



Anderson University School of Theology

Creationism and Science: The Continuing War

2013 Harp Professor in Residence Lecture,
March 12, 2013

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Introduction

In his book *You Lost Me* the new president of the Barna Group, David Kinnaman states, "Millions of young Christians perceive Christianity to be in opposition to modern science."¹ He goes on to state that:

One reason young Christians feel acutely the antagonism between their religion and science is that there is animosity on both sides—Western science has often seen itself as an opponent of faith. We could call this opposition 'scientism,' the assumption that science has cornered the market on knowledge, and something can only be true if it can be tested by scientific methods.²

Part of the reason why there is this perceived antagonism is that many scientists such as Richard Dawkins, the author of *The God Delusion*, are atheists. In his discussion of this problem Kinnaman does not mention the tension creationism, particularly that of the Young Earth Creationists (YEC), generates by opposing much of modern science in general, and in particular biological evolution. One can only wonder if this omission is due in part to sensitivity to a major section of the Barna Group's constituents, particularly conservative Evangelicals and Fundamentalists, which would include YEC.

According to Barna's research 25% of those 18 to 29 years of age view Christianity as anti-science; 18% that it is anti-intellectual; 29% that churches are out of step with the scientific world we live in; and 35% that Christians are too confident that they know all the answers.³ These statistics indicate that the Church needs to seriously examine the root causes of this perception to determine if in fact the Church maintains theological positions which are in opposition to what is being taught today as science. Unfortunately it is not likely that fundamentalist segments of the Church, particularly the YEC, who are waging a false war on science, will change their position concerning modern science.

Scope and Definitions of the Paper

The amount of literature on this topic is endless. New books, articles, essays, internet blogs, videos, comic books, etc., are being produced almost daily. This paper cannot survey the

¹David Kinnaman, *You Lost Me* (Grand Rapids: Baker Books, 2011), p. 131.

²*Ibid.*, 135.

³*Ibid.*, 137.

entirety of material being produced. It will only attempt to set forth the basic presuppositions and methodologies of each opponent, along with some of the evidence each side presents. There are several good histories available for further study. Four that I recommend are: Karl Giberson, *Saving Darwin*; David Livingstone, *Darwin's Forgotten Defenders*; Arthur McCalla, *The Creationist Debate*; and Ronald L. Numbers, *The Creationists*.

A few basic definitions are in order. The term "creationist" is a general term used for anyone who believes that God created the universe. It is, however, often used to mean YEC, so one must read carefully how a writer is using the term. I will use the term "creationism" to refer specifically to the position of those who want to reject the theory of evolution. Massimo Pigliucci may be more correct to label the position as "evolution denial."⁴ The position of YEC will be referred to as "creationism," a specific theological and philosophical ideology, especially espoused by those associated with the Institute for Creation Science and the Answers in Genesis, that opposes not only biological evolution, but also the theories linked to evolution by other branches of sciences as well. "Scientism" refers to the philosophical position that goes beyond methodological naturalism, claiming that only the physical universe exists. This is philosophical naturalism. Dawkins' book *The God Delusion* is an example of this belief, as well as is Carl Sagan's *Cosmos* series which began with the well-remembered mantra, "The cosmos; all that is and was and ever will be."

The title of this lecture is "Creationism and Science: A Continuing War." Where does this idea of warfare come from? A model of two fortress towers at war has been commonly used to illustrate how YEC view what is happening in our culture. In the tower on the left men wearing bandanas, obviously pirates are firing their cannons at the foundation of the tower on the right, which is labeled, "Creation: God's Word Is Truth." The defenders on the right are asleep, aiming in the wrong direction, aiming at their own foundation, or aiming at the wrong target, the balloons being floated by the pirates. The foundation on the left tower reads "Evolution: Man Decides Truth." Its banner is humanism and the balloons display an assortment of cultural expression of sinfulness. Dr. Terry Mortenson of Answers in Genesis (AIG) states in the video "From the Dust" that evolution does not create the problems; sin does. But "the more people build their thinking based on evolution the more they use it to justify their sin."⁵ The various groups of Christian defenders will be described later.

The Task and Presuppositions of Science

Let us first briefly discuss how the lecture uses the term science. The task of science is to investigate the natural world and "to explain the world as far as possible without appeal to

⁴Massimo Pigliucci, *Denying Evolution: Creationism, Scientism, and the Nature of Science* (Sunderland, MA: Sinauer Associates, 2002), 2.

⁵Terry Mortenson, *From the Dust: Conversations in Creation* (DVD: Highway Media; Biologos), 2011.

special initial conditions."⁶ By "special initial conditions," Davies refers to factors which lie outside the "scientific-experimental method" which is based on methodological naturalism. This methodology asks three basic questions about the natural universe: what are its physical properties? What is the nature of its physical behavior? What is its formative history?⁷ Thus science is limited to the investigation of only the natural order of the universe; or as Pigliucci notes negatively, "Science cannot draw conclusions about things it cannot measure or manipulate experimentally."⁸ Thus by definition science excludes supernatural beings as effective causes. Science is not thereby atheistic, but rather agnostic. It makes no claims to the existence or non-existence of God, gods, angels, demons, ghosts, leprechauns, fairies, gnomes, pookas, succubi, boggarts, dementors, or any other supernatural, mythical, or literary characters or powers.

In order to accomplish its purpose science is built on certain presuppositions. 1) The universe is real; it exists. 2) The universe can be known. Somehow the human mind is able to understand how the universe works. 3) The universe is rational in that it is dependable. It operates in a way that can be described by certain "laws" such as the laws of thermodynamics. While the laws are human descriptions of the way the universe functions, Davies notes that "the laws have been invested with many of the qualities that were formally attributed to ... God." That is, they are universal, absolute, eternal, and omnipotent. Davies also asks the question, did the laws come into existence with the universe or are the laws independent from the physical universe? He opts for the later, that the "laws of initial conditions strongly support the Platonic idea that the laws" do transcend the physical universe.⁹ At this point we must recognize that Davies has moved from science to philosophy. Howard Van Till makes a distinction between investigating the physical behavior of existence, a legitimate endeavor of science, and inquiring about the governance of the universe, which is a philosophical and theological issue.¹⁰ If the laws are transcendent, then might one suggest that they operate as functions of God's governance of the universe? Again, this is a theological assessment, not a scientific one. 4) The universe is consistent and uniform across space and time. The same laws that function in our solar system also function throughout the universe. 5) There has to be a sufficient cause to produce an observed effect, which is the theory of causality. There is presently in the scientific community debate about this last assumption as quantum physics appears to undermine it.¹¹

⁶Paul Davies, *The Mind of God* (New York: Simon & Schuster, 1992), 88.

⁷Howard J. Van Till, "The Character of Contemporary Science," *Portraits of Creation: Biblical and Scientific Perspectives on the World's Formation* (Grand Rapids: William B. Eerdmans Publishing Company, 1990), 128-130.

⁸Pigliucci, 145.

⁹Davies, 82-92.

¹⁰Till, 133.

¹¹Private communication from Dr. Lowell Hall, Professor of Chemistry, Eastern Nazarene College; iMonk, "Five Things Science Cannot Prove, But Are Necessary for Science to Work," online, cited October 18, 2012; Till, "The Presuppositions of Scientific Cosmology," *Portraits of Creation: Biblical and*

These presuppositions cannot be "proven" in the formal sense as assumptions in every discipline by their very nature are not intended to be proven, but they are necessary for science to function. One might object that since they cannot be proven, others might assume that there are forces or entities in the universe that operate differently than what these presuppositions state. That may be true, but until someone demonstrates that the presuppositions are invalid, or that these other forces or entities exist in the physical universe, science will continue to assume them as they work quite well.

The Methods of Science

"Science is not a body of knowledge;" however, that body of knowledge referred to as scientific "is a product of science." Science is more a method learned in the laboratory than a specific area of study. One can read about the history of science, its achievements, and its processes, but there are no "armchair scientists." Philosophers of science examine and debate the presuppositions and methods of science, but science itself is based on a careful examination of the phenomena of the physical universe. A scientist observes facts or phenomena, formulates first generalizations about the phenomena, produces causative hypothesis about them, and then moves to testing the causative phenomena by means of observation or experimentation.¹² No one scientist observes all facts, only those in his or her discipline. The scientific endeavor is a community effort contributed to by individuals or teams, but all working together.¹³

The presuppositions described above combined with these practical procedures are known as methodological naturalism. It is a learned system as the next generation of scientists is trained by the previous generation in the methods, procedures, and scientific paradigms which

Scientific Perspectives on the World's Formation (Grand Rapids: William B. Eerdmans Publishing Company, 1990), 106-107.

¹²Pigliucci, 127-129; Karl W. Giberson, *Saving Darwin: How to Be a Christian and Believe in Evolution* (New York: Harper One, 2008), 157-158.

¹³The following quotation is a private communication from Dr. Max Reams, Professor of Geology, Olivet Nazarene University, on 28 February 2013. "Very few scientists are fully engaged (or engaged at all) in the whole 'circle' of what is described as scientific methodology. Many engage only the experimental aspects. This is very important because doing good experimental work requires excellent, specialized skills and creativity in order to provide sound information for hypothesis formation. Other scientists engage primarily in what is often called 'theoretical' methods. This aspect has its own version of creativity and is generally much more mathematical and often abstract. Others engage in finding creative ways to test the hypothesis. As a result, current scientific endeavors involve team work (cf. the recent revelations about the Higgs particle). In my current work on metabolite identification, 'our team' includes chemical experimentalists in more than one methodology: biologists, modelers (like myself and son, now called computational chemists), statisticians, computer scientists, robotic engineers, other computational chemists and computer scientists skilled in information management, etc. The result is pooled creativity and more rapid advancement."

have been found to be the most accurate and productive. Science does not produce truth, but discovers that which is true—for the present. Any hypothesis or theory may be rejected or modified by future investigation. However, they will be replaced by other scientific hypotheses or theories which more accurately account for the phenomena.

The methods of science are grounded in logical processes, the history of which reaches back to ancient Greece. Aristotle (384-322 B.C.) was interested in investigating the natural world and his books on natural history made a lasting contribution to Western society's development of science. While he was not the first to use deductive reasoning, he formalized the process. Although most all of Aristotle's conclusions about the natural world have been rejected, deductive reasoning forms an important component even today of the scientific method. The limitation of deductive reasoning is that the results are always enclosed in the basic statement. For example the following syllogism: All humans are mortal. Socrates is a human. Therefore Socrates is mortal. The conclusion flows from the primary premise, but it does not tell us anything about non-humans. It does, however, enable the scientist to identify what conclusions to which one is committed based on the premise or foundational assumptions.¹⁴

Several advances in the scientific method came relatively quickly after the founding of the first universities such as the Sorbonne in 1200, Oxford in 1220 and Cambridge in 1225. Francis Bacon (1561-1626) who entered Trinity College, Cambridge in 1573 advocated empiricism, the investigation of nature by observation and experimentation. By so doing he laid the foundation for the modern scientific method. His method has been characterized as taking buckets out into nature, filling them with whatever one finds and then drawing generalizations by means of inductive reasoning. For example, one observes that the sun rises each day. On the basis of continued observation one can generalize that it will also rise the next day. This process allows one to discover what is true about nature, but not necessarily the truth, what is always true. The limitation of empiricism is that the universe is so vast, no one scientist or team of scientists is able to comprehend the whole of the universe. Therefore, an additional approach is needed.

That next step was taken by the philosopher Rene Descartes (1596-1650). In his *Discourse on Method* (1637) Descartes laid out an approach for raising questions about the natural world, the second of which is, "to divide each of the difficulties under examination into as many parts as possible, and as might be necessary for adequate solution." While Descartes was not discussing science specifically, his concept of subdividing complex problems into smaller units is followed by scientists. When enough smaller units have been examined then they "can be combined to yield broader generalizations."¹⁵

¹⁴Pigliucci, 119.

¹⁵Ibid., 121-122.

What Francis Bacon had foreseen, Galileo Galilei (1564-1642) developed, the practice of using controlled experiments by which he could test hypotheses and thus gain knowledge "by controlling and measuring what goes on during an experiment." Isaac Newton (1642-1727) realized what Galileo had foreseen, that mathematics was a powerful intellectual tool for tackling all sorts of scientific problems. As Pigliucci notes, "what distinguishes the scientific method from other ways of thinking about and investigating reality is a combination of the pieces that Aristotle, Descartes, Bacon, Galileo, and Newton—among others—have put together over the span of two and a half millennia."¹⁶

Admission to the Tower on the Right

After this brief look at science, let us turn to the other tower and explore who is allowed entrance in order to battle the evils of evolution. As has been noted, Mortensen did not claim that evolution caused the social problems represented by the balloons, but that the problems arose out of sinful humanity's rejection of the word of God. Those who deny evolution view the war as being fought in Western culture, and especially America. The roots of this concern go back at least to the beginning of last century when the tragedy of the First World War with its modern weaponry took an enormous toll in human life. Many thought that Germany, the primary enemy, had lost its biblical foundation by accepting and advocating higher criticism in general and the documentary hypothesis specifically. The Bible was rejected and human reason was exalted. In addition, the rapid cultural changes in America that took place in the following decades produced a longing for a simpler lifestyle founded upon biblical principles. Fundamentalists were gripped by a fear that evolution had "undermined the basis of morality and the basis of purpose in life."¹⁷ America no longer was the beacon of light for the rest of the world. It had become apostate.¹⁸

Only those who hold to the belief that the Bible is absolutely infallible on every topic it addresses and who reject evolution are allowed into the tower. The most prominent group in the tower is the YEC, particularly those who identify with Henry Morris and the Institute for Creation Research. They maintain that a "plain sense" reading of the Bible leads to the acceptance that the earth is only 6,000 to 10,000 years old. They are also the most influential group publishing a long list of books and articles in various YEC publications. Ken Ham of the Answers in Genesis (AIG) organization located in Petersburg, Kentucky, is now probably the most influential leader of the YEC since the death of Henry Morris. Some Evangelicals who disavow the term Fundamentalist maintain a belief in an inerrant Bible, but are more flexible in their interpretation of the Bible.

¹⁶Ibid., 126-127.

¹⁷Robert T. Pennock, *Tower of Babel: The Evidence against the New Creationism* (Cambridge, MA: The MIT Press, 1999), xv.

¹⁸Arthur McCalla, *The Creationist Debate: The Encounter between the Bible and the Historical Mind* (New York: T & T Clark, 2006), 165.

The Old Earth Creationists such as Fred Heeren and Hugh Ross oppose the YEC. While they still reject evolution they do accept that the earth is billions of years old. Glenn Morton advocates that the six days of creation are literal days, but separated by millions of years.

Two interpretations of Genesis One that arose centuries earlier are the day/age theory, each of the six days are of unlimited time, and the gap theory advocated by C.I. Scofield which suggests that there is a gap of unlimited time between Genesis 1:1, God's initial act of creation and verse 3 when God reformed the earth after some disrupting event such as the fall of Satan from heaven.

Another group of inhabitants of the tower are those who advocate Progressive Creation which accepts much of the scientific evidence of a developing universe, but holds that at strategic points God directly intervened to create new species.

The newest group to demand admittance to the tower is those who advocate Intelligent Design (ID). They argue on scientific grounds that the complexity of the universe points to a Designer. Although they do not specifically state who that Designer is, they privately accept the belief in an inerrant Bible and would personally maintain that He is the Christian God. Since ID does not officially reject evolution, with Michael Behe being a committed evolutionist, there is some question as to their claim to admittance into the tower.¹⁹

The one group that is not allowed into the tower, because they accept that evolution has occurred are those who advocate Theistic Evolution.²⁰

The 19th Century Princeton Theologians

Our main focus now shifts to the YEC teachings concerning the Bible and science. In 1961 John C. Whitcomb and Henry M. Morris published *The Genesis Flood: The Biblical Record and its Scientific Implications*. The book was well received by many Fundamentalists and Evangelicals and has become the basic text for those who maintain that the earth and the universe are recent creations. The authors maintain that what we see today is the result of three supernatural events that cannot be adequately explained by science: the Creation, the Fall of Humanity, and the Flood. While we will concentrate on the topic of creation, the other two events will be considered at appropriate points.

In the introduction²¹ B.B. Warfield is cited once. This is the only citation to any of the Princeton theologians: Archibald Alexander, Charles Hodge, A.A. Hodge, and Warfield. The

¹⁹Ted Peters and Marinez Hewlett, *Evolution from Creation to New Creation* (Nashville: Abingdon Press, 2003), 103-106.

²⁰For a fuller discussion of these various positions see Pennock, 8-31.

belief that the Bible is infallible in all its states concerning faith and practice was commonly accepted by Protestants after the Reformation. Many extended that belief to include every domain including history and science but restricted the concept of inerrancy to the original autographs.²² Their theological work, however, forms the basis of the doctrine of inspiration and infallibility of the Scriptures that Whitcomb and Morris presuppose. It is probable that the doctrinal positions of the Princeton theologians were assumed to be common knowledge and that no further citations were necessary. However, their theological positions are so foundational to not only Whitcomb and Morris' work, but also many other YEC that it is necessary to briefly survey them.

Archibald Alexander (1772-1851) in 1812 became the first principal of Princeton Theological Seminary. Alexander drew upon two sources for his theological work. The first was that of the Reformed scholastic scholar Francis Turretin (1623-1687)²³ and second Scottish Realism or common sense philosophy. The latter assumes "that the universe possesses a rational structure that corresponds with the structure of the human mind. Through the use of reason, the Common Sense philosophers believed, human beings could ascertain the intimate workings and causal processes of the natural world."²⁴ Dunning notes that by the use of common sense one is able to grasp "an adequate understanding of the meaning and significance of the observable external world." As applied to the study of the Bible, it is argued that the "plain sense" of the text²⁵, as opposed to the medieval allegorical and spiritual interpretations, is to be taken as its proper interpretation. As such, the common person by the use of reason can apprehend its truth; that is, true statements which one can believe.²⁶ Faith thus is not seen as "a personal relationship with God based on trust," but as "belief in or assent to true statements or propositions about God.

²¹John C. Whitcomb and Henry M. Morris, *The Genesis Flood: The Biblical Record and Its Scientific Implications*, 50th Anniversary Edition (Philipsburg, NJ: P & R Publishing, 2011), xxxvi.

²²See John D. Woodbridge, *Biblical Authority: A Critique of the Rogers/McKim Proposal* (Grand Rapids: Zondervan Publishing House, 1982), for a comprehensive study of the development of concepts of infallibility and inerrancy, particularly from the time of the Reformation to the modern Fundamentalist debate. Woodbridge critiques their work by maintaining that the shift from the Reformers' concept of Scripture to that of the Princeton theologians was not as different as Rogers and McKim propose.

²³On Turretin see also Jack B. Rogers and Donald K. McKim, *The Authority and Interpretation of the Bible: An Historical Approach* (New York: Harper and Row, 1979), 100-116, 172-183.

²⁴David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought* (Grand Rapids: William B. Eerdmans Publishing Company, 1987), 102.

²⁵The Princeton Theologians based their work on the plain sense of the Hebrew and Greek texts, not translations, although the common person could understand the basic message of salvation in a translation.

²⁶This point is compatible with Turretin's position that the Bible's teachings concerning salvation, "that they can be understood by believers without the external help of oral tradition or ecclesiastical authority," as quoted in Rogers and McKim, 182.

Christian faith becomes primarily assent to infallible biblical propositions."²⁷ Dunning recognizes that on a practical level Fundamentalists stress "faith in Jesus Christ for salvation and the importance of Christian piety." However, among fundamentalist apologists or spokespersons, faith becomes dependent on rational arguments rather than person commitment to Christ.²⁸

Alexander's most outstanding student was Charles Hodge (1797-1878) who became a professor at the Seminary in 1822, and its principal in 1851. In his *Systematic Theology* Hodge argues for the absolute inerrancy and infallibility of Scripture not only for faith and practice, "but extends to the statements of facts, whether scientific, historical, or geographical. It is not confined to those facts of importance of which is obvious, or which are involved in matters of doctrine. It extends to everything which any sacred writer asserts to be true."²⁹ Hodge like Alexander was also "an admirer of the inductive Baconian ideal both in science and theology. Put simply, this approach assumed that true knowledge is based on fact gathering, on painstaking data collection without prior recourse to theory."³⁰ Hodge rejected higher criticism of the Bible, such as denying the Mosaic authorship of the Pentateuch, as it contradicts the plain teaching of Scripture.

Hodge did accept the concept of evolution, but objected to Darwin's theory, for he thought that Darwin's concept of chance overthrows the argument of design, or teleology and thus leads to atheism. William Paley's *Natural Theology*, first published in 1802 was highly regarded by Hodge. Paley argued that the animals and plants of nature display "marks . . . of contrivance, choice, and design" which point to a Designer."³¹ As the 18th and 19th centuries saw the rapid development of science, Hodge, as did many other Christian theologians and scientists, viewed the discoveries of science as evidence of the providence of God who created all things. Darwin's theory of natural selection, however, was viewed by Hodge as inimical to design as it was "conducted by unintelligent causes"³²

²⁷See also Hall's statement, "many highly credentialed scholars and pastor/teachers . . . believe the Bible to be an objective propositional revelation, verbally inspired in every word, absolutely inerrant in the original documents" in Ken Ham and Greg Hall, *Already Compromised* (Green Forest, AR: Master Books, 2011), 108. Roger and McKim, 295.

²⁸Dunning, H. Ray. "Comparing and Contrasting: Some Distinguishing Wesleyan and Fundamentalist Expressions of the Christian Faith," in *Square Peg: Why Wesleyans Aren't Fundamentalists*, ed. Al Truesdale (Kansas City, MO: Beacon Hill Press, 2012), 64-66.

²⁹Charles Hodge, *Systematic Theology*, 3 Vols. (New York: Charles Scribner's Sons, 1889), 1:163.

³⁰Livingstone, 102.

³¹William Paley, *Natural Theology: Evidence of the Existence and Attributes of the Deity, Collected from the Appearances of Nature* (Great Britain: Clays Ltd. 1802. Kindle edition based on Oxford World's Classics, Oxford: Oxford University Press, 2006), 48.

³²Livingstone, 104.

In 1868 James McCosh (1811-1894) came from Queen's College in Belfast, Ireland, to become president of Princeton University. Although Hodge and McCosh disagreed on the point of design in Darwin's theory, Hodge warmly welcomed McCosh as he also advocated Scottish Realism. Also, for both of them "the idea of a designed universe constituted both the foundation and fabric of a truly biblical philosophy of science." McCosh, however, looked not at the actual incidents of death and suffering, as did Hodge, but at an overarching scheme or ultimate whole as having design.³³

It might be profitable at this point to briefly outline the classical arguments for the existence of God. While Thomas Aquinas gives five, Wiley lists the four most prominent ones: the Cosmological, the existence of the universe must have a First Cause; the Teleological, the presence of design in the universe indicates a Designer; the Ontological, the idea of a perfect Being necessitates existence of that Being; and the Moral, the existence of conscience points to a moral law independent of humanity, and thus an Author of that law. Wiley points out that these arguments are "formally invalid from the syllogistic point of view, involving the logical fallacy of assuming that which they profess to prove."³⁴ Or more pointedly as Bill McCumber, a colleague of mine quipped, "If you believe in God the arguments sound pretty good. If you don't, they just don't quite make it." Bill was echoing John Wesley who having "lived during a time when rational apologetics were rampant, questioned the adequacy of the traditional arguments for God's existence. He explicitly denied that reason alone can conclusively prove this—or any other—theological claim."³⁵

Archibald Alexander Hodge (1823-1886) followed in his father's footsteps both in becoming a theologian and in teaching at the Princeton Seminary (1877-1886). Hodge accepted that God used human instrumentality to produce the Scriptures, in that the writers "freely and spontaneously produced the very writing which God designed, and which thus possesses the attributes of infallibility and authority." The final result of inspiration is a Bible which in each part and every word is fully the word of God.³⁶ He made a major contribution by further developing the concept of placing the authority of the Bible in the inerrancy of the autographs. Turretin accepted that the autographs written by the biblical authors were inerrant but noted that they no longer exist. However, he then argued for the purity of the Hebrew and Greek texts which exist in the current copies or apographs.³⁷ Hodge advanced further than Turretin by

³³Ibid., 106-110.

³⁴H. Orton Wiley, *Christian Theology*, 3 vols. (Kansas City, MO: Beacon Hill Press, 1940), 1:33-240.

³⁵Dunning, 65. John Wesley, "The Case of Reason Impartially Considered." *The Works of John Wesley*, 3rd ed., 1872 (Grand Rapids: Baker Book House, 1979), 6:355-358.

³⁶A.A.Hodge, *Outlines of Theology: Rewritten and Enlarged* (New York: George H. Doran Company, 1878), 75-77.

³⁷Francis Turretin, *The Doctrine of Scripture: Locus 2 of Institutio Theologiae Elencticae*. Geneva, 1688. Translated, Edited, and Introduction by John W. Beardslee III (Grand Rapids: Baker Book House, 1981), 113-123.

maintaining that for one to claim that there is an error in Scripture, that person must prove that the error existed in the autographs themselves.³⁸

Benjamin Breckenridge Warfield (1851-1921), the last of the Princeton theologians also held to the belief that the Scriptures are infallible in the autographs, and that there is a human element in Scripture. Although the Scriptures in every part are a Divine as well as human book, the final product, produced by Divine verbal, but not dictation, inspiration, is the word of God. Warfield did sense that there was a comparison between the human/Divine composition of the Bible and that of the Incarnation of Jesus, but thought that the issues were not the same.³⁹ The issue that Warfield seems to be skirting is that of Docetism. If, like in the debates concerning the personality of Jesus, too much emphasis is placed on the divinity, one ends up with a wholly divine book. Thus he like A.A. Hodge emphasizes the human element; however, in the end the Bible is, for them, the word of God, infallible in all it asserts. I do not think that they escape entirely the charge of Docetism over this point.

A common characteristic of all the Princeton theologians was that they were well read in theology and the science of their day. As a result they accepted the concept of deep time and interpreted the days of Genesis 1 as long expanses of time. They also accepted the concept of evolution but rejected Darwin's work as conflicting with the idea of divine purpose or teleology.

In summary, the Princeton theologians provided a number of key concepts upon which Whitcomb and Morris built their work and which continue to influence YEC to this day. Most importantly, they provided the theological underpinning of the concepts of inspiration, inerrancy, and infallibility of the Scriptures. The Scriptures in the autographs are inerrant in all matters that they address, including science and history. They are to be read in their literal or "plain sense" which even the common person is able to understand. The Bible presents truth in the form of propositional statements that are to be accepted as a part of one's faith in God. Higher criticism is rejected as it is contrary to the plain sense of Scripture. Darwinian evolution leads to atheism. It is helpful to understand the positions YEC take concerning the relationship between the Bible and science by being aware of their dependence upon the Princeton theologians.

Presuppositions of Young Earth Creationists

What are the presuppositions of YEC? First, the Bible is inerrant in all it addresses, including science and history. Therefore, if science and the Bible, or the YEC interpretation of the Bible, conflict, the Bible is given greater authority than "man's biased, incomplete, prideful, changing and fallible interpretations of nature."⁴⁰ Second, the first eleven chapters of Genesis are

³⁸A.A. Hodge, 75-77.

³⁹B.B. Warfield, *The Inspiration and Authority of the Bible*, ed. Samuel G. Craig (London: Marshall, Morgan and Scott, 1951), 143-163.

⁴⁰Mark Van Bebber and Paul S. Taylor, *Creation and Time: A Report on the Progressive Creationist Book by Hugh Ross* (Mesa, AZ: Eden

to be read as factual history.⁴¹ Third, science is limited to studying the present world and cannot study earlier ages. The Creation was accomplished by Divine fiat and thus by processes not available to science. Ken Ham makes the distinction between historical science and observational science.⁴² Scientific methods are not adequate to examine God's actions of the past and thus are essentially limited to Baconian empirical methods to study only the presently existing universe.⁴³ As a corollary to this position it should be noted that YEC appreciated modern science and accept its findings as long as they do not conflict with what they believe the Bible teaches. Fourth, death did not enter the universe until Adam sinned and was expelled from the Garden of Eden.⁴⁴

Creation According to Young Earth Creationists

Based on these assumptions, what are the positions YEC hold concerning creation? The material available to answer this question is voluminous and thus we can only sketch the basic ideas that are repeatedly expounded in the literature. The first chapters of Genesis are taken to be history and thus the days of creation are held to be six, twenty-four hour days. Morris states boldly, "If the Bible is the Word of God—and it is—and if Jesus Christ is the infallible and omniscient Creator—and He is—then it must be firmly believed that the world and all things in it were created in six natural days and that the long geological ages of evolutionary history never really took place at all."⁴⁵ While Morris believes in the Incarnation of Jesus,⁴⁶ he here overstates his theological position, taking a Docetic position. Jesus was not omniscient according to Mark 13:32, for the Son did not know the time of the "coming of the Son of Man," only the Father does. As to the genealogies of the Bible, they are accepted as factual, with some possible gaps, such as are evident in Matthew (1:1-16) and Luke's (3:23-37) genealogies of Jesus. Therefore, there is some flexibility as to exactly when God created the universe, generally attributed to between 6,000 to 10,000 years ago.

Since the world was created in such a short period of time, the animals, plants, and even Adam and Eve were created fully mature. The root of this concept again lies in the 19th century. Phillip Gosse, a highly respected marine biologist who invented the first aquarium published in 1857 *Omphalos* (Greek for navel or belly button). He establishes a courtroom setting in which

Productions, 1994), 36. Morris, Henry M., ed. *Scientific Creationism*. 2nd ed. (Forest Green, AR: Master Books, 1985), 215.

⁴¹Ibid., 203.

⁴²Ken Ham, no pages, cited November 29, 2012, online <http://www.youtube.com/watch?v=JxX11c1cSWU>. Van Bebbber and Taylor, 26.

⁴³Ibid. Whitcomb and Morris, 223-224. Dennis G. Lindsay, *Foundations for Creation Science*, vol. 1. Of Creation Science Series (Dallas: Christ for the Nations, 1990), 100-101.

⁴⁴Henry M. Morris and John D. Morris, *The Modern Creation Trilogy*. 3 vols. (Green Forest, AR: Master Books, 1996), 1:26-27. Bebbber and Taylor, 16-17.

⁴⁵Morris, 251.

⁴⁶Morris and Morris, 193-197.

various plants and animals recently created by God are examined by a botanist or biologist as to age. For example, an Alsophila or Tree-Fern is examined and pronounced to be at least thirty years old. However, the inference is false as it is known to have been created only minutes previously.⁴⁷

Morris duplicates this position stating that the plants created on the third day were "full grown plants whose seed was in themselves." He also states that the light created on the first day included the light from the stars; "The light-trail from the star was created in transit, as it were, all the way from the star to the earth, three days before the star itself was created!"⁴⁸

On day two (Gen 1:6-8) a vault or dome was created to separate the waters below and those above. The waters above formed a vapor canopy over the whole earth which provided a uniform, mild climate conducive for rapid plant growth and protection from the sun's harmful rays which allowed people to live vastly longer lives.⁴⁹ Morris acknowledged that this concept lacks scientific support but thought that later work will justify it. However, Giberson notes that the "idea received much attention, but nobody could come up with a model to show how it might have developed or been sustained. An ICR (Institute for Creation Research) physicist created computer models that yielded results even he described as 'disappointing for advocates of a vapor canopy.'"⁵⁰

God's initial creation "was a perfect environment and man was perfectly equipped to manage it." Humanity and all living creatures were free from death, disease, and suffering. It should be noted that God never pronounced his creation as "perfect" (tāmam) only as "good" (tōb). Unfortunately Adam and Eve sinned and "the bondage of decay" came upon the earth which is equated with the Second Law of Thermodynamics. Prior to the Fall this Law was not functioning.⁵¹

The geological column did not exist when God created the earth. It was laid down during the Flood which was caused when "all the springs of the great deep burst forth, and the floodgates of the heavens were opened" (Gen 7:11, NIV 2011). These events also included an intense volcanic activity over all the earth.⁵²

⁴⁷Phillip Henry Gosse, *Omphalos An Attempt to Untie the Geological Knot* (London John Van Voorst, 1857), 129-133.

⁴⁸Henry M. Morris, *The Genesis Record: A Scientific and Devotional Commentary on the Book of Beginnings* (Grand Rapids: Baker Book House, 1976), 65-66. Morris, *Scientific Creationism*, 209-21. Whitcomb and Morris, 228, 232-234.

⁴⁹*Ibid.*, 121, 240-241, 253-258. Morris, *Scientific Creationism*, 210-211.

⁵⁰Karl W. Giberson, *Saving Darwin: How to Be a Christian and Believe in Evolution* (New York: Harper One, 2008), 139.

⁵¹Morris, *Scientific Creationism*, 211-213. Van Bebbber and Taylor, 16-20. Lindsay, 58, 63.

⁵²Whitcomb and Morris, 242, 270-288.

Young earth creationists accept the concept of natural selection as long as it is restricted to microevolution. The original "kinds" were created on days three, five, and six (Gen 12:11-12, 20-22, 24-24-26, 27). What is meant by the term "kind" is left undefined, but from the original "kind" variations inherent in the original genetic code can take place.⁵³ Touring the Creation Museum in Kentucky gave evidence of how flexible the original genes of the "kinds" were. Noah's family included various human "races." While macroevolution is denied, a kind may develop into related species such as not only the varieties of dogs, but also wolves, and possibly foxes. The "ancestors" who were on the Ark produced the various common animals of today by means of natural selection. The first two displays you come to in the museum portray, I assume, Eve and Adam living with the raptors. Yes, there were dinosaurs on the Ark, but they became extinct during the Middle Ages.⁵⁴ A poster displays the development of the horse from the time the small mammal was on the Ark to the present day animal. With the Fall genetic changes also were introduced, particularly as carnivores developed claws and teeth for eating meat.

The Rejection of Evolution by Young Earth Creationists

The theory of evolution is vociferously attacked by YEC for they maintain that it subverts every major tenant of their belief system. Therefore they reject the following claims made by the "atheistic" evolutionists: that the earth is old, some 4.6 billion years, and the universe over 13.75 billion; that death existed prior to the development of humanity and thus prior to the Fall; that the Scriptures cannot be read in their plain sense; that macroevolution has taken place as new species have evolved, including humanity; that there could not have been a real Adam and Eve who were the ancestors of all humans; that their transgression was not the beginning of sin, which, of course, thus places the redemption provided by Jesus under suspicion; and that the Bible becomes just another sacred book of a religious community, but without universal authority for all of humanity.

Young earth creationists and Henry Morris in particular have developed a number of arguments to counter the scientific claims that the universe is old. In the opening pages of *Scientific Creationism* the scope of science is limited by definition. Scientific methods are limited to "experimental observation and repeatability." Thus since science "can neither observe nor repeat *origins*" (emphasis in original), it can make no valid statements about how the earth came into being.⁵⁵ As noted before, this is essentially the methodology advocated by Francis Bacon and does not take into consideration other scientific methods of studying the past. However, the main argument does not concern methodology; it is grounded in theology. God

⁵³Morris, *Scientific Creationism*, 217.

⁵⁴Morris and Morris, 1:210.

⁵⁵Morris, *Scientific Creationism*, 4. Donald B. DeYoung, *Astronomy and the Bible: Questions and Answers* (Winona Lake, IN: BMH Books, 2010), 131.

created the universe by means of supernatural forces which science cannot examine. We can only know how the earth was created by reading Scripture.⁵⁶

Radiometric dating of rocks has been used to claim that the earth is some 4.5 billion years old. There are several difficulties with using this method, which YEC are quick to point out. Certain isotopes of elements are unstable and change into other elements. Scientists know the rate of decay and by measuring the amounts of the elements in specific rocks, they can estimate the age of the rock. One problem is determining the amount of the daughter element, that is, the element which the unstable isotope decays into, that was in the rock originally. Second, the leaching of the elements from the rock can distort the test results, as well as can, third, weathering of the rock. These are problems well known to geologists. However, YEC use them to deny that accurate dates can be known. Also, if God created the earth with the appearance of age, accurate readings would be impossible.⁵⁷

There is no place on earth where the geological column is intact, nor would one expect it to be. Various areas of the earth have been covered by oceans only to rise above the waters and sink again. Geologists have "pieced together" the evidence from around the world to construct a sequential pattern of the formation of the earth's crust. George McCready Price (1870-1963) in his major work *The New Geology* (1923) challenged the historical accuracy of the geologists' claims. He proposed that one great catastrophe, the flood of Noah's day, laid down the geological column which thus could not be used as a means of dating the age of the earth. Price as a Seventh Day Adventist was following the teaching of Ellen G. White who claimed to have had a vision from God of the Flood and how it laid down the geological column.⁵⁸ In *The Genesis Flood* Morris borrowed directly from Price's work, but "deleted all but a few direct references to Price."⁵⁹ This was because Morris did not want the book to be seen as affiliated with a "cult."

The geological column according to Morris and Whitcomb was formed in rapid succession during the flood, first layers without any sign of life, then fossils of the abundant plant life that blossomed during the days when the vapor canopy sheltered the earth. In the following layers the various animals are present in the fossil record according to their ability to struggle to higher ground during the flood. This accounts for not only the geological column, but also the fossil record.⁶⁰

⁵⁶Whitcomb and Morris, 331-332.

⁵⁷Ibid., 331-391 for a full discussion. Morris, *Scientific Creationism*, 131-149.

⁵⁸See Ronald L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design*, expanded ed. (Cambridge: Harvard University Press, 2006), 88-119 for a history of Price's life and work.

⁵⁹Ibid., 227. See also Whitcomb and Morris, 116-211 and Morris, *Scientific Creationism*, 91-130.

⁶⁰Whitcomb and Morris, 273-287. Morris, *Scientific Creationism*, 118-120.

One of the common arguments found in YEC literature is the quotation of evolutionists who disagree with some aspect of evolution. Within the scientific community there is a continuing debate concerning the processes of evolution, but not over the theory itself. Scientists who accept the theory but debate the process are often quoted by YEC as denying evolution itself.⁶¹ To the uninformed reader, however, the argument sounds impressive. If the biological scientists are in disagreement, then there must not be that much support for the theory.

When and from whom did the concept of evolution arise? Morris and Morris trace the concept of evolution back to the Greeks, the Persians and then to the Babylonians, specifically the original Babylon (Gen 11:1-9). The mighty hunter Nimrod (Gen 10:8-12) ruled over an empire with his capitol in Babylon. He and his priests met in the temple on the top of the tower of Babel with Satan and his evil spirits "to plan their long-range strategy against God and His redemptive purposes for the post-deluge world." Thus evolution was conceived by Satan as an alternative to God's account of creation (Gen 1-2) and he convinced Nimrod to teach it to the people who then were dispersed to the various parts of the world. Thereby in all the religions and philosophies of the world from China to India to Egypt to Greece and Rome the evil concept of evolution was planted.⁶²

Response to Young Earth Creationists by Scientists

How do scientists who accept the theory of evolution respond to YEC? Chris Colby is very blunt. "Scientific creationism is 100% crap."⁶³ Other scientists, particularly Christians who as scientists disagree with YEC, may not be so blunt, but they are as adamant that YEC are wrong. The following represents some of their reasons for maintaining that the universe is much older than 6-10,000 years old.

Geophysical scientists are well aware of the problems associated with radiometric dating. They are the ones who originally recognized the problems and worked to overcome them. This is what science does; recognize problems and investigate to solve them. Davis Young, a geologist who taught at Calvin College, wrote *Christianity and the Age of the Earth* in 1982. The chapter on radiometric dating discusses the processes scientists use to date rocks, which includes the care they take to make certain their tests are accurate. He also discusses the technical objections that YEC such as D.O. Acrey, H. Slusher, Robert L. Whitelaw, and Melvin Cook raise and why the objections are not valid.⁶⁴ In a more recent and expanded work Young and Ralph A. Stearly go into greater detail about the geological evidence for an old earth. The two chapters on radiometric dating describe the processes geochronologists use to date rocks, such as Samarium

⁶¹See Morris, *Scientific Creationism*, 58, 90, 93-93 for examples.

⁶²Morris and Morris, 3:42-56.

⁶³(Chris Colby, "Introduction to Evolutionary Biology," The TalkOrigins Archive, no pages, accessed December 6, 2012, <http://www.talkorigins.org>).

⁶⁴Davis A. Young, *Christianity and the Age of the Earth* (Grand Rapids: Zondervan, 1982), 93-116.

decaying by alpha emission into Neodymium and Rubidium by beta emission into Strontium. The discussions include the limitations, problems, and methods that are used to assure accurate results.⁶⁵ Radiometric dating methods are continuing to be refined and scientists see no valid scientific reasons to reject the radiometric findings that the earth was created some 4.5 billion years ago.⁶⁶

Young earth creationists claim that the geological column was laid down by the Flood, a turbulent force which reshaped the earth in a year's time. The problems with this thesis are too many to list; a few examples will have to suffice. The thicknesses of sedimentary rocks are quite extensive. In Michigan sedimentary rocks reach a thickness in excess of 15,000 feet. "In northern Utah and southern Idaho, the collective thickness of these layered rocks runs well in excess of 30,000 feet and may range locally to at least 45,000 feet." Sedimentary rock shows evidence of being laid down not only on ocean floors, but also in "identifiable contexts such as deserts, lakes, rivers, deltas, shores" as well as in open oceans," not just by a worldwide flood.⁶⁷ It boggles the mind to figure out how layers of sediment could be laid down by a flood, solidify into rock, and then have sequential layers lain on top of them, each layer having time to solidify, all in a year's time.

The sedimentary columns often contain sections deposited on beds of shallow seas, as indicated by the presence of fossil reefs thousands of feet thick and miles long. Young asks, "Can one possibly conceive of a structure this large as being a redeposited antediluvian reef? Could even the most spectacular flood be capable of transporting a reef that large?" He goes on to note that "none of the reefs are upside-down." How could a gigantic flood keep the reefs intact and right side up?⁶⁸

In the fossil record there is an abundance of remains of non-flowering plant life in what is called the Silurian Period, dated to between 443 and 417 million years ago. But flowering plants do not appear until the Cretaceous Period dated to 135 million years ago. If all plant life was created on the third day only 6,000 to 10,000 years ago and the fossil record established during

⁶⁵Davis A. Young and Ralph F. Stearley, *The Bible, Rocks and Time* (Downers Grove, IL: IVP Academic, 2008), 388-443.

⁶⁶"Much work has been done by YEC and ID folks to refute radiometric dating. A book was published by the RATE study group (**R**adioactivity and the **A**ge of **T**he **E**arth). An in-depth review of the book was done in the ASA journal. Among other points, the review shows that if the acknowledged (even by ancient age opponents) amount of radioactive decay has occurred - and occurred in the short time span supposed by YEC - then the heat evolved in the radioactive processes would cook the surface of the earth and destroy all life. No credible response to this argument has been given." A private communication from Dr. Max Reams, Professor of Geology at Olivet Nazarene University, on 28 February 2013.

⁶⁷*Ibid.*, 217-218.

⁶⁸ Young, 85.

the flood, why do flowering plants appear only in rocks laid down in the higher levels of the geological column than non-flowering plants?⁶⁹

Young earth creationists claim that dinosaurs were contemporary with humans. Not only did early humans create tools out of rocks, but according to Gen 4:22 they forged them out of bronze and iron. Yet in the fossil beds no human remains including tools have been found in the same rock strata as dinosaur remains. In conclusion, it should be clear that there is no scientific evidence that the geological column was laid down by the flood. One might be more logically consistent by arguing like Gosse that God created the world with the marks of age including the geological column containing the fossils.

Quoting persons out of context is improper if not a demonstration of a lack of integrity. Michael Ruse considers this tactic as "sleazy," and as "violating every standard of intellectual integrity."⁷⁰ There is a mindset similar to that of Gosse who openly acknowledged that he used a courtroom setting. The assumption is that, if it can be shown that there is a problem with the support for evolution, by default it becomes an argument for creationism. It is like a lawyer defending a client. He tries to show that a prosecutor's case has flaws and, therefore, the jury should acquit the defendant. This is a false argument; a problem with a position is not therefore an argument for the opposition.

Two arguments by YEC concerning the Fall are very problematic. First, there was according to the Bible no death before Adam sinned, and second, during this same period the Second Law of Thermodynamics was not functioning. On the fifth day of the creation narrative the fish and fowls were created (Gen 1:20-23). Bacteria are essential for several functions including digesting food. Even termites that eat wood are dependent upon bacteria to digest cellulose.⁷¹ Bacteria reproduce by asexual division every 20 minutes. Dr. Kimberly Lyle-Ippolito has calculated that if there was no death before Adam sinned, and one bacterium reproduced every twenty minutes, in twenty-seven hours and twenty minutes the mass of bacteria would equal the weight of the earth.⁷² By the time on the sixth day that Adam had been created, he had named the animals, and Eve had been created, the couple would have been up to their necks in bacteria.

⁶⁹"What is a Flowering Plant?" No pages. Cited February 14, 2013. Online <http://www.backyardnature.net>.

⁷⁰Michael Ruse, *But Is It Science?* as quoted by Ted Peters and Martinez Hewlett, *Evolution from Creation to New Creation* (Nashville: Abingdon Press, 2003), 95.

⁷¹Margaret Gray Towne, *Honest to Genesis: A Biblical and Scientific Challenge to Creationism* (Baltimore: PublishAmerica, 2003), 96.

⁷²Private communication from Dr. Kimberly Lyle-Ippolito, Anderson University.

According to the Second Law of Thermodynamics "energy is constantly moving to establish equilibrium. This is accomplished by regions of higher energy expanding into less energetic regions."⁷³ This is called entropy. Cold is the absence of heat. On a cold day, heat is constantly being lost by moving from a warmer body to a cooler body. The earth is constantly radiating into space heat received from the sun. On the fourth day of the creation narrative the sun and stars were created. The sun by means of nuclear fusion produces energy in the form of light and heat. This light and heat as it travels thru space is dissipating in accordance with the Second Law.⁷⁴ To suggest that the Second Law was not functioning at the beginning of creation is ludicrous. To save these two arguments, one would have to suppose that God intervened in some manner to protect the earth from his own creation.

One of the growing problems with the position of YEC is the lack of the ability to explain away the biological evidence that continues to accumulate supporting evolution, particularly with recent studies in genetics. One example will be given, the genetic inheritance of the even-toed ungulates. Genes are made up of strings of DNA which contain the plans to build particular protein molecules, such as hemoglobin. These genes replicate themselves with marvelous accuracy from generation to generation.

As an illustration, let us suppose that the message of one gene is the command, "gototherefrigerator." Occasionally a stretch of meaningless gibberish, called an intron, enters the gene and becomes replicated in the following generations. The cell however is able to read the command perfectly by skipping over the gibberish as in our illustration, "gotozzxxytherefrigerator. DNA also has floating gibberish, called retroposon, which can be attached inside an intron. As long as the retroposon is inside an intron, the original command can be read without difficulty. For example, "the retroposon SINE CHR-1 is found inside a specific intron of a particular gene in a group of related animals."⁷⁵ So our illustration would now read, "gotozzxSINECHR-1xytherefrigerator." The command can still be accurately read, as the cell would skip over the intron as well as the retroposon contained in the intron. Also, the gene with the intron and retroposon would be accurately copied from generation to generation.

It is significant that all even-toed ungulates, except camels and pigs have the SINE CHR-1 retroposon. The species that do have it are cattle including bison and water buffaloes, sheep, goats, deer, antelopes, giraffes, hippopotamuses, whales, and dolphins.⁷⁶ How could an intron with a specific retroposon enter the genes of such varied species? Either when God created the

⁷³Private communication from Dr. John Millis, Anderson University.

⁷⁴See the discussion of the Second Law of Thermodynamics of Giberson, Karl W. and Francis S. Collins, *The Language of Science and Faith* (Downers Grove, IL; IVP Books, 2011), 162-169

⁷⁵Darrel R. Falk, *Coming to Peace with Science* (Downers Grove, IL: IVP Academic, 2004), 190. While Falk uses the term "retroposon" other biologist prefer the term "retrotransposon." SINE CHR-1 is a virus.

⁷⁶*Ibid.*, 182-192.

species he created them with genes that carried mistakes, not likely if God created the "perfect" world, or the cells of a common ancestor passed on a gene that first had an intron inserted into it. A later ancestor that had a retroposon inserted into intron of that same gene passed it on to generations that evolved into the various species.

Other Options

Where does this this evidence leave us? Do we have to tell our students, as my pastor told me, "You have to choose to believe either the Bible or science"? Should the Church openly acknowledge to the next generation, what Kinnaman's survey shows that they already suspect, that the Church is anti-science; it is stuck in the 17th century waging a war against science? Are there other options? I believe that there are other options. Let me illustrate from my own theological tradition.

The Arminius-Wesley tradition has long challenged some of the positions of the Reformed tradition. It should be emphasized that both are orthodox traditions, accepting the oecumenical creeds as correct expressions of the Christian faith. James (Jacobus) Arminius (1560-1609) was educated in Geneva, studying with Theodore Beza. However, he soon rejected some of the basic tenets of Calvinism such as supralapsarian predestination and irresistible grace.⁷⁷ John Wesley (1703-1791) was an Anglican priest who accepted many of Arminius' theological positions and who along with George Whitfield, a Calvinist, was used of God to bring about a revival of spirituality in England. Wesleyan theologians have modified the Reformed view of inspiration, advocating a dynamical theory that limits inerrancy to teachings of faith and practice only.⁷⁸

Albert Gray, a Wesleyan theologian of the Church of God (Anderson) specifically rejects the Reformed view as developed by the Princeton theologians because, "It is not possible to reconcile this view of inspiration with the fact that writers report the same instances or the same words differently, even words of Christ." Rather "God gave only the idea and left each writer to express it in his own words. This theory" he states, "seems to fit most of the facts better than the others." This position avoids Docetism by recognizing the human element in Scripture. As Gray states, "An acknowledgment of human limitations in Bible writers will explain some apparent

⁷⁷See James Arminius, *The Writings of Arminius*, 3 vols., trans. by James Nichols, 1st and 2nd vols. and by W.R. Bagnall, 3rd vol. (Grand Rapids: Baker Book House, 1956), 1:211-264 for a statement of his theological positions.

⁷⁸See Robert D. Branson, "How the Discoveries of Science and Archaeology Shift Interpretations of Genesis," in *Divine Grace and Emerging Creation*, ed. Thomas Oord, 138-55 (Eugene, OR: Pickwick Publications, 2009), 150-154 for a brief survey of the Wesleyan theological tradition.

misconceptions. Divine perfection should not be expected in a book that is partly human. The divine element is very apparent, and so is the human element.”⁷⁹

What is meant by misconceptions Gray does not specify, but some suggestions would be based on the fact that the Bible was given to a people who lived in a pre-scientific age. Thus they believed that the earth does not move (Ps 93:1; 104:5), that they lived in a geocentric system where the sun rotated around the earth (Josh 10:12-13; Ps 19:6); that the earth was established on foundations (Job 38:4; Ps 102:25; 104:5; Isa 48:13), that a solid dome on which the sun, moon, and stars were fixed held back waters above the earth (Gen 1:6-7,14-18). These examples are indications of the human aspect of the Bible. They are not to be received as revelations from God concerning the structure of the universe, but as examples of how God used the common understanding of the writers and their culture to convey to the readers what is essential. As A. M. Hills clearly states, "in spite of all discrepancies, and disagreements, and errors, and minor inaccuracies, the Bible still remains God's inspired and infallible book. But infallible for what? . . . It infallibly guides all honest, and willing and seeking souls, to Christ, to holiness, and to heaven."⁸⁰

This theological position allows scholars to compare the biblical account of creation to those current in the broader culture of the ancient Near East. In so doing, scholars such as John Walton recognize both the similarities between them and the distinctive theological message of Genesis.⁸¹ In contrast to the polytheistic beliefs of the Babylonians and Egyptians, Gen 1 proclaims that there is only one God who is separate from the creation itself, and who brought order to the world to support human, plant, and animal life. Ken Ham dismisses Walton's work by stating that "he is using pagan, idolatrous mythology to supposedly help us to understand what God and Moses really meant!" Ham thus demonstrates his ignorance of Old Testament studies in general and specifically how the study of the ANE cultural background of Israel informs the meaning of the text.⁸²

Conclusion

As long as the texts of Scripture, particularly those that describe God's acts of creation and his interaction with the universe are interpreted from a theological position of absolute inerrancy and are held to be more authoritative when they supposedly speak to scientific matters than science itself, the war between creationism and science will continue. Young people will be forced into a false position of having to choose between believing the Bible, or rather a specific

⁷⁹Albert F. Gray, *Christian Theology: Volumes I and II* (Anderson, Indiana: The Warner Press, 1944 and 1946), 1:71-73.

⁸⁰A.M. Hills, *Fundamental Christian Theology*, 2 vols. (Pasadena, CA: C.J. Kline, 1931), 1:134.

⁸¹John Walton, *The Lost World of Genesis One: Ancient Cosmology and the Origins Debate* (Downers Grove, IL: IVP Academic, 2009).

⁸²Ham and Hall, 189.

interpretation of it, or believing science. When they become persuaded by the overwhelming scientific evidence of the old age of the universe, they will feel betrayed. They will realize that the interpretation of the Bible they were taught is not credible and many will turn away from the Church and their belief in God. Other orthodox theological options are available to approach this issue. We should not be afraid to articulate those options and give to the next generation a solid basis upon which to build a strong spiritual life and also to be prepared to live in a modern age which is shaped by valid findings of science.⁸³

⁸³I want to thank the following persons who reviewed the paper and who suggested changes. Any remaining errors are, of course, mine alone. Dr. Lowell Hall, Chemistry, Eastern Nazarene College; Dr. Dan Ippolito, Biology, Anderson University; Dr. Kimberly Lyle-Ippolito, Biology, Anderson University; Dr. John Millis, Physics and Astronomy, Anderson University; Dr. Max Reams, Geology, Olivet Nazarene University; Dr. Jeffery Stackert, Biblical Literature, University of Chicago Seminary; Dr. Al Truesdale, Theology, Nazarene Theological Seminary, Emeritus.

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