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## A BIBLICAL CHRISTIAN FRAMEWORK FOR EARTH HISTORY RESEARCH PART II-FOUNDATION AND METHOD OF HISTORICAL ANALYSIS WITHIN THE BIBLICAL CHRISTIAN SYSTEM

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### Abstract

*Although the naturalist-uniformitarian system and its derivative view of earth history are demonstrably invalid, a biblical Christian substitute is not logically a de facto replacement. It must first succeed at the points of failure of the naturalist system. In this paper I attempt to show that the biblical Christian system is successful in passing these tests as it demonstrates internal consistency in developing a framework within which historical analysis can take place. Additionally, the epistemological framework of the system is shown to integrate geological models of earth history, separable from the system, in a comprehensive approach to historical analysis.*

### Introduction

In Part I of this contribution I noted two tasks involved in the development of a viable interpretation of earth history. These include: (1) the refutation of the dominant naturalist-uniformitarian system and (2) the introduction of an alternative that successfully addresses

the failures of that system. Demonstrated contradictions between the fundamental axioms of the naturalist-uniformitarian system on the one hand and its methodology and conclusions on the other invalidate it. The remaining positive task is then to demonstrate the validity of a replacement. The biblical Christian system can successfully address the failings of the naturalist system by these means;

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1. demonstrating *internal consistency* between its foundational axioms on the one hand and methods and conclusions on the other to validate assumptions necessary to constrain and generate models,
2. justifying *methods* in earth history analysis by applying an epistemological framework consistent with the biblical Christian system,
3. proposing geologic *models* of earth history once that framework is established. Each model must be constrained by several criteria, including:
  - a. consistency with the metaphysical system,
  - b. consistency with the epistemological framework and method,
  - c. well defined limits that will insure that the model is separable from the framework in a methodological sense, and,
  - d. clearcut criteria by which the model can be revised or rejected based on empirical evidence.

The first three criteria (a-c) must be supplied outside science but are conditions that constrain and shape scientific models. The last criterion (d) is influenced by field data, and the process it describes is most closely related to what is commonly considered the "scientific method." This restriction of the scientific method implies similar restrictions on science, and will certainly be rejected by adherents of the naturalist-uniformitarian system.

The first three items highlighted above (a-c) will be the subjects of this paper. In developing an epistemological framework that will constrain the method of historical analysis, the issue of the separability between models and the underlying system will also be addressed. Success of the biblical Christian system in these tasks will parallel corresponding failures of the naturalist-uniformitarian system, which were partially presented in Part I of this contribution (Reed, 1996, pp. 6-12). Additional epistemological failures of the naturalist-uniformitarian system highlight the corresponding successes of the biblical Christian system.

### Passing Formal Tests

Evaluation of any successful model of geologic history must first include the ability of its parent system to pass formal tests of *internal consistency*. This ability is primary in the sense that it must precede the application of *external* empirical tests. No empirical evidence can offer support to the truth claim of a model generated within a self-contradictory system. For this reason, the geologic column, as a part of the naturalist-uniformitarian system, cannot possibly be true, unless new philosophical or religious conclusions are drawn about the nature of the cosmos, of man, and of history, that are consistent with the central tenets of naturalism, and justify the method and conclusions of uniformitarian historical analysis. Because a successful overhaul of uniformitarian thinking does not appear likely, a biblical Christian alternative is offered.

The biblical Christian alternative to historical analysis must pass the same formal tests failed by the naturalist-

uniformitarian system. In Part I of this series, the failures of naturalism-uniformitarianism resulted from the systematic use of biblical Christian axioms to support anti-biblical conclusions. The success of the biblical Christian alternative in passing the formal tests described above has already been documented in Part I (Reed, 1996, pp. 6-12), in which the biblical Christian axioms are shown to be consistent with biblical Christian methods and conclusions. The results from Part I include four propositions:

1. Science can exist because nature as the artifice of an orderly, transcendent God justifies the comprehensibility of phenomena by a mechanistic method that is the result of a metaphysic that relates phenomena to transcendent reality.
2. Human participation in science is possible because man is the image-bearer of God. Man thus transcends nature as a potential observer, and has an inherent ability to understand to some degree God's works.
3. Novel, empirical scientific progress is possible because nature follows the orderly, yet novel dictates of God's will as opposed to an inherent natural, rational order; man, the scientist, exists in a unique historical relationship with God that frees him from potential deterministic forces of both history and nature.
4. Science is motivated and justified as a human enterprise by the creation mandate of Genesis 1:28, which crystallizes the interrelationships between God, man, nature, and history.

Formal tests presented above do not supply an exhaustive evaluation of the two systems. In addition to the justifications of science in the biblical Christian system discussed above, a brief examination of the framework reveals the following additional conclusions which are essential to the task of geologic historical analysis:

1. the affirmation of discontinuity in earth history,
2. the objective reality of nature and time apart from the human mind, and
3. the primacy of historical events over the mode of time in which they occurred.

Discontinuity is implied by the active participation of a transcendent purposeful God in earth history. Likewise the existence of God as eternally self-existing, free (to create or not), and separate from nature in terms of existence and dependency provide the basis for the objective reality of nature and time as created entities. Ultimate reality is dependent on the will of God, rather than the mind of man or phenomena. God's interaction with man in history grants primacy to their relationship illustrated by the *events* that occur in history, rather than to the historical "process" in which those events occur.

### Clarifying The Epistemological Foundation

Because epistemology is the study of the nature of knowledge, especially its limits and validity, any model

of earth history must be supported by an epistemological framework that can justify the search for truth in history. A full-orbed discussion of epistemological issues is well beyond the scope of this paper, and the author welcomes future contributions from professional philosophers of science in this arena. There are, however, several epistemological concepts that relate directly to the formulation of geologic models of earth history, and those issues will be addressed below.

The biblical Christian system underlies the classical structure of western thought. It delineates distinct areas of knowledge and demands both vertical and horizontal relationships between these areas. The biblical Christian system also justifies a relationship between human knowledge and truth, and can apply this framework to the issue of historical analysis. In contrast, the naturalist-uniformitarian system distorts science to reject the very structure of western thought that provided a foundation for modern science (see critique in Reed, 1996). This internal contradiction in the naturalist-uniformitarian system is revealed in its emphasis on science as the only valid knowledge. This claim discredits other areas of knowledge that are required to justify the practice of science. The dismissal of these other facets of knowledge also precludes constraints on science. The attempt to apply science outside of its proper limits has negative scientific and philosophical results.

#### **The Failure of Knowing in Naturalism**

The preceding formal tests have illustrated that key concepts in the development of modern science depended on key developments in Christian theology. God's relationship with nature guaranteed that the physical universe was a "mechanical" artifact brought about through intelligent design. God's relationship with man (made in His image) guaranteed the transcendent aspect of man that justified his external, objective analysis of nature and history as aspects of creation. Man existed as an historical being, focused on his relationship to God and to his mission in fulfilling the will of God on earth. Success in the pursuit of scientific knowledge was guaranteed by the unity of truth in God, even when that unity was not immediately apparent because of focused, piecemeal investigation or human limitations. Ongoing theological and philosophical confusion was eliminated. The justification of every scientific concept was no longer considered necessary, since the theological and philosophical foundations had already been laid, and the nature of God insured goodness of "fit" for the individual pieces of truth. Naturalism fails in two significant ways to provide an internally consistent epistemological basis for its own method. The first failure lies in its deviation from the traditional epistemological structure of western thought. The second failure is a dependence on system-building trends in pre-twentieth-century modern philosophy, followed by the failure to update its philosophical base after those earlier trends were discarded during the twentieth century.

#### **The Naturalist Rejection of the Structure of Western Thought**

Ironically, part of the triumph of the biblical basis for modern science was the ability to draw clear distinctions between theology and science. For example, the divorce of purpose from scientific inquiry was not based on the unimportance of purpose per se, but on the transfer of purpose from nature to God. The links between science, theology, and philosophy were not severed, they were merely arranged in such a way as to allow free exercise of the scientific process within the limits set by theology and philosophy. Science was thus linked in a dependent manner to theology and philosophy; the mechanistic, empirical method was made possible by underlying theological and philosophical conclusions.

From the perspective of the practicing scientist, however, philosophy and theology were in "background memory," and not particularly applicable to day-to-day tasks. The early secularists of the Enlightenment apparently did not understand that the background status of theology and philosophy in operational science did not diminish their fundamental importance. Already in the background, and weakened by internal difficulties during the eighteenth and nineteenth century, philosophy and theology were easily jettisoned. The necessary presuppositions that were formerly supplied to science by theology and philosophy were assumed to naturally inhere within science itself. Unfortunately, the severing of this epistemological connection with theology and philosophy allowed the transition within science from a mechanistic method to a mechanistic metaphysic which could not support the mechanistic method (Glover, 1984). What has not yet been realized by modern scientists is that in the midst of their triumph over "religious superstition," they have lost the justification for their most foundational axioms. The foundation has been laid for the self-destructive implosion of science, and that self-destruction will accelerate as these issues are more widely appreciated.

In the uniformitarian system, replacing God with nature as the ultimate reality was necessarily accompanied by the epistemological promotion of science as the replacement for revelation, theology, and first order philosophy (Schlossberg, 1983, p. 143). The naturalist-uniformitarian denial of validity outside of science rests upon certain nineteenth century philosophical conclusions regarding science and knowledge that culminated in the philosophical school of "logical positivism," which was quickly rejected or modified by secular philosophers (Medawar, 1984, p. 66). This attempt to define truth in terms of science is similar to other faults of naturalism described in Part I of this series. The replacement of other areas of knowledge by science was performed only on a surface level, and the underlying basis for applying human knowledge was not fully integrated into the naturalist system, primarily because it could not fit.

Although uniformitarians have attempted to subvert the traditional structure of knowledge, the opposing tradition of western thought derived from biblical Christianity offers the only possibility for maintaining the link between human knowledge and truth. Science never had the ability to provide the meaning and purpose by which the scope, direction, and results of scientific discovery could be integrated into human experience. What has become apparent during recent years is that science in and of itself, cannot even justify the basis for asserting a relationship between its empirical facts and truth. Truth cannot be derived from empirical observation, if for no other reason than the limited (in both space and time) perspective of any human observer. For example, science routinely employs causal explanation, but no defense of causality *per se* can be offered by science, or any other empirical explanation. Although David Hume (1777 in: Steinberg, 1977, pp. 50-53) reached the same conclusion over 200 years ago, implications of his critique of an empirical basis for human understanding have not yet become clear to the practitioners of modern science, since so many apparently accept the reductionistic concept that science is the only path to truth.

The naturalist-uniformitarian system cannot reconcile the empirical awareness of human limitations in knowledge with a refusal to allow any place for revelation, or for nonscientific uncertainty in issues rightly belonging to theology or first order philosophy. All knowledge must be subsumed under scientific methodology (see Figure 2 of Part I of Reed, 1996). Therefore science is the naturalist's only hope for truth, but as predicted by the Christian approach, it cannot meet the challenge. The failure of logical positivism to successfully deny distinct yet valid areas of human knowledge outside the positivist's narrow limits has not yet fully penetrated into general scientific consciousness. As it does, the naturalist system must either retreat to mysticism (Schlossberg, 1983, p. 158) or return to a classical western concept of systematic thought of unified truth existing within a multidisciplinary framework. The advent of New Age religions and their associated veneration of nature drives modern man towards mysticism; it is the imperative of Christians to advance a multidisciplinary framework. Either option will effectively end modern post-Christian materialistic naturalism as we currently understand it.

### **The Role of Outmoded Philosophy in Naturalism**

Uniformitarianism did not arise in a vacuum. It was profoundly affected and directed by commitments to philosophical system-building that were characteristic of early modern philosophy. The break between ancient and modern philosophy is commonly attributed to Rene Descartes (1596-1650). One of the distinctive marks of Descartes' work was an emphasis on the rejection of all past thought, and the subsequent necessity for constructing a complete, self-contained philosophical system:

But since I now wished to devote myself solely to the search for truth, I thought it necessary to do the very opposite and reject as if absolutely false everything in which I could imagine the least doubt, in order to see if I was left believing anything that was entirely indubitable. Thus, because our senses sometimes deceive us, I decided to suppose that nothing was such as they led us to imagine. And since there are men who make mistakes in reasoning, committing logical fallacies concerning the simplest questions in geometry, and because I judged that I was as prone to error as anyone else, I rejected as unsound all the arguments I had previously taken as demonstrative proofs. Lastly, considering that the very thoughts we have while awake may also occur while we sleep without any of them being at the that time true, I resolved to pretend that all the things that had entered my mind were no more true than the illusions of my dreams. But immediately I noticed that as I was trying thus to think everything false, it was necessary that I, who was thinking this, was something. And observing that this truth, '*I am thinking, therefore I exist*' was so firm and sure that all the most extravagant suppositions of the sceptics were incapable of shaking it, I decided that I could accept it without scruple as the first principle of the philosophy I was seeking. (Descartes, R., 1637, in: Nottingham, Stoothoff and Murdoch, 1985, pp. 126-127).

This tendency towards closed, innovative systems was followed through the rationalist school, and to a degree by its critical opponents, and culminated with the constructs of Kant (1724-1804) and Hegel (1770-1831). This drive towards unified systematic truth apart from God spilled over into science. It is no coincidence that uniformitarianism developed on the heels of the golden age of philosophical system building. However, post-modern philosophy has moved in anti-systematic directions, as typified by twentieth century existentialism. Obviously, there now exists a tension between secular philosophy and secular science; a tension that is a direct result of rejection of the biblical Christian worldview by both sides.

However, uniformitarianism as a grand integrating interpretation of earth history has divorced itself from secular philosophy; modern philosophy has turned away from systematic synthesis, but integrated systematic explanations of phenomena are still popular in the earth sciences. Once again, uniformitarianism is trapped by its scientific veneer because of its proponents' inability to perform reflexive criticism and understand their intellectual dependence upon a foundation that is no longer present. The predilection for system-building remains strong in the earth sciences; plate tectonic theory is now heralded as the grand unifying concept of earth history. However, without the ability to provide a philosophical apology for the presumption of being able to unify truth on a grand,

systematic scale, uniformitarianism has not only lost step with its biblical Christian roots, but has also, in that respect, been rejected by the secular philosophy that nurtured it in the nineteenth century. Uniformitarianism as a system is now facing external pressures from the secular side that will destroy or radically alter it. It is not apparent that science can survive without some supporting philosophical structure, and no such secular structure appears available.

A rejection of ultimate truth being mediated either through philosophy or science, and a recovery of biblical Christian modes of thought are necessary to reverse current trends in science. However, Christian theology has often followed philosophy in abandoning unifying systematic ventures, as illustrated by the development of theistic existentialism. Unfortunately, an anti-systematic mode of thought hinders theologians (even orthodox ones) from appreciating the significance of the geologic column to theology; they do not think in terms of unifying systems. Recovery of confidence in Christianity's ability to unify truth from all areas of knowledge is crucial to a needed reintroduction of professional Christian theologians and philosophers into the debate about earth history, and the corresponding recovery of science from modern irrationalism.

### **The University Paradigm**

The classical Christian view of knowledge is best described by the "university" (unity in diversity) concept (Sproul, 1984, p. 9). In the "university" concept of Sproul, the ultimate unity of truth allows for divisions of 'labor' in human knowledge and the assignment of particular methods and concerns to distinct areas of interest. Therefore, theology, philosophy, science, history, etc. each have their own independent methods and special questions. Answers to intradisciplinary questions can be confidently integrated on an interdisciplinary level because truth is unified in God. Extreme confidence in the ultimate unity of truth allowed early scientists to pursue piecemeal investigations apart from theological and philosophical justification of each step. This method combined with the empirical tradition derived from the doctrine of creation to form a conceptual framework for modern science (Glover, 1984). However, this process is only possible if an omniscient God exists and if He has revealed truth to rational man created in His image. In the naturalist-uniformitarian system, there is no basis for ultimate truth, there is no basis for man knowing it even if it were there, and there is thus no justification for dissociated studies reaching unified truth. Yet, this piecemeal pursuit of knowledge is a widely recognized cause for the success of modern science.

The interdependence of the different areas of knowledge also applies to the third dimension of knowledge, and the resulting hierarchical arrangement of disciplines. Disciplines are assigned discrete domains in

two dimensions, but can also be conceptualized as relating to each other in the third. Relative positions in this hierarchy of knowledge are based upon each discipline's relative dependence for the justification of its foundational principles. Simply put, the assumptions needed to do science are justified by philosophy, and the foundations of philosophy are justified by theology; therefore science, philosophy, and theology can be conceptualized as a hierarchy of disciplines. The apex of any hierarchy of disciplines in the biblical Christian system is God's revelation, justified by the attributes of God. This hierarchy further defines limits within which special questions and methods of various disciplines apply, and in this structure of knowledge is found one of the most fundamental distinctions between the naturalist and biblical systems.

Because absolute truth and certainty exist in God, and are available in His revelation, human limits to knowledge do not force radical skepticism. Nor is there need to search for indubitable first principles, as did Descartes, in order to justify science. The presence of epistemological human limits are undeniable. While naturalism must by force of logical necessity force these limits to irrationalism, a biblical Christian epistemological framework (culminating in fixed, revelatory truth) allows for the mild skepticism of the empirical tradition, and thus for progress within science. Ultimately, God's revelation justifies science, and science can proceed without the necessity of justifying itself as an autonomous system of thought.

An additional benefit unique to the "university" framework in the biblical Christian perspective is the latitude for tolerance and respect that it provides in intellectual pursuits. This attitude is based on two factors: (1) the recognition that human limits result in a mixture of some error with truth in the work of any person regardless of intellectual ability; and (2) the realization that admixtures of error do not detract from the value of "pieces" of truth in these efforts. Thus, the piecemeal approach to knowledge is not only a function of human limits in terms of the potential scope of knowledge, but also is a function of human limits in terms of the truth of the knowledge existing within the scope of human ability. Recognizing these limits provides a basis for empathy for others that can be exercised because their individual errors do not threaten truth in any ultimate sense, since truth is guaranteed by God, and not by men. Thus in the context of earth history research, anyone operating within the biblical Christian system can exercise tolerance and respect for the work of both those peers operating within the biblical Christian system, and those peers operating within the naturalist-uniformitarian system, and while the naturalist-uniformitarian system is rejected as false on the system level, facets of work done within that system may well demonstrate both astute observation and interpretive insight. This possibility allows the re-

searcher operating in the biblical Christian framework to assess more objectively and accept truth as it exists, even in competing ideological systems.

### Mixed Questions and Straight Answers

The biblical alternative to uniformitarian natural history will be distinct because the acceptance of a "university" framework of knowledge, results in the application of a multidisciplinary method, recognizing that no single branch of knowledge is competent for a complete analysis. This approach is consistent with the biblical Christian framework, since truth is expected to be present in all disciplines, and to be consistent between them. Science by itself is inadequate to provide an interpretation of natural history, although there are facets of natural history that require scientific analysis. Similarly theology, philosophy, and history are not individually competent to support a thorough analysis, although each area is crucial to the task. The interpretation of natural history should then be defined as what Adler (1965) has called a "mixed question." A mixed question is one that requires input from more than one discipline. Investigations into earth history must be considered mixed questions, since science alone cannot define unique, non-repeatable historical events or generate metaphysical and epistemological constructs necessary to constrain interpretation. History alone (in the sense of written records and archaeology) cannot investigate and utilize additional physical information contained in the rock record, and is also unable to generate a philosophical framework. Speculative theology, based on biblical revelation provides a framework and justifies methods, but does not provide sufficient detail for interpretation of field data. Only as these disciplines are used together, recognizing the proper limits and relationships of each, can a comprehensive description of earth history be performed.

Christianity contrasts with naturalism by advocating a foundational system that justifies the unity of truth. This system recognizes the pursuit of truth by individual disciplines within their own special spheres, and encourages multidisciplinary approaches to mixed questions. Therefore, biblical creationists should rely explicitly on a comprehensive approach in which they will define and justify a methodology, construct a framework that incorporates applicable areas of knowledge, and define the role of geology in earth history studies. The methodology and scope of the task have been partially defined and justified by the positive aspects of the formal tests presented above. The framework must integrate the roles of theology, philosophy, history, and science (at a minimum), and relate each to revealed truth. At that point, scientific models of stratigraphic interpretation can be offered within the context of the biblical Christian system, and these models can be utilized in field application within the clearly stated context of the entire system. Evaluation of any such stratigraphic model will be twofold: (1) internal tests against the methods and factual constraints of the primary system; and (2) external comparison with field evidence. Any model should include clear criteria for revision or rejection based upon empirical investigation.

The great advantage of the biblical Christian epistemological framework is demonstrated by the clearcut implications of failure by a particular geologic model. In the naturalist-uniformitarian system, the failure of the stratigraphic model implies the failure of the system as a whole and forces the possibility of major revisions on a metaphysical level. In the biblical Christian system, the failure of the scientific model implies only the failure of that model; the framework is established within which revision of the failed model or even its replacement can take place in an orderly fashion, allowing for the ongoing progressive, if somewhat irregular, development towards scientific truth.

Another benefit of the biblical Christian system is the capacity for true novelty in scientific discovery. This novelty is possible because the epistemological "anchor" provided by the extrascientific framework allows greater freedom of intellectual risk within science. The failure of any given concept within science does not endanger the underlying epistemological framework. Conversely, such risk is not desirable within uniformitarianism, because it is constrained by possessing practically identical philosophical and scientific limits, and therefore risks ideological loss by empirical failures within its system.

In summary, the epistemological foundation for biblical historical analysis must incorporate several tenets:

- The confidence in the results of science are based on an epistemological division of labor that is possible because God guarantees both the existence and the ultimate unity of truth. The resulting framework allows for the justification of the necessary axioms of science, and for the proper limits on the scope of scientific inquiry.
- The burden on science is proportional because historical analysis can be approached as a mixed question, and science is not driven to perform the tasks of other areas of knowledge.
- The religious significance and resulting potential for subjectivity in historical analysis is not hidden or denied, but faced directly by a system that promotes scientific objectivity by allowing the independent failure of scientific models.

### Summary

In Reed (1996) I demonstrated the failure of the naturalist uniformitarian system by its inability to maintain consistency between its fundamental axioms and its methods and conclusions. Conversely, the biblical Christian system meets the test of internal consistency, and thus stands as the superior system in regard to the tests described. In addition, the biblical Christian system offers a consistent epistemological basis for performing earth history analysis by reference to the "university" paradigm of knowing and the derivative mixed question method of investigation.

Naturalism, with its reductionist, scientific approach to knowledge cannot offer a comprehensive method for earth history studies. In addition to its one-dimensional approach to historical knowledge, naturalism cannot, in its framework of knowing, even offer a possibility of the correspondence between its "knowl-

edge” and truth. Christianity does provide that all important facet by its acknowledged dependence on God as the ultimate arbiter of truth, and on His revelation to men capable of comprehending it (since they are created in His image). Since men are made in God’s image, they also possess the intellectual faculties necessary to pursue truth outside of the content of revelation, but within the constraints of revelation. Since the guarantee of truth is found in God, rather than in man, those operating in the biblical Christian system can exercise tolerance and respect for peers operating within competing ideologies.

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## LETTER TO THE EDITOR

### Source of Flood Water

Allen Roy in the June 1966 issue of *CRSQ* (33:18-22), “Fountains of the Great Deep: the Primary Cause of the Flood,” has made a notable contribution to Biblical creationism in providing exegetical support for a Flood model that provides an adequate source of water in accord with basic principles of science.

The description of planet Earth’s surface at the beginning of the Creation Account represents maximum stability, “infinite age” features—minimum potential energy, low profile that placed the entire surface underwater, maximum entropy. On the third day of Creation Week continental surfaces were raised (and dried), and the remainder of the global surface relatively depressed to provide ocean basins. This change was an act of creation that required a vast input of potential energy, with attendant reduction in entropy. It was a reversal of “natural” processes that may be compared to the reversal of natural processes when the dead body of Lazarus was converted into a functioning healthy young man. [In using this illustration I do *not* wish to imply that at some remote time prior to Creation Week there were dry-land continents on planet Earth.]

The Biblical record specifies that heavy rain was a distinguishing feature of the Flood experience; but this specification does not require all the rise in water from prior sea level to 20 feet above the highest mountain (Gen. 7:20) to have been rainfall. From the first 10

verses of Genesis we can model the initial stages of the Flood as a reversal of the Earth-surface changes that occurred at the beginning of the third day of Creation Week. At the height of the Flood the entire surface of the planet was covered with water, as it had been at the beginning of Creation Week.

At the height of the Flood the planet was again in the most stable, maximum entropy, configuration. The potential energy in the pre-Flood surface profile of elevation and depression had been converted into heat and dissipated. The termination of the Flood required re-introduction of potential energy, and was an act of creation similar to the formation of dry-land continents on the third day of Creation Week. In contrast with the original creation of continents in less than one day, the termination of the Flood was extended over nearly eight months, and probably continued in exponentially-decreasing continental uplift over decades and centuries following.

To satisfactorily model the Flood it is not necessary to postulate original creation of water for the necessary amount of rainfall, or release of unreasonable amounts of ground water from soil, rock, and underground cavities. An adequate amount of water is indicated in the second verse of Genesis. [See word studies of the Hebrew terms translated “deep” and “waters.”]

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### Quote — Textbooks and Pure Fancy

A large number of well-trained scientists outside of evolutionary biology and paleontology have unfortunately gotten the idea that the fossil record is far more Darwinian than it is. This probably comes from the oversimplification inevitable in secondary sources: low-level textbooks, semipopular articles, and so on. Also, there is probably some wishful thinking involved. In the years after Darwin, his advocates hoped to find predictable progressions. In general, these have not been found—yet the optimism has died hard, and some pure fancy has crept into textbooks.

Raup, David M. 1981. Evolution and the fossil record. *Science* 213:289.