a reason to reject the theory wholesale, rather, we must concede that our knowledge is incomplete and understanding is still being built. Such is the nature of scientific theory.

## Even empirical data must be interpreted.

It is a truism that "facts don't lie." But neither do they tell the truth. Facts do not say anything. Facts must be read or interpreted. And it necessarily follows that facts can be misread, or that there can be alternate or competing reads. Fact-readers (scientists and theologians) bring "something" (their past experiences, biases, a perspective, and unexamined assumptions) to their read. This *something* influences how the data are read. For example, one who brings to the read of the fossil record an assumption of natural selection will see fossils in that light and, perhaps, be blinded to alternative reads.

Additionally, conclusions drawn from scientifically gathered data which account for the data and logically connect into a compelling theory may still be wrong. Ideas about data are not equivalent to the data. Ideas about the data, or theories which organize the interpretations of the data, may be wrong even when the data itself are empirical. Even while the data may not change, our read of the data will likely change.

As new data become available, alternate theories (that is, alternate interpretations of data) may be necessary. This self-correction is viewed as a positive attribute of the scientific method. That being said, it must be acknowledged that there is a resistance to challenge current scientific orthodoxy. Any human institution suffers entrenchment, and the trajectory of *status quo* is resistant to change. Scientific institutions as human institutions are given to hegemonic abuses. Yet, in principle, scientific knowledge is subject to correction.

Just as empirical data need to be read, mutatis mutandis, so do scriptural texts. The reader brings something to the text. One who comes to the Bible with the belief that Jesus is God will read the text differently than the one who reasons that Jesus is a legend. Both readers will reach predictable and alternate conclusions even while reading the same text.

Theology, while based on the Word of God, is not equivalent to the Word of God. Perhaps a better way of saying this is that a theological position is not the same thing as the gift of faith. Theology is a human exposition of Scriptures, often resulting in or affirming doctrine and dogma. Even while maintaining that doctrine is standard and unchangeable, we must concede that as a human enterprise, theology is subject to error or misuse and correction (the Reformation can be viewed as one such correction).

While fully supporting and affirming the authority of Scripture and the Symbols (The Three Creeds and the Book of Concord), it is acknowledged that reads of these unchanging texts may in principle be incomplete or subject to misunderstanding. Readings of texts may be improved . While the texts do not change, the "something" readers bring to the text does change.

### Texts should be read with the purposes for which they were generated.

The Genesis chapter one account of creation answers one question about creation unequivocally and unambiguously, namely, who created the world. That is the fundamental question the text answers, and we might conclude that was the primary intent of the text. The Genesis two and three accounts of creation answer questions about mankind's relationship with that Creator. In our human curiosity we would like to know how God created the world and when God created the world. However, that is not the intent of the text. There are tantalizing clues about those significant, albeit secondary, questions in the Genesis accounts. But the intent of the texts was not to answer those secondary questions. Whatever doctrinal conclusions we reach concerning these secondary questions must be viewed as incomplete and tentative. We might look to other evidence to support the conclusions reached from those revealed but partial accounts of the creation.

When both the text and science are taken seriously one cannot help but feel tensions between them. Consider for example the meaning of "day" in the Genesis one account. When we read the Genesis account of creation, we read it thinking of our experience of a day. We have not experienced any moment of life without a day being a single revolution of the earth relative to the sun. So it is logical and consistent to conclude that the six days of Creation were the same kind of twenty-four hour days that we have all experienced. And it may be fairly observed that throughout history readers of Genesis assumed a "day" to be a "day." It is only recently, as geological data are being read to consistently support a very old earth, that the Genesis account is being reread to allow for a greater length of time, leaving some to reason that perhaps a "day" is not a "day." This conclusion can be reached even while maintaining a strict adherence to the text because the Genesis one account describes a reality which differs from our own experience-that is, an earth, three days and light without a sun. Keep in mind that it is not twenty-four hours which makes a day; rather a single revolution of the earth relative to the sun (which happens to take twentyfour hours). Therefore a day as we reckon it (a single revolution of the earth relative to the sun) may or may not be the same duration as the first three days of creation because the sun, by whose light we determine the length of a day, had yet to be created.

The current scientific understanding of the geological data posits that the earth has been around a very long time, causing many to conclude that the first three days of creation must have been something other than the twenty-four hour days we experience. But it is also equally plausible to conclude that God created an "old-appearing" world, that is, one with fully grown trees and fully formed mountains and canyons rather than one which started with seeds and level plains. Science rejects such propositions because its approach requires a consistent system (the principle of "uniformitarianism") in which the forces at work today have been at work in the same way in the past. So there is tension between current theological and scientific understandings: the Genesis text describes a supernatural Creator and a reality which is different than the one we inhabit today, and science cannot address the supernatural and an alternate reality, but demands a past which is consistent with today. The current understanding of our solar system and earth's orientation within it is incompatible with a system that has no sun. These tensions are ameliorated when we recognize that our understanding is still in process-we do not have a complete understanding yet. We must embrace the texts and the empirical data fully while not reading into them more, nor less, than is there. We must be confident enough in our Creator (who is certainly capable of creation either by fiat, instantly and fully, or progressively and mechanically), to rejoice in his creation without us knowing how or when he created it. A complete understanding of the how and when of creation is not a condition of our salvation.

Good theology requires that we not push the text into answers it was not intended to address. It would be very helpful to know how old the earth is, but we do not have the revealed means of knowing with certainty. We can piece together various bits of data into a theory, into a tentative statement about how the pertinent data can be interpreted, but data are missing. Our conclusions may or may not be accurate. We are providing answers which are equivocal, and so must not be binding on consciences.

Good science requires that we recognize that data continue to be gathered, and that our understandings of origins and realities continue to develop. We can be sure that with the accumulation of more data what is

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accepted today as scientifically valid will be challenged in the future.

# Assumption and confidence can be mistaken for truth.

One's feeling of certainty does not preclude error. One may feel with "100 percent certainty" the truthfulness of a proposition, yet that proposition may be wrong. For the scientist, we need only recall the confidence with which the concept of spontaneous generation was taught. It was predictive and reliable, but was demonstrated to be invalid. Or consider how generations of Christians in the United States did not question that the "mark of Cain" was the black skin of the African slave.

Being a Christian isn't simply about being "right." The power of the Word is not for argument but for life. Being a Christian is more than being convinced of the truth of various doctrines, propositions or even creeds. Being Christian means to be in a faith relationship with the living God through the redeeming work of his son, Jesus the Christ. Theology, even great theology, does not save us. Only Jesus does. Faith is based not on knowing; it is rather based on being known by our Maker and Redeemer.

Being a scientist isn't about an apologetic for a materialist philosophy of life. It is about the pursuit of an understanding of the empirical world. Both disciplines are to be in service of humanity, not the fortification of one's own domain.

Scientists and theologians are learned people. And both groups have arrived at conclusions by way of remarkably similar processes. Yet, these conclusions differ radically. Truth is awfully big. As Christians, we recognize that while what we have in the Word of God is completely true, God is still making himself and his Truth known to us. When one considers an understanding of human beginnings, we can acknowledge our limitations even while we pursue one truth. And we remember that real Truth, the whole Truth, is the One who created and pursues us, the One who called himself the Way, the Truth, and the Life. In the approaches to understanding human beginnings, it is necessary to recognize one's assumptions, since these will often lead to certain conclusions. It is also necessary to recognize the limitations of one's approach. Understanding is an ongoing process that requires coordination of multiple approaches. Please consider that as you read the following essays about human beginnings.

### Notes

- I A version of this paper was presented at the Two Books, One Truth? Science and Theology Conference held at Concordia University–Irvine, May 23-25, 2009.
- 2 Recent studies asserting empirical investigations of such phenomena are hypostasizing and necessarily reductionist. They are measuring aspects, manifestations, or symptoms of beauty, love, and faith. Beauty cannot be reduced to symmetry or adherence to the Fibonacci sequence; time spent in prayer, church attendance, religious ideations, and religiosity are not the same thing as the gift of faith; love cannot be reduced to a drive to procreate, a "cocktail of brain chemicals," olfactory cues, or altruistic acts. Certainly these studies have their place, but to equate the phenomena of beauty, faith and love with these empirical manifestations is tantamount to reducing the genius of Shakespeare to "assorted letters on a page."
- 3 Paul L. Maier, Synodical Vice-President, writing at the end of an article regarding the contributions that new historical or archeological data can bring to a text, concluded that "Doctrine in the holy Christian church is standard and unchangeable, as is the basis for doctrine in the Holy Scripture. Understanding Scriptural passages accurately, however, may be subject to improvement as more and more evidence is discovered from the ancient world." (*Reporter*, February 2007, page 6).



"This article takes the message of Scripture in its natural sense, seeing the early chapters of Genesis and related scriptural passages as historical."

How many dozens of times have you heard that the Church mistakenly held to a geocentric view of the solar system in the face of the findings of Copernicus, and that even Franz Pieper thought this way? Another view is that the literature of the Babylonians and Egyptians contains creation myths and that the Genesis account is an adaptation of those stories originating in an ancient Near Eastern cultural milieu.<sup>1</sup> That opinion is not nearly so common, however, since the publication of the research of Alexander Heidel.<sup>2</sup> Another perspectives that is cited often is that science has "proven" that the earth is more than four billion years old and that the universe is more than fourteen billion years old. This leads some to assert that Genesis 1 is merely poetical and is one of two major creation accounts in Genesis (Genesis 2 having a different order of creation), with other creation accounts appearing in the Scriptures.

Those are a few of the canards familiar to anyone who has read much in the field of origins. What most people don't know or realize or accept, however, is that many in the field of science in the sixteenth century also resisted the Copernican Theory, while others in the Church adopted this view. Seeing the Genesis account as the original version and all other accounts as corrupted versions of the biblical account is both theologically coherent and eminently reasonable, with the vast majority of dating methods supporting thousands rather than billions of years of earth's history.<sup>3</sup> Solid, objective research shows with a 99.99 percent degree of probability that Genesis 1 is a historical narrative rather than figurative poetry.<sup>4</sup>

At times the Church has been mistaken, largely for hermeneutical reasons. Some parts of the Church are currently mistaken, and most disagree about who is mistaken. I do not

Dr. Joel D. Heck is Professor of Theology Concordia University, Texas. Joel.Heck@concordia.edu presume to offer *the* biblical perspective. What I offer on these pages is a biblical perspective, based on what God's Word says rather than what people think, being aware, for the most part, of my own presuppositions. This leads to the question of biblical hermeneutics for the Genesis account, which, oddly has been dominated not by a historical-grammatical hermeneutic, but by a naturalistic scientific worldview originating in the nineteenth and twentieth centuries, the age of science. Before I continue, however, I want to affirm that an intelligent Christian can confidently believe the biblical account of Genesis 1 in its natural sense, holding to a young earth and 24-hour creation days in this age of science.

### A Hermeneutical Question

This article takes the message of Scripture in its natural sense, seeing the early chapters of Genesis and related scriptural passages as historical. This results from reading the text with as much objectivity as possible. While complete objectivity is impossible, this writer is guided primarily by what the text says and not by the prior commitments I bring to the text or the embarrassment I might feel by opposing the majority view in the sciences. This means that the proper approach is one of exegesis rather than of eisegesis and one that is biblical rather than scientific. One needs to read meanings out of the text rather than read meanings into the text which I wish to find. This is a very difficult task.

Many think that they approach a biblical text without presuppositions, but no one does, nor does this author. The unspoken presuppositions of nearly everyone have to do with Scripture and its reliability and relative authority, the nature and reliability of scientific data (or other data that affect our understanding of the text, such as archaeology, psychology, symbolics, and anthropology), the difference between data (facts) and inference (interpreting facts in relation to theory), and whom you trust and why. In many ways, people have often made up their minds before they look at the data or without considering alternative interpretations. Or they choose to ignore some of the data, regarding it as spurious without a legitimate reason because their minds are already made up. Recently, Stephen C. Meyer noted that some reviews of his book, *Signature in the Cell: DNA and the Evidence for Intelligent Design*, "were clearly written by people who hadn't even read it."<sup>5</sup>

Many of the issues regarding Genesis 1 revolve around the type of literature we find in that chapter. Confusion has arisen over ancient Near Eastern creation stories that are almost inevitably poetic, a fact that leads some to assume that Genesis 1 is poetic also. But it is not. If the original account is inspired by God and, therefore, an accurate depiction of the creative week, while the secondary accounts are neither inspired nor fully accurate, we would expect some similarities but also a great number of differences. And that is what we find when comparing Genesis 1 to the Babylonian creation account, Enuma Elish, the Atrahasis Epic from ancient Sumer, or Hesiod's Theogony.

One also reads from time to time that "Genesis 1 is not a textbook on science." Other similar statements also are common, such as, "Genesis 1 ... [is] not ... a textbook on astronomy." Then, pages later, the author stated that the opening chapters of Genesis "... were not meant primarily as essays on anthropology."<sup>6</sup> Of course not! There was no such thing as a textbook or an essay at the time that Genesis 1 was written. Genesis 1 is not a textbook, treatise, essay, or any other academic type of writing on anthropology, history, science, astronomy, biology, Hebrew linguistics, or any other academic discipline. Not even on theology! Using these types of statements to limit the meaning or application of Scripture is reading a modern academic discipline back into the text of Scripture. There was no such distinction when Genesis 1 was written. The Hebrews did not divide writings into "historical narrative," "scientific treatise," "anthropological excursus," "astronomical observations," or any other category. They knew when they were writing poetry or prose, history or fiction, liturgical or courtroom language,

that is, in a particular genre, but they did not sit down to write in any narrow academic arena. They simply wrote under the inspiration of the Holy Spirit while simultaneously writing from their own experiences.

Often the reason for insisting that Genesis 1 is not a textbook or essay on science, astronomy, or anthropology is to suggest that the chapter can only carry a theological message and not a scientific one. This is an artificial distinction. Passages of Scripture often carry multiple functions. There is no good reason to create an either-or when a both-and applies. Genesis 1 is capable of expressing both scientific and theological concepts, both anthropological and astronomical ideas, both ontology and teleology. This chapter also is interested both in the "how" of creation and the "who" of creation. The Bible is reliable in all areas about which it speaks.

Thus, while Genesis 1 is not a textbook on astronomy, it still speaks on the subject of astronomy. It's just not an academic textbook on that subject. While Genesis 1 is not an essay on anthropology, it still speaks about mankind. While Genesis 1 is not a textbook on science, it still speaks about the natural world in which we live.

Agreeing that the Bible is not a science textbook does not mean that modern scientific conclusions must rule over biblical ones. Nor does it mean that everything biblical is unscientific. In fact, God Himself is the ultimate Creator of all theology and all science. Therefore, we are pushed back to the original question, "What type of literature is Genesis 1?"<sup>7</sup>

Genesis 1 is clearly historical narrative. To turn that chapter and subsequent chapters into saga, legend, poetry, or symbolism is to rob it of its natural meaning. Then we also create other problems. If we say that Adam is a metaphor, then all of the genealogies that trace back to Adam become nonsense. When Jude 14 says that Enoch was seventh from Adam, does that mean that he was seventh from a metaphor? Are we sinners (Rom. 5:12-14) because we are descended from a metaphor?

### **Goals of Biblical Studies**

The goals of biblical studies will depend upon the convictions of the student of Scripture. For a Christian teacher, in my opinion, the most important goal is the salvation of souls (see John 20:31 and Matthew 28:18-20), but it doesn't end there. Another important goal is the new obedience of the whole life (Ephesians 2:10). Essential to both of these goals is an attitude of submission to God, His Word, and His will. Those are fundamentals of a Lutheran perspective.

Stated more broadly and fitting within this new obedience, a major goal of biblical studies is elucidation for understanding and direction. The familiar words of Psalm 119:105 teach us, "Your word is a lamp to my feet and a light for my path." According to the psalmist, God's Word illuminates or elucidates (its lamp function), and it also provides a way to live (its path function).

Romans 5:12 and related passages ground the Fall and our redemption in the sin of Adam through whom death and sin arrived. Paul states that Christ is the second Adam (Romans 5:12-17), which assumes that there was a first Adam. George Sayer notes that C.S. Lewis, "After he had become a Christian, he usually thought of animal suffering as a consequence of the Fall."<sup>8</sup> In other words, there was no pain or suffering prior to the Fall, though an old earth perspective argues that there was suffering and death for millions of years before the creation of Adam and Eve. Interestingly, to counter the old earth creation model is one reason Richard Dawkins writes:

The total amount of suffering per year in the natural world is beyond all decent contemplation. During the minute that it takes me to compose this sentence, thousands of animals are being eaten alive, many others are running for their lives whimpering with fear, others are slowly devoured from within by rasping parasites, thousands of all kinds are dying of starvation, thirst, and disease. It must be so. If there is ever a time of plenty, this very fact will automatically lead to an increase in population until the natural state of starvation and misery is restored.<sup>9</sup>

While it is true that a theology of redemption does not depend entirely on a historical reading of Genesis 1-3, but on the events of the crucifixion and resurrection, that theology is much stronger when it is based on actual events. In fact, this is the view of Jesus and every New Testament writer who addresses the subject.

### Key Messages of Genesis 1-3

Genesis 1–3 conveys many important messages. Among them are: (1) the fact that God created; (2) who this God is and what He is like; (3) the creation of man in the image of God; and (4) the six-day scope of creation (e.g., lots of time indicators as in Exodus, 20:11, 31:17).

According to Genesis 1, the Creator is one God, powerful, creative, majestic, giving, and loving. This, of course, does not exhaust the meaning of that chapter, but the effortless speaking into existence that we find in that chapter, for example, suggests that the God who created was very powerful. This is the most important message of Genesis 1.

Genesis I conveys the origin of man in the creation of Adam and Eve, and in Gen. 1:26–27 we learn about the image of God. The image of God has received much attention, but it generally refers to that which separates mankind from the animals, especially characteristics such as rationality, a sense of morality, conscience, and the ability to communicate on a high and abstract level.

While subsidiary to both the great power of the Creator, as revealed by the acts of creation, and the creation of mankind in the image of God, other key messages of Genesis I include the orderliness of creation, the power and majesty of creation, and the foundational nature of a creation that takes place in just six days. Significantly, Genesis 1 grounds our work week in a similar seven-day span of time.

An ironic truth is that some critical Old and New Testament scholars, no longer needing to work out a compromise between creation and evolution (since they don't think that much of Genesis is historical), admit that the word day means a 24-hour day.<sup>10</sup> James Barr, former Old Testament professor at Oriel College, Oxford University, while not believing the straightforward message of Genesis, once wrote, "...so far as I know, there is no professor of Hebrew or Old Testament at any world-class university who does not believe that ... creation took place in a series of six days which were the same as the days of 24 hours we now experience."<sup>II</sup> Gerhard von Rad wrote, "The seven days are unquestionably to be understood as actual days and as a unique, unrepeatable lapse of time in the world."12 Marcus Dods stated, "If, for example, the word 'day' in these chapters does not mean a period of twenty-four hours, the interpretation of Scripture is hopeless."13 Likewise, evangelical scholar John Walton, though not holding to a young earth or a six-day creation, wrote, "These are seven twenty-four-hour days. This has always been the best reading of the Hebrew text."<sup>14</sup> (See my forthcoming booklet, In the Beginning God: Creation from God's Perspective, for seventeen reasons why the word day should be understood in its normal sense in Genesis 1.)<sup>15</sup>

### Goals and Connections in the Scriptures

There is a strong connection between the creation, the fall, and our redemption. Paul himself connects them in numerous places, especially in Romans 5 and 8. D.M. Lloyd-Jones stated:

The Bible does not merely make statements about salvation. It is a complete whole: it tells you about the origin of the world and of man; it tells you what has happened to him, how he fell and the need of salvation arose; and then it tells you how God provided this salvation. Therefore these early chapters of Genesis with their history play a vital role in the whole doctrine of salvation.<sup>16</sup> Even the purpose of mankind was stated in the Garden of Eden. God created Adam to care for the garden and Eve to care for Adam. To this day, men are primarily, but not exclusively, work-centered, while women are primarily, but not exclusively, family-centered. There are many exceptions to these generalities (after all, Genesis 1:26 says, "... let *them* rule ..."), but these original purposes remain valid. The historical events of creation, fall, and redemption itself are close and strong. It's no wonder that evolutionist and atheist Richard Lewontin does not want to "allow a Divine Foot in the door."<sup>17</sup>

### The New Testament on Genesis

This connectivity is apparent from the more than two hundred references to Genesis in the New Testament, and more than one hundred quotations or references to the first eleven chapters of Genesis. Every New Testament author referred to Genesis 1-11, and Jesus Himself referred to those same chapters at least six separate times, including His references to the creation account. In none of those passages are the events of Genesis taken in a mythological or figurative sense; always the writer assumes the historical nature of the events he mentions. In fact, the words of Jesus, if taken at face value, preclude the possibility that Adam and Eve were late arrivals on the earthly scene at the end of a long evolutionary period.

D.M. Lloyd-Jones wrote:

... if you do not accept this history [Genesis], and prefer to believe that man's body developed as the result of an evolutionary process, ... you are still left with the question of how to explain Eve, for the Bible [especially the New Testament] is very particular as to the origin of Eve. All who accept in any form the theory of evolution in the development of man completely fail to account for the being, origin, and existence of Eve.<sup>18</sup>

In Mark 10:6, Jesus stated that "at the beginning of creation God 'made them male and female'." If evolution were true, then male and female human beings would have

come long after the "beginning of creation." If a young earth is true and evolution is false, then the words of Jesus are true and accurate with Adam and Eve being made "at the beginning of creation." This is clearly a reference, not to the beginning of mankind, as some think, but, as the text says, "the beginning of creation." A straightforward reading of this passage also shows that Jesus held the creation account to be historical and trustworthy, reflective of the entire first week of creative activity at the beginning of time. In Luke 11, Jesus connected the murder of Abel to the foundation of the world, i.e., its creation, not to an event that happened millions of years later. In fact, every reference of Jesus to the Old Testament shows that He not only held the Old Testament, including Genesis, in high regard, but He took it as straightforward history.<sup>19</sup> If Scripture truly interprets Scripture, then the words of Jesus are important testimony. Nor will it do to assume that Jesus accommodated Himself to frail human understanding, since that would make Him guilty of a falsehood.

In conclusion, we can trust Scripture to be what it says it is, to teach what it says it teaches, and to accomplish the purpose for which God sends His Word. Let's let our consciences be captive to the Word of God.

### Notes

- John Walton's book, The Lost World of Genesis One. Downers Grove, Ill: InterVarsity Press, 2009 is a recent example of this cultural viewpoint.
- 2 Alexander Heidel, *The Babylonian Genesis: The Story of Creation*. Second Edition. Chicago: The University of Chicago Press, 1951.
- 3 John Morris, *The Young Earth*, Revised and Expanded Edition, Green Forest, Ark.: Master Books, 1994, 2007.
- 4 Stephen Boyd, "A Proper Reading of Genesis I:I-2:3." In *Thousands ... Not Billions*. Don DeYoung, ed. Green Forest, Ark.: Master Books, 2005, pages 158–170.
- 5 Biola Magazine, Summer 2010 (online version).
- 6 Hillmer, Mark. "Was Evolution Involved in the Process of Creation? Yes." *The Genesis Debate: Persistent Questions about Creation and the Flood.* Grand Rapids: Baker, 1990, 87, 91, 92.

- 7 This is precisely the question that Ernest Lucas and many others get wrong. Citing Origen's book, First Principles, Lucas seems unaware of the fact that Origen belonged to the Alexandrian School, a school that favored the allegorical interpretation of Scripture. This explains Origen's statement that the days of Genesis 1 are "figurative expressions." The allegorical interpretation is precisely one of those rejected by the Reformers as too subjective. Lucas also fails to note that Origen believed in a young earth and wrote against Celsus by stating that "the Mosaic account of creation ... teaches that the world is not yet ten thousand years old, but very much under that." (De Principiis 1.19) "Interpreting Genesis in the 21<sup>st</sup> Century." http://www.st-edmunds.cam.ac.uk/faraday/ resources/Faraday%20Papers/Faraday%20Paper%20
- 8 George Sayer, Jack: A Life of C.S. Lewis. New York: Harper & Row, 2005, p. 179.
- 9 Richard Dawkins, The Greatest Show on Earth: The Evidence for Evolution. New York: Simon & Schuster, 2009, 391.
- 10 For example, John Skinner and August Dillman, in Jonathan Sarfati, *Refuting Compromise*. Green Forest, Ark.: Master Books, 2004, p. 134. See also Jack Lewis, "The Days of Creation: An Historical Survey of Interpretation," *JETS* 32/4, 454.
- 11 Cited in Sarfati, 137.

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- 12 Gerhard von Rad, Genesis: A Commentary (Philadelphia: Westminster Press, 1972), 65. See also references to Gordon Wenham, Victor Hamilton, Hermann Gunkel, and John Stek in Trevor Craigen's chapter, "Can Deep Time Be Embedded in Genesis?" in Terry Mortenson. Coming to Grips with Genesis. Green Forest, Ark.: Master Books, 2008, 203.
- 13 Marcus Dods, Expositor's Bible (T. & T. Clark: Edinburgh, 1888), 4, cited in Douglas Kelly, Creation and Change. Fearn, Scotland: Christian Focus Publications, 1997, 45.
- 14 John Walton, *The Lost World of Genesis One*. Downers Grove, Ill.: InterVarsity Press, 2009, 91.
- 15 St. Louis: Concordia Publishing House, 2011
- 16 What is an Evangelical? (Addresses given at I.F.E.S. Conference, 1971) The Banner of Truth. Banner of Truth Trust, 1992, p. 75.
- 17 "Billions and Billions of Demons," The New York Review, January 9, 1997, 31
- 18 What is an Evangelical? (Addresses given at I.F.E.S. Conference, 1971) The Banner of Truth. Banner of Truth Trust, 1992, p. 76.
- 19 John Wenham, Christ and the Bible. Downers Grove, Ill.: InterVarsity Press, 1973, 11-37.



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"I was raised by Christian parents, confirmed my faith in the Triune God as a teenager while attending Missouri Synod Lutheran churches in South St. Louis, Missouri, and Woodriver, Illinois." ISSUES

During my undergraduate and graduate studies in zoology, and later, as a Professor of Clinical Hematology, my professors and student colleagues would ask me: "As a student of zoology, how can you be a Bible-believing Christian and ignore the Big Bang Cosmic Theory on the Origin of the Universe and Darwin's Theory of Natural Selection?"

I was never troubled by this question. I was raised by Christian parents, confirmed my faith in the Triune God as a teenager while attending Missouri Synod Lutheran churches in South St. Louis, Missouri, and Woodriver, Illinois. Every person I saw, every animal I had as a pet, and every tree and plant I watched grow, I saw the "fingers of God," the Creator. I never saw natural selection as the cause, only the God who creates by His spoken word.

As the Bible states: "By faith we understand that the universe was created by the word of God, so that what is seen was not made out of things that are visible" (Hebrews 11:3, ESV). Herein lies a theological and confessional summary of what The Lutheran Church— Missouri Synod professes regarding the creation of the universe and our human beginnings.

God's word is truth, and Jesus Christ "was in the world, and the world was made through him" (John 1:10A) as "the Spirit of God was hovering over the face of the waters" (Genesis 1:2B, ESV). The Triune God is creator, not cause.

Yet, I have found that many of my scientific colleagues and friends wanted to point to the Big Bang Cosmic theory and Naturalistic Darwinism as the combined cause of the origin of the universe and humans. What truly surprised me was the fact that

Dr. Robert Weise is Professor of Practical Theology and The Lutheran Foundation of St.Louis Chair of Pastoral Ministry and the Life Sciences Concordia Seminary, St.Louis. Weiser@csl.edu some of my Lutheran friends in college and even up to this time combined the Big Bang, Naturalistic Darwinism and Biblical Creation into the oxymoronic origins-phrase: Theistic Evolution. They wanted "to have their cake and eat it, too." This troubles me the most.

With the gatekeepers of society, the television, the Internet, the printed media such as Discover, Scientific American, and National Geographic magazines constantly lifting up the Big Bang and Naturalistic Darwinism theories as the truth of human origins, Lutheran Christians need to reaffirm what they believe, teach and confess regarding our human beginnings in Christ. Our thinking and reasoning are always in service to the Word of God. Therefore, this article and others assist us in structuring our theological and confessional thinking so that whatever we do, in thought, word and deed, brings glory to God and witness to the Good News of Salvation History in Jesus Christ who is the author and perfecter of faith (Hebrews 12:2).

### Creation: God Creates One Human Kind The Bible, Confessions and Synodical Resolutions.

The Triune God created one human kind, Adam and Eve, from dirt. Moses records His created word narrative as follows:

Then God said: "Let us make man in our image, after our likeness. Let them have dominion over the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth." So God created man in his own image, in the image of God he created him; male and female he created them. And God blessed them. And God said to them, "Be fruitful and multiply and fill the earth and subdue it and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth" (Genesis 1:26–28).

Moses expanded the details of God's created word regarding Eve: Then the LORD God said, "It is not good that the man should be alone" ... for Adam there was not found a



helper fit for him. So the LORD God caused a deep sleep to fall upon the man, and while he slept took one of his ribs and closed up its place with flesh. In the ribs that the LORD God had taken from the man he made into a woman and brought her to the man. Then the man said, "This at last is bone of my bones and flesh of my flesh; she shall be called Woman, because she was taken out of man. Therefore a man shall leave his father and his mother and hold fast to his wife, and they shall become one flesh" (Genesis 2:18A, 20B-24).

This is God's word creating human kind from nothing. As the writer of Hebrews stated, this is an article of faith and is affirmed in Luther's Small Catechism in the First Article of the Apostles' Creed with its explanation: "I believe in God the father Almighty maker of heaven and earth." What does this mean? "I believe that God has created me together with all that exists. God has given me and still preserves my body and soul: eyes, ears, and all limbs and senses; reason and all mental faculties." We are created descendants of God's first human kind, Adam and Eve. As Luther writes in the Large Catechism, The First Article, "All this is comprehended in the word 'Creator'."

Dr. Martin Luther in writing on Genesis states the following:

But He Himself shapes him [Adam] according to His image as if he were God's partner and one who would enjoy God's rest. So Adam is a dead and inactive clod before he is formed by the Lord. God takes that clod and forms from it a most beautiful creature, which has a share in immortality ... and, as Moses states later, makes the woman out of the rib of the man. Such was the origin of man.<sup>2</sup> affirms the six-day creation narrative and that man is the principle creature of God."<sup>3</sup> A resolution from the 2004 synodical convention states:

The Scriptures teach that God is the Creator of all that exists and is therefore the Author and Giver of Life .... That all educational agencies and institutions of The Lutheran Church--Missouri Synod including early childhood programs, elementary schools, high schools, colleges, universities, and seminaries continue to teach creation from the biblical perspective .... That no educational agency or institution of The Lutheran Church--Missouri Synod tolerate any teaching that contradicts the special, immediate, and miraculous creation by God, Father, Son, and Holy Spirit, as an explanation for the origin of the universe .... That The Lutheran Church-Missouri Synod, in convention, remind its pastors and teachers to increase emphasis to the doctrine of God as the Creator Author of Life in their preaching and teaching.<sup>4</sup>

Resolutions from the 1979 and 1981 Convention Proceedings of The Lutheran Church—Missouri Synod encourage public schools "To Allow Concept of Special Creation to Be Taught in public schools."<sup>5.6</sup>

### Science affirms the Biblical Word on Human Beginnings.

The Lutheran Church—Missouri Synod has always taught that we are a "complete human being" in body and soul from "conception," the union of the genetic material from the male and female gametes. God speaks of the unborn child as "complete/fully human" body and soul. He is the one that creates and forms

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the tiniest human being in the womb (Psalm 139:13; Job 31:15; Isaiah 44:2). God knows his human created creatures and, therefore, establishes a relationship with the unborn child in the womb (Judges 13:5–7; Psalm 22:10; Jeremiah 1:5). In Exodus 21:22, the Hebrew word for child in the womb is *yeled*. In addition, this word is used for an adolescent child in Genesis 21:15 and adult in 37:30 and 2 Chronicles 10: 8, 10, 14.

Several LCMS resolutions affirm our being and personhood from conception: "Life is a gift of God, and unborn (nascent) life is of special value before God, and life and death belong to the province of God (Psalm 139: 13-16; Jeremiah 1:5; Isaiah 49:5; Galatians 1:15)."<sup>7,8,9</sup> In addition, one resolution adds: "The Bible clearly states that the child in the mother's womb is a living human being (Jeremiah 1:5; Psalm 139:16; Isaiah 49:1,5; and Luke 1: 41, 44)."<sup>10</sup>

Science that affirms the Word of God is in service to the Word of God. The scientific discipline, embryology, demonstrates that life begins at conception, and is a continuum throughout the human being's development within the womb of the mother.<sup>11,12</sup> Biblical passages taken from the Old and New Testaments demonstrate this point. Isaiah 7:14 states: "Therefore the Lord himself will give you a sign. Behold, the virgin shall conceive and bear a son, and shall call his name Immanuel." In addition, Saint Luke writes: "And behold, you will conceive in your womb and bear a son, and you shall call his name Jesus."13 Both Drs. David Adams and Jeff Gibbs of the Exegetical Department, Concordia Seminary, St. Louis, Missouri, shared the following comments with me regarding these passages:

Both of these passages demonstrate that life is a continuum. The word "and" combines "conceive" with "bear a son" as single event and process. Therefore, the science of embryology agrees with the biblical Word. From the conception of a human person, life is a continuum. This becomes more profound within the context of the Incarnation. God, Jesus Christ, became like one of us from His incarnate conception. From the Christian Lutheran perspective, we are human beings, created by the Word of God to have fellowship with Him and the Body of Christ. We Lutherans view the created human being as a gift. We are made, not begotten. We are made in His image. This image was lost when Adam and Eve disobeyed God and sinned. Since Christ is the very image of God, through Holy Baptism we are in Jesus Christ by His righteousness, holiness and innocence with the image of God restored in us by Jesus Christ.

We are changed by God's grace, not by a Natural Darwinistic 'change' via mistake and chance brought about by death. Our value, our dignity, comes from God, our creator, who declared us as His adopted sons and daughters in Christ. The completeness of our humanity comes to us not only as the gift of created life but also the grace-gift of His righteousness. Luther sums this up in this way: "Let this be the summary of this article that the little word "LORD" simply means the same as Redeemer, that is, he who has brought us back from the devil to God, from Death to life, from sin to righteousness, and keeps us there."<sup>14</sup>



### Creation: Mixing God's Human Kind with Darwin's Ape-Man Kind

Mixing the biblical teaching of "creation from nothing" with Darwin's theory of Natural Selection tramples the Gospel into dust proclaiming Jesus as one who comes to 'fix' Adam and Eve's evolutionary mistake called original sin, so that our relationship with God depends on our state of being evolved. This approach deconstructs the biblical teaching of creation into a potpourri of blended human origins into Theistic Evolution. Yet, there are prominent scientists who believe that this is the way to go for Christians so that they can have "the best of both worlds." For example, Dr. Francis Collins, Director of the National Institutes of Health and Dr. John Polkinghorne prefer to merge the Doctrine of Creation and the Big Bang/Materialistic Darwinism into Theistic Evolution, or as Dr. Collins prefers, BioLogos.

Dr. Collins writes in his most recent book, The Language of God:

Science reveals that the universe, our own planet, and life itself are engaged in an evolutionary process .... No serious biologist today doubts the theory of evolution to explain the marvelous complexity and diversity of life .... In the context, I find theistic evolution, or BioLogos, to be by far the most scientifically consistent and spiritually satisfying of the alternatives.<sup>15</sup>

Dr. Polkinghorne in *Science and Theology, an Introduction* states:

The universe started extremely simple (referring to the Big Bang), but in the course of its fifteen-billion-year history there has been generated a rich profusion of complex structure. This has happened by evolutionary process, ... God is present in the evolutionary process—not as its sole determinant, for an evolving world is allowed by its Creator to some degree to 'make itself' through the shuffling explorations of contingency—but as the source and guide of its fruitfulness.<sup>16</sup>

To the contrary, Dr. Martin Luther predates these latest pro-theistic evolutionists when he writes:

Just as no creature was able to contribute towards its own creation at the beginning, so it has not been able to work towards its preservation and the perpetuation of its kind. Thus, as we human beings did not create ourselves, so we can do nothing to keep ourselves alive for a single moment by our own power.<sup>17</sup>

He adds:

24

It is not true as several heretics and other vulgar persons allege, that God created everything in the beginning, and then let nature take its own independent course, so that all things now spring into being of their own power; thereby they put God on a level with a shoemaker or a tailor. This not only contradicts Scripture, but it runs counter to experience.<sup>18</sup>

Again, Luther writes: "Ungodly and wicked men, who suppose that everything happens by chance, understanding nothing in the Holy Scriptures and the creatures of God."<sup>19</sup>

Obviously, Martin Luther recognized that men and women did not come into existence by chance or mistake under the guise of either Deistic or Theistic Evolution. Combining materialistic Darwinism with the authority of Scripture and the biblical narrative on Creation tramples the Gospel and the entire biblical narrative that Jesus Christ was in the world creating the world before the world was. This has serious implications for the ongoing future of mankind in the areas of abortion, reproductive technologies, assisted suicide, euthanasia, ageism, health care rationing, and Posthumanism wherein human beings are treated as objects.

### Human Beginnings: LCMS Perspective

The Lutheran Church–Missouri Synod rejects materialistic Darwinistic cosmic origins of mankind as well as its union with Biblical Creation by God in the form of Theistic Evolution. We are dependent on God, our Creator. We are not autonomous beings seeking self-fulfillment via self-will. By His grace through faith we receive His love in Christ Jesus and share this covenant love with those around us in our Christian witness. We are the Lord God's human creatures to worship, serve and obey Him, as well as serve our fellow persons. To reduce human beings to objects or commodities or murder them by elective abortion violates God's will set forth in His creative word " ... so that we neither endanger nor harm the lives of our neighbors, but instead help and support them in all of life's needs."20

The Lord God, the Word made flesh in Jesus, teaches us that we value all human beings as persons from conception. We are not here to build our City and Tower of Babel, "That Hideous Strength."<sup>21</sup> Control and manipulation of His human creatures and the environment are not living the life of Christ Jesus in this world. Again, we are here to be His witnesses, to plant the seed of the Gospel, to water the seed of the Gospel, and know that He causes the Gospel seed to grow in the body and soul

of all persons that He has called by name.

As a Lutheran Christian scientist and ordained clergyman who has served in two parishes for 10 years and now, for the past 18 years as Professor of Practical Theology, I have no difficulty proclaiming that the LORD God is the author and creator of all life. When I am asked the question: "Why don't you, a scientist and theologian, see how God uses the cosmic origin of the universe and man in our ongoing evolution?" I respond: "I am a Christian Lutheran that believes in the Word of God who has made me His human creature and brought me into His body through water, Word and faith. Where you begin is where you will go."

### Notes

- 1 Martin Luther, The Small Catechism and The Large Catechism, in The Book of Concord, The Confessions of the Evangelical Lutheran Church. Edited by Robert Kolb and Timothy J. Wengert (Minneapolis: Fortress Press, 2000), pp. 354, 432-433.
- 2 Martin Luther, "Lectures on Genesis," Luther's Works, Chapters 1-5 (St. Louis: Concordia Publishing House, 1958), vol. 1, p. 84.
- 3 Proceedings of the 47th Regular Convention of The Lutheran Church–Missouri Synod, New York, New York, July 7–14, 1967, "To Reaffirm Our Position on Creation, Fall, and Related Subjects," Resolution 2–31, p. 95.
- 4 Convention Proceedings, 2004, 62nd Regular Convention, The Lutheran Church-Missouri Synod, St. Louis, Missouri, July 10–15, 2004,
  "To Commend Preaching and Teaching Creation," Resolution 2–08A, p. 125-126.
- 5 Convention Proceedings of the 53rd Regular Convention, The Lutheran Church-Missouri Synod, St. Louis, Missouri, July 6-12, 1979,
  "To Allow Concept of Special Creation to Be Taught in Public Schools," Resolution 9-02A, p. 161.
- 6 Convention Proceedings of the 54th Regular Convention, the Lutheran Church-Missouri Synod, St. Louis, Missouri, July 3-10, 1981, "To Encourage Teaching of Creation," Resolution 7-16, p. 201.

- 7 Convention Proceedings, 52nd Regular Convention, The Lutheran Church-Missouri Synod, Dallas, Texas, July 15–22, 1977,
  "To Support Efforts to Protect the Living but Unborn," Resolution 3–08C, page 130.
- 8 Convention Proceedings, 53rd Regular
  Convention, The Lutheran Church-Missouri
  Synod, St. Louis, Missouri, July 6–12, 1979,
  "To State Position on Abortion," Resolution 3–02A, page 117.
- 9 Convention Proceedings, 56th, Regular Convention, The Lutheran Church–Missouri Synod, Indianapolis, Indiana, July 18–25, 1986, "To Reaffirm the Position of the Synod on Abortion," Resolution 3–21, page 148.
- 10 Convention proceedings, 61st Regular Convention, The Lutheran Church–Missouri Synod, St. Louis, Missouri, July 14–20, 2001, "To Reiterate Synods Stance on Abortion," Resolution 6–02A, p. 157.
- R. O'Rahilly and F. Müller, Human Embryology & Teratology, 3rd Ed., (Wiley-Liss, 2001), pp. 7-8.
- 12 Moore Persaude, The Developing Human, Clinically Oriented Embryology, 7th Ed., (Saunders, 2003), p. 2.
- 13 St. Luke 1:31
- 14 Martin Luther, The Large Catechism, in The Book of Concord, edited by Robert Kolb and Timothy J. Wengert (Minneapolis: Fortress Press, 2000), p. 343.
- Francis S. Collins, The Language of God, A Scientist Presents Evidence for Belief. (Free Press, 2006), pp. 45, 99, 210.
- 16 John Polkinghorne, Science & Theology, an Introduction (Fortress Press, 1998), pp. 39, 80.
- 17 Martin Luther, "Sermons on the Gospel of St. John, Chapters I-4," Luther's Works, Vol. 22 (Concordia Publishing House, 1957), p. 28.
- 18 Ibid, pp. 28-29.
- Martin Luther, "Lectures on Genesis, Chapters 21-25, Luther's Works, Vol. 4 (Concordia Publishing House, 1958), p. 249.
- 20 Martin Luther, The Small Catechism, in The Book of Concord, edited by Robert Kolb and Timothy J. Wengert (Fortress Press, 2000), p. 352.
- 21 C. S. Lewis, That Hideous Strength, a Modern Fairy-Tale for Grown-Ups (Scribner, 1996), title page.



ISSUES

Given the limited space I have to discuss a topic as controversial as human evolution, I feel compelled to be as clear as possible regarding the objective of this article. The objective is to describe how human evolution is currently understood in the sciences. Let us be clear that I am reporting information, not analyzing data. My objective is not to disprove or prove that the information reported is accurate and true, but rather to relay to the reader what is currently being said in the scientific community about the evolutionary history of humans. In order to achieve this objective, it will be necessary to lay out a small number of scientific terms and concepts so that the information is more readily understood.

This discussion will begin with rudimentary evolutionary concepts and will then progress to a summary of what is currently being suggested as the path of human evolution. I will pick up the human ancestry from where it is currently believed that humans diverged from chimpanzees and introduce the key points in the fossil record that are used to substantiate human evolution from that point to modern humans. The paper will conclude with a discussion of how current paradigms within the scientific community mold the discussion of human evolution (and evolution in general).

### The Basics

Current evolutionary theory is based on concepts developed by Charles Darwin in his book, On the Origin of Species, published in 1859. Interestingly, Darwin did not address human evolution in Origins with the rigor that it was discussed in The Descent of Man published in 1871. The Origin of Species established the

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concept of natural selection that Darwin developed by combining his observations of artificial selection (e.g., cross breeding plants and animals for maximum production in agriculture) with the concept of limited environmental resources. He concluded that organisms that can adapt best to their environment will have the most offspring. Modern science draws on the information learned from genetics (unavailable to Darwin) to say that changes in the morphology (general internal and external anatomy) of an organism occur when the genetic code (DNA) of that organism mutates and new morphological characteristics emerge within that organism.

When mutated changes in an organism occur, the ability of that organism to produce more offspring than competing organisms can sometimes take place, and the mutated organism will survive at a higher rate and establish itself as the dominant organism. The ability of a genome (all the genes of a particular organism) to change over time provides a population (all the organisms found in that species) with the ability to adapt to new environments as they arise and also to become the best suited for the environment they currently occupy. If the environment changes over time, species will change with it. New species will emerge and other species will go extinct. This basic concept is then used to describe how all new species arise from old ones and even how the first living organisms colonized the Earth.

Carolus Linnaeus established a classification system in 1735 that attempted to take extant (currently existing) animals and organize them based on morphological characteristics. His classification system organized animals into a Kingdom, Phylum, Class, Order, Family, Genus and Species scheme. For example, modern humans would be in the Kingdom Animalia, Phylum Chordata, Class Mammalia, Order Primates, Family Hominidae, Genus Homo and the species sapiens. This classification scheme figures prominently in the discussion of human origins and focuses primarily at the levels of family, genus and species.

Another key concept that is used in the discussion of human origins is cranium

(or skull) size. The idea here is that the size of the brain is correlated to the intelligence of the organism. Human-like fossils with small brain sizes would be considered less intelligent than modern humans. In general, the smaller the brain, the less human the fossil would be considered.

Homology is a key concept that must be understood when reviewing human evolutionary history. This concept identifies shared body form characteristics for extinct and extant animals and attempts to draw conclusions based on the similarity of these characteristics and how many characteristics are shared. For example, humans are thought to be more closely related to chimpanzees than apes because of shared skeletal characteristics. This concept is extended to metabolic, genetic and social similarities as well. The basic assumption in this concept is that similarities mean evolutionary relatedness. The more similarities found between animals, the closer they are related.

Evolutionary trees are established by using homology. These trees attempt to build

a visual picture that shows the evolutionary lineage of a species. Human fossils, and those fossils appearing to be humanlike, are aged and analyzed by looking for shared characteristics, and evolutionary relationships are theorized based on this data. One significant characteristic that is used in human evolution is the ability to walk upright on two feet (called bipedalism). In order to walk as we humans do, the hip, spine, leg bones and feet bones must be positioned correctly or we would fall over as we walked. Scientists will use the skeletal structure of a modern bipedal human and compare that to fossils found to determine that fossil's ability, or inability, to walk upright.

Current scientific dating techniques estimate the age of the Earth to be in the billions. Consequently, when one looks at evolutionary trees of humans, relationships are reported in the millions of years. Most of human evolutionary history is considered to be relatively recent by geologic time scales.

This may be a good time to remind the reader that the objective of this paper



is to relay a summary of current human evolutionary theory which restricts my ability to adequately address the strengths and weaknesses of the information reported above. That would need to be another paper.

### Human Evolution

The concept that humans evolved from apes is not exactly correct when describing human evolution. The way evolutionary biology describes human lineage is better understood with the concept of a "common ancestor." Using this concept, humans are not considered to be direct descendents of apes or chimpanzees, but rather that these groups shared a common ancestor in the distant past. Consequently, when one describes the evolution of humans and a split from a lineage is referenced, what is meant is that from the shared common ancestor, humans evolved in one direction, apes and chimpanzees evolved in another direction.

Most evolutionary biologists agree that early human ancestors came from the African continent. Human lineage is thought to have separated from chimpanzees five to seven million years ago. In the nottoo-distant past, Primates that split from chimpanzees were referred to as hominoids. Recently, hominoids were categorized to include gorillas, orangutans, chimps and humans. Fossils containing more humanlike characteristics are now called hominins. There are some main characteristics that would put a human-like fossil into the category of hominin. The primary characteristic is the propensity for bipedal locomotion (walking upright). Since it is thought that human-like characteristics evolved slowly over a long period of time, the exact point when hominins broke away from chimpanzees and apes is not well defined, making trying to decide if a primate fossil is a hominin difficult. Regardless, when a fossil skeleton is found, analysis of bone structure to determine if the organism would have been capable of walking upright is used to make a determination of whether or not it is a human ancestor.



Other characteristics that are used are cranium size and shape, dentition, shape of the spine and length of forearm and hind limb bone structure.

Earliest hominin fossils are in the genus Sahelanthropus and Orrorin. These fossils were found in central and eastern Africa respectively and are aged at 6-7 million years old. The genus Ardipithecus, which includes the recently found fossil nicknamed "Ardi," is theorized to be the next in the hominin lineage followed by groups of species referred to as the australopithecines.

Australopithecus is a genus of hominins that is thought to be bipedal; however, the forelimbs are longer than the hind limbs. This genus contains Australopithecus afarensis which was nicknamed "Lucy" by the researchers who found the skeleton. Lucy was dated approximately 3 million years old and had a cranial capacity of about 400 cm<sup>3</sup>, which is considerably less than that of modern humans (approximately 1,300 cm<sup>3</sup>). Australopithecus is thought to be ancestral to the more modern genus of humans called Homo.

Ancestors of humans are placed into the genus *Homo* if, in general, the brain size

is greater than 600 cm<sup>3</sup>, if the use of tools were present with the fossils, if the jaw and teeth are similar to modern humans and if bipedalism were possible. The earliest fossil in the *Homo* genus is known as *Homo habilis* dated to be approximately 2 million years old. *Habilis* had a cranium size of approximately 700 cm<sup>3</sup> and are thought to be omnivores based on their dentition. Stone tool use is evident with this species, but was considered to be very simple compared to the next species of *Homo* in the human lineage *Homo ergaster* dated to be about 2 to 1.4 million years old.

### FIRE



Ergaster's cranium size is thought to be approximately 800 cm<sup>3</sup>, and skeletal remains of this species strongly indicate an upright striding gate much like modern humans. Fossils from this species were found with more advanced stone tools and demonstrated the use of fire. Homo ergaster is thought to be an evolutionary ancestor to Homo neanderthalensis (commonly referred to as Neanderthal) and Homo sapiens (you and I). Colonization of areas beyond Africa by the genus Homo is still debated within the scientific community, but it is currently thought that Homo sapiens evolved from Homo erectus in Africa and then migrated from there. This is typically referred to as the "out-of-Africa hypothesis."

The oldest fossils of our genus and species, Homo sapiens, is Cro-Magnon, named after the area of France where it was first found. Cro-Magnon is thought to be very similar to modern humans in appearance and had specialized tools (e.g., stone tools hafted to wood handles). Art figures prominently in Cro-Magnon culture, as do advanced social organizations and cooperative hunting. This leads us to today's population of humans with the characteristics that you see in the mirror.

In an attempt to make this summary of human evolution as concise as possible, I have intentionally left out some hominin fossils of the Australopithecus (e.g., Australopithicus boisei, Australopithecus robustus) and Homo (e.g., Homo erectus, Homo heidelbergensis), genus. I wanted to introduce the major categories that are used to discuss human evolution which would primarily mean the genus level. Consequently, a discussion of each individual species within the genus goes beyond the scope of this paper.

Please remember that this is a summary of human evolutionary history and not an analysis of its accuracy or truthfulness. An understanding of this information would not be complete without a discussion of the paradigm in science that has had an effect on how this information (or data) is analyzed or interpreted.

### Parawhat?

An operating paradigm is a focused way of saying "worldview" or the "lens with which we look at the world." Most people are somewhat aware that they have a worldview, but I do not think that most people take time to articulate what it is. It would not be an earth-shattering statement to say that science also has an operating paradigm, but it may be interesting to observe that this paradigm did not come from a laboratory or a scientific experiment of any kind. It comes from history and the way humans have interacted with science in the past and present. The current operating paradigm in science has been called a number of different things (e.g., materialism, naturalism), but its basis is that science looks only to natural explanations to describe what it considers to be natural phenomenon. Consequently, if you ask an evolutionary biologist how humans populated the planet, you would

hear something like what was discussed. To say that such a biologist is evil or an atheist would most likely be inaccurate; to say that such a biologist is influenced by the current operating paradigm in science would be accurate.

Does this mean such a person is not thinking for one's self when thinking about current human evolution theory? Absolutely not. Does that mean that if that person is a Christian, there will be confusion between the scientific account and the Genesis account? Perhaps, but one of the ways that is commonly used to resolve the confusion is to rationalize that maybe God used evolution as a way to populate the Earth. Or, to believe that science and theology are two separate ways of knowing, and that science answers questions that theology cannot and vice versa. These may be ways to resolve the conflict, but they are a woefully incomplete way to look at what one may hold to be true.

Our time may be better spent trying to truly understand what effect the current operating paradigm in science has on the way that science speaks. For example, if you are looking for a purely naturalistic way to explain the existence of humanity, then current human evolutionary theory would make great logical sense to you. You might even go so far as to say that it is a fact, but if you have not taken the time to really understand how operating paradigms affect the way science communicates (or if you are not even aware of it), then I would suggest that you may be hearing a paradigm and not necessarily the facts. Please be advised that I am NOT saying one is unaware of the facts, or that one is ignorant of the facts; I am saying that time needs to be spent thinking about how different groups of people can be looking at the same facts and draw seemingly diametrically opposed conclusions. I would suggest that when there are competing interpretations of the facts, that should be a red flag to both camps that they need to identify to each other how their operating paradigms could be influencing the way they are interpreting these facts and

the way that they are communicating that interpretation.

Science and theology are united in that both seek the truth and employ a way of knowing to try and locate that truth. Both disciplines can teach each other to identify their own operating paradigms. Before arguing about the details, time should be spent identifying the paradigms (with their underlying assumptions) they operate with and showing each other the ways their respective paradigms affect how they talk to each other.

### Notes

This summary of human evolution is a compilation of information based on: Slyvia Mader's 11<sup>th</sup> edition of *Human Biology*; Slyvia Mader and Michael Windelspecht's 12<sup>th</sup> edition of *Human Biology*; Cleveland Hickman, Jr., Larry Roberts, Susan Keen, David Eisenhour, Allan Larson and Helen I'Anson's 14<sup>th</sup> and 15<sup>th</sup> editions of *Integrated Principles of Zoology*; Bruce Bower, "Evolution's Bad Girl," *Science News*, January 16, 2010; Frances Ayala, *Am I a Monkey*? Johns Hopkins University Press, 2010. I would recommend Dr. Ayala's book for a discussion of evolution and how the worlds of science and theology are discussed. Human Beginnings:

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PITUITARY GLAND SPINAL CORD FRONTAL LOBE CEREBELLUM TEMPORAL LOBE

Dr. Erich A. von Fange

# Creation Research Society tives erspec

"The focus of creationist studies is to honor God with our lives, and that includes honoring Him with all our minds."

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ISSUES

What are the purpose, goals, and methods of studies conducted by members of the Creation Research Society (CRS) and other creationists?

As we discuss in some detail below, creationists see that many Christians are misled by attacks on their faith in the guise of "science." Creationists believe that ALL of the Bible is God's pure word, and thus attacks on the truths of Genesis are attacks on all of Scripture. The focus of creationist studies is to honor God with our lives, and that includes honoring Him with all our minds. Thus CRS studies show the highest regard for science as a special gift of God, and this is reflected in the purpose, goals, and methods of all the studies of the CRS. Scientific method is therefore reflected in their work.

Good people of all ages have good questions about their faith and life, and some of their important questions deal with the early chapters of Genesis, such as Creation and Noah's Flood. As we shall note, there are many active forces about us that use every possible means to change the clear Word of God into fiction and myth. This was true at the time of Jesus and His disciples, and it is true today. Creationists need to be reminded over and over how to cope with this situation. One of a number of passages reads, "Always be prepared to give an answer to everyone who asks you to give the reason for the hope that you have. But do this with gentleness and respect" (1 Peter 3:15, NIV).

A recent letter helps us see the need for much prayer and study: "I am a very good example of someone who has been lost in a sea of unanswered questions. I am now 30 years old—was raised as a Christian, but when I was about 13, I began wondering and asking about the beginning of the earth. I strayed from the church and chose to believe

Dr. Erich A. von Fange is a charter member of the Creation Research Society and Professor Emeritus Concordia University, Ann Arbor. Fangmer@gnet.com the 'scientists' (sic) way of thinking. I recently have been drawn back in the church, and your talk at our church was a true blessing to me. I sincerely thank you ... and I am so eager to read your books. I am so desperately searching for sense to be made of my questions."

Here is one more example. At the end of a Bible class about our young created earth, a man approached me and thanked me for the class and then said, "But I didn't believe a word of it." My soft smiling response led to a wonderful e-mail relationship in the following weeks and much real positive sharing.

The Creation Research Society has five areas of focus.

1. Publish a technical journal, the *Creation Research Society Quarterly*, which provides in-depth analysis of scientific understanding, and a popular-level publication, *Creation Matters*, which features non-technical articles on a variety of current issues.

2. Publish and distribute books on a variety of scientific fields in the creation/ evolution controversy.

3. Conduct field, laboratory, and library research to develop and test scientific models of creation.

4. Provide research grants and facilities to experienced creation scientists for approved research projects.

5. Reach out to the world with physical evidence that demonstrates that science confirms Scripture.

We now have a speakers' bureau comprised of highly-trained scientists who are able to speak in churches, schools, and other organizations on a wide variety of creation topics.

## What are the data bases of their discussions of human beginnings?

Newspapers and other media across America offered this headline and story on October 23, 2010: "Wind, not Moses, is suspected of parting Red Sea." Computer simulations were claimed to match fairly closely with the account in Exodus. How does the creationist respond to stories like these? One sees that doubt is spread by the article, but the story is full of hedges rather than certainties.

Above all, creationists honor the Bible as setting forth the boundaries of what God tells us through the inspired writers of holy Scripture about the true beginning of the cosmos, our world and everything in it, defined as an orderly, harmonious whole, as opposed to chaos.



Over centuries of study, we have learned much from the Bible, and study continues to give us important knowledge of the great miracle of creation. Creationist writings are in harmony with the Word of God. However, since the great purpose of the Bible is to tell the Good News of Jesus Christ and how through Him we come to a saving faith in Him, creationists are not surprised to see that the Bible does not speak of many questions we have about the world and the surrounding universe. As we discuss below in some detail, science, via scientific method, is an important gift of God to help us grasp some of the mysteries of the early world.

### What are the assumptions?

In 1963 a group of scientists saw the need for organizing a society for creationists to explore important questions about our young created world, and therefore formed the Creation Research Society (CRS) for the purpose of publishing studies of interest and value that honored this belief. The following is their statement of belief. "Members of the CRS, which include various fields of scientific inquiry, are committed to full belief in the Biblical record of creation and early history, and thus to a concept of dynamic special creation (as opposed to evolution) both of the universe and the earth with its complexity of living forms. We propose to re-evaluate science from this viewpoint and since 1964 have published a quarterly of research articles in this field. All members of the Society subscribe to the following statements.

I. The Bible is the written Word of God, and because it is inspired throughout, all its assertions are historically and scientifically true in all the original autographs. To the student of nature this means that the account of origins in Genesis is a factual presentation of simple historical truths.

2. All basic types of living things, including humans, were made by direct creative acts of God during the Creation Week described in Genesis. Whatever biological changes have occurred since Creation Week have accomplished changes only within the original created kinds.

3. The Great Flood described in Genesis, commonly referred to as the Noachian Flood, was a historical event worldwide in its extent and effect.

4. We are an organization of Christian men and women of science who accept Jesus Christ as our Lord and Savior.

ISSUES

The act of the special creation of Adam and Eve as one man and woman and their subsequent fall into sin are the basis for our belief in the necessity of a Savior for all people. Therefore, salvation can come only through accepting Jesus Christ as our Savior.

### What is the role of the sciences?

Isaac Newton (1642-1727) is often credited as the greatest of all scientists. Yet he stated that his discoveries were in answer to prayer, and he spent more of his time in the study of the Bible than with scientific endeavors. But we must ask if any university or other scientific institution would dare to employ him today if he were alive.

Newton is only one of a list of giants in many fields of science, all of whom believed in our young created earth. A partial list investigated in the Internet can furnsh details: Agassiz, Bacon, Boyle, Copernicus, Descartes, Faraday. Fleming, Galileo, Harvey, Kelvin, Kepler, Linnaeus, Morse, Pascal, Pasteur, Virchow, von Braun.

In order to discuss the role of science among creationists, we need to see how the sciences are viewed in the three versions of the *Humanist Manifesto*. These documents dominate all our media and our educational systems at all levels, and assume that science is the answer to human needs. Hence, faith, prayer, salvation, the existence of God, life after death, and purpose in life are all outmoded and harmful beliefs.

Since evolution is held to be science, we therefore need to see how the scientific method is reflected in the writings of evolutionists. We are all agreed that opinion and speculation are not science. Einstein is credited with holding that a theory (we add good or bad) decides what we are permitted to see. Let us pursue this thought.

In 1971 a respected British evolutionist, L.H. Matthews, was entrusted with writing the introduction to the university edition of Darwin's, *The Origin of Species*. He stated: "The fact of evolution is the backbone of biology, and biology is thus in the peculiar position of being a science founded on an unproved theory—is it then a science or a faith? Belief in the theory of evolution is thus exactly parallel to belief in special creation both are concepts which believers know to be true but neither, up to the present, has been capable of proof." However, both beliefs cannot be true.

Similarly, another prominent evolutionist, Loren Eiseley (1962), wrote the following: "With failure of ... many efforts, science was left in the somewhat embarrassing position of having to postulate theories of living origins which it could not demonstrate. After having chided the theologian for his reliance on myth and miracle, science found itself in the unenviable position of having to create a mythology of its own: namely, the assumption that what, after long effort, it could not be proved to take place today had, in truth, taken place in the primeval past."

Perhaps the world's leading authority on the structure of the earth was the late evolutionist Derek Ager, who stated some astonishing conclusions that strongly support a young created earth belief. For example, dating rocks by their fossils, and dating fossils by the rocks that contains them is an impossible circular belief, but we must stick with this. Earth's history consists of long periods of boredom and short periods of terror. (The imaginary long periods of boredom are required by evolutionists in order to prop up the belief in millions and billions of years.)



SPRING 2011

Richard Milton (1997), a prominent science journalist for the BBC and many other science media sources, was thoroughly at home with research in many scientific fields. He was shocked at the content of the science classes for his young daughter in England and wrote that: there are no missing links, the earth is much younger than taught, radiometric dating is deeply flawed and unreliable, mutations cannot produce new species, and earth's history is one of catastrophe—not gradual change.

It is not at all difficult to make a collection of embarrassing misinterpretations by "mainstream" archaeologists, but the same is sometimes true of well-meaning creationists. We must not convey the impression that creationists are agreed on every detail about the early world, even though the biblical framework is fully accepted by them. On many questions there is simply inadequate evidence, or we do not know how to read the evidence that lies before our eyes. It is freely granted that many questions may never be satisfactorily answered, nor is there any real need to do so, other than to satisfy some of our curiosity about the past. Yet many valuable and interesting insights have been gained through the application of scientific method. The Christian who takes Genesis seriously certainly has nothing to fear from scientific data. We must never confuse explanation imprisoned by a faulty theory with the observations we can make in the world around us.

### What is the role of the Bible?

Above all, the Bible is the inspired Word of God, written over a period of many centuries. It is important to note that it is a unified message from God to us, rather than a collection of fragments. By actual count, the New Testament cites, quotes, or refers back to Genesis no less than 267 times to tell us about real events and real people. Creationists affirm that the Bible from beginning to end also provides the foundation and basis for a full and honest belief in our young, created earth. Adam and Eve were real people, the ancestors of us all. The New Testament book of Hebrews gives us a lesson about heroes of the faith and cites actual people, not myths, such as Abel, Enoch, and Noah. After the Flood, Abraham, Joseph, Moses, Gideon, Samson, David, and many others are named.

There are unexpected answers in studies of beginnings. For example, an answer to the mystery of how something can and did come out of nothing was given in a tablet outside of the Bible from the long lost kingdom of Ebla in Syria, written almost a thousand years before Moses wrote the Pentateuch (the first five books of the Bible), and centuries before the time of Abraham. Time Magazine asked the amazing question, "New Grounding for the Bible?" in citing a partial translation of this tablet which is a very unexpected paraphrase of the first verses of Genesis 1: "Lord of heaven and earth: The earth was not, you created it. The light of the day was not, you created it. The morning light you had not yet made exist." (Sept 21, 1981). These ancients had their heads on straight!

The account of the battle of Jericho has been strongly attacked over and over as just another legend of the Jews. So it was refreshing to read in the Science Section of *Time Magazine* (March 5, 1990) the headline, "Score One for the Bible, Fresh Clues Support the Story of Joshua at the Walls of Jericho."

Scholarly squabbles about such accounts are described in various issues of the *Biblical Archaeology Review* and other media. We might add that every discovery supporting the biblical record is vigorously attacked.



### How do Creationist Research Society studies view time and the age of the earth?

The Geological Society of London is the world's oldest such society, and its fame rests on the fact that it popularized the idea of an old, old earth in the early 1800s and thus made Darwin possible a generation later. In order to achieve this goal, competent scientists of that day were excluded from membership because they all accepted a catastrophic view of earth's history, including Noah's flood. The goal of this anti-monarchy society was to undermine Genesis and thus hopefully get rid of both the moral code (the 10 Commandments) and the monarchy (the Divine Right of Kings). The chopping block at the Tower of London made any direct attack on the monarchy inadvisable, so the strategy was to parade the new treatment of Genesis as science. No one would challenge science! In 1976 a professor of the history of science at McAlester University, Canada, Dr. George Grinnell, wrote a remarkable article in Kronos (1:4, 68-76) in which he fully documented that the real purpose of the long, slow ages of the earth pushed by 19<sup>th</sup> century evolutionists was to undermine the Bible to achieve political and social goals.

Eiseley spoke strangely: "For evolution to win (sic), catastrophism, such as Noah's Flood, had to go in favor of slow gradual change to give species the vast time needed for change to take place. The Ice Age had to last a million years or else this would force a complete re-examination of human evolution. Darwin's thinking was that in 6,000 years you could never grow wings on a reptile. But with 60 million years you could have feathers too! In a lecture at the University of Michigan, Dr. P. Gingerich stated: "Mouse today-elephant tomorrow." As his students faithfully scribbled notes for the next test on what he said, Dr. Gingerich added, "I didn't say it did, but it could!"

He was echoing the new take in 1980 on Darwin, replacing slow gradual change with changes so fast they did not leave fossils behind to show the changes. (We must never think of this kind of thinking as science.)

Into all this mix, it came as a surprise to learn in US News and World Report (June 16,1997) that the world's pre-eminent expert on the process by which the earth creates volcanoes, earthquakes, and movement of the earth's continental plates, Dr. John Baumgardner, revealed that he is a creationist who believes, in accordance with the Bible, that the earth was created by God less than 10,000 years ago. He was treated with great respect in the article.

Another resource on the age of the earth is John Woodmorappe's *The Mythology of Modern Dating Methods*, 1999 (ICR, Box 2667, El Cajon CA 92021). Drawing on about 500 scientific studies and reports, he shows clearly what the title of his book supports.

# What is known about prehistoric humankind?

In reviewing well over a century of intensive study of mankind's origin, no one has ever said it better than Stewart Easton: "The truth is that we know very lttle indeed about prehistoric man. The unremitting labors of archaeologists and anthropologists ... have only scratched the surface of our almost total ignorance. Besides, no two experts are ever in agreement on all points in their interpretation of the meager data available .... In this age, on principle, we are inclined to prefer even the most far-fetched of material explanations to the possibility of any kind of divine guidance or intervention, or the fulfillment of any divine purpose." What creationists know about prehistoric mankind can be summarized in this overview, "Wo Was Cave Man?"

# WHO WAS CAVE MAN?

### THE BIBLE

- Outcasts, rebels, degenerates Job 30:6
- . The weal, persecuted, refugees in hiding
- Job 24:8; Hebrews 11:38
- Temporary shelter
- Genesis 19:30
- Burial
- Genesis 23:9
- Mighty hunters (rituals)
- Genesis 10:9
- (Earth sheltered) homes by choice; Troglodytes, Horites Genesis 14:6; 36:20; Deuteronomy 2:12
- Many "cave men" living today

### **OTHER EVIDENCE**

- Eye witnesses; contemporary artists, portraits; amazing sophistication
- 2 Forensic scientists, including computer reconstructions from skeletal material
- All ancient skeletal material is 100% human or 100% ape. There are no missing links.
- 4. Variation: inbreeding, disease, harsh environment

### **EVOLUTION DOGMA**

- Assumes without proof that apes evolved into man
   Invention of the ape-man
- Interprets ancient material as primitive
- Assumes Ice-Age hunters were primitive cave men
- Employs artists to illustrate their beliefs that apes evolved into humans

### THE SORRY LINEUP OF MISINTERPRETATIONS & FRAUDS

- Neanderthal Man
- Piltdown Man
- Nebraska Man
- Minnesota Man
- Spanish Man
- Lucy
- Skull 1470
- Java Man
- (Many Others)

## How do creationist publications describe human beginnings?

Creationist Marvin Lubenow made an exhaustive study of the fossil record in the supposed sequence from ape to man (Bones of Contention, 2004. Grand Rapids: Baker). Of the almost countless family trees constructed to try to show this evolution, the current dominant pattern is to begin with Homo habilis to Homo erectus to Homo sapiens. His well-documented conclusions are that the two forms of Homo habilis (gracile and robustus), are one 100 percent ape, and one 100 percent Homo sapiens (modern human). By calling the two radically different fossils by the same name, evolutionists try to slip by the problem of getting from ape to man. Homo erectus, Lubenow concludes, is simply a variation of Homo sapiens. It is interesting that after Lubenow's book appeared, paleontologists from Cornell University reclassified one old Homo erectus as a Homo sapiens. Other experts also decided that some Chinese Homo erectus fossils should be classified as Homo sapiens. An article in Geotimes bears a very appropriate title, "Homo erectus never existed?" In Lubenow's view, strongly supported by the actual evidence, there are fossil apes and fossil Homo sapiens. Nothing else. Nothing in between. (We note here that Lubenow did his first studies of fossil humans in classes taught by Dr. Wilbert Rusch, former professor at Concordia University, Nebraska and later until his retirement at Concordia University, Ann Arbor.)

We also can note that the picture of the fossil, Nebraska Man, discovered in 1922 was sketched by an artist and reproduced around the world millions if not billions of times. He was a key exhibit in the infamous Monkey Trial (Scopes, 1925) in Dayton, Tennesse, which was used to mock the beliefs of creationists. In 1928, however, this fossil (just one tooth) was determined to be the tooth of an extinct pig! The noted archaeologist, William Albright, stated that the Table of Nations in Genesis 10 is absolutely unique in all ancient literature. It 'dares' to outline the history of all people in the world who were descendents of Noah's three sons and their wives. In the remarkable book, *After the Flood* (1995), Bill Cooper traced the early post-flood history of Europe back to Noah. For the creationist such studies are of more value than the fruitless efforts made for more than 150 years to search for fossils that supposedly show actual evolution of humans.

For interested readers who wish to pursue questions about creationist beliefs and scientific studies, we suggest these websites for more information:

CRS Creation Research Society. www.creationresearch.org

ICR Institute for Creation Research. www.icr.org

ABR Associates for Biblical Research. ABR@biblearchaeology.org

Answers in Genesis Creation Museum. www.CreationMuseum.org/goodnews

An exceptional site naming complete books and articles online and links to other good sites is www.creationism.org

May all creationists strive to say with St. Paul (2 Corinthians 4:2 TLB): "We do not try to trick people into believing—we are not interested in fooling anyone. We never try to get anyone to believe that the Bible teaches what it doesn't. All such shameful methods we forego. We stand in the presence of God as we speak and so we tell the truth, as all who know us will agree." Human Beginnings: Dr. John C. Jurchen

NORTH AMERICA SOUTH AMERICA

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# IntelligentDesign Perspective

"Intelligent Design in its pure form is **not** Creation Science."

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ATLANTIC OCEAN

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### What is Science?

On June 11, 2001, Rick Santorum, a senator from Pennsylvania, introduced the following amendment to the No Child Left Behind Act on the floor of the U.S. Senate:

(1) Good science education should prepare students to distinguish the data or testable theories of science from philosophical or religious claims that are made in the name of science; and (2) where biological evolution is taught, the curriculum should help students to understand why this subject generates so much continuing controversy, and should prepare the students to be informed participants in public discussions regarding the subject. (Congressional Record, 13 June 2001).

The amendment was described as a "Sense of the Senate" and was intended not as a regulatory instrument but as an aid to state and federal legislatures in interpreting the perspective of the U.S. Senate. The amendment received broad bipartisan support from senators such as the late Senator Kennedy who reached across the aisle to speak in favor of the amendment provided by the staunchly Republican Santorum. After minimal debate, all of which was in favor of the amendment, the motion carried ninety-one to eight, with the "nays" being mostly Republican Senators who thought that the Federal Government had no business interfering with state education. The response provided by the science education establishment was swift and quite contrary to the sense of the Senate. Within two months, ninety-six organizations representing science education sent letters to the chairs of the House and Senate Education Committees requesting that the Santorum Amendment be struck from the final bill (From the Hill, Spring 2002).

As the Santorum Amendment was not included in the bill passed by the House of

Dr. John C. Jurchen is Associate Professor of Chemistry Concordia University, Nebraska. John.Jurchen@cune.edu Representatives, the conference committee chose to include the substance of the Santorum Amendment in the "Conference Report Language" attached to the bill. The inclusion of the Santorum amendment in the conference language was hailed as a victory both by the Intelligent Design community and their opponents. The science education establishment proclaimed their success in keeping the amendment out of the final bill and not becoming law. The Intelligent Design community, including Philip Johnson who was responsible for the language of the amendment, countered that the amendment was given only as a "Sense of the Senate" and a general recommendation rather than law, and that its inclusion in the 'Conference Report Language," which is often used to interpret law, would serve very well.

It is instructive to consider why ninetysix science and education groups were so dramatically opposed to the Santorum Amendment. After all, the motion was not passed by religious fanatics, or Midwestern "born again boneheads" (Wilson), but with broad bipartisan support by one of the most respected elected legislatures on earth. Perhaps the U.S. Senate was mistaken in asserting that the subject does not generate controversy. The swift response of the science education establishment would seem to provide proof to the contrary, as do hundreds of books and articles discussing the subject and this very edition of Issues in Christian Education. Perhaps any controversy that is generated is merely perceived? If there is only one viable "scientific" viewpoint of biological evolution, how can there be any real controversy? Here, the opponents of the Santorum Amendment are on firmer ground, for the matter rests wholly on the definition of "science." It is in this definition, obscured by thousands of pages of rhetoric, that the heart of the matter lies, and it is the raison d'être of Intelligent Design.

The impact of subtle differences in the definition of "science" can be profound. This was illustrated when the Kansas State Board of Education enacted Science Education Standards on August 11, 1999, which were at odds with a draft prepared for them by

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a committee of scientists with a strong penchant for naturalism. The State Board made various changes in the Science Education Standards regarding the teaching of evolutionary biology, but buried among them was a key, single-word substitution. The draft prepared for the State Board by a committee of scientists defined science as "the human activity of seeking *natural* explanations for what we observe in the world around us." The State Board substituted the word "*logical*" for "*natural*" (Johnson 68).

The responses of the press and the science education establishment to the Kansas State Board's revised definition of science and other changes in the Science Education Standards were even more caustic than their responses to the Santorum Amendment. For example, the editor-in-chief of the journal, *Scientific American*, urged university admissions committees to write to the Governor of Kansas warning him that: "... in light of the newly lowered education standards in Kansas, the qualifications of any students applying from that state in the future will have to be considered very carefully." (Rennie)

If the goal of the press and scientific community was to retain the scientific enterprise as the exclusive domain of naturalism, a dramatic response may have been warranted. By substituting the word "logical" for "natural," the Kansas State Board of Education adopted an open definition of science that allows scientists to follow the evidence and reach any logical conclusion as the results of their investigations rather than dismissing by definition any conclusion not ultimately rooted in the laws of physics. This also summarizes the platform of Intelligent Design.

### What Intelligent Design is not

So what is Intelligent Design? It is *not* a religious movement. Although most members of the Intelligent Design community are practicing Christians, the tenets of Intelligent Design are independent of the Bible, the Koran, and other religious texts. Individual authors writing from the Intelligent Design perspective often consider the relationship between science and Christian theology and have developed methods to reconcile these two viewpoints (Dembski, 187 and following). However, Intelligent Design was conceived as an "umbrella" organization that could encompass Christians, agnostics, and people of other faiths who share a vision for an open philosophy of science and a certain skepticism that Darwinian evolution alone is sufficient to explain the origin, development, and diversity of life. Intelligent Design in its pure form is not Creation Science. While individuals who hold Creation Science perspectives necessarily agree with the postulate of an Intelligent Designer (i.e., the God of the Bible), Intelligent Design makes no claim of any specific designer and does not require a belief in a young earth, a universal flood, or a particular sequence to the events of creation.



The primary focus of Intelligent Design has not been human beginnings. From a strictly biochemical perspective, the Intelligent Design community recognizes that the genetics and physiology of humans and primates, such as chimpanzees, are quite similar. This is not to say that authors writing from an Intelligent Design perspective deny the evidence for design in human beings or the operation of intelligent causes in human beginnings, but simply that both humans and chimpanzees are so incredibly complex that numerically modeling the likelihood of either species' origin by a strictly natural process is problematic. At the same time, the open philosophy of science embraced by Intelligent Design proponents, coupled with a tendency to interpret the results of scientific research to indicate the operation of intelligent causes in the origin and development of living creatures, has implications for the consideration of human beginnings.

### Intelligent Design and Human Beginnings

The approaches used by the Intelligent Design community to address the topic of human beginnings can be classified in two categories. The first expresses skepticism about the scientific community's interpretation of existing data recovered through the fossil record or genetic studies. Jonathan Wells, prominent Intelligent Design proponent and UC Berkeley-trained molecular biologist, takes this approach in his book, Icons of Evolution, in the chapter titled "From Ape to Human: the Ultimate Icon." Wells claims that researchers in the field have an evolutionary bias that encourages them to perceive among fossilized primates a gradual transformation of apes through a series of ape-human chimeras to a final form, modern humans. He argues that fossil data of early humans and primates purported to be ancestors of early humans can be interpreted in ways that do not support Darwinian evolution. He also claims that the number of well-preserved early specimens is too small to support a Darwinian evolution model of humans, even if the prevailing interpretation of early hominid fossils is correct. Wells' book was written more than ten years ago, but he remains convinced of the accuracy of his depiction of the problem as reported in recent video footage produced by the Discovery Institute and available on the internet (http://www.youtube.com/user/ DiscoveryInstitute).

A second approach to Human Beginnings considered by Intelligent Design proponents is illustrated in The Edge of Evolution by biochemist Michael Behe. He begins by examining two human-parasite systems that are considered showcases for Darwinian evolution in action, specifically, the relationships between humans and the malaria causing parasite Plasmodium falciparum and the relationship between humans and the Human Immunodeficiency Virus (HIV). Analyses of human beings, parasite, and virus have revealed a number of clear instances of mutations in the organisms' DNA (RNA for HIV) that are generally considered beneficial, such as the mutation that leads to Sickle Hemoglobin, and mutations that provide Plasmodium falciparum with resistance to anti-malaria medications. He accepts published values of eukaryotic mutation rates (approximately 1:100,000,000 per base pair per generation in Plasmodium falciparum) and extrapolates this value to eukaryotes in general.

# HUMAN IMMUNODEFICIENCY VIRUS

His analysis of the number of beneficial mutations and particularly double mutations in the malaria parasite over the past ten millennia have led him to some rather concrete statements about what Darwinian evolution can and cannot be reasonably expected to explain. Considering the vast numbers of Plasmodium falciparum that have preyed upon humans for millennia (each infected human may harbor a trillion parasites), his proposal appears to have some statistical weight. Instances of simultaneous, multiple, beneficial mutations in Plasmodium falciparum that lead to adaptations such as chloroquine resistance have appeared in the organism, but only rarely. When Behe compares the vast number of malaria parasites that have existed with the number

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of creatures that may have preceded human beings since a proposed split from their most recent common ancestor with the chimpanzee, he concludes that:

"No mutation that is of the same complexity as chloroquine resistance in malaria arose by Darwinian evolution in the line leading to humans in the past ten million years." (Behe, *The Edge* of Evolution, p. 61).

In other words, given even a rather generous estimate of a trillion creatures leading up to modern humans (an estimate that coincides well with the Darwinian evolutionary timeline), Behe finds it unreasonable that certain types of mutations, specifically those that would require simultaneous changes in several parts of a protein, would have occurred at all. According to his hypothesis of irreducible complexity, the construction of most, if not all, of the molecular machines that enable cells to function requires mutations such as these. In his analysis, the Darwinian mechanism of variation through random mutations is simply not robust enough to account for such observations.

### Intelligent Design

Welcome to Intelligent Design. The strongest arguments against the sufficiency of Darwinian evolution to generate life as observed are currently rooted in molecular biology at a level far smaller than a single cell. Here, we find a world of self-assembled molecular machines that manufacture and transport proteins, repair DNA, fend off invaders, enable locomotion and communication with other cells, and generally undergird the functioning of life. It is at this level that proponents of Intelligent Design find evidence of irreducible complexity (Behe, Darwin's Black Box) and complex specific information (Dembski; Meyer) that they claim cannot be explained by Darwinian evolution.

While Intelligent Design is *not* a religious movement, it *is* an association of individuals who are devoted to science in its classical sense of experiment, measurement, and the search for logical theories to account

for observations. The primary authors of Intelligent Design are highly credentialed professionals, including scientists, philosophers, and attorneys, who have collectively published hundreds of articles in mainstream journals independent of any concerns with Intelligent Design. Although the Office of the President of the LCMS gave an enthusiastic response to the principles of Intelligent Design (What about Creation and Evolution?), it is important to note that the primary authors of Intelligent Design accept the accuracy of research conducted by modern science, and in almost every instance agree with the mainstream scientific interpretation of the data. They interpret radioactive decay and the measurement of isotopes in the earth's crust and meteorites to imply that the earth is billions of years old. They interpret the fossil record to indicate that life appeared on the earth billions of years ago, and that various forms of living creatures appeared at various times throughout the long history of the planet. The leading authors of Intelligent Design espouse "evolution" in its generic sense of "a change in gene frequency with time." Some, such as Behe, go a step further and accept the Darwinian theory of common descent and the existence of a common ancestor of humans and chimpanzees some millions of years in the past.

The critical point in which Intelligent Design differs from mainstream science is that it does not have an *a priori* commitment to Naturalism. If science, by definition, is restricted to a search for natural causes based only on the laws of physics, the ninetysix organizations opposed to the Santorum amendment were correct in asserting that there is no conflict. Darwinian evolution isn't just the best explanation for life on earth; it's the only game in town. Intelligent Design proponents take exception to this virtual hegemony. While none of the primary authors of Intelligent Design expects a higher intelligence to interfere in any of the millions of scientific measurements made daily around the world, they question whether Naturalism should have the exclusive domain of explaining everything in the universe, past, present, and future. If an intelligent cause has participated in the

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development of life on earth and left an indication that it had done so, is it logical to reject evidence to this effect because it does not fit our definition of science? Some branches of mainstream science are already concerned with the search for intelligent causes (Dembski, 127). The scientific community already turns its telescopes to the heavens in search for evidence of intelligence. Is it off-limits to look closer to home and search for evidence of intelligence in the earth's past?

### A Postscript

I was a doctoral student in biophysical chemistry at the University of California, Berkeley, when Philip Johnson, the father of Intelligent Design, issued a blanket request for graduate students to meet with him on a weekly basis. Three of the four of us who took him up on the offer attended LCMS congregations, which I believe reflects the intense curiosity our church body has with questions of origin. I asked him once how science would change if the community accepted the tenets of Intelligent Design. He smiled and indicated that science would change very little. I recognized that he was right. Much of the biological and chemical sciences are currently enmeshed in the dazzling world of molecular machines. Molecular biologists use the enzymes they find in nature to manipulate organisms as they see fit. Structural biologists explore the details of catalytic sites in crystallized proteins to try and determine how they allow a bewildering array of complex reactions to occur, and chemical biologists are reverseengineering proteins to see if they can build something that will bail us out of our energy crisis. Functionally, everyone treats these systems as if they were the products of superhuman intelligence while also attributing their construction to random mutations. A proponent of Intelligent Design looks at the amazing complexity of these systems and must recognize design even though he cannot explain the mechanism by which the design was accomplished. A proponent of Naturalism, by definition, cannot recognize design regardless of the evidence but must explain the complex systems by Darwinian

evolution, however improbable, because it's the only theory available.

Which is the more tenable position?

### Notes

Behe, Michael. Darwin's Black Box: The Biochemical Challenge to Evolution. New York, New York: The Free Press, 1996.

Behe, Michael. The Edge of Evolution: The Search for the Limits of Darwinism. New York, New York: The Free Press, 2007.

Congressional Record. Proceedings and Debates of the 107th Congress, First Session. Vol. 147, No. 82, 13 June 2001, S6147-S6153.

Dembski, William A. Intelligent Design The Bridge Between Science & Theology. Downers Grove, Ill.: Intervarsity Press, 1999.

Johnson, Phillip E. The Wedge of Truth, Splitting the Foundations of Naturalism. Downers Grove, Ill.: Intervarsity Press, 2000.

"Language on Evolution Attached to Education Law." From the Hill Spring 2002 (Prepared by the Center for Science, Technology, and Congress at the American Association for the Advancement of Science).

Meyer, Stephen C. Signature in the Cell DNA and the Evidence for Intelligent Design. New York, New York: HarperCollins, 2009.

Rennie, John. "A Total Eclipse of Reason." Scientific American October 1999: 124.

Wells, Jonathan. Icons of Evolution Science or Myth? Why Much of what We Teach about Evolution is Wrong. Washington, D.C.: Regnery Publishing, 2000.

What about Creation and Evolution? The Office of the President, The Lutheran Church Missouri Synod, Pamphlet SI4979, St. Louis, Mo.: Concordia Publishing House, 2000.

Wilson, A.N. "Land of the Born Again Boneheads." The Evening Standard. 13 Aug. 1999.



"It's a rare treat for a teacher of physics to be able to discuss topics that are as controversial and socially relevant as Science and Religion (S&R)."

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### Introduction

In this edition of *Issues In Christian Education*, we have heard descriptions of various points of view in the ongoing Creation/Evolution debate. As a professor of physics at Concordia University, Nebraska, I have been blessed with the great opportunity to teach my students about these issues for the past fifteen years, and always look forward to this topic in my course schedules. It's a rare treat for a teacher of physics to be able to discuss topics that are as controversial and socially relevant as Science and Religion (S&R).

Why does this topic generate so much debate and emotion? As Christians, we sense that S&R issues penetrate to the heart of important questions about the reality of our beliefs, forcing us to think about how we know what we know and how we interpret Scripture.

From the Young Earth Creationist (YEC) point of view, the rejection of a plain reading of the sequence and chronology of the creation story as presented in the Bible is tantamount to the denial of a central doctrine of the church, and opens the door to the abandonment of any inspired revelation for which a rationalist rebuttal can be fabricated. These believers worry that if we do not teach the YEC perspective to our young students, we fail to equip them for an evolutionary assault on their beliefs, with a godless natural history acting as a wedge that separates the young Christian from God, as has undoubtedly happened to those who have fallen away.

Participants in the debate include Christian proponents of Intelligent Design (ID) who generally agree with conventional scientific measurements of an old Earth while judging that the scientific evidence points toward non-material causes for the complexity we observe in nature. Theistic Evolutionists conclude that evolutionary theory presents a plausible and inoffensive mechanism for God's creative action in history. These interested parties worry

Dr. Brent Royuk is Professor of Physics Concordia University, Nebraska. Brent.Royuk@cune.edu that the YEC approach is tainted by its use of a Theistic Science that allows Scripture to be used in theory formation rather than adhering to a strict definition of science as an empirical enterprise. They worry that YEC is contradicted so clearly by the scientific evidence that it is actually dangerous for students to whom it is taught, possibly undermining their faith by setting them up for profound doubt when some of them encounter clear and convincing scientific evidence that contradicts the Young Earth point of view. There are, no doubt, young Christians who have lost their faith for this reason as well.

These issues are very important, and Lutheran teachers rightly fret about just what approach to take in their classrooms. In this essay, I will consider the question of how to teach about S&R in our Lutheran schools and offer some opinions as to what constitutes a best practice for teaching about this interesting and difficult subject. I offer these opinions humbly, with the knowledge that academic freedom is of utmost importance, and that individual teachers must be allowed to teach in a way that is congruent with their instructional theory and personality, and guided by their own beliefs and conscience.

### Framing the Debate

Any Lutheran educator who wishes to teach about issues in S&R would be well-served by having some familiarity with the various points of view espoused by Christians, both within the LCMS and without. I recently published an article in the Lutheran Education Journal (available online at http://lej.cuchicago.edu/research-ineducation/ideological-approaches-toscience-and-religion-in-a-national-surveyof-lutheran-high-school-science-teachers/) describing a survey research project in which Lutheran High School science teachers were asked which of the following four S&R approaches they most agreed with: Young-Earth Creationism, Intelligent Design (described in the survey as an old-Earth approach), Compartmentalism or Complementarity. The percent responses for these four categories for 129 teachers at LCMS

high schools were 58.1%, 21.8%, 2.4% and 17.7%. (I encourage readers of this article to click over to the LEJ website for more details and discussion of the survey methodology and results, especially the precise definitions that were used for each of the four points of view.)

My framework for understanding the S&R differences that divide us is that they are fundamentally ideological, depending especially upon an individual's beliefs about the nature of science. Young-Earthers hold a theistic view of science, which allows revelation to play a part in scientific theory formation. Compartmentalists and Complementarists espouse Methodological Naturalism (MN) for their definition of science, allowing only empirical data and naturalistic explanations. Intelligent Designers generally agree that science should operate only with empirical inputs, but that limiting explanations to only those that are naturalistic is counterproductive and likely to stifle scientific inquiry (an approach that is coming to be known as Open Science Philosophy). The relationship between approach and ideology in this fourfold typology is graphically represented in the following figure, reproduced from my previous article.

These ideological choices are essentially statements of philosophical belief, axiomatic

statements that do not flow from some higher principle. Each position may have strengths and weaknesses, but adherents are unlikely to be swayed from their position by argument or data. Christians who are not employed in relevant science, theological or church-work careers will likely be content to live their whole lives blissfully unaware of these deep philosophical fault-lines that lie underneath the creation/evolution battlefield.

But which of these approaches is correct? Is this a decidable issue? I would argue that this question is similar to asking whether a conservative or liberal approach to politics is correct. With group membership depending on a system of shared axioms and beliefs about the world, individuals may sometimes change sides. But this happens ordinarily when beliefs change, not simply because one side or the other has empirical data or the best arguments on their side.

Regardless of whether or not you agree with this philosophical understanding of the S&R debate, the fact remains that we are a denomination in which all these varying points of view are represented, and no synodical resolution is going to change that. The survey data cited above gives us some helpful insight into the prevalence of approaches among Lutheran High School science teachers, and since identifying these numbers, I have heard many people



volunteer opinions as to how the distribution would differ for Lutheran pastors, laypeople, professors at synodical institutions of higher education, etc. One important finding of the survey was that the ID point of view is more common among the least experienced teachers (the 19 teachers with 0-2 years of experience were identified as 42.1% YEC and 32.6% ID, perhaps signaling a trend away from the YEC point of view in favor of ID.

## Addressing the Issue in our Classrooms

In order to have a productive discussion about S&R in our church, we must first acknowledge that many issues are adiaphora. When we get to heaven we will find Christian believers of all sorts: Young-Earth Creationists will be able to have lively discussions with Compartmentalists while Intelligent Designers enjoy deliberations with Theistic Evolutionists. Perhaps God in his wisdom will straighten us all out about the whole issue. But here on Earth the debate will continue.

I believe that Lutheran science teachers should first of all treat S&R gently, perhaps taking their cue from those who teach civics classes. If a student takes an American Government course, he or she is likely to expect that the teacher won't teach the course from a single political perspective, trying to proselytize and convert students to their own point of view. We have all heard complaints about teachers who do this, and it is generally condemned as an abuse of teacher privilege, with the teacher forcing his or her point of view on a captive audience of impressionable young people, possibly against the wishes of their parents.

When teaching about sensitive subjects that are not core religious issues, we expect our teachers to be informative without being coercive, to present controversial issues in a descriptive way that is fair to the best presentation put forth by each side in the debate. I refer to this practice as "going meta," implying that individuals try to lift themselves above their own points of view in order to give students a broad understanding of all sides in the debate and help them to clarify how their own beliefs and opinions fit into the bigger picture. When teaching about S&R, I try very hard to "go meta" and sometimes indulge my curiosity by asking my students after we're done with my S&R lectures if they were able to tell what my own opinion actually is. They generally have no idea, and I only share my personal perspective outside the classroom with those curious students who approach me individually.

A teacher in a Lutheran school does not suffer the disadvantage of those in public schools who have to maintain a careful separation between course content and religious beliefs. We are able to teach from a point of view that affirms an omnipotent eternal God who is the creator and sustainer of our physical world. Christian teachers are fortunate to be able to see the wonderful design God has created for his universe, and Christian science teachers have the unique blessing of seeing God's world through the eyes of faith, which allows our scientific inquiries to become an act of worship of our magnificent creator-God.

Our shared belief in God provides enhanced clarity as we view and teach about the scientific enterprise, allowing us to carefully distinguish between faith and sight—those things we know through God's revelation and information we gather with our senses. We can rejoice that God has given us science as a wonderful and helpful tool for understanding our world and allowing us to enhance the lives of fellow humans through technology. Without this faith perspective, we wouldn't know who to thank for this great blessing in our lives.

When teaching evolution in a Lutheran classroom, teachers must also make sure to provide their students with a clear understanding of what a scientific theory is. Scientific theories are frequently misunderstood by lay people and are sometimes even defined incorrectly by science teachers. The misconceived definition of a theory that is commonly propagated comes from a confounding of experimental method with what the meaning of a theory actually is as used by practicing scientists. In this mythical formulation, students are often told that theories originate from experiment, in which a scientist formulates a testable hypothesis, so that experimental support allows a hypothesis to somehow graduate upward to become a theory. This is only crudely true. Theories are actually quite a bit more conceptually lofty, providing an overarching explanatory (and naturalistic, depending upon your ideological persuasion) framework that generally includes many tested hypotheses, facts and laws.

Creationists who wish to denigrate evolutionary theory sometimes mistakenly dismiss it as "just a theory." This phrase has resonance with those who do not have a comprehensive understanding of what a theory is, confounding the word with its everyday usage as some sort of speculative statement. On the other side of the debate, activist evolutionists who wish to push a materialist agenda sometimes mistakenly assert that "evolution is a fact," or that evolution is a theory in the same way that Music Theory is a theory. It should also be acknowledged that scientists of varying religious persuasions hold a wide diversity of opinions as to the importance of preserving a careful set of categories for scientific knowledge, and many arguments have their genesis in differences about definitions for words like fact, theory and law.

As Lutheran science teachers address the topic of evolution in their classrooms, they have the freedom to teach their students about the variety of approaches taken by Christians to explain how evolutionary theory relates to our belief and understanding of God's creation of the world. They can "go meta" in order to make a balanced presentation of all the various points of view, describing each without judgment.

Lutheran teachers have the freedom to describe the profound respect for biblical revelation represented by Theistic Science in the YEC approach, along with misgivings that YECers have about dating techniques and their understanding of the physical importance of the Noachian flood. Lutheran teachers have the freedom to expose their students to the latest ideas from ID, including the idea of Irreducible Complexity, and the Open Philosophy of Science that allows not only empirical inputs but also the ability to choose supernatural scientific explanations when the data call for it. They have the freedom to explain that some Christians embrace Methodological Naturalism, and how this often leads to Theistic Evolution, and what that means.

I believe that Lutheran teachers have a unique responsibility to exercise scholarship in this area, familiarizing themselves with the best arguments among the many Christian perspectives. I have sometimes encountered Christians who endorse multiple points of view that are incompatible with each other, simply because they perceive various authors and researchers to be part of their "tribe," without recognizing the conflicting nature of these different approaches. If teachers have no interest in this subject and wish to remain ignorant, that is their own choice, but hopefully they can at least recognize the imperative to do no harm to their students by proselytizing for positions they don't understand.

Twelve years ago I gave a talk to some science teachers in the Lincoln, Nebraska, public schools on how to teach about the nature of science. During the discussion, we talked about the creation/evolution controversy, and I was surprised when they told me that many public school biology teachers in Lincoln stay away from the teaching of evolution because it is too controversial. I pressed them on this issue, but they insisted that it was so. I don't know how common this practice was at the time or if it continues twelve years later, but I hope that Lutheran science teachers embrace the freedom we have in the Gospel to engage all the scientific and religious viewpoints that are relevant to the great S&R debates that continue in our society, and treat ideas that differ from their own with respect and tolerance.

In a recent faculty forum at Concordia, Nebraska, a respected theology professor said: "The love of Christ constrains us to be open to communication on topics that are important or of concern to others, even if it makes us uncomfortable. If we are not able to do this, we should be prepared to point to people more equipped to address the subject." Our conversation had nothing to do with S&R, but I believe that these issues also belong in the category of "uncomfortable topics" that will continue to require open and balanced communication in our Lutheran classrooms.



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### book reviews

### God's Undertaker: Has Science Buried God?

**John C. Lennox.** Oxford: Lion Hudson, 2009.

In this relatively short book, John Lennox evaluates the scientific evidence that has been claimed by some to rule out the existence of God. He seeks to determine whether that evidence is in fact more compatible with belief in God. Lennox himself is a bona fide member of the scientific community, holding three doctorates in mathematics (from Oxford, Cambridge, and Wales) and a master of arts degree in bioethics. He has spent considerable time exploring the interaction of science, philosophy and theology, and has debated such well-known atheists as Richard Dawkins and Christopher Hitchens. His purpose in this work is not to be exhaustive, but to concisely introduce and discuss the major topics at the center of the current "Science versus Religion" debate.

In his first chapters, Lennox proposes that the true conflict in the current debate is not between science and religion-a valid point, as many scientists, among them Nobel Prize winners, believe in God-but between the competing worldviews of naturalism and theism. It is this dichotomy that he explores through the remainder of the book. Throughout the text, Lennox makes extensive use of direct quotes from leading scientists in order to accurately reflect the views held and the arguments made on both sides of the issue. He guides the reader through an initial discussion of the scope of science, the limits of what science can explain and the questions that it can and cannot answer.

He then moves logically and inexorably through various areas of scientific inquiry that have been used to address the existence of God. On this scientific tour, Lennox first explores issues related to the existence of the universe: the fact that it can be described rationally and mathematically, and advances in science which have revealed just how precisely the fundamental forces of the universe (gravity, electromagnetism, etc.) are fine-tuned to make the existence of life possible. Narrowing the focus, he then considers the implications of what science has discovered about living systems and the way in which many processes and structures in organisms appear to be at least as precisely engineered as the most complex modern factories.

He includes a chapter on the hot-button topic of evolution, enumerating five different definitions for the word which are currently in use, and considers the arguments for and against each of these five "flavors" of evolutionary theory. In this discussion, he points out limits to what evolution has been shown to explain, and proposes limits to the changes that evolution can produce.

He concludes his scientific tour with a thorough discussion of DNA, floating the question of how DNA and other biological molecules came to exist and the origin of the staggering amount of information contained in a single strand of DNA.

Throughout these discussions, Lennox steadily argues that far from precluding the existence of God, the scientific evidence can actually be interpreted as evidence for a Creator with at least as much confidence as some have used it to imply the absence of any higher power. In each area under consideration, he describes the scientific evidence, presenting both the arguments against the need for God that have been advanced based on this evidence and the case for the existence of God that can be made using the same evidence. His tone is unerringly humble, good-humored, and respectful of all involved—a refreshing change from the heated rhetoric and disparaging assertions often present in writings from both sides of this debate.

At the same time, Lennox does not hesitate to point out gaps and fallacies in the arguments that have been proposed in opposition to the existence of God. His own arguments in support of an intelligent originator of the universe and of life, though never weak, are strongest when they are phrased in his native mathematical dialect of probability and information theory. He makes clever and illuminating use of analogies and illustrations, such as keeping an eye out for Aunt Matilda's cake and for informative variations on the oft-used theme of primates pounding on typewriters.

Being a scientist, Lennox writes from a scientist's perspective, and he targets his discussion towards individuals who have at least a passing familiarity with the scientific disciplines in question. Readers without a scientific background should either be prepared to do some supplemental reading regarding several of the subjects Lennox raises, or to gloss over some of the details of the evidence he presents.

As a Christian and a scientist, I found God's Undertaker to be at once illuminating and refreshing. I recommend it for any reader interested in a critical analysis of the question of whether or not science truly seeks to bury God.

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### Life's Big Questions, God's Big Answers.

#### Brad Alles

St. Louis: Concordia Publishing House, 2010.

It was my second day in a Lutheran school, and I was teaching an 8th grade New Testament class. Seconds into the lesson, a young lady, Sarah, raised her hand with a confidence and assertiveness that alarmed me. "How do you know that some guy didn't just go into a cave, decide to start a religion, and write the Bible? How do you know that Jesus really existed?" Over the next semester, Sarah followed these first two questions with dozens of others. "Do you really think that God created the world in six days? How could a person named Noah fit all of those animals into a boat? Do you really think that cute little babies are sinful? How do you know that all religions don't lead to the same place?" Day after day, Sarah and other students came to class with such questions.

I read plenty of apologetics during my college years, but this was an unexpectedly challenging year. I tried to find good apologetics sources that I could use with my middle and high school students, but there were few pre-developed options. I found good books that I could use to prepare lessons, but few that I could recommend to curious students. Most books were too complex, overly simplistic, too specific to one or two questions, too long, or written in a style that didn't keep the interest of most teenagers.

Brad Alles' Life's Big Questions, God's Big Answers is one of the first texts that I have come across that does not fall prey to those five limitations. Alles has put together a resource that is substantive, rooted in plain reason and Scripture alone, and accessible for teenager through adult. The writing style is clear, concise, and full of interesting and understandable examples and illustrations. In 150 pages, Alles provides thoughtful responses to many of the big questions asked by people in and outside the church, such as: "Does evolution or creation explain the world? Can you trust the Bible and where it came from? Was there really a worldwide flood? Did Jesus really exist, die, and rise from the dead?" Alles provides solid answers to these and more questions, answers that are consistently rooted in Scripture.

The book begins with a call to consider the value of Christian apologetics and understanding the impact of a person's worldview. He works from the definition of a worldview as "a collection of the truth claims that explain the world and reality." The majority of the book helps readers work through some of the big questions. After that, Alles emphasizes the importance of apologetics and worldview thinking, and he concludes with two excellent chapters. The first provides the reader with one of the more crisp and lucid explanations of postmodernism that I have seen. It is a brief historical perspective, starting with pre-modern thought as embracing the supernatural, objective truth, and a "big story" that explains reality. He then contrasts that with postmodernism, where there "is no God, no meta-narrative, and no objective truth." The final chapter of the book gives specific and practical advice on being a witness in a postmodern world.

Some critics might argue that the explanation of postmodernism and a few other concepts in the text have overly simplified matters. These critics might point out that postmodernism, for example, is not necessarily a single school of thought, that there are many "flavors" of postmodernism. As such, they might not appreciate the more sharp distinctions that Alles makes throughout the text. As a rule, Alles limits the scope in many chapters by offering the reader with clear and straightforward definitions and distinctions. Again, some critics might see this as leaving out some of the voices in a given conversation.

I am prepared to defend and commend Alles' approach. He leaves out some perspectives, but with care and intention. All good writing requires decisions about both what to include and what to leave out, and this book has done this responsibly. He does not make the mistake of similar books. He doesn't simply introduce views other than the Christian worldview as straw men that he can easily attack. Instead, the vast majority of this text is a positive defense of the Christian faith. The text spends much more time giving reasons for the hope that we have than giving reasons for the hopelessness of others. As a result, this is a great model for engaging in apologetics in a postmodern society which provides a solid resource for classrooms, small groups, and personal Bible study. Most important to me, it is a text that I can gladly share and discuss with young ladies like Sarah.

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