

Originally published for
Creation Ministries
International on Creation.com.
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A Response to:

Campbell et al. (2010). PCA Geologists on the Antiquity of the Earth. *Modern Reformation* 19(3), May/June 2010.

<http://www.modernreformation.org/default.php?page=articledisplay&var1=ArtRead&var2=1137&var3=issuedisplay&var4=IssRead&var5=112>.

Introduction

The May/June 2010 volume of Modern Reformation, published by Dr. Michael Horton (Westminster Seminary, Escondido), noted for his radio program, The White Horse Inn, includes an article by eight geologists who are members of the PCA. It can be accessed at the link above. In the article, these men propose that the denomination accept the old-earth view of Genesis based on arguments from the discipline of geology. This response was developed to demonstrate to laymen that their arguments are not based on proper authority and are not scientifically compelling. It will also show some of the links between prehistory and Enlightenment secularism. All should drive us back to the Bible.

The critique will be presented in a paragraph by paragraph comment/response format, following these introductory observations.

The only infallible source of truth is God’s word, and the derivative system of theology for the PCA is found in the Westminster standards. Thus, we must test the argument of these authors against both. The Westminster Confession of Faith (WCF) summarizes numerous Scriptures in IV-I:

It pleased God the Father, Son, and Holy Ghost, for the manifestation of the glory of His eternal power, wisdom, and goodness, in the beginning, to create, or make of nothing, the world, and all things therein whether visible or invisible, in the space of six days; and all very good.

Hall (1999; 2008) demonstrated the absence of evidence for old-earth views by the Westminster divines. His work is supported by the absence of attacks on Ussher’s famous history, published a decade later. That is because the young-earth view was Christian orthodoxy from the Apostles to the Enlightenment (Mortenson and Ury, 2008).

Does God’s word speak with clarity and authority about Earth’s history? The authors say no. But textual, hermeneutical, and theological considerations indicate otherwise. The authors do not argue Scriptural or confessional support for their position, apart from a generic reference to the value of general revelation. That silence, in the face of abundant textual and hermeneutical arguments advanced by creationists from Whitcomb and Morris (1961) to Kulikovsky (2009), is stunning.

Instead, these geologists follow 200 years of Christian academics in attempting to “remain relevant” to secular natural history via heterodox interpretations of Genesis—Gap, Day-Age, Framework, and local flood. None can withstand critical analysis. In that tradition, these eight authors devalue special revelation in favor of natural revelation. Sadly, their “natural revelation” does not even consist of indisputable facts of science, but of a collection of ever-changing secular interpretations of forensic evidence of unique unobserved past events. Given that the

same interpretation is advanced by atheists as a primary argument against Christianity, caution is warranted. For we know that:

The whole counsel of God concerning all things necessary for His own glory, man's salvation, faith and life, is either expressly set down in Scripture, or by good and necessary consequence may be deduced from Scripture: unto which nothing at any time is to be added, whether by new revelations of the Spirit, or traditions of men... (WCF I-VI).

Thus, we bow to the authority of Jesus Christ in His word, which includes numerous clear assertions of fact about the origin and history of Earth, the cosmos, and mankind contrary to the position taken by these authors. Read the Scripture with an open mind and see for yourself. It presents the traditional position of the Church: God created the cosmos in six days, thousands of years ago, and later destroyed Earth's surface and land-dwelling, air-breathing life by water. The texts are neither difficult nor unclear. Sound theology is at stake: in addition to the issue of authority, how can orthodox Christians explain death before sin, an imperfect creation, or evolutionary descent? Furthermore, as Dabney (1878) noted, historical geology becomes a theological issue because it presents a virtual cosmogonic system in competition with that of Christianity.

Finally, the investigation of unique past events falls under the domain of history, not science. Adler's (1965) division of disciplines excluded natural history from science, labeling it a "mixed question," requiring input from multiple disciplines. Although science acts as a valuable forensic tool in that empirical investigation, its scope and certainty are less than the exaggerated claims of the founders of geology and their positivist heirs. This is especially relevant because recent historical research (e.g., Stark, 2003; Rudwick, 2005) has affirmed a strong secular bias in those who originated the concept of Earth's antiquity.

Assessment

The fundamental argument of this article is not new. It asserts that scientific knowledge supersedes the historical narrative of Scripture. In this view, science interprets Scripture. Thus, at root, it is the question of authority. What is truth? Jesus stated that the Bible is truth; these authors believe that secular geologic history can and should force interpretation of the relevant passages. Because of this, they do not present an exegetical demonstration of Earth's antiquity from Scripture alone, and fail to rebut both biblical and scientific arguments advanced by proponents of a young earth.

Now we can examine their case, point by point.

[How old is the earth? Does an honest reading of the opening chapters of Genesis confine creation to six days a few thousand years ago, or does it allow for an origin of much greater antiquity?](#)

The question should be what Genesis *affirms*, not *allows*. Until the Enlightenment, the Church monolithically asserted a recent creation in six days and a global flood (cf., Mook, Hall, and Mortenson, 2008). What changed? Were there textual, hermeneutical, or theological breakthroughs? No. Rather, the Church was captivated and/or intimidated by geology, biology,

and cosmology. Scientists oversold their case, philosophers supported them, and theologians largely folded.

In retrospect, that period saw the birth of a post-Christian secular worldview (Lewis, 1943; Noebel, 1991; Schaeffer, 1982; Sire, 1976; Sproul, 1984; Stark, 2003). Earth history was one of its facets. Miracles were called into question. Apologetics were trashed. Higher critics dismantled the Bible. “Scholars” also “scientifically” argued against the Incarnation, the virgin birth, and Christ’s resurrection. This secularist spirit still informs Western culture. Given opposing worldviews, we should expect conflict over origins and history. Thus we need to revisit foundations. Christianity’s is the Bible and the Bible’s is Genesis. Interpreting Genesis is an exercise in grammar and hermeneutics, not geology. Human experience is applicable when the Bible is silent and logical inference is unclear, but the burden of proof for those conditions rests on the authors, and they present no convincing argument to that end.

[These questions are hardly new. Scientific assertions suggesting an alternate interpretation of the length of creation began more than 200 years ago, well before the days of Charles Darwin.](#)

Just as early Church Fathers and Old Testament Jews fought ancient pagan cosmologies of extended duration. Any fight over the past involves religious/philosophical conflict. As Clark noted: “History demands philosophy.... It can be ignored, but it cannot be avoided.” (1994, pp. 21-22). His wisdom is vindicated by the commitments of the founders of secular natural history. Buffon may have professed Catholicism, but his actions and publications were heretical. Hutton was an enthusiastic Deist; Lyell a Unitarian hostile to biblical history (Mortenson, 2006). Geology was nurtured by a powerful secular intellectual class that included Spinoza, Hume, Kant, Hegel, Voltaire, and Rousseau. Some intellectuals maintained a façade of Christianity, but as Christ taught, we judge men by their fruit. That of the Enlightenment has proven bitter for the Church.

The “alternate interpretation” was not theology, but the secular assumption of a lengthy prehuman prehistory, accepted *before* the discovery of what today would be accepted as valid scientific evidence, such as the geological time scale or radiometric dating.

In the opening sentence of his *Alpine Travels* (1779), Saussure claimed that it was universally accepted—he meant, of course, among savants and other educated readers—that the earth’s past revolutions or major changes had occupied “a long succession of ages”.... Likewise, Werner commented in print—casually and just in passing—that the Geognostic pile of rock masses must have accumulated “in the immense time span...of our earth’s existence”; and in manuscript notes for his lectures on geognosy he estimated that the whole sequence might represent perhaps a million years. Lavoisier suggested that the “period” (in the sense of frequency) of his hypothetical oscillation of the sea level was perhaps “several hundreds of thousands of years” and since he believed there had already been several such cycles, his conception of the earth’s total timescale must certainly have run into millions.... And Kant’s well-known earlier conjecture that “a series of millions of years and centuries have probably elapsed” in bringing the universe to its present state was almost a commonplace among cosmological theorists (Rudwick, 2005, p. 125).

I previously noted (2010a, p. 205):

This pre-evidentiary disposition to reject the Bible is supported by a passing comment about the typical attitude towards Genesis at this time. It was ‘...ancient Jewish history, often scorned and dismissed by savants hostile to religion...’ (Rudwick, 2005, p. 276).

The progression of the secular attack is well documented, and the Flood and young earth were among the early targets. Early secularists cleverly conceded the Bible’s human history, but claimed it was silent about prehistory. Given that this attack was on just the first three words of Genesis, and seeing the results in retrospect, we should beware of making any concession.

Creationists understand the history of geology (Mortenson, 2004a; 2006; Reed, 2010a; 2008a; 2008b). Thus the mention of Darwin is ironic since Young and Stearley (2008, p. 450) complained that:

Like many other young-Earth creationists, Morris frequently invoked an intimate connection between evolution and uniformitarianism as a strategy for discrediting the latter, given the widespread hostility toward evolution on the part of so many Christians in the evangelical wing of the church.

If Darwin is irrelevant, then why raise the topic? Perhaps because most thinkers understand that Darwin *does* have a link to deep time, but as an effect, not a cause. There is no shortage of primary sources demonstrating Darwin’s dependence on deep time, just as there is no shortage of experience since 1859 demonstrating the effects of Darwin’s theory on society and the Church.

[With a debate more than two centuries in the making, one might reasonably expect that Reformed scholars long ago resolved the issue.](#)

That expectation is anything but reasonable. As has been documented by Mortenson (2004a), Sarfati (2004), Rankin (1999), and numerous others, the Church (with few exceptions) retreated in the face of the Enlightenment assault. Schaeffer (1968) and Sproul (1984) both trace that sad path in philosophy. Reformed scholars were no exception. Princeton quickly capitulated to both the new geology and then the new biology. Dabney was exceptional for his opposition to both, and southern Presbyterians held out a few more decades (Rankin, 1999).

These authors advocate the same path. To what end? Secular cultural decay, liberal theology, and eviscerated mainline denominations. This worldview spawned Marx, Nietzsche, and Freud, and it is clear that it must be opposed by the Church.

The first serious Christian challenge to modern secularism was the creationist movement dating from the later half of the 20th century—penetrating the Church in the 1970s-1980s. Therefore, the current debate is quite recent. And history shows that major theological debates take time to resolve. In 1960, there were few, if any, reformed theologians advocating a young earth. Today there are many. Give the Spirit time to work. After all, it is truth we want, not a speedy conclusion.

[In fact, the much-sought resolution has proven elusive. In 1998, the Presbyterian Church of America \(PCA\) commissioned a Creation Study Committee \(CSC\), made up](#)

of both Bible scholars and natural scientists, to consider the relevant Scriptures in light of the various existing interpretations and scientific evidence.

It is not surprising that resolution is elusive when the PCA has had little formal debate on the topic. The denominational seminary takes an old earth view, as does Westminster. Other schools either accept an old Earth or ignore the issue. This seems unfortunately typical. Dr. Joseph Pipa (personal communication) has related the refusal of old-earth professors at Westminster Seminary in San Diego to allow young earth Christians on campus to debate during his tenure there. It took grass roots interest from Presbyteries to spur action by General Assembly. A single committee composed of inflexible members does not qualify as a thorough investigation.

Also, the CSC considered only the first two chapters of Genesis only, ignoring the primary target of early secularists—the Flood. A more comprehensive evaluation might have been more helpful. For example, how many of members of the CSC advocating an old earth would have been equally comfortable denying the Flood, especially in the face of its affirmation by Peter (II Peter 2:5; 3:3-7) and Christ (Matthew 24:36-38) as the exemplar of final judgment? This takes us back to authority: is it the CSC or the Bible?

As demonstrated by this document, old-earth arguments are primarily scientific. Creationists have addressed those, and also have made textual and theological arguments, building a comprehensive and compelling case for the traditional interpretation of Genesis 1-11. These are usually ignored by old-earth proponents, but when addressed, are easily refuted (e.g., Mortenson, 2004b). I would encourage interested Christians to compare the cases presented in *Coming to Grips with Genesis*, (Mortenson and Ury, 2008), *Refuting Compromise* (Sarfati, 2004), and *Did God Create in Six Days* (Pipa and Hall, 1999) to the works of Hugh Ross, Meredith Kline, Mark Ross, etc. and determine for themselves which arguments align with biblical truth.

Finally, they state that the committee was to weigh Scripture by scientific evidence. Is that approach consistent with WCF I-IV?

The authority of the Holy Scripture, for which it ought to be believed, and obeyed, depends not upon the testimony of any man, or Church; but wholly upon God (who is truth itself) the author thereof: and therefore it is to be received, because it is the Word of God.

The report, submitted after two years of investigation, did not recommend a definitive answer, but did at least conclude that it is possible to believe both in an ancient earth and the inerrancy of Scripture. The statement below is extracted from the concluding pages of the 2000 *Report of the Creation Study Committee*.

Dabney (1878) noted this tendency of those arguing an old earth to move from the “may be” to the “must be.” His insight was valuable for that is exactly what is happening here.

The two years of the CSC’s “investigation” was a period of gridlock, and the result illustrates an inability to agree, not a reasoned conclusion. And, of course, is truth determined by “study committees”? What happened to *sola scriptura*? WCF I-VI again seems relevant:

The whole counsel of God concerning all things necessary for His own glory, man's salvation, faith and life, is either expressly set down in Scripture, or by good and necessary consequence may be deduced from Scripture: unto which nothing at any time is to be added, whether by new revelations of the Spirit, or traditions of men..

Since the theological doctrine of creation is involved, as well as the issue of God's glory—what kind of world did He create?—these words seem most appropriate, showing that the issue is primarily a doctrinal one, not a scientific one.

Clearly there are committed, Reformed believers who are scientists that are on either side of the issue regarding the age of the cosmos. Just as in the days following the Reformation, when the church could not decide between the geocentric and heliocentric views of the solar system, so today there is not unanimity regarding the age question.

This attempt to frame the issue as a question of conscience, with no clear biblical teaching, is misleading. The issue is biblical truth, not human opinion. The weight of biblical evidence for a young earth and global Flood is overwhelming, and these two are mutually reinforcing because the primary support for the old-earth position is the geological time scale, which cannot be an accurate account of history if there was a global flood. Since deleting the Flood was the original goal of secular natural history (Mortenson, 2006; Rudwick, 2005), and was triumphantly proclaimed as such for decades by 19th and 20th century geologists, we should be suspicious of where “science” leads.

The analogy to heliocentrism is also misleading. That was a debate about timeless physical reality, amenable to scientific investigation, and lacking clear biblical teaching. The geocentric view originated with the Greeks, not the Bible—another unfortunate compromise with an alien worldview. As such, it took time for the Church to sort truth from untruth. Ironically, that path was firmly established in 1277 at the Council of Paris, when Christian scholars accepted the authority of the Bible as being superior to that of Aristotle, using the *doctrine of creation* (Glover, 1984). The Church chose the biblical worldview over Aristotle, leading to the development of modern science. Five hundred years later, it chose the secular worldview of the Enlightenment, leading to postmodern culture.

Earth history is just that—history—and the investigation of unique, unobserved past events can never attain the certainty of observable physical reality. It is an intellectual error to accept earth history as something on par with physics or chemistry. That precedent was set by 18th century naturalists who were overly-enthusiastic about the potential of science. Their positivism has fallen by the wayside in philosophical circles, but still seems strong among scientists. But God is the ultimate eyewitness (revealing His point of view in the Bible), trumping all circumstantial evidence.

Ultimately, the heliocentric view won out over the geocentric view because of a vast preponderance of facts favoring it based on increasingly sophisticated observations through ever improving telescopes used by thousands of astronomers over hundreds of years. Likewise, in the present controversy, a large number of observations over a long period of time will likely be the telling factor.

Yes. Observation was important—anyone can confirm the locations of astronomical bodies by doing so. But the acceptance of heliocentrism had more to do with the simple elegance of the system, especially after Kepler (Hooykaas, 1999). That is not true of earth history. The past is not open to anyone’s observation. If nothing else, two centuries of multiple geological theories explaining the same phenomena illustrate that point.

For example, Young and Stearley (2008) noted that modern geologists tend towards neocatastrophism—a position anathema to geology as little as a few decades ago. Lyellian gradualism has been discarded. And yet, for roughly 150 years Lyell’s view was affirmed as the “fundamental principle” of geology. What are we to say to a discipline that changes its fundamental principle so readily? Gould (1984, p. 27), no friend of the Church, suggested that the retention of Lyell’s ideas for so long had nothing to do with science.

If gradualism stands up so poorly as a universal dogma when subjected to detailed examination, then why did it maintain its hegemony for so long? This question has no simple resolution, but I am certain of one thing: the popularity of gradualism did not arise from nature.

If Lyellian gradualism was influenced by non-scientific ideas, then why should we not expect the same of other assumptions relevant to geological history?

The geocentric/heliocentric debate refers to a controversy starting some 500 years ago between two conflicting views of nature. The geocentric position held that the sun, stars, and planets revolved around the earth. In contrast, the heliocentric position held that the earth and planets revolved around the sun. Several passages of Scripture appeared to support the geocentric view, and heliocentrism was considered by many to be a direct challenge to the authority of God's Word. Others recognized more than one possible interpretation of the Scriptures in question, and scientific evidence eventually persuaded them that the sun was indeed the center of our solar system. In this context, it is important to recognize that science did not prevail over Scripture. Scripture was and remains true. Scientific evidence only served as a God-given aid in selecting the more accurate of two plausible, Bible-honoring interpretations. The CSC report suggests we are at a similar crossroads concerning the age of the earth, but without sufficient evidence to tip the scales one way or the other.

The appeal to the geocentric/heliocentric debate is a red herring. The primary support for the geocentric position came primarily from Aristotle, Ptolemy, and other ancient Greeks. Scholasticism (integrating Christian and Aristotelian worldviews) might have been a “fruitful failure” (Glover, 1984), but was still a failure. And the switch to the heliocentric theory didn't come about “because of a vast preponderance of facts favoring it based on increasingly sophisticated observations through ever improving telescopes used by thousands of astronomers over hundreds of years.” Rather, the switch occurred soon after the telescope was invented (circa 1610), and virtually no one remained committed to geocentrism by 1650. The only telescopic datum that had any bearing on the issue was the discovery that Venus underwent phases visible from Earth. Though impossible with the Ptolemaic model, it did fit that of Tycho Brahe. The first direct data to support the heliocentric theory was the discovery of aberration of starlight in 1725, but by then it was a moot point.

Finally, and most importantly, the biblical passages in question in that debate are all easily interpreted as a matter of perspective, similar to that used by all secularists today. On the other hand, there are many unambiguous passages from Genesis to Revelation that clearly teach a young earth and global flood. These cannot be explained by perspective, or by innovative theological theories which begin with the premise that the plain meaning of the text is wrong. Thus the analogy fails.

The CSC commendably included several scientists, though none were geologists. So what would a geologist add to the discussion? As practicing geologists committed to the authority and inerrancy of Scripture, in keeping with Reformed tradition, the eight authors of this article maintain that the "large number of observations over a long period of time" mentioned in the CSC report have already been made, and the data are sufficient to unequivocally answer the question.

These “observations” are typically interpretations of geologists committed to secular uniformitarian history. And the judgment of their sufficiency is made by...them.

If these geologists are committed to the authority and inerrancy of Scripture, then they would accept what it says. To state that you are so committed, and then make it clear that you hold a heterodox interpretation, means that anyone could make that pious claim and affirm anything they wanted. “Jesus did no miracles, the accounts are just allegorical or poetical constructs, etc.” or “Virgin simply means ‘a young woman’ so why affirm Christ’s miraculous conception?” The Church has been down this path before.

We also understand, however, the inherent difficulty that people have in assessing a vast body of scientific literature filled with terms and jargon that often require years of schooling in very specific fields to comprehend. Such difficulties have landed even well-read and godly individuals such as Martin Luther on the wrong side of these debates. Luther addressed the heliocentric theories of Copernicus in his day as being little more than the pursuit of vanity since Scripture clearly speaks of the sun moving and not the earth.

Luther’s “attack” on geocentrism is attributed to an offhand remark about Copernicus made in 1539 and recorded in his “Table Talk.” His attitude of skepticism was not only appropriate for a theory that would not be considered proven for more than a century later, but would have been that of the leading *scientists* in Europe at that time. Luther was distorted by later secularists (e.g., Andrew White) wishing to foster a “religion vs. science” war with the Church as the “bad guys.” Why accept that premise? Especially when Stark (2003) so ably unmasked the nature and extent of Enlightenment propaganda, both then and now.

There is no sound biblical link between astronomy and history. The historical narrative and subsequent supporting texts are extensive and clear. Old-earth theories are attempts to escape the text, not exegete it, typically relying on tenuous re-definition of terms or style. Even today, theologians seek to interpret the term “day” in Genesis as a long indefinite period of time, citing one or two usages in support, while ignoring the 99% that apply it in the context of a 24-hour day. Why do not those same theologians question that Jesus was in the tomb for three 24-hour

days or in the wilderness for 40? Simple grammar and context affirms the meaning. But they abandon the same in Genesis. Its context is plain; for example, Boyd (2005) showed an overwhelming statistical match between textual and linguistic characteristics of early chapters of Genesis and other historical narratives, and McCabe in Mortenson and Ury (2008) documents the historical continuity between Genesis 1 and the rest of the book.

If we need interpret the Bible by a “vast body of scientific literature” then why not do the same for the Incarnation, the Resurrection, spiritual power manifestations and other miracles? What makes Genesis unique in this regard?

Most scientists, being specialists, have little better than an educated layman’s knowledge of much of this “vast body of scientific literature” outside their specialty. And, of course, no one has the omniscience of God, which is the whole point. Thus we should accept what He reveals, even if it contradicts the wisdom of man, just as I Corinthians 3 predicts.

[In this article, we wish to provide our brothers and sisters in the body of Christ with a few general observations, some clarification of a common misconception about our science, and two specific examples that speak convincingly that God's earthly creation has been around for a very long time.](#)

Why not show clear and unambiguous evidence from Scripture for the same?

General Observations

[Science can be a contentious business when data can be plausibly interpreted more than one way. One of the best ways of making a name for yourself in the scientific community is to challenge a widely held scientific understanding with a strongly defended alternative theory. It is thus of considerable significance that the tens of thousands of geologists worldwide are virtually in complete agreement that the question of the earth's age has been answered: roughly 4.6 billion years.](#)

On the contrary, institutional dogmatism is a well-documented phenomenon in the sciences, including geology. Individual distinctives are only allowed within the accepted framework. Why else the 150-year reign of gradualism? The anti-plate tectonics herd mentality of the early 20th century and the pro-plate tectonics dogmatism today? Are climate researchers who do not support global warming making a name for themselves or losing grants? What about anti-evolutionary biologists? A clearer picture of how science really works is provided by Bergman (2008) or by the movie *Expelled*. As one wag once stated: “If scientists were objective, we wouldn’t need science.”

And even if millions of independent geologists arrived at the same conclusion, it would mean absolutely nothing in the face of the clear teaching of God’s word (Romans 3:4).

Furthermore, how many of those geologists have made an exhaustive personal study of Earth’s age? Most are taught it, accept it, see a few pieces of evidence to support it, and then move forward in their profession. They “confirm” it because it is expected. Those for whom age is

important (academia, government) soon realize that questioning the age can end a career. Many others do not care, because it is not important for them. Finally, bias drives us all:

...uniformitarians could be as metaphysical and perhaps even more dogmatical than their opponents... (Hooykaas, 1970, p. 271).

The agreement is perhaps even more striking in the world of economic geology (oil and mineral exploration) where theories that lead to increased revenue always win, even if philosophically distasteful. Understanding the age of the earth and its layers plays a critical role in natural resource exploration, yet to our knowledge there is not a single oil or mining company anywhere in the world that uses a young-earth model to find or exploit new reserves. Old-earth models work. Young-earth models do not.

More striking than what? The vast majority of geologists work in petroleum/mining, academia, or government. Those taking the hardest line on modern secular natural history are in academia and government. Could this unanimity be related to the overwhelming secularist bias in those institutions? Their animosity towards Christianity certainly suggests that. Of course, institutional hostility towards the Flood is nothing new. As far back as the turn of the 19th century, Deluc was forced to modify publications because of a strong anti-Flood sentiment (Rudwick, 2005).

If scientists were truly neutral, then some would objectively investigate the Flood as a valid working hypothesis, and a few oil companies would try it out. That none do is as easily an argument for institutional bias as it is for the shortcomings of the concept. Ironically, modern oil exploration emphasizes seismic analysis over paleontological analysis. This suggests the physical nature of the rock record is more important than an evolutionary stratigraphic succession—long held to be the key to understanding the past.

Is the age of the earth both a necessary and sufficient condition for economic success? Most geologists generating prospects are looking for a conjunction of reservoir, migration pathway, source, and seal. Those can be theoretically produced by catastrophic as well as gradualistic processes, and in a short time as well as a long time. An unnamed young earth geologist has drilled over 100 successful wells over the past decade. Dr. Alexander Lalomov worked as a mineral exploration geologist in Siberia for many years. He found that diluvial models predicted ore placer deposits, found only in very “old” and very “young” rocks, better than secular geology’s models, which could not explain, much less predict, the distribution (Lalomov and Tabolitch, 1999). His recent work is providing sedimentological constraints on the dating of strata (2007; Lalomov et al., 2006). I expect that if more geologists actually assessed the data with an open mind that many would find similar interesting ideas.

As an aside, a clarification of the logic of this statement would help. In one place it is said that young earth models do not work, in another that they have never been tried!

But Isn't an Old Earth Based Entirely on Assumptions of Naturalism?

There is some confusion over the term naturalism because it is variably used as an approach to day-to-day research and as a philosophical worldview.

The Bible teaches the doctrine of Providence as a twin to that of Creation. It is summarized in WCF V:

I. God the great Creator of all things does uphold, direct, dispose, and govern all creatures, actions, and things, from the greatest even to the least, by His most wise and holy providence, according to His infallible foreknowledge, and the free and immutable counsel of His own will, to the praise of the glory of His wisdom, power, justice, goodness, and mercy.

II. Although, in relation to the foreknowledge and decree of God, the first Cause, all things come to pass immutably, and infallibly; yet, by the same providence, He orders them to fall out, according to the nature of second causes, either necessarily, freely, or contingently.

III. God, in His ordinary providence, makes use of means, yet is free to work without, above, and against them, at His pleasure.

These beliefs were common currency during Newton's day. Scientific method depended on it; the predictability of science was based on the character of God. The fathers of science, familiar with the Reformed doctrine of Providence, had no problem integrating that theology with science. Indeed, they saw it as necessary:

As the historian Edward Grant explained, "it is indisputable that modern science emerged in the seventeenth century in Western Europe and nowhere else" (Stark, 2003, p. 146).

But things changed. Metaphysical materialism and epistemological positivism tore science from its Christian roots and made it autonomous and absolute, set against revelation and theology. This secular worldview dominated science for decades, and still does today. That is undeniable.

We can see how far we have come from the Reformation view of Providence by realizing that even affirmations of miracles sees them as intrusions by God into the "natural order." For example, Young and Stearley (2008, pp. 462-463) attempted to argue:

... that God is economical with miracles and that he has employed them mainly in the service of redemptive history.... Arbitrary, unobserved miracles performed during the work of creation would have had absolutely no impact on people and would not serve to confirm the presence of God or the pronouncement of the word because no one was there to observe them.... Biblical miracles like the virgin birth, the resurrection or Jesus' walking on water were powerful signs to the observers to confirm the divinity of Christ but such miracles have no bearing on the daily practice of scientific geology. Such miracles have no effect on historical reconstructions of the Earth's past, nor do they affect the laws of physics or the course of chemical reactions.... What would be a problem, however, is the introduction of arbitrary or capricious miracles with no compelling reason from the biblical text for assuming their existence. Assuming such miracles would make the pursuit of historical sciences more problematic.

This position contains a litany of errors (Reed, 2010b):

1. Ambiguity of the term "miracle," especially seen against the WCF on Providence.
2. Fencing God from His rightful rule over origins and earth history.
3. Equivocal use of "economical."
4. Failure to see all of history as redemptive history.

5. Missing the true purpose of Creation—God’s glory (Edwards, 1754).
6. Failure to see that people comprehend actions apart from directly apprehending the effects (Psalm 19, Romans 1).
7. Failure to account for the “miracle” of the Flood being witnessed by all alive at that time.
8. Failure to see the reason for the Incarnation and its miracles as original sin; Adam, Eve, Fall, Garden, etc. = Genesis as history.
9. Calling God arbitrary and capricious (Isaiah 55:8-9).
10. There are two “compelling reasons from the biblical text” to reject this theology of miracles. First, both Old and New Testaments testify to the reality of Creation and the Flood, and to God’s immediate work in both. Second, that testimony must be true because it is “impossible for God to lie” (Hebrews 6:8, KJV).

Affirming God’s hand in history does not make history or science “problematic;” it is quite the opposite. If the goal is truth, then we want to know what actually happened. Failing to acknowledge His works in history, and giving aid and comfort to those that openly deny Him seems much more “problematic” than believing Genesis.

As a philosophical position, it is better termed *materialism*, which holds that all that is real is observable or testable using natural tools. Supernatural phenomena and beings unconstrained by time and space--such as angels, demons, or God himself--are deemed impossible by simple definition. Ironically, materialism lacks the tools to test its own postulates and is devoid of real merit. It is nonetheless the mantra of many atheistic scientists who have latched onto evolution and deep time as ways of getting around God. This has led to an unfortunate misrepresentation of the age of the earth debate among Christians.

And yet philosophical naturalism has been a monolithic position of science for nearly two centuries, despite being philosophically and theologically bankrupt (Lisle, 2009; Reed, 2001; Reed et al., 2004). That does not mean that it has not exercised significant influence in the sciences or that it still does, because the “movers and shakers” of modern science are proponents of this worldview. The rude reception of the Intelligent Design School, which expected to be welcomed with open arms by repudiating a young earth and Flood geology, has demonstrated that.

Nor is it just a few rogue atheists who have “latched onto” metaphysical materialism for their own ends—it was the default position of the Enlightenment, and has been the fundamental assumption of science ever since. Strahler (1999, p. 4) stated:

Scientists therefore have no alternative but to ignore claims of the existence of supernatural forces and causes. This exclusion is a basic position that must be stoutly adhered to by scientists or their entire system of evaluating and processing information will collapse.

Fr. Dwight Longenecker (2010), an Anglican convert to Catholicism, has an excellent response to such an attitude, which is applicable to all Christian scientists of any denomination:

The skeptic is afraid that if he allows for the resurrection that he must accept every other supernatural tale that comes along from images of Mother Teresa in a bagel to “healings”

by sweating televangelists. He dare not take seriously the Catholic understanding of miracles: that they are possible but that we are properly skeptical and we look for every natural explanation first. Such a common sense approach seems perfectly reasonable. It allows for unexplainable phenomena --and who can deny that such things happen? But it also seeks the natural explanation first, and even when a natural explanation is not possible it still does not necessarily ascribe the phenomena to God.

The supernaturalist therefore is more open minded than the logical positivist who denies the possibility of miracles. The supernaturalist has room for the unexpected even if he does not understand it. The logical positivist has room only for the natural, physical explanation. The supernaturalist has both/and. The logical positivist has only one.

The irony is that the logical positivist is neither logical nor positive. He is illogical and negative. The supernaturalist is able to be objective and coolly rational in the face of the unexplained. The logical positivist can only react with incoherent rage for the unexplained reveals that he has no explanation--not even a bad one.

The foaming rage and bitter, irrational, bile spitting rants of Dawkins and Hitchens proves my point.

The history of Naturalism is closely tied to secular natural history, and has been since its inception. Thus, the identification of metaphysical naturalism with the age of the earth is not an “unfortunate misrepresentation,” but is an accurate assessment of how presuppositions influence conclusions.

Furthermore, Naturalism as a worldview cannot be reduced to metaphysical materialism. It must also recognize the corollary epistemology of positivism, and the resulting uniformitarian philosophy of history. Even if these authors are neocatastrophists, they cannot deny that their discipline was built on Lyellian gradualism. The question then becomes: why did Hutton and (the early) Lyell hold such a rigid view? Perhaps it was because they understood that scientific certainty across vast reaches of time required sufficient similarity between past and present to extrapolate reliably (Reed, 1998). The flip side means that modern neocatastrophism faces diminished certainty.

[The debate over the age of the earth is frequently characterized as science versus religion or as naturalism/materialism versus theism/Christianity, but these are utterly false dichotomies.](#)

“False dichotomies” can mean two things: (1) that the actual dichotomy is false, or (2) that its application to this issue is false. Also, the two “false dichotomies” are quite distinct.

The first—science vs. religion—is false in and of itself, but has been the ruling paradigm of geology since the Enlightenment. As far back as Buffon, the “science vs. religion” dodge was used to characterize religion as mere weak faith. I agree that this position is a false issue; it is no coincidence that it has been unmasked in the face of modern creationism.

The second is not synonymous. It is a true description of the worldview clash behind the views of modern science. While not all scientists are atheists, their definition of science as being absolutely naturalistic, positivistic, and actualistic is inherently anti-Christian. Therefore, that conflict is relevant to the age of the earth issue. To assert so is to ignore the history of ideas.

[In *Christianity and the Age of the Earth*, Davis Young notes that many of the early advocates of an ancient earth were devout Christians. Among geologists such as Deluc, Buckland, Sedgwick, Conybeare, Fleming, Hitchcock, Guyot, Dana, Winchell, Dawson, and Walcott, several were Calvinists.](#)

And there have been many ethical atheists. Human inconsistencies are part and parcel of common grace. Also, “devout” believers err every day. That is why our only standard of truth must be God’s word. Only God can judge their hearts and salvation, and so we leave that to Him. Being a Calvinist is not a get out of jail free card. Either these men were right or they were wrong about Genesis. God will assess their position based on His understanding of the truth, which Christ told us has been revealed in His word, which is superior to theological or pietistic labels.

Furthermore, it was not the “devout” Christians who drove the development of geology; it was the devoutly anti-Christian freethinkers, including Hutton, Lamarck, Lyell, etc.

[These men did not regard the scientific evidence as challenging the veracity of Scripture, but only as challenging one aspect of the traditional *interpretation* of Genesis 1 and 2.](#)

Just as others *only* challenged the “one aspect” of the virgin birth, the resurrection, or miracles, etc. Scripture is a package deal. James states that he who sins against one point of the law is guilty of it all. God’s word is not a smorgasbord; you believe it or you do not. Note also that this wording implies multiple traditional interpretations, which as previously shown was not the case in the Church before the Enlightenment.

To label the issue as one of “interpretation” and then further minimize it as only “one aspect” of that “interpretation” is to excuse unbelief. These men had a choice to fight where Satan was attacking the Church. In most cases, they failed.

[The central message of God's authorship of creation was and remains undisputed by evidence of great age.](#)

This point is true only in the sense that what exists now was created by a transcendent entity. But God’s revelation about origins and earth history extend far beyond Genesis 1:1, which would have been sufficient had that been the only necessary doctrine. As noted earlier, we cannot ignore the historical reality that the denial of a young earth and global flood were early steps by secularists that led inevitably to denying “God’s authorship of creation.” Christians discover significant detail about Creation and Providence in His revelation. If Scripture teaches a young earth or a global flood, then the age issue does present a stumbling block to its veracity.

It was not a commitment to naturalism that convinced Christian geologists of the antiquity of the earth, but rather a belief that the history of nature recorded in the earth's rocks should be consistent with the unchanging, truthful nature of its Author. In their estimation, the rock record in outcrop after outcrop in all parts of the world clearly told a story extending far beyond a few thousand years.

But it was a compromise with Naturalism that persuaded geologists who were Christians to accept the antiquity of Earth. As noted above, the assumption of a lengthy prehuman prehistory predated the “evidence.” Nor can we ignore the aggressive promotion of secular history by those who were clearly hostile to Christianity. One compromise leads to another. For example, what happens to the Christian doctrine of original sin if we believe modern geology’s account that the earth is at has been for billions of years—a place of imperfection and suffering?

How do the authors know the hearts of geologists that accepted an old earth? Only God knows. But the results are clear. Syncretism is nothing new.

This statement implies that the rock record is on par with the Bible as a revelation of history. But the rocks do not come labeled in the field with propositions of narrative history. Geological history is an interpretation of the rock record, adding in assumptions, extrapolation, and uncertainty. If the presuppositions include an old earth, then any resulting conclusion will not affirm Scripture, and the argument is circular.

It is ironic that they mention the rock record in “outcrop after outcrop in all parts of the world” because the geological time scale was built on limited outcrops in England, France, Italy, and even more limited outcrops in central Europe and Russia. This was prior to seismic data, drilling, and the technologies that identify lithologic and paleontologic detail. The invariance of the time scale since the early-to-mid 1800s logically implies that it functioned as a template in most parts of the world. Subsequent “affirmation” is readily explained by the fact that geologists—like most humans—see what they expect.

The inferred vast ages of these rocks is a function of assumptions of gradualism and actualism governing their emplacement—assumptions that are at odds with the distinct, catastrophic events recorded in the Bible. Modern geologists may be forsaking gradualism, yet they retain the geological history built on that foundation.

This sentiment underlies the current position taken by most Christian geologists today.

This opinion means very little against the revealed truth of an omniscient God, who was not only there to observe, but caused each event after the counsel of His own will. Thus, these geologists are stealing glory from God by refusing to attribute to Him his proper role in history.

It is interesting that the leap to neocatastrophism logically increases the uncertainty of geological history. Millions of years of “evidence” have been compressed into days or weeks as geologists re-interpret many rock units as having formed in short order, such as the Columbia River Flood Basalts, tempestites, turbidites, etc. This creates ever-increasing gaps in this 4.6 billion-year history, which means that the actual physical evidence in support of extended periods of time is

evaporating. By analogy, it is hard to understand *War and Peace* if you only have scattered sentences on a few of the pages.

[The Creation Study quote at the start of this article implied that a roughly equal number of Reformed scientists could be found on either side of the age of the earth controversy.](#)

This statement is irrelevant to biblical truth.

[This perception is understandable given the high-profile nature of young-earth organizations, but it is not what we have encountered in our experience working among Christian geologists.](#)

Who is David and who is Goliath? Creationists are represented by four major organizations, one museum, and a few small Christian colleges. Old-earth geology owns all of academia, all the public schools, all the media, government, and industry. It has permeated mainline Protestant denominations and the Roman Catholic Church. Why not talk about the many “high profile” old earth organizations? For example, the total *capital* cost of the Answers in Genesis museum was only 25% of the *annual operating* budget of the American Museum of Natural History in New York City—which is only one of many promoting the old earth view.

It is not surprising that people accept an old Earth since they have been taught from an early age that Earth is old, have been educated in universities that dogmatically assert it, have been placed in work situations where that paradigm is demanded, and attend churches that tell them it is acceptable. What is amazing is that in the same environment, God has raised up Christians who have rejected that indoctrination and placed their trust in Him rather than experts. If creationism was an unbiblical, unscientific fabrication, then its exponential growth over recent decades is the real anomaly in the face of academic and cultural animosity.

[Of those who claim belief in an inspired, inerrant Bible, an overwhelming majority fall within the "old earth" camp. In fact, we are not aware of a single practicing geologist who was convinced of a young earth by studying God's physical creation. Though an exception may well be out there somewhere, the few young-earth geologists we have seen in print or have spoken to privately arrived at their position solely on an assumption of how Scripture should be interpreted, not on a study of God's creation.](#)

The opinion of man or the observation of God? The “book of nature” or the Bible? And if they want to cite the latter, then the testimony of a young-earth geologist should be included:

My experience was the opposite of what they maintain. I returned to faith during grad school as a thoroughly uncatechized Catholic, and it took the writings of Michael Denton to help me see the flaws of Darwinism, and several years and some frank comments by Emmett Williams to help break down my anti-young age prejudice so that I could start re-evaluating the rock record. It was not the book of God, but the book of Nature that finally convinced me.

However the more sure path to truth is the Scripture. We do not learn the infallible truth about earth history by studying rocks. We learn it from reading an infallible historical document. As

mentioned earlier, what good is the claim of inerrancy if one is free to “interpret” away the troubling parts?

The implication that young earth geologists are blinded by the Bible and are unable to do research in their field is both insulting and contrary to fact. A more interesting question is why Christian geologists committed to the Scripture would not at least make an honest attempt to use the young earth view as a working hypothesis in their work, given the Scriptural and confessional support.

Evidence for the Earth's Antiquity

When selecting examples to convey the strength of the evidence for the earth's antiquity, we faced two challenges. One was selecting examples that can be easily explained in just a few paragraphs to those unfamiliar with geology. The more difficult challenge, however, was selecting a mere two out of the literally thousands of good candidates from every corner of the globe.

Let's simplify. If:

The whole counsel of God concerning all things necessary for His own glory, man's salvation, faith and life, is either expressly set down in Scripture, or by good and necessary consequence may be deduced from Scripture: unto which nothing at any time is to be added, whether by new revelations of the Spirit, or traditions of men. (WCF I-VI)

Then the true answer is found in the Bible. Once again, we are back to the authority and sufficiency of Scripture. We would expect that these authors would then make textual and hermeneutical arguments for their position and against their opponents'. If the accounts of Genesis 1-11 can be denied or made to fit the theories of anti-Christian intellectuals, then any other part of the Bible can too. Such has been the last two centuries of church history.

But since we also believe that God is truth and that truth is unified in God, let's look at these examples.

Lake Suigetsu, Japan: Rocks and Sediments Aren't Just Old, They Have a History

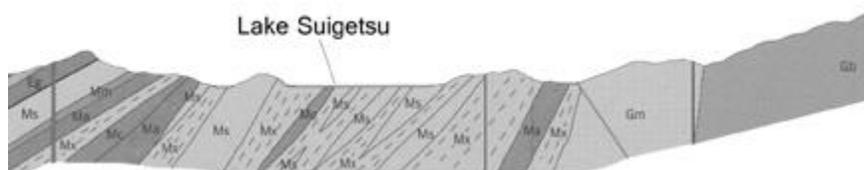
In many places around the world, rocks and sediments preserve evidence not only of their age but also of the processes that produced them and the order in which events took place.

First, this title implies that having a history demands being “old.” That is a false dilemma. Second, crustal rock bodies do not contain recorded propositional history. They possess features and characteristics that can be interpreted as indicative of historical events or processes. Depending on the starting assumptions of the geologist, a variety of interpretations are usually feasible. Since geology was built on belief in an ancient earth, no global flood, and Lyellian gradualism (until quite recently), we should expect a bias towards long, slow, gradual processes. Thus, it is essential to distinguish data from assumption and interpretation, and to do so on many levels.

Consider Lake Suigetsu in Japan, starting with the loose sediments that have been slowly accumulating at the bottom. The bulk of these bottom sediments consist of darkly colored silt and clay particles that settle out after being washed into the lake by streams. In the spring, single-celled organisms called *diatoms* living in the water increase in number. As they die off, their microscopic shells settle to the bottom to produce a whitish layer that gets covered during the following season by more silt and clay. Each pair of light and dark layers, collectively referred to as a varve, represents the passage of one year. Lake Suigetsu contains more than 100,000 of these varves, which strongly suggests the lake has been collecting sediment in excess of 100,000 years.

The concept of chronology by varves was advanced in the early 1900s to characterize the various ice age cycles. As Oard (2009) discussed, there are many difficulties in this method, including that of determining whether a sedimentary couplet is an annual varve or an indeterminate rhythmite. As he demonstrated, there are numerous examples of rhythmites being deposited on a faster-than-annual cycle. As Woodmorappe (2002) noted, although Kitagawa and van der Plicht (1988) affirmed a 100,000 year age for the base of their core at this site, they were unable to correlate the varves to C-14 dating past 31,000 years, and recorded various uncertainties in those methods. Other scientists questioned these dates, adding 10,000 years to the total (Beck et al., 2001). Bard (2001) posited a set of “missing varves” to account for the discrepancy. Regardless, none of these secular publications can demonstrate a date “in excess of 100,000 years” absent the *assumption* that the sedimentary couplets represent annual varves.

Furthermore, all of these estimates are based on an actualistic understanding of earth history. If the Flood occurred, as the Bible teaches, we would expect non-actualistic conditions during and after. Oard (2005) noted that atmospheric dust could have been 40-100 times more abundant immediately after the Flood, based on his study of ice cores in Greenland. Diatom blooms associated with dust influx, potentially associated with weather fronts blowing from East Asia, could have generated rhythmites at a much accelerated rate (Oard, 2009). What the varves at Lake Suigetsu really demonstrate is that when it comes to the details of history, the rock record does not provide exact infallible data.



And there is still more to this story. Those 100,000-plus layers lie on top of bedrock that has its own history. The solid rock beneath and around the lake sediments is a complex assortment of granites that formed from intruded magma (melted rock) and tilted sandstones, mudstones, limestones, and cherts that formed from accumulating sediments in an ocean environment.

These are the data and are no different from the geology of many areas. The question remains: is this complex assortment of geological features the result of long, slow, gradual processes operating over tens of millions of years, or is it the result of catastrophic processes operating within the biblical time frame. Do we interpret Scripture based on one of these hypothetical

examples, simply because it represents majority opinion in a discipline built on unbiblical presuppositions? If we affirm the primacy of Scripture, then it is the task of Christian geologists to interpret the rock record within that framework, even if that runs counter to the spirit of this age.

The infallible history conveyed in the Bible tells us what God invoked and witnessed; the interpretations of geologists are conjecture and opinion. The latter are certainly acceptable, if constrained by infallible Scripture. The myth of scientific autonomy has been withering for decades along with the optimistic positivism that built that myth in the 18th and 19th centuries. The failure of Marxism represents the failure of “scientific history.” If mankind cannot achieve scientific certainty for recent history, then why should we expect it to be easier for prehistory?

The abbreviated history all this reflects starts with deposition in a shallow ocean environment, followed by multiple changes in sea level, cementation of grains to harden sands and mud into rock, intrusion of magma, tilting and uplift above sea level, erosion of these rocks to present level, and finally formation of the lake where sediments and diatoms began to accumulate on the bottom.

All of this can be explained in the context of the Genesis Flood. None of these requires vast ages. That is simply the establishment paradigm. Under the influence of the French naturalists, Hutton, and Lyell, geologists became accustomed to interpreting all rocks in term of long, slow, gradual processes. Recent years provide a multitude of examples of rapid processes once thought to require vast periods of time, and many specific geological features have been shown to have formed in very short order (cf., Snelling, 2009a).

Furthermore, creationists have proposed models and mechanisms for the rapid formation of other aspects of the rock record. Oard (2008) has shown that many geomorphological features indicate rapid formation by vast volumes of water; conventional geomorphology cannot explain the scale and nature of the same features. Snelling (2008; 2009a) summarizes recent research showing the feasibility of rapid formation and emplacement of granites.

Many questions remain, but creationists have shown that alternate interpretations are both possible and reasonable. If all Christian geologists were to apply their knowledge to understanding earth history in biblical terms, much more profitable work could be accomplished.

No single event can be called upon to plausibly produce all these observed changes.

This assertion depends on the equivocal use of “event.” Do the authors mean a local single geological event, like erosion or deposition or faulting, or are they implying the Flood? If the latter, they misunderstand that the Flood was a collection of very rapid, high energy events that changed over time as the physical and chemical environment at any given location changed.

What is more important: looking for scientific or forensic explanation by reference to physics and chemistry or by time? For example, given the right mix of minerals, water, heat and pressure, solid rock can form in short order. Ever since the beginning of geology, secular scientists argued against the biblical history based on some proposed process or event that would

“take too long.” In just a few decades, a few creationists have shown that many of these are possible in short periods of time (Oard and Reed, 2009; Snelling, 2008; 2009a). Furthermore, secular geologists are finding “young” indicators that they cannot explain, such as the soft tissue associated with Cretaceous dinosaur fossils (Weiland, 2010). If all of these “long age indicators” have been shown fallible in a short time with relatively little research, how many more would be discovered by the concerted efforts of Christian geologists committed to God’s word?

Each feature and rock unit records a unique aspect of earth history.

We still have not reached *proof* of long ages. Once again, note the equivocal use of “history” to imply vast time. Unique aspects can happen quite rapidly. Austin (1984) documented the rapid formation of thick sequences of laminated sediments and the rapid erosion of a large scale drainage system associated with the Mount St. Helens eruption in a matter of days. Secular geologists have realized that the Columbia River Basalt flows occurred in hours to days.

This gets back to starting assumptions. Secular geology was built on the stratigraphic approach—interpreting rock units by the time in which they were emplaced, based on modern depositional environments. Thus, time, and lots of it, is the background working assumption of geologists when they examine rocks. As more exceptions come to light (e.g., Austin, 2003; Lalomov, 2007; Lalomov et al, 2006; Oard, 2008; Snelling, 2009a), perhaps it’s time to re-examine the foundations.

Dating techniques applied to these rock units yield the same sequence of ages inferred from logically sorting out the order of events from visual observations.

The argument is of mutually-reinforcing methods of arriving at the same age. As noted above, that is not exactly the case. Even with the veneer of “varves,” researchers are hard pressed to find a good match between C-14 dates and “varves” past 31,000 years. Numerous creationist publications have noted the problems with other dating methods that render them uncertain (e.g., Snelling, 2009b; Vardiman et al., 2000; 2005; Woodmorappe, 1999). Dating techniques are not infallible. God’s word is. Furthermore, based on past experience, we must ask if this mutually-reinforcing information is a function of data or psychology.

“Logically sorting out the order of events” is another term for “interpretation.” Since all history requires the combination of assumptions with data, it would be helpful to know what assumptions were involved in this process.

The fact that the order of ages follows the logical sequence of events that must have taken place lends credence to the absolute values, but again, we do not have to depend on untestable assumptions to accept that ages in the millions of years are credible. This leads us to Example 2.

This assumes that the “order of ages” is true, an assertion that still requires some form of validation, especially given demonstrable errors in the methods used. The “logical sequence of events” is a loaded statement since it reflects the opinion of the particular scientist as to what would be a logical order. That is illustrated by the fact that more than one “ancient environment”

could be argued for similar sequences, and the actual history could vary widely depending on who was telling the story.

Even if there was a relative sequence of events, it does not “lend credence to the absolute values” if there is a feasible catastrophic alternative. Thus, that statement does not logically follow.

That is because absent an absolute framework known in advance, piecing together the events of Earth’s past becomes a matter of speculation, depending largely on the assumptions behind the interpretation. Thus, the millions of years is a matter of relying on untestable assumptions, which is the case in any approach to history outside the Bible.

The Atlantic Ocean: Plate Velocity Confirms Measured Ages of Rocks
The details of how radioactive dates are determined are irrelevant for this example.

Since part of this argument depends on the validity of the dates, it seems that the details of how they are derived *are* relevant. For example, if we start with the contrary assumption that the dates were incorrect, the argument falls apart.

As already noted, radiometric dating is not infallible and serious problems have been identified. The best test is that of comparing “dates” to rocks of known ages. Austin (1996) radiometrically dated a volcanic dacite from the lava dome of the post-eruptive Mt. St Helens volcano. The whole rock K-Ar ‘age’ was dated at 0.35 ± 0.05 million years (Ma). Mineral concentrates from the dacite which formed in 1986 give K-Ar ‘ages’ from 0.34 ± 0.06 Ma (feldspar-glass concentrate) to 2.8 ± 0.6 Ma (pyroxene concentrate). If dating is off by a factor of more than four orders of magnitude compared to known age samples, then why should it be considered in independent and accurate set of methods? Other problems have been documented (Snelling, 2009a; 2009b; Vardiman et al., 2005; Woodmorappe, 1999).

It will be sufficient to make a general observation about their application and proceed with an example of how the dates can be independently verified.

Verification requires logically connected indisputable propositions leading to a conclusion. Since no dating method has proven to be a certain chronometer, then this “verification” is nothing more than the agreement of disparate data sets; something that can also happen fortuitously or be induced by bias.

That dating methods are not absolutely accurate is further illustrated by: (1) the casual dismissal of dates by geologists that do not agree with predefined (usually by fossils) ages, (2) the typical requirement of labs for a stratigraphic age before they date a sample (eliminating the blind test), (3) demonstrated errors in various methods and between different methods, and (4) their disagreement with biblical history.

Creationists don’t have all the answers, but data such as the discovery of Carbon-14 (half life = 5,730 years) in rocks and minerals supposedly hundreds of millions to billions of years old (Baumgardner, 2005) and soft tissues in dinosaurs over 65 million years old (Weiland, 2010) suggest that secular geology does not have all the answers either.

Furthermore, secular geology traditionally has dated stage boundaries by evolutionary progression. This strongly suggests that Christians who take the old earth position must by logical inference also take the Darwinian one. As Dr. Stephen J. Gould (1987, p. 197) wrote:

But rocks are simple objects, and their similarities designate formation under recurring conditions, not time's arrow of genealogy. The proper paleontological criterion, based we now know on contingent pathways of evolutionary change, allowed us to mark by time's arrow what the matrix of time's cycle had established.

If time's arrow is evolution, then it logically follows that the old-earth position requires a belief in evolution too.

The utility, if not the absolute accuracy, of radioactive dating methods is evident from the sheer number of analyses performed every year, with the vast majority yielding ages consistent with independent observations of layering, cross-cutting, or presence of unique fossils.

If the number of something is an indication of its truth value, then horoscopes would be our best guide to the future. Likewise, lotteries would be the best means of obtaining wealth. It would be beneficial to see the actual statistics of (a) samples submitted, (b) results discarded by labs as being out of range, (c) results discarded by geologists as being out of range, and (d) results accepted and published.

It appears from the last criteria (i.e., unique fossils) that the authors also accept the evolutionary succession of fossils. How else could they be used as reliable time markers? Should the PCA affirm evolution? The "new geology" was, after all, the wedge that originally opened the door to Darwinism in the 1800s.

Since the discovery of radioactivity, literally hundreds of thousands of samples have been analyzed from all over the world. If the various radioactive methods yield random or inconsistent dates as often claimed, few researchers (including some of us) would waste valuable resources on these measurements.

First, as noted above, dates do not all agree. Even the use of different methods can return discrepant dates. For example, Humphreys (2004; 2008) has shown that the presence of radiogenic helium in "old" zircon crystals far exceeds the expected amount based on Uranium decay.

Second, the requirement for *scientific* certainty of a particular age is unambiguous unanimity. Gravity works every time it's tried. Dating does not. Once again, the difference between hard science and historical inference equals a decrease in certainty.

Third, the main question is whether Christians should accept radiometric dating as being a better historical account than God's word? If so, they why not accept other scientific research, such as the biological impossibility of resurrection or the scientific impossibility of miracles?

At root, the issue is one of authority. God is infallible. Men are not. That's the best starting point in considering this issue. God calls us to bow before the authority of His word (John 17:17), and I urge these brothers to do so, and use their God-given gifts to defend that word to an unbelieving world.



[A simple method for checking the accuracy of radioactive dating methods makes use of our knowledge of plate tectonics: the movement of plates making up the earth's crust.](#)

A simpler method would be the blind comparison of dates from the same sample, using different methods, at different labs. Or the comparison between dates from rocks of historically known ages in double blind studies. But these types of comparisons have already shown inconsistencies. Logically, the demonstration of even one error in a given method refutes its infallibility. This is exacerbated by the fundamental limit of history—nobody was there to record the events or the passage of time except God, and He offers a quite different account from measurements of radioactivity in rocks.

But for the sake of argument, let's continue this line of reasoning.

First, it implies a sure and certain knowledge that plates move, and that they have at the same rate and in the same manner for 4.6 billion years (or 180 million in this example). Though most geologists today accept plate tectonics, some do not, and their arguments are typically ignored, not answered. Proponents seem to suffer from a logical misunderstanding; they believe that the preponderance of evidence is sufficient to prove their case. But this is not true. Any exception to any proposition renders it invalid until explained, and the increasing weight of ad hoc explanation increases uncertainty. I could list many, but instead refer the reader to Keith (2001); Pratt (2000); and Smoot (2001), which contain many additional references.

Second, historical certainty of uniform continuous plate motion is an assumption that cannot possibly be proven. Thus, the conclusion is no stronger than this unproven assumption.

Creationists disagree about plate tectonics. But those who assert plate motions make a case for rapid plate motions based on physical observations and extrapolations of rock mechanics (Austin et al, 1994; Baumgardner, 1986; 1990; 1994a; 1994b; 2003). Thus, the assumption of uniformity is further degraded by the contrary physical evidence adduced by these scientists.

[If we consult a map of the Atlantic Ocean floor, a ridge--aptly named the *Mid-Atlantic Ridge*--is readily visible exactly dividing North and South America from Europe and Africa. Lava observed welling up along the ridge attests to modern day separation of the continents and expansion of the ocean floor.](#)

First, it is important to note that the presence of volcanism does not demonstrate plate separation. The numerous volcanic eruptions occurring at non-spreading locations prove that point.

Second, the prediction of plate tectonics would be of volcanism occurring along the total length of the ridge system. This is not true. In fact, even the heat flow varies significantly along the length of the ridge:

According to the seafloor-spreading model, heat flow should be highest along ocean ridges and fall off steadily with increasing distance from the ridge crests. Actual measurements, however, contradict this simple picture (Pratt, 2000, pp. 321-322).

This seems to also contradict the authors' assertion that data converge to demonstrate uniform spreading for 180 million years.

[Seafloor ages determined using radioactive methods are consistent with this observation; the farther one moves away from the ridge, the older the seafloor.](#)

The ocean drilling programs that provided these dates have been shown to have not gathered dates from the true basement of the ocean floor. Pratt (2000, p. 324) documented the sites that did and did not reach basement; the vast majority did not.

Of the first 429 sites drilled (1968-1977), only 165 (38%) reached basalt, and some penetrated more than one basalt. All but 12 of the 165 basalt penetrations were called "basement," including 19 sites where the upper contact of the basalt with the sediments was baked.... Baked contacts suggest that the basalt was an intrusive sill, and in some cases this has been confirmed, as the basalts turned out to have radiometric dates *younger* than the overlying sediments.... One hundred one sediment-basalt contacts were never recovered in cores, and therefore never actually seen, yet they were still assumed to be depositional contacts. In 33 cases, depositional contacts were observed, but the basalt sometimes contained sedimentary clasts, suggesting that there might be older sediments below. Indeed, boreholes that have penetrated Layer 2 to some depth have revealed an alternation of basalts and sedimentary rocks.... Kamen-Kaye (1970) warned that before drawing conclusions on the youth of the ocean floor, rocks must be penetrated to depths of up to 5 km to see whether there are Triassic, Paleozoic, or Precambrian sediments below the so-called basement.

Dating reliability is also in question:

On one seamount just west of the crest of the East Pacific Rise, the radiometric dates range from 2.4 to 96 million years (Pratt, 2000, p. 325).

Also Pratt (pp. 325-327) documented published discoveries of “old” rocks at or near the Mid-Atlantic Ridge. In the scenario presented here, that should be impossible. If the plates are continuously spreading and new crust is constantly being formed at the ridge system, why have geologists found these “old” rocks on or near the ridge? For example:

During legs 37 and 43 of the DSDP, Paleozoic and Proterozoic igneous rocks were recovered in cores on the Mid-Atlantic Ridge and the Bermuda Rise (Pratt, 2000, p. 324). Since the authors are arguing that the correlation of rock dates and distance from the ridge is reinforcing, then the presence of these discrepant samples disproves their argument.

All of this underscores the real issue at hand; the authors submit that these data are superior to the revelation of God’s word. In contrast, it seems the more we dig into the details of any particular historical interpretation, that the inherent uncertainty should drive us to the Bible as our one true light.

Maximum ages of about 180 million years are obtained at the edge of the continents. Intermediate ages determined for seafloor samples between the ridge and continents suggest that the rate of spreading has been relatively constant at about 2.5 cm per year since the continents first started splitting 180 million years ago.

If even one of the anomalous dates summarized by Pratt (2000) is correct, then this argument cannot possibly be true.

The argument also assumes uniformity and reasonable extrapolation over this duration. Neither assumption is demonstrable or even testable.

Now for the test. Satellite stations on different continents allow precise distances to be measured down to the centimeter scale. Long-term measurements of the relative position of North America and North Africa document a steady current spreading rate of 2.5 cm per year--the same value calculated using positions and radioactively determined ages of ocean crust.

It would be helpful to note the difference between accuracy and precision: any numeric calculation may be expressed with an infinite number of digits, but that does not mean that any of the digits is accurate. Satellite positioning data produce a slightly-different value every time they are calculated, for numerous unavoidable reasons related to physics. Thus, all positioning results are estimated by statistical inference and the analysts must also make inferences as to the source of any trends observed; satellite orbits do decay and they also move closer or farther from the earth based on the mass concentration beneath them (a complex function of earth density and satellite velocity). Although these are small effects, they are larger than the inferred rates of motion. Thus, a complex statistical inference using multiple debiasing inferences is required to produce this deceptively-simple estimated result of 2.5 cm/yr relative motion.

Also, the relative motion between two points does not require the same relative motion of all points in between, since local events are certainly possible and might well be more likely. In other words, the measurement between hypothetical points A and B must assume that the change

in distance calculated occurred at the plate boundary and not at, say, somewhere between the two points.

Even if we grant plate motion measurements from space, the problem remains that present day information must be extrapolated back across time. At best, we have measurements from space for several decades, a very small and very biased (to the present) sample compared to 180 million years. We are back to the fundamental problem of the past—uncertainty.

From these examples, there are only two possible conclusions: either the earth is very old or God intentionally made the earth to *appear* old.

This conclusion is a false dilemma. Due to the uncertainties mentioned in each case, there are other conclusions possible. One is “we do not know.”

Even so, the appearance of age is not a powerful argument against biblical reliability. Ex nihilo creation—the doctrine of the Church throughout its history—demands by force of logic an appearance of age. Thus, the authors must argue against another doctrine of the Church held throughout its history.

At first glance, apparent age may not raise a red flag, but it should not take much thought to recognize a serious theological problem. Ocean spreading rates and radioactive decay rates are entirely unrelated.

What is this “serious theological problem?” If there is one, then should not the fact that it is both serious and theological drive us to the Scripture and Confession? It is amazing that this “serious theological problem” was unknown over most of church history.

Spreading rates, as shown above are inferred. Radiometric dating is problematic. That reinforces the possibility that although the two are physically unrelated, they are conceptually related in the a priori assumptions of geologists regarding a lengthy prehuman prehistory, plate motions, and uniformity. We see what we want to see.

If the earth is truly young, it means that God started rapid plate movement and rapid radioactive decay and diminished these independent rates precisely so that today the observed rate of spreading would only *appear* to confirm the accuracy of radioactive dating methods.

This statement is only true if the authors know, with sure and certain knowledge, that the plates have been moving and that the assumptions governing radioactive dating are infallibly accurate.

Even if God allowed the physical phenomena that suggest these things, the fact remains that the “serious theological problem” has an easy solution: God told everyone exactly what happened, and when, in His word. Unbelief is not His fault, it is ours.

Furthermore, Scripture warns us repeatedly of the key strategy of our enemy, deception. Is it not possible that the ruler of this present world could manufacture confusion and deception on many levels aimed at bringing us all the fundamental problem of Eve...doubting God's word?

From the previous example, the 14C (carbon-14) decay rate is unrelated to the number of tree rings or sediment layers formed in a year, meaning God started creation with a higher 14C decay rate, and a dozen or more tree rings and varves formed each year, and then he diminished each independent process in such a way to only appear to confirm that one varve and one tree ring typically forms each year.

Again, this assumes that all of the correlations of all of the dating methods, as well as the methods themselves, are infallibly accurate. That is an important point, since the authors are betting God's integrity on those conclusions.

If the "varves" are non-annual rhythmites, if the C14 dates are influenced by external factors, including non-actualistic conditions in the past, if more than one tree ring can grow in one year, and if the correlation of tree rings is not infallible, then my choice to default to God's honesty and integrity is made even easier.

In other words, God designed the earth intentionally to mislead all those who are unwilling to ignore the obvious history his natural creation reflects. Reformed believers should be quick to reject this possibility on the grounds that it denies the truth of Romans 1:20, where Paul assures us that God's character is evident in the universe he created. Apparent age makes God a deceiver.

No. Apparent age does not make God a deceiver. Since it is a logical imperative of ex nihilo creation, then God's integrity is not besmirched by that historic doctrine of the Church. It is curious that countless generations of theologians never saw that error. Perhaps that was because they accepted that God had provided a propositional written record of His activities at Creation and afterwards to help inform our understanding of the past, and guide our approach to natural phenomena. For example, the wine Jesus created at Cana (John 2) was thought by the host to have "age," based on his human reasoning and "evidence." However, if he had investigated by asking the eyewitnesses, he would have discovered its miraculous origin.

It is true that Romans places natural man without excuse before the Judgment Throne of God. That does not mean they will not fall into error. In other words, man is responsible for how he interprets all of God's revelation, and blaming God for unbelief is contrary to sound doctrine. A little further on, in Romans 3:1-3, Paul says that the Jews held an advantage because they were given "the oracles of God," including Genesis. Elsewhere, Jesus states that people will not believe in the face of the miracle of resurrection because they do not believe Moses and the Prophets. Both are presented as examples of man's sin, not God's deficiency in revelation.

Our imperfect understanding must be directed by infallible truth. The authors seem to want to reverse that process. We know that God cannot lie (Hebrews 6:18). Nor is he tempted by evil, such as deception (James 1:13), nor does he tempt us to disbelieve Him. Thus, their dilemma is no dilemma.

Young-earth advocates counter that Creation had to have the appearance of age, without deception, because Adam, mature forests, and even flowing rivers would all of necessity have the appearance of age.

Theologians for millennia asserted the same thing.

This confuses *maturity* with *history*. A miraculously created tree might well appear mature, but apparent age arguments suggest that if Adam cut down several of these trees, he may have found 50 growth rings with matching patterns of variable growth and burn marks at rings 21 and 43. These data represent not just maturity or age but history--a history that never actually occurred. This is not the Creator described in Romans 1. We may not always have a complete understanding of the history revealed in the earth's layers, but Reformed theology should insist it is a *real* history.

This appears to be a fanciful scenario of the authors. We do not know what Adam would have found because there is no evidence. However, there is abundant evidence that Adam was created at the beginning of history (Mark 10:6; Matthew 19:4; Genesis 1:27). That alone is sufficient to demonstrate that his entire line of reasoning is unnecessary and unfruitful.

Young earth advocates do insist on a real history. It is a history of Creation from nothing by God in the space of six days, including life and mankind. It is the history of man's Fall and the resulting curse. It is the history of covenant in reclaiming mankind from the dominion of Satan. It is the history of the Flood, showing God's righteous anger at evil.

To propose that interpretations of rock layers can set this aside or minimize it is to transpose the hierarchical authority of special and general revelation, contrary to Reformed theology.

Does My Belief Regarding the Age of the Earth Make Any Practical Difference?

If the PCA recognizes that mature believers fall on either side of the age of the earth debate, does it ultimately make a difference which side you fall on? We suggest it does matter for two important reasons.

Because God loves truth, any disagreement over truth, especially that He revealed, is important. But it is equally clear that the reason for disagreement among Christians is their imperfect understanding, due either to natural limits, faulty intellectual consistency (including assumptions about the past), or indwelling sin. That should drive us all to the only infallible source of truth, the Bible.

Christ said explicitly that the truth would set us free (John 8:32), implying that a lack of truth would carry a corresponding lack of freedom. Mortenson (2004; 2006) has documented that the issue of the age of the earth was a turning point in church history. Surrender and compromise quickly led to positivism, Darwinism, and the fruits of those faulty ideas. No one can look back on the last two centuries of Western culture or the Church and see victory. We see instead a steady cultural decay, and its ideological reasons are typically traced back to the false

philosophies of the Enlightenment. For example, the decline of Princeton Seminary can be traced to the gradual acceptance of Enlightenment ideas, starting with their compromise on creation and the Flood.

Furthermore, ignoring the dimension of spiritual warfare is both dangerous and shortsighted. Satan is the father of lies; thus we expect his kingdom (including modern secularism) to promote beliefs that are both false and dangerous.

The first is a greater appreciation of God's handiwork.

If the earth shows a 4.6 billion year history of struggle, death, catastrophe, and suffering, and Genesis affirms that God thought His creation was “very good,” then how can we appreciate that handiwork? The groaning of nature that Paul attributes to sin (Romans 8:22) is relegated to the natural order instead, suggesting that it reflects God’s character. This is both false and insulting to the perfection of God.

If creation conforms to God's trustworthiness and looks old because it is old, we are free to marvel at each new discovery that further reveals the incredible complexity and grandeur of his creativity. If the earth is old and we insist it is young, every new discovery can be met only with distrust and disdain--disdain of his creation!

God’s trustworthiness does not ride on our interpretations of the apparent age of the world. It is more important that we are being conformed to the image of His Son, who placed a high value on Scripture.

There are two possibilities to this “problem” of perception. Either the object perceived is deceptive or the subject perceiving it is deceived. The latter seems more in line with the biblical picture of man. Scientists who believe in a young Earth have proven that the study of creation can be fruitful, exciting, and interesting. To assert otherwise is insulting.

The second reason is of perhaps greater importance. If the earth is old and Christians insist it is young, we risk becoming a tragic obstacle to faith for those both inside and outside the church.

Paul says that God has not given us a spirit of fear (Romans 8:15) or of shrinking back from the world’s assaults (Hebrews 10:39), but of courage and determination for His kingdom. This appears to be the counsel of fear. The real question is what the Bible teaches. If it teaches a young earth and the author are convinced to the contrary, then they can choose to submit to the Word or not.

Recent decades have shown that people solidly grounded in a biblical understanding of earth history enjoy a vibrant faith and witness. Those who seek compromise with the world tend to drift into more. Numerous polls show that the primary reason that young people leave the Church is because of their indoctrination of secular natural history and evolution in public schools and universities. That does not seem a strong recommendation for the old earth view.

And of course the real obstacle to faith in any person, as is clearly taught by Scripture, is our spiritual deadness apart from Christ. Only God can overcome that bondage to sin and deliver us from the kingdom of Satan.

The real obstacle to faith is the implication that God's word is not true. Even atheists understand the plain reading of Genesis. They habitually note that it teaches a young earth and global flood and they mock the Church for it. But I have yet to see evidence that dismissing parts of Scripture is healthy and winsome to either believers or unbelievers.

Finally, this implies that young earth advocates are either irrational or evil. If the earth is so obviously old, if the Bible clearly teaches the same, and if creationism is an obstacle to faith, then those are the only two possibilities. In creating this "tragic obstacle" creationists are sinning. That is a serious and unsubstantiated charge. If the authors are convinced this is the case, then they should bring charges against young earth advocates in church courts. But even more, I would encourage them to recall that the final verdict on our lives will be rendered by the God who revealed that He created the earth in the space of six days, destroyed it by water because of sin, and scoffs at the "wisdom" of this world.

[Non-Christians who logically understand geology conclude that the path to Christ requires belief in an intentionally deceptive god and choose to place their faith elsewhere.](#)

Non-Christians believe a variety of Satan's lies. The same could be said of unbelievers who logically understand biology, cosmology, Marxism, etc.

Salvation requires the deliverance of these people from his kingdom and their transfer into the kingdom of Christ. This change of heart and mind is accomplished by the monergistic work of God. To imply otherwise is to affirm that God is not able to save and to preserve His saints. The problem is not geology or creationism; it is their inability to regenerate themselves apart from God's gracious and effectual calling.

[Covenant children who are raised with the impression that a young earth is integral to Christianity have their faith needlessly undermined when they are later confronted with the overwhelming evidence of the earth's antiquity, and many leave the faith. It is our prayer that no Christian would be such an obstacle!](#)

On the other hand, covenant children who are raised believing that the plain words of Genesis are not reliable have no reason to accept any others in the Bible, giving them a wonderful excuse for sin and apostasy. The world is always going to present obstacles to faith. Do we believe in Kantian or Hegelian or Marxian philosophy because of their erudition and powerful arguments? Do we accept the testimony of medical researchers that homosexuality is a genetic condition, and thus unrelated to sin? Do we accept the "obvious" evidence that man is no more special than plants or animals?

God will preserve his saints. Christ promises us in Romans 8 that nothing can separate us from His love. He is bigger than any of the world's challenges because he has overcome the world.

Again, if creationism is causing covenant children to fall away from the faith, which is what the authors seem to be saying, then the problem is much larger than science and needs to be addressed in church courts.

Creationists regret that there are Christians who accept secular natural history as more reliable than the Bible. However, God will judge all of His people and He will reward them according to their faithfulness. I am content to leave the salvation of God's people in God's hands and pray for discernment and wisdom for His Church.

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