

The Uniformitarian Stratigraphic Column— Shortcut or Pitfall for Creation Geology?

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Abstract

The end of the twentieth century saw a substantial increase in theories attempting to explain natural history within a Biblical framework. The proliferation of divergent models has opened the door to healthy debate, but suggests that more clarity in the foundational issues of natural history would be beneficial for creationism. In the arena of stratigraphy, one of these issues is the role of the global uniformitarian stratigraphic column (hereafter referred to as “the column”): is it a springboard to accel-

ated progress or a quagmire? If the former, then it allows for the immediate development of mature Flood models. But we assert the inseparability between the column and evolution, uniformitarianism, and deep time. Therefore logic demands its separation from any Flood models. This caution is reinforced by the careless use of the column in some creationist models. Alternative approaches to defining stratigraphy within the Christian Worldview are needed and that work is underway.

Introduction

Creation science has come a long way since its modern revival with the issuance of *The Genesis Flood* (Whitcomb and Morris, 1961). Several creationist models and numerous less-integrated interpretations have been proposed, addressing the areas of tectonics and stratigraphy (Table I). But once the Biblical basics of Creation and the Flood are acknowledged, creationist models and interpretations tend to diverge significantly. This raises questions about the structure of creationist natural history and suggests that a consensus is needed on defining the questions, even if there is disagreement over the answers.

Of course, the present “frontier” nature of creationist research may be one reason for this diversity of thought. However, we believe that another reason is the paucity of thought about fundamental questions of natural history and stratigraphy. Investigation in this direction could foster agreement well beyond the Biblical text. At the root of the issue is the relationship between the limited detail provided in the Bible and empirical data that will presumably supply that deficiency. The fit between empirical data and Biblical truth is not simple, and the important question of how they fit is often unexplored and cannot be answered scientifically.

Assumptions and methods are always worth examining, and questions about them are never closed. If uniformitarian work is to be used, how much and what kind of modification is first needed? Do we use data only, or data and interpretation? If interpretation, how much? How can the two be distinguished? How do we deal with data selection forced by presuppositions or interpretation bias? What serves as an integrating framework for natural history models? Until sound answers to these questions are consistently applied, we are convinced that creationist models using uniformitarian interpretation will enjoy limited success. Why? One reason is that these models of earth history are developed within the context of the Naturalist worldview and are thus at odds with Christianity on many levels. We believe there are significant differences between a radical approach of evaluating and reinterpreting data collected, analyzed, and published over many years by the uniformitarian establishment and introducing a “Flood explanation” on top of an essentially uniformitarian interpretation.

Natural history is first and foremost *history*. It must be undergirded and framed by theological and philosophical justifications. Science, in a forensic sense, plays a secondary role, and must function in a mixed question approach (Reed, 2001). This is quite distinct from Naturalism, where science and natural history are considered synonymous (Cleland, 2001). But creationists should understand that confidence in historical reconstructions is quite different from that derived from experimental science. Apart from the consideration of specific historical events de-

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Table I. Creationist Models Addressing Global Tectonism and Stratigraphy

Originator and Date	Model or Development
Whitcomb and Morris, 1961	Posited Genesis Flood as cause of majority of rock record
Brown, 1980	Hydroplate Theory
Woodmorappe, 1983	TAB—Tectonically-Associated Biological Provinces
Austin, 1994; Austin and Wise, 1994	Integrated compressed Column
Walker, 1994A	Bible-based Stratigraphic Timescale
Austin et al., 1994; Baumgardner, 1986, 1990, 1994a, 1994b	Catastrophic Plate Tectonics
Froede, 1995, 1998A	Bible-based Stratigraphic Timescale
Reed et al., 1996	Proposed energy instead of time as stratigraphic key
Robinson, 1996	Advocated compressed column
Holt, 1996	Advocated compressed column
Gentet, 2000a	Creation, Curse, Catastrophe Model
Oard, 2001a, 2001b	Vertical Tectonics

scribed in Genesis, creationist natural history, and the nature and role of stratigraphy will differ in significant fashion from that practiced by Naturalism by virtue of profound differences in presuppositions and methods.

Thus, creationist stratigraphic models can fail by not discerning the “interbedding” of uniformitarian interpretation with data. The difficulty of separating the “data” from the “story” is enhanced by their merger in current technical literature—a situation probably related to the undue confidence Naturalists place in their historical reconstructions. Where creationists are not diligent to distinguish between data and interpretation, we leave ourselves open to being duped. When we seek to use uniformitarian data, we must beware of embedded assumptions and hidden layers of interpretation in the final presentation. It is easier to discern between data and interpretation if we are aware of the role of uniformitarianism as the historiographic framework of the Naturalist worldview.

In stratigraphy, a major issue is the use of the uniformitarian geologic column in creationist models. We believe that creationists incorporating the column will inevitably fail; but other creationists disagree. We propose an objective solution. *If it can be shown that the column rests, even in its supposedly empirical aspects, on presuppositions of evolution, uniformitarianism, and deep time, all inimical to creationism, then its role in creationist models should be discontinued.* If empirical aspects of the column are independent of those fundamental theological errors, then its use can provide a significant shortcut to fruitful work by creationists. We will examine the arguments, pro and con, for the role of the column in creationist stratigraphy; examine issues raised by its varied application in two creationist models, and discuss reasonable alternatives.

The Rock Record versus the Geologic Column

Before a discussion of the use of the column can be profitable, a distinction must be drawn between the “rock record” and the “geologic column.” Many treat them as synonyms, when in fact they are not. “Rock record” is a descriptive term for those portions of the earth’s crust open to human perception. Even the term carries historiographic baggage. Embedded within is the assumption that historical truth can be derived from examination of the rocks. Creationists and Naturalists agree that this is possible, but the methods and conclusions differ, because Naturalists 1) reject revelation, 2) do not manage uncertainty well, and 3) do little to distinguish

between the perceptual rock record and the conceptual geologic column. Most geologists are so accustomed to overlaying the construct on local data, that little thought is given to its testing. It is simply applied.

However, the geologic column is more than just a descriptive compilation; it is an idealized representation of the crust as it would be absent erosion and nondeposition. It includes a historical framework not found in the physical description of the rocks themselves; a definite, linear historical sequence, absolute ages, tectonic history, paleoenvironmental interpretation, and even an account of geomagnetic fluctuations through time. The distinction between the rock record and the column is crucial for creationists parsing the uniformitarian literature. Any statement that contains historical propositions is by definition interpretive to some degree (Reed, 2001).

The Role of Stratigraphy

The definition of stratigraphy reads as follows:

The science of rock strata. It is concerned not only with the original succession and age relations of rock strata but also with their form, distribution, lithologic composition [*lithostratigraphy*], fossil content [*biostratigraphy*], geophysical and geochemical properties – indeed, with all characters and attributes of rock as strata; and their interpretation in terms of environment or mode of origin, and geologic history (Bates and Jackson, 1987, p. 649). [Brackets added]

The definition of lithostratigraphy reads as follows:

The element of stratigraphy that deals with the lithology of strata and with their organization into

units based on lithologic character (Bates and Jackson, 1987, p. 385).

However, lithostratigraphy depends on the assumption of superposition (i.e., one layer stacked over another) and continuity to define age relations between strata. Recent work has shown that even those assumptions can be questioned empirically (Berthault, 2000). Lithostratigraphy cannot provide accurate or widespread age relations between rocks. The definition of biostratigraphy reads as follows:

Stratigraphy based on the paleontologic aspects of rocks, or stratigraphy with paleontologic methods; specif. the separation and differentiation of rock units on the basis of the description and study of the fossils they contain (Bates and Jackson, 1987, p. 71).

Biostratigraphy simply follows the evolutionary model, which assumes that fossils were not transported great distances and that the sediment which encloses them is of the same age as the fossil. Neither of these assumptions is likely in any Flood model. Conventional biostratigraphy would argue that a comparison of similar clam fossils in the southeastern United States with those found in Great Britain would require both similar paleoenvironment and age. But outside of evolution, there is no meaningful way, in the context of the Flood, for fossil comparisons to provide global correlative ages.

The incompatibility of conventional stratigraphy with any Flood scenario and the necessary distinction between the rock record and the geologic column illustrate the extent to which modern stratigraphy requires reevaluation. Klevberg (1999; 2000a) provided a good introduction to both philosophical and scientific challenges facing creationist stratigraphy. Since stratigraphy is at the heart of modern natural history, it will be difficult to replace stratigraphy without rebuilding most of natural history. If creationist answers to these basic issues force interpretation sharply away from present uniformitarian dogma on a broad front, then we must accept that and move forward into the uncharted territory of a comprehensive and self-consistent creationist stratigraphy. But not everyone agrees with this assessment.

Adopt Portions of the Column: Pro

Following a meeting held at Bolney House, Sussex, England in August 1996, several young-earth geoscientists issued a statement outlining their position regarding the use of the global uniformitarian stratigraphic column in natural history (Snelling, Ernst, Scheven, Austin, Wise, Garner, Garton, and Tyler, 1996). The group stated that while the entire construct of the column was unacceptable, portions could be extracted (specifically the biostratigraphic and lithostratigraphic components) to provide a ready-

made framework for natural history models in creationism. They asserted that the column was an empirical compendium of outcrops and subsurface data and that its time periods could be transposed in the same sequence to form a creationist framework. Obviously the absolute time scale would be dramatically compressed.

Publication of this position postdates its application. It reflects the position of work conducted in the Grand Canyon (Austin, 1994) and the Eastern Mojave Desert (Austin and Wise, 1994). The biostratigraphic and lithostratigraphic portions of the uniformitarian stratigraphic column were used to define the Flood/pre-Flood boundary. Other creationists have also followed the general framework of the uniformitarian column in an effort to adopt their concepts of the Flood to the global stratigraphic construct (e.g., Holt, 1996; Morris, 1996).

Several individuals from the Bolney House group presented their stratigraphic concepts using the bio- and lithostratigraphic portions of the column in a special symposium of the *Creation Ex Nihilo Technical Journal* (Garner, 1996a, 1996b; Garton, 1996; Robinson, 1996; Snelling, 1997; Tyler, 1996). Their adoption of the column coincided with a desire to drive "golden spikes" at the pre- and post-Flood boundaries. However, to preserve the integrity of the "stripped down" column, they had to invoke multiple global catastrophes apart from the Flood to explain the various "Periods" and "Eras" that did not fit the traditional understanding of the Flood having caused most of the rock record.

Use of the column as a creationist stratigraphic framework was advocated by this group because: 1) it supposedly represents an empirically-derived ideal relative age scale of crustal lithology, 2) it allows the global correlation of strata, and 3) it provides a tremendous shortcut to deriving creationist alternatives based on exhaustive local studies and subsequent integration. Given the size of the creationist geological community, taking leaps forward instead of small steps appears as an attractive alternative to the work involved otherwise. But is it a leap forward or back?

Adopt Portions of the Column: Con

Following the special Flood/post-Flood symposium and the Bolney House statement, several articles were presented by individuals who opposed using the column to define Flood geology (Oard, 1996; Woodmorappe, 1996, 1999a; Froede, 1997). Woodmorappe's contribution must be seen in the context of his earlier work (Woodmorappe, 1981) arguing against the existence of the column at all (an argument that remains compelling in our opinion).

The spate of publications discussing the placement of pre-Flood and post-Flood stratigraphic boundaries in the new, compressed "creationist" column sparked a negative

test of its effectiveness in defining a Flood/post-Flood boundary in the Gulf of Mexico Basin (Froede and Reed, 1999). After testing several proposed boundaries in the column, we determined that none appeared appropriate, and further concluded the failure to identify any feasible boundary (coinciding isochronally with the column) suggested that the adoption of the column was itself the problem. Tyler and Garner (2000) protested that conclusion, but we reiterated that the column did not aid Flood interpretation of the Gulf of Mexico geology (Reed and Froede, 2000). We leave it to the interested reader to draw his own conclusions from our work and subsequent comment.

That exchange is relevant because it raised several key arguments against the use of the column in creationist stratigraphy. These can be summarized as: 1) evolution is a necessary condition of the column, 2) uniformitarianism is a foundation of the column, and 3) absolute time compression is not as simple as it first appears, and does not resolve the differences between the old-earth and young-earth frameworks.

The relationship between evolution and the column is stated unambiguously by the North American Stratigraphic Code. The code states (1983, p. 849):

Biologic remains contained in, or forming, strata are uniquely important in stratigraphic practice. First, they provide the means of defining and recognizing material units based on fossil content (biostratigraphic units). Second, the irreversibility of organic evolution makes it possible to partition enclosing strata temporally. Third, biologic remains provide important data for the reconstruction of ancient environments of deposition.

Stephen Jay Gould (1997, pp. 157–158) expanded on the problem addressed by the writers of the stratigraphic code:

A chronometer of history has one, and only one, rigid requirement—something must be found that changes in a recognizable and irreversible way through time, so that each historical moment bears a distinctive signature. Geologists have long appreciated this principle in the abstract, but had not found a workable criterion... Moreover, rocks are simple physical objects formed by chemical laws and, as such, do not bear distinctive temporal signatures. Quartz is quartz—conjoined tetrahedra with a silicon ion in the center, surrounded by four oxygen ions, each shared with a neighboring tetrahedron. So it was in the beginning and is now, and ever shall be so long as nature's laws prevail. Cambrian quartz is not different from Pleistocene quartz.

But life is complex enough to change through a series of unrepeated states. *Today we attribute this irreversible sequence to the workings of evolution...* [emphasis added]

The essence of natural history, captured by the column, is the working of evolution that provides a strand to follow events inferred from the rock record. Although some argue that Darwin's publication of his theory of evolution post-dates the geologic column, it is clear that evolution has a much longer history (Morris, 2000), especially in the Enlightenment context that produced its 19th Century proponents. For example, Diderot (1713–1784), the influential French thinker, accepted "Transformism," and Lamarck (1744–1829) heavily influenced Lyell (Barzun, 2000). Gould (1997) also admits that 19th century geology, dominated by the views of Hutton and Lyell, included biologic views of progress, common when Lyell published his *Principles* between 1830 and 1833. So evolution is part and parcel of the column.

Evolution directs the erecting of the walls, but the foundation is uniformitarianism. The assumption that the rock record represents a global, time-correlative, representative snapshot of natural history demands it. Otherwise, global correlation of "same age" rocks would be impossible, since different depositional processes are expected to exist at the same time at different places around the globe. Uniformitarianism's necessity is clearly seen in the assumption that ancient environments of deposition can be reconstructed using modern analogs. Since we understand uniformitarianism to be the historiographic presupposition of Naturalism (Reed, 2001), it is only proper to consider it in opposition to a Biblical understanding of history. The later part of the 20th Century saw the victory of a new, "dilute" version of uniformitarianism, quite different from Lyell's original. Although the new version allows more flexibility in interpreting depositional environments and processes, it only does so at a hidden price. Consider that uniformitarians universally acknowledge the absence of the vast majority of the rock record. With so much of the empirical evidence gone, logic demands an inversely strict uniformitarianism to further restrict uncertainty and provide some confidence in historical interpretation.

The claim that the column can be "fixed" by shrinking the absolute time scale is quite attractive, and that attraction may help mask the complexities of doing so. It is thought that the only modification needed is a "simple" compression of the absolute time scale from 4,500,000,000 years to less than 10,000 years. But is this change quite so simple? If I take a new car and run it through a hydraulic press I can compress it. It may then be a car and it may be compressed, but will it work? Compressing the timescale of the geologic column is not as simple as it might appear because the time-rock-environment interpretative framework is designed for *uniformitarian* depositional conditions. Thus, the issue is not time *per se*, but the mode of deposition (uniformitarianism versus catastrophism) and preservation (evolution versus extinction).

Because of these different modes (i.e., catastrophism vs. uniformitarianism), the proposed time compression cannot be uniform. There can be no one-to-one correlation of X million years on the column to X thousand years on its creationist analog. There is no correspondence between the vast majority of the rock record being deposited by processes operating today over incredibly vast periods of time, and a much shorter “uniform” history punctuated by a one-year catastrophe. In the former, there is uniformity in the processes producing the rock record; in the latter there is not.

So, as we argued earlier (Reed et al., 1996), time is not even an *appropriate* integrating factor in Flood stratigraphy at all. Consider; the mass of the rock record was deposited rapidly and probably at varying rates in different locations. How then can strata be considered globally correlative in a time-stratigraphic sense? Diachronous sedimentation, not a problem when the time scale is in millions of years, is a tremendous challenge for Flood geologists intent on a time-stratigraphic interpretation. Instead of trying to parse hours and days of depositional processes in a Flood setting, we advocate the abandonment of time as the heart of stratigraphy. We believe that depositional processes and their relative energy levels are a better key to interpretation. However, we recognize that other factors may be equally valid or even superior, and that question is worthy of further debate among creationists.

In spite of these difficulties, the willingness of young-earth creationists to utilize the column in their models remains undiminished. If the arguments in favor of the column are demonstrated to be superior, then those models can proceed to be tested in other ways. However, if not, then the models will have been proven to have failed at their points of contact with the column even prior to other tests.

Models Incorporating the Column

Two models, the recently-introduced Creation/Curse/Catastrophe (CCC) model and the Catastrophic Plate Tectonics (CPT) model, demonstrate pitfalls in creationists’ use of the column. CPT has been extant since at least 1994, but has been the focus of a recent dialogue in the *Creation Ex Nihilo Technical Journal*. In contrast to the efforts of the Bolney House Group, neither model appears to have carefully considered their adoption of the column. The CCC model eviscerates its essential time-stratigraphic function, while keeping the shell, presumably for its reputation as an interpretive framework. The CPT model relies on the column to justify lines of evidence borrowed from its uniformitarian parent without carefully identifying or sorting those aspects of the column and evidences

for plate tectonics that are derived from and upheld by uniformitarian interpretation. Neither model addresses the evolutionary and uniformitarian links in the column, nor do they present arguments demonstrating how the column can be used in a creationist framework.

The Creation/Curse/Catastrophe Model

The CCC model (Gentet, 2000a; 2000b) proposes that most of the geologic record is a result of extra-Flood catastrophes associated with the divine curse of Genesis 3. The model appears to accept the column as a framework of correlation and description of the global rock record, but closer evaluation reveals that the essential time-stratigraphic structure of the column has been overturned in favor of a paleoenvironmental interpretation. Instead of the geologic periods representing time-stratigraphic divisions, the Phanerozoic eras are said to represent preserved distinct ecosystems, resulting from the work of the 3rd, 5th, and 6th days of creation.

The introduction of this model has raised many questions (Akridge, 2000a; Froede, 2000a; Klevberg, 2000b; Reed, 2000a; Woodmorappe, 2000). An issue common to all was the curiosity over the sudden disappearance of the Flood from “Flood geology.” Gentet’s reply (2000b) and subsequent letters by supporters (Aufdemberge, 2001; Lain, 2001) failed to address this revolutionary change. Critics likened the CCC model to the “tranquil Flood” theory, not because it explicitly advocated a tranquil Flood, but because the contention that the Flood would not have left significant geologic evidence above and beyond an erosion surface seemed identical in terms of field investigation. The continuity of the “creation ecosystems” before and after the Flood also needs to be reconciled with textural evidence regarding the alteration of the earth’s surface by the destructive power of the Flood (Genesis 6:13, II Peter 3:6).

Although the CCC model is correct in its insistence on an explicit Biblical foundation, we believe that it employs improper exegesis and goes well beyond the bounds of the Biblical text. We find no textural reason for assuming that the curse of Genesis 3, with specific penalties described in that chapter, provides a basis for global natural catastrophes *prior* to the Flood. We invite Biblical scholars and theologians to carefully examine these aspects and publish their findings in the *Quarterly*.

However, our immediate interest with CCC model is its unique utilization of the column. It is interesting that the CCC model abandons the fundamental time-stratigraphic nature of the column without seriously questioning its relationship to evolution, uniformitarianism, and deep time. It simply seems to automatically assume that the column accurately captures a rock record that accurately reflects the three paleoenvironments (Paleozoic,

Mesozoic, and Cenozoic) buried *before* the global Flood, but neglects to discuss why there is any need to retain any of the column after jettisoning its basic structure. Uniformitarian geoscientists clearly understand the limited nature of the column in accurately defining past paleoenvironments (Ager, 1993a; 1993b; Braunstein, 1974; Hallam, 1981; Reading, 1996; Selley, 1985; Walker and James, 1992). It is puzzling that the advocates of the CCC model do not see this conflict. We hope that further explanation of the handling of the column in the CCC model will be forthcoming.

The Catastrophic Plate Tectonic Model

Catastrophic Plate Tectonics (Austin et al., 1994) grew out of discussions about the role of plate tectonic theory in creation geology. The central concept of runaway subduction and subsequent accelerated plate motion arose from computer modeling studies (Baumgardner, 1986, 1990, 1994a, 1994b). It was deemed that a simple time compression (similar to the modification of the column) was sufficient to allow CPT to piggyback onto the evidence for its uniformitarian parent (Snelling, 1995). Questions about this arrangement were raised (Reed et al., 1996; Reed, 2000c), but have been ignored until a dialog sponsored by the *Creation Ex Nihilo Technical Journal* (TJ Editors, 2002; Oard, 2002a; 2002b; 2002c; Baumgardner, 2002a; 2002b; 2002c). Many issues related to both catastrophic and uniformitarian plate tectonics were discussed, but the issue that attracts our attention here is the manner in which CPT utilizes the column. It illustrates concerns mentioned earlier about distinguishing between data and interpretation.

CPT relies on the column to validate *interpretations* that are in turn presented as data. For example, Baumgardner (2002) states that the regularly decreasing age of the seafloor from the midocean ridges to the continents is a key piece of evidence for CPT. However, the conclusion of this age distribution rests in part on the application of the column and its dating scheme to seafloor sediments. Baumgardner (2002) applies relative dating comparisons based on microfossil assemblages. But these assemblages are assigned their relative ages based on their evolutionary succession!

Plate tectonic theory illustrates why the “simple” compression of the absolute time scale of the column does not resolve problems in migrating from an old-earth uniformitarian framework to a young-earth catastrophic alternative. One problem is the inability to resolve even the *relative* timing of uniformitarian plate tectonic events with the sequence demanded by the Genesis Flood. For example, uniformitarian plate tectonics is an ongoing process with *repeated* continental joining and separation (Froede, 2000b; Hoffman, 1988; Rogers, 1996; Windley, 1993).

CPT appears to include only one catastrophic episode of plate motion and subduction, followed by quiescence (Baumgardner, 2002a; 2002b; 2002c).

Alternate Approaches to Creationist Stratigraphy

While the desire to incorporate the column into creationist stratigraphy is present, the necessity is not. Creationists have proposed other stratigraphic approaches. An early, exhaustive evaluation of the distribution of fossils by Woodmorappe (1983) led to the development of his “TAB” model—TAB standing for “tectonically-associated biological provinces.” In 1994, Walker presented a stratigraphic model at the Third International Creation Conference. His model proposed a framework for defining strata on a timeline extracted from the Bible. He applied his model at locations in Australia (1996a; 1996b) and New Zealand (2001). Froede (1995) published a similar timescale, based on events described in Genesis and Job. This timescale was used for comparison in an evaluation of the column in the Gulf of Mexico basin (1999). Reed, Froede, and Bennett (1996) advocated geologic energy as the integrating factor in creationist stratigraphy.

Theoretical alternatives have been complemented by field studies that have ignored the column. Akridge (1998; 2000b) and Akridge and Froede (2000) described and interpreted strata found in the area around Lookout Mountain (NE Alabama-NW Georgia border) with reference to the Genesis Flood without relying on the column. Interpretation outside the column was also applied to gravel deposits found in Montana and sections of Canada (Klevberg, 1998; Klevberg and Oard, 1998; Oard and Klevberg, 1998). Reed (2000b) described and interpreted strata associated with the North American Midcontinent Rift System with respect to depositional energy levels rather than the column. Reed (2002) applied the same method at the Palo Duro Basin, Texas.

Conclusion

The uniformitarian stratigraphic column encapsulates the modern geologic interpretation of the earth’s crust. Unfortunately, that interpretation includes the rejection of the Christian worldview in favor of Naturalism—a worldview that replaces a reality founded on God’s Creation and governance of the universe with an impersonal, uncaring mechanism. It also substitutes Christianity’s confidence in a truth granted by God’s revelation with an unstable positivism that succeeds only when it pilfers Christian doctrine. Finally, it sterilizes a meaningful and rich history, substituting a timeframe designed to dismiss the imma-

ment presence of the Creator, and fills its endless ages with pseudo-scientific “just-so” stories. When we consider the vast chasm that lies between Naturalism and Christianity, we do not see how creationists can escape the necessity of razing that worldview until no two stones are left standing, and then rebuilding natural history and its derivative stratigraphy from the ground up.

Creationist proponents of adopting the stratigraphic column believe that they are simply incorporating an empirical construct without any stain of Naturalism. We are confident that they decry any influence of Naturalism in creationism and gladly eschew its tenets. However, we fear that they are missing connections between the column and that worldview and we challenge them to examine more closely the assumptions, methods, and conclusions that surround the column. We hope that they come to see the difference between the perceptual and conceptual. If it quacks like a duck...

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CRSQ: Creation Research Society Quarterly

CENTJ: Creation Ex Nihilo Technical Journal

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