

THE HEXAEMERON:
A Brief Analysis of the Creation Days of Genesis 1
and the Age of the Earth

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A. INTRODUCTION

While Christians debate creation and evolution with unbelievers, Christians have discussed among themselves the nature of the six days of creation as recorded in Gen. 1 and the nature of the genealogies of Gen. 5 and 11. Before we take a look at the issues involved, a few qualifications need to be made:

1. Sometimes this question gets blown out of proportion. While the question of the days in Gen. 1 is an important interpretive question, it is possible to make too much of it. As long as we continue to affirm that Scripture is our ultimate authority, we are on safe ground. Obviously, if we cave in to secular/naturalistic/atheistic science and accommodate our view of Gen. 1 simply to maintain intellectual respectability before the world, we are in trouble. We must be willing to be mocked as Paul was, without compromising our commitment to biblical truth (Acts 17:18, 32). If the Bible and modern scientists disagree, let God be true though all men are liars (Rom. 3:4)!

In one sense, we can agree with Warfield that, "It is to theology, as such, a matter of entire indifference how long man has been on the earth." Everything the Bible says remains true regardless of the age of the earth. However, because Christianity is a historical religion, and chronology is the backbone of history, we should not be surprised if the Bible does give us at the very least an approximate date for creation. Of course, if the Bible does allow us to date creation, then we must believe and defend this date. As we will see, this is part of the ongoing debate as well.

The debate has significant cultural ramifications. Churches that have compromised on six-day creation, accommodating themselves to various forms of evolution, have generally drifted into theological liberalism, replacing the true gospel with the "social gospel" and subverting biblical sexual ethics and roles. This is because the gospel is based on a second Adam acting in history to undo, reverse, and overcome the work of the first Adam, who also acted in history. But if the first Adam is not an historical figure, if his fall is not an historical fall, then the historicity of the second Adam is thrown into question. It raises the issue: what exactly do we need to be saved from? Further, the NT bases its sexual ethics repeatedly on the details of the creation account (Mk. 10, 1 Cor. 11, 1 Tim 2, etc.). If those details are mythic, the reasons for the rules are undercut. Perhaps the so-called "culture wars" are really the "Genesis wars."

2. Evolution is false no matter how old the earth is. Evolution is a modern day myth, to be rejected by all Christians as an expression of man suppressing his knowledge of the Creator (Rom. 1:18ff). Whether the earth is 6000 or 6 million years old, evolution is a fairy tale. If I told you a princess kissed a frog, who instantaneously turned into a handsome prince, you would know I was not being serious. But somehow evolutionists think eons of time can make this fairy tale come true. No matter how much time we grant evolutionists (and they keep saying they need more and more), there is no chance evolution is true.

We must also insist that there is no way of reconciling evolutionary theory with the biblical account of creation. Harmonization is simply not possible. While we must not make one's view of Genesis 1 a test of orthodoxy or salvation, there are limits to what is tolerable.

3. While modern day science and the Bible meet one another head-on, Christians should have a healthy appreciation for what science can teach us when it is carried out properly. Science is a tool for coming to a greater understanding of the wonders of what God has made. Our scientific knowledge should drive us to praise and worship the Creator. Science (when properly done) should not be scorned by Christians, but embraced. However, at the same time, we also must be careful that we do not allow ourselves to be beguiled by pseudo-science that would undermine or deny the Lordship of Christ (Col. 2:3ff).

We must remember that God created and controls all the facts of creation. Therefore the facts of creation can only be properly understood when viewed in light of God's Word. We should not use science to "prove" the Bible. Science does not confirm God's Word as though Scripture were in doubt until scientists gave it certainty. Rather, the most science can do is corroborate and harmonize with the written Word of God. Science can supplement what we know about God from the pages of Scripture, but can never be allowed to overturn a proper interpretation of the Bible. Part of the reason the six days of creation have caused so much debate is that many Christians on all sides have been confused about how to bring the two "books" of God (nature and the Bible) together. In principle, we know they agree, but we also know we can misunderstand one or both.

We need to be cautious as we seek resolution between Scripture and science. On the one hand, we must not isolate our faith from the real world of space-time history. We cannot afford to divorce our faith from science, philosophy, or anything else. It is our trust in God's written Word that must give shape to our entire world view. On the other hand, we must be careful to not identify our faith or the Bible too closely with any scientific theory. The hypotheses of scientists do not carry a "Thus saith the Lord" with them. For example, some so-called scientific creationists claim the pre-flood earth was covered by a vapor canopy that produced a greenhouse effect all over the earth. Accordingly, they use this to explain the existence of frozen tropical plants discovered under the ice in Siberia. This may be a very plausible theory, but nonetheless it remains a *theory*. Or, when the same scientists claim the Noahic flood produced a great majority of the fossils, that too may be a useful and plausible theory, but we must remember that it is not in the Bible. Scientific evidence can be *supportive*, but never *conclusive*. The Bible says many things touching on scientific matters, but we need to carefully distinguish what the Bible actually says from scientific theories that try to deal with both biblical and scientific data.

LET US PROCEED CAUTIOUSLY!

B. LITERARY GENRE

First of all, we must ask what kind of literature we are dealing with in Gen. 1. Is it history, myth, saga, poetry, symbol, or something else? It seems the account presents itself as straight forward history. Hebrew scholar E. J. Young explains:

The man who says, "I believe that Genesis purports to be a historical account, but I do not believe that account," is a far better interpreter of the Bible than the man who says, "I believe that Genesis is profoundly true, but it is poetry." That latter has nothing to commend it at all. I disagree with the first man, but he is a better exegete, he is a better interpreter, because he is facing up to the facts. So I conclude that Evangelicals who want to hold to evolution as the unbeliever holds to it, and to get over the difficulties by saying that Genesis is to be interpreted as poetry or myth and not in a factual matter, cannot, in my view, be honest interpreters.

The opening chapters of Genesis are intended to report events that actually happened. Of course, there is certainly room for figures of speech and poetic elements in biblical prose. For example, when Adam first sees his wife, he breaks out in a poem or a song to express his joy (Gen. 2:23). The passage is highly charged with symbolism and provocative imagery (much of which forms the basis for the poetic literature of the later prophets), but this true of virtually all biblical history. Biblical history is also redemptive history, and therefore always carries with it important theological truths. We dare not set the theological truth over and against the historical truth!

It should be noted that Gen. 1-2 do not have any of the basic marks of Hebrew poetry -- compare these chapters in Gen. to 1 Kings and then to Job's speeches or the Psalms. Clearly, Gen. is much more like Kings, a historical book. As Young says, "Hebrew poetry had certain characteristics, and they are not found in the first chapter of Genesis."

If the first few chapters of Gen. are not considered as history, the whole book unravels. If Gen. 1-2 are not history, when does history begin in the book? The way Gen. 1-2 fit into the book as a whole requires their historicity. The story of Adam grows into the story of Cain and Abel, which grows in to the story of Noah, etc. There is no decisive point where we could say the writer moved from poetry to prose. Its all historical narrative.

The early chapters of Genesis lay a crucial foundation for the rest of the Bible. The NT is heavily dependent on Gen.:

- 165 Gen. passages are quoted or alluded to and there are over 200 total quotations or allusions
- The first 11 chapters of Gen. are referred to over 100 times in the NT and every one of these first 11 chapters is used in the NT. Jesus made reference to 7 of these 11 chapters

Every time Gen. is used in the NT it is treated as history. For example:

- 1 Cor. 11:8, 9 refer to the creation order of man and woman (note how this account conflicts entirely with every evolutionary scheme).
- Rom. 5 is perhaps the most significant text. The first Adam is compared to the second Adam, Jesus Christ. Just as sin and death came through the first Adam, so life and righteousness came through the second Adam. To allegorize or mythologize the Gen. account is to open the door to mythologizing Jesus. (This has happened in several instances.)

Note that the Bible does contain poetic accounts of creation, such as Ps. 104 and the end of Job.

C. GAP THEORIES

One of the first modern attempts to reconcile the Bible with secular science was made in 1814 by Thomas Chalmers, a Scottish theologian. Chalmers was concerned that the Gen. account was being discredited because of new theories in geology.

We need to understand some important aspects of geology. Strictly speaking, geology is not a science because geologists generally do not use the scientific method (experimentation). Geologists are more like detectives, seeking to piece together clues to discern the earth's history. There are many assumptions made by geologists; geologists work in terms of basic conceptual frameworks that are not derived from the facts under study. It is based on deductive, *a priori* reasoning, not hard, empirical evidence. This is evident in that even though geology is a fairly young discipline, it has already undergone several "paradigm shifts."

The paradigm that has been used by most modern geologists was formulated by Hutton and Lyell in the late 1700s and early 1800s. It was especially Lyell who popularized "uniformitarianism," the doctrine that "the present is the key to the past." Prior to Lyell, most geologists had worked in terms of a "catastrophic" model, believing the Noahic flood had caused most of the fossils that were found. Lyell's framework required long periods of time to produce slow, gradual geologic changes. Not surprisingly, Lyell denied the biblical account of creation and the flood.

Chalmers' solution was to posit a gap between Gen. 1:1 and 1:2. Supposedly God made the heavens and the earth (1:1), but after long ages of time, Satan fell, causing the heavens and earth to *become* formless and void (1:2). The chaos in view in 1:2 was thought to be a state of evil and decay which God subsequently recreated into the world we know. Chalmers' view was popularized in America through the Scofield Reference Bible. The theory became known as the "Ruin-Reconstruction theory."

The greatest problem with this view is that it totally distorts the way the opening verses of Gen. read. The text says "the earth *was* formless and void," *not*, "it *became* formless and void." Also, scholars (such as Young) say that Gen. 1:1-3 are tightly integrated in the Hebrew.

Additionally, nothing in the text indicates the fall of Satan. There is no reason to think of the state described in v. 2 as evil. Verse 2 describes an incomplete state, not a wicked state. Clearly, God is in control, as the Holy Spirit is hovering over the watery earth. The darkness does not represent evil, but simply shows no light had been created yet. The six days that follow show the goodness of God's creative work. God is not bringing good out of evil, but order out of disorder, turning chaos into a cosmos, and making it a habitable environment for man.

Gen. 1:1 describes what has been called "absolute creation." It was the beginning of time and the beginning of the creation week that immediately follows. The six days of creative activity may be called "secondary creation." The earth was without form and empty, so God spends

these six days forming and filling it. He organizes and arranges his creation to fit it for the king and queen of creation, Adam and Eve.

Other theologians have tried to insert gaps between the creation days, but there is no good reason for doing so. The days come in successive order in the text, with no gaps.

D. CREATION DAYS

There are at least seven interpretations of the days of Gen. 1 that need to be discussed. As will become evident, I personally hold that the days of the creation week were normal, 24 hour days. I will briefly summarize each view and then critique it.

1. Some theologians have said the six days of creation were not a report of what actually happened, but rather God's way of *revealing* his creation to Moses. But this view is untenable, in light of the historic nature of the text. The text does not claim to be describing things as they appeared, but as they were actually created. This view is not held very widely for obvious reasons, but it is closely related to next view we will discuss.

2. A view known as the "framework hypothesis," taught by Kline and Blocher, has received a lot of attention in recent years as a way of escaping the conflict between science and the Bible. This view takes the days of Genesis to be a literary device used to present theological, but not historical, truth. The days are like snapshots arranged in a logical, rather than chronological, order. The days are arranged around certain themes, with the overarching theme being God's creation of all things. Kline viewed these opening chapters as a polemic against various idolatrous myths prevalent in the ancient world.

Critique:

-- This view takes Gen. 1 as non-historical, but as shown above, the text is best taken to be a historical account, and therefore the days must be presented in sequential fashion. The Hebrew strongly favors a chronological reading.

-- Those who hold this view point to the obvious structure and order of the account in Gen. 1-2 and claim it must therefore teach truth symbolically. How could such an aesthetic and carefully shaped account describe actual events? For example, the triad of days match -- God creates the environment in the first three days and then the creature for that environment in the last three days. Similarly, certain phrases are repeated in multiples of 3, 7, or 10. But we must ask: Why couldn't God have worked in a structured, orderly pattern? Why must an aesthetic account and genuine historicity be mutually exclusive? There are certainly other historical narratives that show literary beauty and balance much like these chapters. Even if there is symbolic-theological meaning to this text, there is no reason to set theological truth in opposition to historical truth. The passage can teach what the proponents of this theory want it to teach, and it can still describe a normal week.

-- The fourth commandment (Ex. 20:8ff) helps us interpret the days of Gen. 1. The seven days of Gen. 1 were not simply a literary framework to describe God's creative work. The creation week also provides a pattern for man to imitate. But if God did not actually work for six days and then rest one, how can man imitate God's activity? How can God's week form the basis for man's week if God did not actually do his work in this way?

-- While many elements in Gen. 1-2 may contradict pagan creation myths, that does not seem to be the focus of the account. Also, it makes biblical interpretation dependent on extra-biblical material. We do not know for sure what ancient myths the Jews would have been familiar with at the time of writing. Finally, if the point was to attack idolatry, why doesn't the passage explicitly address idolatry as the prophets do elsewhere? A polemic against idolatry could be communicated didactically, without any sort of literary framework.

3. The day-age theory, also known as the concordistic theory, claims the days were actually long periods of time, roughly corresponding to geologic ages. The days are chronological, but not literal, 24 hour periods. Several noted theologians have shown at least an openness to consider this view, if not embracing it outright. Included among this group are Charles Hodge and B.B. Warfield. Here are some arguments given for this view, along with refutations:

-- This view is based on the word for "day" in Hebrew, "yom," which does occasionally refer to extended periods of time. However, whenever "yom" is modified by qualifying adjectives, it always means a normal 24 hour day. In Gen. 1 there are two such qualifiers, the numbers given (first day, second day, etc.) and the definition of a day, given in 1:5 ("there was evening and there was morning"). Sometimes specific appeal will be made to 2 Pt. 3:8. But this verse becomes a tautology if we substitute "long period of time" for the word day. The verse only makes sense if "day" means 24 hour period. The point of the verse is that, because God transcends time, he does not reckon the passing of days and years as men do; for Him, 1000s of years pass as quickly as 24 hours. Additionally, had Moses wanted to show the days of creation were actually long ages, there was a better Hebrew word available to him, "olam."

-- Appeal is made to the first three days of creation, before the sun was created on day four. How could there be solar days before the creation of the sun? Actually, there was already a light source before the sun was created. This light, created on day 1, had already given definition to "day" before the sun was created. In other words, the earth was apparently rotating, with alternating periods of light and darkness. The sun was created to fit days that were already fixed in their duration. (Note the sun was given for the specific purpose of serving as a clock for man to mark his days and nights, Gen. 1:14-19). Also, if "yom" in days 4-6 refers to 24 hour periods, the use of the same word ("yom") in the immediate context (days 1-3) would seem to require giving it the same meaning (24 hour periods).

-- Those who hold to any non-literal view of "yom" in Gen. 1 almost always point to day 6, claiming it was too full of activity to be a 24 hour period. However, we should not be too hasty in drawing this conclusion. We simply have no idea what the powers of an unfallen human being would be. Also, perhaps Adam did not do quite as much as we give him credit for doing. The Bible does not say he named *all* the animals, only "the livestock, the birds of the air, and all the beasts of the field." His task did not include naming all the creatures that move along the ground, the fish, insects, water animals, etc. The reason for his task was simply to teach him his need for a companion. The deep sleep he was in when Eve was created did not have to last long. All things considered, it does not seem that the events of day 6 absolutely require a longer period of time than 24 hours and to say that they did is to engage in unwarranted speculation.

-- Day 7 does not have a clearly marked endpoint as the other days do. If day 7 is a long period, why couldn't the first 6 days be long periods as well? Perhaps the seventh day is unique in that it is not said to have an evening and morning, but if it is unique, how can we require the other 6 days to be like it? Besides, why couldn't Gen. 1 describe six normal days followed by one unending day? It might be better to take the Sabbath day as a normal day, along with the

previous days, even though the text does not explicitly state it had an evening and morning. At any rate, the point of the Sabbath is not that day 7 is eternal but that God's creative work was completed. God now rested, rejoicing in the works of his hands. When man fell, God had to go back to work, this time to accomplish the *recreation* of man, or his redemption. Thus the Sabbath becomes a sign not just of the original creative work of God, but also his work of deliverance (cf. Dt. 5:12-15, Heb. 4:1-11).

-- Most contemporary geologists think the earth's strata clearly shows the earth is very old. It is a desire to harmonize the Bible with modern geology that drives the day-age theory. However, when geologists claim the features of the earth show great age, we must question how they came to this conclusion. How do geologists know what a 5 million year old earth looks like, especially since they do not know what a brand new earth would look like? God created Adam, the animals, and the plants with the appearance of age; why not the earth also? If there were already rivers and topsoil for plants to grow in (Gen. 1:11-13, 2:9-14), the earth would have looked much older on day 7 than it actually was.

Critique:

-- Much of what was said about the framework hypothesis could apply to this view as well.

-- The fourth commandment is helpful again. In Ex. 20:8ff, we find that man's work week was rooted the creative pattern of God. We are not told to work for 6 long geologic ages, and then rest one long geologic age. The commandment makes no sense unless the days in view were 24 hours.

-- The formula "evening and morning" becomes absurd on this view as well. Are we to imagine the six ages of creation were made up of alternating long periods of darkness and then light?

-- The word day/yom is used 5 times in Gen. 1:14-19, in relation to days, nights, seasons, and years. If "day" does not mean an ordinary 24 hour day in this context, the text is reduced to nonsense. The days in view are precisely those days marked by our sun, in other words, days as we know them, that make up our seasons and years.

-- The sequence of the week is out of order, thus making it impossible to reconcile a chronological view of the creation week with modern biology, geology, or physics. For example, the Bible puts the creation of the earth before the sun. Life began on earth, with plants, rather than in the sea (or a pre-biotic soup of some sort). The earth was originally a watery ball, not a flaming mass, as the Big Bang requires. Flowers were made before insects, which makes one wonder how pollination occurred for those many plant species that depend on insects. All in all, stretching the days of Genesis out into long periods does not bring the Bible into harmony with modern science.

-- Those who take non-literal approaches to the days in Gen. 1 must also reckon with the problem of death occurring before the fall of man into sin. Man, and most likely animals, did not die before sin entered the world (Rom. 8:18-25). Not only does this rule out evolution, with a long period in which a death-filled process of natural selection occurred, but it also seems to rule out any view that makes the days so long that death would have occurred before the fall of Gen. 3. The fossils would have to have been deposited sometime after the Adam's sin, in contrast with the day-age theory.

-- Insofar as an argument may be made from geologic evidence, it should be remembered that before two centuries ago, "geologic ages" were unheard of. Certainly, the Hebrews who read Gen. 1 or Ex. 20 could not have had any such thing in mind. It seems to me to be poor exegesis to let a concept that could not be found in the text drive our understanding of the text.

4. Theologians such as William Shedd, Gordon Spykman, and Jack Collins view the days in Gen. 1 as anthropomorphisms. An anthropomorphism is a description of God's being, action, or emotion, in human terms. It is a figure of speech, or an analogy. For example, when the Bible talks about God having arms and a face, it is speaking in anthropomorphic language. Like the framework hypothesis, this view is based on an appeal to the literary character of the text. But like the day age theory, it preserves the chronology of the creation week.

This view sees the days of Gen.1 as anthropomorphisms; that is, they are "God's days" and must not be equated with man's 24 hour days. It is claimed this view arises from the use of other anthropomorphisms in the local context. For example, the Genesis account speaks of God "forming" man, as a human craftsman might do (Gen. 2:7). It speaks of God "resting," (2:2) and "breathing" (2:7) as men do. Shedd explains:

The seven days of the human week are copies of the seven days of the Divine week. The "sun-divided days" are images of "God-divided days." This agrees with the biblical representation generally. The human is the copy of the Divine; not the Divine of the human. Human fatherhood and sonship are finite copies of the trinitarian fatherhood and sonship. Human justice, benevolence, holiness, mercy, etc. are imitations of corresponding Divine qualities. The reason for man's rest upon the seventh solar day is that God rested upon the seventh creative day. Ex. 20:11. But this does not prove that the Divine rest was only twenty-four hours in duration; any more than the fact that human sonship is a copy of the Divine, proves that the latter is sexual.

What is a "God-divided day"? We do not know and cannot know. All we know is that our days are patterned after God's days. His creative days are the basis for man's solar days, but these two kinds of days are not to be equated with one another. His time is somehow different than our ordinary time. Gen. 1 presents the work of God in a highly structured account. It is a broad stroke description of God's creative activity, using anthropomorphic days as a pattern for man to follow in his work and rest.

Critique:

-- Much that I have said above would apply here as well (especially if it assumed that anthropomorphic days are long periods of time).

-- There are certainly anthropomorphisms in the text of Gen. 1-2 (especially chapter 2). In fact, in one sense all Divine revelation is anthropomorphic. Additionally, there is certainly an analogy between God's work as the Creator and the work man is to do imitating God. But specific anthropomorphisms and analogies in the text do not rule out 24 hour days. It simply does not follow from the use of some anthropomorphisms (forming, resting, breathing) that the days are anthropomorphic. It is a *non sequiter*.

-- God created with time; time began in the beginning in Gen. 1:1. Gen. 1:1 describes the point of absolute creation and the beginning of history. The secondary creation (the six days) took place within this time that God had created. I question the existence of "God-time" or "God-days." God does not have days; the only days that actually exist are the days he created, the 24 hour days in which man lives. I know of no biblical evidence for any other kind of time. Why does God need some kind of divine clock that keeps different time than an earthly clock? When God acts in human history, he acts in terms of human time. Just as God accommodates himself to human language when he speaks to man, so he has accommodated himself to human time.

(Of course, both language and time were created by him so they can serve his purposes perfectly.) I conclude there are not two kinds of time (or days or weeks or mornings or evenings), but only the time God created for man, in which man lives and moves. Even if there were evidence for some kind of “heavenly” or “divine” time, the events of Gen. 1 take place on earth and therefore in earthly time.

-- The fourth commandment is helpful here once again, because it allows us to use Scripture to interpret Scripture. Ex. 20:8ff explains why God took six days in Gen. 1. God was not just creating heaven and earth, he was giving man a pattern to follow. Man is to spend six days forming, filling, and lighting (i.e. glorifying) the world just as God did. Then he is to rest on the seventh day as God did. Certainly God could have created in any length of time he chose, but if the creation week was to form the basis for man’s week, why would God have used any other length of time than a week as we know it? If the days of Gen. 1 are anthropomorphisms, how could they have any relation to our days at all? How could they form a basis for man’s week? Again, God is eternal. Time as we know it is the only time there is and the events of Gen.1 take place in time.

-- The six day period of Gen.1 not only describes the creation of the heavens and the earth, *but also describes the creation of man’s week*. In other words, the creation of weeks as we know them (168 hour cycles) coincided with the forming and filling of the heavens and the earth. The type of day in view in Gen. 1 is the type of day God created for man; just as everything else in the creation centered around its function for man (heavenly lights as clocks, plants for food, etc.), so the days God made were made for man. Before Gen. 1, there was no time and there were no days; God alone existed in timeless eternity. The creation of a week of 7 24 hour days ran concurrently with the creation of everything else God made. The days are not anthropomorphic, they are created. They are man’s days, not God’s. Just as the Sabbath was made for man (Mk. 2:27), so the other 6 days were made for man as well.

-- How could days 4-6 be anthropomorphic since they are measured by the sun? And, since the sun was made to fit the pre-existent day, we may extrapolate backwards and conclude days 1-3 were also of normal length.

-- While the account of Gen. 1-2 is clearly aesthetic and highly structured, this is not at all incompatible with taking the days to be normal 24 hour periods. The text does not demand that “yom” be taken metaphorically or as a figure of speech. Structure and beauty do not mean the account must be classified as poetical; neither does it mean the days must be taken anthropomorphically, if this means non-literally. Once again, we must not set symbolism or theological truth over and against history. Either Gen. 1 is poetic account (which it clearly is not) or it describes what actually happened. But if it describes what actually happened, the days were days as we know them. While “yom” can have other meanings in Scripture, the historical/chronological context of Gen. 1 seems to require a 24 hour block of time.

5. Some church fathers apparently believed in creation in a moment of time. In other words, God created instantaneously, and Gen. 1 is merely a literary device. Many have attributed this view to Augustine, though there is some ambiguity about his belief on this issue. At any rate, this approach simply does not comport with the way Gen. 1 is written. I know of no modern day proponent of this view, probably because it does nothing to bring the Bible into conformity with contemporary science.

6. The view that the days were normal twenty-four hour periods seems to be the most widely held view in the history of the church. It is important to remember that this is primarily an exegetical, not a scientific, issue. I have already given several basic arguments for this approach to the text of Gen. 1, but here I will briefly recap those arguments and add a few more:

-- This seems to be the most natural reading of the text, as many Hebrew experts have confirmed. For example, world renowned Hebrew scholar James Barr has said:

So far as I know there is no Professor of Hebrew or Old Testament at any world class university who does not believe that the writer(s) of Genesis 1 through 11 intended to convey the ideas that (a) creation took place in a series of six days which were the same as the days of 24 hours we now experience; (b) the figures contained in the genealogies provided by simple addition a chronology from the beginning of the world up to later stages in the biblical story; (c) Noah's flood was understood to be world-wide and extinguished all human and animal life except those in the ark.

While the agreement among Hebrew scholars may not be quite as universal as Barr seems to indicate, this does seem to be the majority opinion of the text's intent.

-- Whenever "yom" is modified by an adjective, it always means a normal 24 hour day. In Gen. 1-2, it is modified both numerically (first day, second day, etc.) and temporally (evening and morning). Moses uses "yom" with a numerical qualifier 119 times, always to describe a 24 hour period. If he intended to convey the idea of long ages, he could have used the Hebrew term "olam."

-- "Yom" must mean 24 hour day in Gen. 1:14 and following because it is specifically said to be that time period marked out by the sun, i.e., a solar day. I believe the sun was made to fit days that were already in existence.

-- Ex. 20:11 uses the plural "days" to describe the creation week. This plural form occurs 702 times in the OT, always describing a 24 hour period. All the lexical evidence strongly favors this interpretation.

-- Ex. 20:8ff patterns man's work week after God's activity, which suggests a literal understanding of the creation week. As Isaac Newton said, "methinks one of the Ten Commandments given by God at Sinai, pressed by divers prophets, observed by our Savior, his Apostles, and first Christians for 300 years...should not be grounded on a fiction."

-- In Gen. 1:5, God defines the meaning of "day" for us: it is the period of light and also the period of light and darkness. By the Law of First Mention, this would seem to be a literal day, not symbolic day. (The Law of First Mention simply means that the first time a word or phrase used, it is used literally. After the literal meaning is established, it may be used symbolically or as a figure of speech. It seems the creation account becomes the source for much of the Bible's poetic imagery.)

-- A non-literal view of the word "day" seems to lead to historical and theological problems. The Bible seems to teach unequivocally that death entered the creation as a result of man's sin. How could there be long ages without death? Also, if the days of Gen. 1 were long ages, and Adam only lived 930 years, did he make it past the sixth day? Did the fall occur before the end of the sixth day, which God pronounced "very good"? Why wasn't there a largely populated earth by the time of his fall into sin?

As stated before, this has been a widely held view in the history of the church. Several church fathers took the days as straight forward history (see the attached chart from *Creation and Time: A Report on the Progressive Creation Book by Hugh Ross*). The best medieval theologians

believed in 24 hour days. Thomas Aquinas said, “The words *one day* are used when day is first instituted, to denote one day is made up of 24 hours.” Likewise, Peter Lombard: “The days referred to in Genesis are to be understood literally as lasting 24 hours.” This data is all the more impressive considering that both the fathers and the medieval scholastics were prone to allegorize Scripture.

At the time of the Reformation, the debate was not 24 hour days vs. long ages, but 24 hour days vs. creation in a moment of time. Luther and Calvin both made it clear where they stood:

Luther: “We know from Moses that the world was not in existence before 6000 years ago...he [Moses] calls ‘a spade a spade,’ i.e., he employs the terms ‘day and ‘evening’ without allegory, just as we customarily do...we assert Moses spoke in the literal sense, not allegorically or figuratively, i.e., that the world, with all its creatures, was created within six days, as the words read. If we do not comprehend the reason for this, let us remain pupils and leave the job of teacher to the Holy Spirit.”

Calvin: “Moses relates that God’s work was completed not in a moment but in six days...[God] distributed his work into six days...[we know] the earth has not yet attained six thousand years.”

As far as I can tell, this was also the unanimous opinion of the Westminster divines. It is hard to understand how the phrase “in the space of six days” (WCF 4.1) could mean anything but 24 hour days. In fact, John Lightfoot, one of the commissioners to the assembly and perhaps the best Hebrew scholar of his day, believed in a 6 day creation, and using biblical genealogies, calculated the date of creation as 3928 B.C. Lightfoot did his work in 1644 (while the Westminster Assembly was in session), six years before Archbishop James Ussher published his famous date of 4004 B.C. Ussher was not only one of the most learned men of his day, but also one of the most godly. He too was a renowned Hebrew scholar and held to 6 day creationism. Ussher was an Anglican and was not at the Westminster Assembly, but he had a tremendous impact on the assembly, as is clearly seen by comparing his shorter catechism to the one produced a few years later at Westminster.

As David Hall points out, it was not until the post-Darwin era that the church really began to move away from the natural reading of Gen. 1. The Reformed tradition has continued to hold to a creation week of 6 24 hour days (with some notable exceptions). By no means can this position be fairly labeled as “fundamentalist” and dismissed. Perhaps the two best Reformed dogmaticians of this century, Louis Berkhof and Herman Hoeksema, both were staunch defenders of a six day creation. Likewise, G.I. Williamson, Doug Kelly, Noel Weeks, Greg Bahnsen, Richard Pratt, Doug Wilson, James Jordan, Joey Pipa, David Hall, Gary North, Ken Gentry and others, have all defended 24 hour days.

E. THE BIBLE AND THE AGE OF THE EARTH

Do the Bible’s genealogies allow us to calculate the age of the earth? Can science answer the question of the age of the earth? Or is it a mystery we cannot solve?

First of all, many theologians (as the section above attests) have thought the biblical genealogies provided a surefire way to calculate the date of creation. Barr claims the writer intended to provide just such a genealogy. Theologians such as Augustine, Theophilus of Antioch, Luther, Calvin, Lightfoot, and Ussher used the genealogies to calculate the age of the earth with varying degrees of precision. At one point, Calvin compared belief in the genealogies of Scripture to belief in the Trinity and predestination! Men such as John Owen, Matthew Henry, Keil and Delitzsch, and Geerhardus Vos have accepted the Bible's chronology at face value. However, there are some apparent problems with this approach. There are several key questions we need to ask:

-- Were the genealogies given for the purpose of calculating the age of the earth? Many theologians seem to take it as an a priori that the Bible is not interested in giving the age of the human race, but we should not simply assume the genealogies cannot be used for this purpose. Clearly, many of the genealogies are selective, focusing on the Messianic line. No doubt, many of the genealogies are condensed for stylistic and/or theological reasons. However, following James Jordan, I am inclined to believe the genealogies of Gen. 5 and 11 are actual chronologies and the writer did intend to give a way of calculating the date of creation. Remember, Christianity is a historical religion. The Hebrews were very concerned with historical records. There is no good exegetical reason I know of for assuming there are gaps in the earliest genealogies of the Bible. The gaps seem to be in genealogies that are derivatives of those found in the early chapters of Gen. Gen. 5 and 11 provide foundational records; later biblical writers do not need to repeat what has already been said so they are free to compress it.

-- Do the genealogies skip generations? It seems that sometimes the writers of Scripture use ancestral relationships in the genealogies, rather than direct father-son relationships. However, even if there are gaps in the genealogies of Gen. 5 and 11, this in no way proves there are gaps in the chronological data we are given. (For example, in Gen. 5:6, even if Enosh were the great-grandson of Seth, instead of his son, it still appears to be the case that Seth was 105 years old when Enosh was born, taking the plainest reading of the text.) Jude 14 seems to indicate the chronology of Gen. 5 should be taken as it stands.

-- How do the numbers actually work out? When we start adding up the years given in the genealogies, we find some oddities. For example, in the minds of some Abram seems entirely too close to Noah and the Tower of Babel. We find that Adam, Enoch, and Methuselah were contemporaries. Many theologians have found it strange that the lives of such men would overlap, without any record of their interaction. However, why should these scenarios be considered impossible?

It must be admitted that it is at least theoretically possible that the genealogies, when brought together, provide a strict chronology. There is no absolutely conclusive proof from Scripture that rules this out. Of course, even if this was disproven, the Bible would still be inerrant and reliable. And either way, it should be noted, the genealogies put limits on the age of the earth. There are only so many possible gaps, and the gaps can only be so large before the genealogies are stretched to the breaking point and the perfections of Scripture are called into question. If millions of years were inserted between generations, the genealogies become virtually meaningless. Biblically, it seems at the very least, we can date the earth in thousands of years, rather than hundreds of thousands or millions of years. However, I think that the Hebrews, with

their keen interest in history, would want a tighter record than that. Chronology certainly seems to be of interest to the biblical writers -- otherwise, why would we be given any ages at all?

F. SCIENCE AND THE AGE OF THE EARTH

If the Bible's written record does not provide a date for the creation, arriving at anything more than an approximation is impossible. Extra-biblical history does not go far enough back and the methods of science are not trustworthy enough to establish a precise date.

Scientists have been telling us for quite some time now that the earth is very old. We will not go into all the reasons for this now, only let it be said that many of the reasons are ethical and philosophical rather than scientific. Science is very limited in giving us information about the past because (a) the past is not observable; and (b) the past is unrepeatable, i.e., it cannot be experimented on in a lab. Without direct observation and experimentation, there is very little reliable data available, the dogmatic claims of scientists to the contrary. With that in mind, I will not try to "prove" a young earth because I do not believe it can be scientifically proven. However, scientific data can be shown to corroborate and support the young earth view.

Complicating matters for the scientist is the fact that the Bible seems to teach creation with the appearance of age. This is not at all deceitful; rather it is the corollary of creation ex nihilo, or absolute creation. For example, when Jesus miraculously turned water into wine, the wine had the appearance of age. Normally, it would have taken months, even years to produce such wine, but Jesus did it instantaneously. He was not being deceitful, yet if we were to ask one of the guests at the wedding feast to date the wine he was drinking surely he would have miscalculated. Similarly, if we could take a time machine back to day 7 of the creation week we would see an adult male who appeared to be 20-30 years old but was actually only one day old. We could chop down a tree in the Garden of Eden and count the rings, but in reality it would only be a few days old. God made full grown chickens, not eggs. We could go on and on with examples, but the principle is this: *You cannot date the earth just by looking at the earth.* The creation was made mature. This applies to the organic creation, but it also applies to the inorganic creation (topsoil, mountains, rivers, valleys, etc. all were present at creation, even though these features may take a long time to form under "normal" conditions).

There are additional factors to consider before accepting scientific arguments for an old earth. We simply do not know what kind of rapid erosion could have happened to the earth during various "catastrophes." Rapid erosion, of course, would give the appearance of old age, when the earth might actually be quite young. For example, who knows what happened to the earth when God separated the waters from the earth on days 2 and 3 of the creation week? Who knows the power of a worldwide flood, or what it would do to the topography of the earth? We should be especially suspicious of geologists who do not take biblical data of this sort into account. The Bible has much to say that has a bearing on the history of the earth.

For quite a while now, there has been a revival of flood geology. Flood geologists claim the great fossil graveyards found in various parts of the world are the result of the Noahic flood. This theory is plausible, especially in view of the fact that organisms that die under "normal"

conditions almost never fossilize. Great numbers of fossils spread all over the globe are almost surely due to a global catastrophe, and Noah's flood seems to fit the bill. Old earth scientists claim the fossils are the result of a million-plus year process, but this is far from proven (or provable).

It is important to recognize that almost all dating methods used by virtually all scientists require the use of unproven and unprovable assumptions. This is especially true of radiometric rock dating methods. Dating rocks is sort of like looking at a car speeding down the expressway and figuring out how long its been on the road -- all we have is its present location and speed, but we do not know the starting point. In the case of a rock, we may know the half life of some isotope (its speed) and we may know the present ratio of parent to daughter element (its location), but its anybody's guess as to what the initial ratio was (its starting point). It is my conclusion that such dating methods are generally too inconclusive to trust. It is actually unscientific to try to date the earth "scientifically."

The greatest problem facing scientists who want to hold to a young earth is that of starlight. If the earth is only thousands of years old, how is that light from stars millions of light years away has reached the earth? There are several possible explanations, though no one can be considered to be fact at this point (in my opinion):

- Perhaps God created the star light "mature" so that the light was reaching earth the moment the stars were created. This has some plausibility since light was apparently reaching the earth even *before* the sun and stars were created. In addition, the stars were created specifically for man, to serve as symbols and clocks (Gen. 1:14ff).
- Experimentation over the years has shown the speed of light is slowing down. If so, light was once traveling faster and may have been able to reach earth much faster.
- Some scientists believe that, because space is curved (that is, it is Riemannian rather than Euclidean), light takes a "short cut."
- Russell Humphreys has proposed a model based on general relativity theory, in which relativistic time dilation, combined with certain assumptions about the universe and its beginning, makes distant parts of the universe look old, while the earth is young. However, this proposal has been subjected to critique and will need to be revised before it is plausible.

We must be extremely cautious in accepting any scientific data about the age of the earth. Time and time again, scientific "certainties" have turned out to be not so certain. The history of science reveals that scientists are not immune to foolish speculation. We have no real reason to be intimidated by science. Certainly, we should not let scientists dictate to us the parameters of our biblical exegesis. Science does not provide a mold into which we must pour the creation account of Gen. 1-2. Do not assume that scientists "know" the earth is very old; there is much that points to a contrary conclusion, both biblically and scientifically. Monty White, in his helpful book *How Old is the Earth?*, provides a summary of scientific methods that point to a young earth. If you would like further detail, I suggest getting a copy of his book. (I have attached a chart at the end of this paper that summarizes his arguments).

G. CONCLUSION

Genesis was not written to satisfy our curiosity about the creation, but to drive us to praise our Creator. Why then are these questions we have been considering important? Certainly believing that the days in Gen. 1 were 24 hours or that the chronologies in Gen. 5 and 11 are strictly trustworthy is not essential to salvation; it is far more important to understand and believe Jn. 3:16. However, all those who trust Christ as Redeemer must submit to him as Creator and Lawgiver. This includes bowing before his Word, undergoing persecution for his name if required, making our thoughts obedient to him, and so on. I think there are at least three reasons for giving this issue our attention:

-- It deals with God's Word and every portion of God's Word is important. We are to live by *every* word that proceeds from God's mouth. God's Word addresses nothing that is useless for our personal sanctification and effectiveness in transforming our culture.

-- In one sense, what is at stake is the relationship of the Bible to science. This is a difficult area, but one the church must deal with. Does science judge our interpretation of Scripture, or does Scripture judge the theories of scientists? Which is the higher authority? How much can we allow scientific data to reshape and correct our exegesis of the Bible? Ultimately, what concerns us here is the connection between special and general revelation. I certainly do believe we must use our study of general revelation to inform our study of the Bible. However, we must also always look at general revelation through the lenses of Scripture. Scripture, as God's written and redemptive revelation, always gets the last word.

-- This issue forces us to remember what the Bible says about the nature of fallen man. Scientists are not neutral. Unbelieving scientists have an ax to grind against God. Their rebellion and sin affects *everything* they do, including what they see through a telescope and a microscope. Because no one is neutral, there are no "brute facts." Facts cannot be separated from their interpretation, and one's interpretation of the facts will always be governed by his most basic faith commitments. Scientists work in terms of paradigms or frameworks. A framework will, in principle, either submit to Christ and the Bible, or seek to suppress the truth God has so clearly revealed. As Abraham Kuyper pointed out 100 years ago, there are actually two kinds of science, one built on the foundation of God and his Word, the other built on the sand of human autonomy. We must keep in mind this antithesis -- namely, that the war between belief and unbelief is comprehensive, involving even scientific pursuits. While this does not mean we cannot learn much from non-Christian scientists, ultimately it means the Christian community must rethink the scientific enterprise in terms of biblical revelation. This is a monumental task, yet it remains to be done. The third reason I think this issue is important is that it shows us clearly the need to develop a comprehensive biblical world view. We must develop science in such a way that it takes the Bible as its basic paradigm and interprets the scientific data in light of Scripture.

H. SELECT BIBLIOGRAPHY

Doug Kelly, *Creation and Change*. Probably the best single volume treatment of this issue. Kelly interacts with both exegetical questions and the findings of scientists.

Louis Berkhof, *Systematic Theology*. Page for page, Berkhof has the best discussion of the six days of creation.

Herman Hoeksema, *Reformed Dogmatics*. Second only to Berkhof in providing a concise discussion of the issues involved in 6 day creationism. Hoeksema is especially good in refuting the day-age theory.

Monty White, *How Old Is the Earth?* Looks at this question from both scientific and biblical perspectives. Short but helpful.

Philip Johnson, *Darwin on Trial*. Johnson is not entirely trustworthy because he is not committed to a biblical world view. He is very self-conscious in avoiding references to the Word of God. Therefore he roots his argumentation in the same kind of commitment to human autonomy that got us into this mess. He stresses that scientists need to return to "objectivity," rather than calling them to faithfulness to Scripture. However, his critique of Darwinism is brilliant, exposing scientific errors, unwarranted assumptions, logical fallacies, etc. Read it, but do so with discernment.

Noel Weeks, *Sufficiency of Scripture*. A good book with an excellent chapter on the hermeneutical difficulties of Gen. 1-3. Weeks is especially strong in refuting the framework hypothesis and the anthropomorphic day view.

E. H. Andrews, *Christ and the Cosmos*. An excellent and readable discussion on the philosophy of science. Must reading for those interested in the creation-evolution debate.

G. I. Williamson, *WCF for Study Classes*. Includes a short but good discussion of the six days and the fossil record.

CEF Symposium, *No Stone Unturned*. Good essays on the implications of creation for various academic disciplines. Also includes a transcendental defense of creation and a study of the reliability of biblical genealogies.

Pearcy & Thaxton, *Soul of Science*. Wide ranging in its scope, dealing with several branches of science. This book shows the historical roots of the scientific revolution. Modern science was born and bred by a Reformational world view but is now a prodigal son that refuses to return home. Includes many interesting historical case studies of scientists who not only did not let their faith stand in the way of their work, but were actually motivated by their faith. This is the best introductory work on the history of science I know. Also demonstrates that modern science is in a crisis situation.

Magnus Verbrugge, *Alive: An Enquiry into The Origin and Meaning of Life*. Devastating critique of naturalistic evolution. A fairly decent example of how science is to be carried out within the framework of a biblical worldview.

Ken Ham, *The Lie*. A critique of evolution and theistic evolution from a six day young earth creationist. Simplistic but helpful. Shows that evolution and creation are foundational to two competing world views. Good introductory material.

Ken Ham, *Genesis and the Decay of the Nations*. Very basic. Good introduction to the implications of creation and evolution. Shows the importance of creation to the biblical world view, as well the way Darwinism has influenced so much of modern thought and culture.

Mark Van Bebber & Paul Taylor, *Creation and Time: A Report on the Progressive Creationist Book by Hugh Ross*. Exposes errors of the progressive creation movement. Virtually a line by line refutation on Hugh Ross' *Creation and Time*.

E. J. Young, *In the Beginning*. Young was perhaps the finest orthodox Hebrew scholar of his day. He taught at Westminster from 1936 to 1968. This is his work on the opening chapters of Genesis. While I do not think it is faultless, it is a very helpful work in a number of respects. Young rejects evolution and theistic evolution. Unfortunately, he is quite agnostic about the length of the days on Gen. 1, but he does insist that the chapter be read as chronological history.

John Whitecomb and Henry Morris, *The Genesis Flood*. The classic modern work on flood geology. Still highly controversial, almost 40 years after its first publication. In many ways a mixed bag. There is much in this book that is good, much that is bad, and much to think about. Worth reading for those highly interested in this topic.

David Hall, *The Arrogance of the Modern*. Includes an important chapter on the relationship of Gen. 1 to apologetics. Is the apologetic task of the church helped or hindered by harmonizing the Bible with science? What has the church traditionally done about the days of Gen. 1? Has the church allowed Darwinism to color her exegesis of the creation account? Hall wrestles with these questions, giving a lot of good historical info along the way. In particular, he shows that Hodge and Warfield were not quite as discerning as they should have been because they were compromised epistemologically.

James Jordan, *The Biblical Chronology Question: An Analysis*. This is (in my opinion) the definitive paper on biblical genealogies. Jordan refutes the views of Schaeffer, Warfield, and Green, showing the genealogies of Gen. 5 and 11 are indeed chronologies, and therefore trustworthy in dating the creation. Just as importantly, Jordan explains *why* we need to take these passages as chronologies if we are to be faithful to Scripture. There are important theological implications that follow from biblical chronology. This short work has virtually convinced me that the Bible requires us to believe in a young earth of about 6000 years. (Jordan does not give a precise date, but I assume he thinks precise dating is possible.)