CREATION, EVOLUTION, AND CATASTROPHISM

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Twenty or so years ago, a discerning Creationist—or another person—might have predicted that interest in former catastrophes would increase greatly. And that is what has happened. But the matter has come to be viewed in several different ways. Creationists know that there was one great catastrophe: the Flood. There are secular catastrophists, of whom Velikovsky is surely the best known. And many uniformitarians are admitting that the uniformity may have been punctuated by an occasional catastrophe.

In this article the implications of, and relation between, these three points of view are investigated.

Explicit in the concept of Creation is some degree of fixity of biological organisms; described in the Book of Genesis as "kinds". It is generally assumed that considerable variation is possible within a kind, but always within some fixed limit. It is further often assumed that the limit is defined by fertility. This is indeed the criterion for "natural species". On the basis of this, it is accepted (predicted) that distinct kinds are mutually infertile; they can not cross.

In contrast, contemporary "secular" catastrophists contend that gaps between species were not created but can arise under the proper "catastrophic" conditions; i.e., one kind can produce a different kind.

Many creationists, while rejecting the underlying philosophy of secular catastrophism, nevertheless seem to assume that Creation and Catastrophism are inseparable concepts. The mounting evidence that catastrophism has played a major role in earth's history is sometimes viewed as the fulfillment of some implicit prediction based on Creation. The secular catastrophists also see a link between creation and catastrophism; although the secular catastrophists' concept of creation is qualitatively different from that accepted by creationists.

For the sake of discussion, we can employ "creation" to include "introduction of new forms subsequently to the initial Creation" (*not* Genesis kinds, but bearing in mind that "kind" is not defined by Scripture). This allows an interesting examination of the relationship between creation and catastrophism.

Biological Change—Theories

Uniformitarian theories in this regard are sterile. (Except, maybe, as regards minor variations.) However, Immanuel Velikovsky has injected new thought by his rejection of the Darwinian concept with his contention that catastrophism is the mechanism of evolution.

"... if the genes of the germ plasma should be the target of a collision with a cosmic ray or secondary radiation, a mutation in the progeny might ensue; and should many such hits occur, the origin of a new species, most probably incapable of individual or genetic life, but in some cases capable, could be expected. In order for a simultaneous mutation of many characteristics to occur, with a new species as a resultant, a radiation shower of terrestrial or extraterrestrial origin must take place. Therefore we are led to the belief that evolution is a process initiated in catastrophes. Numerous catastrophes or bursts of effective radiation must have taken place in the geological past in order to change so radically the living forms on earth, as the record of fossils embedded in lava and sediment bears witness."¹

However, the evidence he offers attests to only a limited change of biological form, and it is far from conclusive.

"If, as the experiments with the vinegar fly demonstrated, a mutation of some gene can produce a wingless fly, many mutations simultaneously or in quick succession would be quite able to transform an animal or plant into a new species. In the bomb craters of London new plants, not previously known on the British Isles, and possibly not known anywhere, were seen to sprout. 'Rare plants, unknown to modern British botany, were discovered in the bomb craters and ruins of London in 1943.' It appears that the thermal action of bomb explosions was the cause of multiple metamorphoses in the genes of seeds and pollens."²

Extrapolating from this, another proposal was put forward by Jueneman.

"Radiation incurs mutations by the absorption of various, but selective wavelengths, which may span the electromagnetic spectrum from direct current (zero wavelength) through the ultra-high radio frequencies to X-rays or gamma rays and beyond. By a statistical relationship a gaussian (bell-shaped) distribution of mutations would be engendered, but only those in the narrow main sequence would have a chance for survival, while at either extreme the mutants which had been subjected to unregenerative or fatal damage could not survive or have progeny."³

Biological Change—Ancient Literary Evidence

Myths and legends from all over the world contain numerous allusions to changing characteristics of plants and animals. These are frequently associated with stories of great catastrophes.

One record comes from the Latin Poet Ovid (B.C. 43-c.17 A.D.): "And though fire and water are naturally at enmity, still heat and moisture produce all things, and this inharmonious harmony is fitted to the growth of life. When, therefore, the earth, covered with mud from the recent flood, became heated up by the hot and genial rays of the sun, she brought forth innumerable forms of life; in part she restored the ancient shapes, and in part she created creatures new and strange."⁴

Minor changes to specific animals are also recounted in ancient tales from throughout the world; these too associated with some extraordinary catastrophe.

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Looking again to Ovid, man himself is mentioned in this record. In a mythological interpretation of a catastrophic natural phenomenon, Phaethon has persuaded his father, the sun, to let him drive the fiery orb across the sky. He thereupon loses control and swoops too near the earth.

"Then indeed does Phaethon see the earth aflame on every hand; he cannot endure the mighty heat, and the air he breathes is like the hot breath of a deep furnace. The chariot he feels growing white-hot beneath his feet. He can no longer bear the ashes and whirling sparks, and is completely shrouded in the dense hot smoke. In this pitchy darkness he cannot tell where he is or whither he is going, and is swept along at the will of his flying steeds.

"It was then, as men think, that the peoples of Aethiopia became black skinned, since the blood was drawn to the surface of their bodies by the heat. Then also Libya became a desert, for the heat dried up her moisture."⁵

The explanation offered here for the alleged change is certainly unacceptable, but the possibility exists of the change coming by other means—a genetic change due to irradiation.

Human biological change (deterioration) is reflected in the Book of Genesis in the shorter lifespans following the Flood. Hesiod⁶ and Ovid⁷ describe this same phenomenon and ascribe it to Zeus' (Jupiter's) several (serial) creations of man; each phase of a lower order and shorter lifespan (and a nastier disposition) than the one preceding it.

Two Interpretations

Given that there is some kernel of truth in the nonbiblical literary accounts, secular catastrophists would argue for a "catastrophic creation" of completely new forms. Creationists naturally see this only as evidence for the possible variability within kinds; whether the result of some "catastrophic process" or anything else.

Few creationists would deny that catastrophism was responsible for the destruction of many past varieties of life. However, its introduction (creation) of a *new* kind would be incompatible with the concept of Creation. The proper definition of "kind" is therefore crucial. Refutation of a theory/prediction based on the wrong definition could be asserted as a refutation of the Scripture that led to it.

A Revised Definition

Perhaps the distinction between Genesis kinds is conceptually more "vertical" than "horizontal". If kinds were interpreted to mean different "levels of complexity", more variation could be envisioned under Creation than can presently be. This would mean that all members of one kind would not necessarily be able to interbrecd—even parents and offspring. However, they would be destined from the beginning to remain on their one level of complexity ("after its kind"); perhaps correlated with the *number* of characteristics programmed into the genetic code. Granted, this would make determination of a kind virtually impossible. However, if the presently defined limits should fail to hold, this or some similar definition would be unavoidable.

Creation and Catastrophism: The Relationship

Secular catastrophists envision a creation process; a process that cannot proceed without catastrophism. However, one must ask how catastrophism can precede Creation. The proverbial "which came first . . . ?". This philosophy is helpless at this point, as evidenced in a statement by Velikovsky himself.

"... why do we assume that at creation the heavy elements like uranium predominated and not the simplest ones, hydrogen and helium? It is philosophically simpler to assume that all started—*if there ever was a start*—with the most elementary elements. A catastrophic event or many such events were necessary to build uranium from hydrogen." (emphasis added)

An earlier statement is even more revealing.

"The objection to the theory of natural selection, that the developed plan in a new species must appear suddenly or the race would expire—as in the case of the kangaroo pockets—is answerable within the framework of catastrophic evolution; however, the purposefulness of animal structures will remain a problem deserving of as much wonder as, for instance, the purposeful behavior of leucocytes in the blood that rush to combat a noxious intruder."⁹

Catastrophism among Uniformitarians

It might be noted, incidentally, that even uniformitarians are getting into the catastrophe business. One occasionally reads in their current literature about near collisions with giant comets and other extraordinary events. Of course, this was necessarily millions of years ago, or it might happen millions of years in the future never in the present. Their contemporary philosophy might be restated as "Nothing can happen *now*."

Creationism and Catastrophism

The question remains, "Does catastrophism necessarily follow from Creation?" This might be answered with another question, "Why should it?" Catastrophism certainly contributed nothing to Creation; and Creation was complete and required no subsequent catastrophism (although catastrophism has probably made the world much more interesting variety-wise). Why, then, the close association of Creation and catastrophism in the minds of Creationists?

There are probably at least two reasons for this association. Creation and catastrophism are both central to the Book of Genesis. Prior to the time of Abraham, nearly all "biblical coverage" is subordinated to these two themes. This possibly creates the impression of some "natural association". Secondly, they have possibly been perceived as closely associated as a result of their both being systematically excluded from uniformitarian philosophy. However, there is no logical, physical, or Scriptural necessity for catastrophism to follow Creation. The Bible merely states that it did. Any prior expectation (prediction), explicit or implicit, of finding more and more evidence that catastrophism played a significant role in earth's history probably resulted (whether consciously or unconsciously) only from the acceptance of biblical accounts describing great catastrophes. If the Bible had not provided such descriptions, Creation would not have been seen as a basis for asserting catastrophism's having occurred or the future finding of evidence that it did. Some see an inference of catastrophism in a perceived demand by Creation for a young earth in conjunction with the earth's appearance of having a great age. However, it is Scripture that possibly demands a young earth and not the act of Creation.

Conclusion

In summary, Creation and catastrophism are independent; one does not imply the other. Even so, taken together, Scripture, other ancient literary evidence, and physical evidence establish a sequential association of events: Creation \rightarrow catastrophism \rightarrow variation, (limited, i.e.); recurrence of the latter two not being precluded.

In contrast, the secular catastrophist sees creation and catastrophism as two sides of the same coin: one cannot proceed without the other, seemingly making a beginning impossible—as incomprehensible as God, so to speak.

The uniformitarian sees catastrophism as an undesirable crutch, recourse to which is made to explain the otherwise inexplicable. This reflects both inconsistency and a lack of objectivity; these being only two of the many weaknesses with which this dogma is fraught.

References

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³Jueneman, F. B., 1976. The origami of species, *Kronos* 1(4):110-113. ⁴Ovid (B.C. 43-c.17 A.D.). Metamorphoses. I:416-437, Translation by F. J. Miller.

⁵Ibid.

^eHesiod (Eighth Century B.C.). Works and days. 109-180.

⁷Ovid, op. cit., I:89-169.

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CREATIONIST PREDICTIONS INVOLVING C-14 DATING

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Radiocarbon dating was introduced in 1946 by W. F. Libby, who was recognized with a Nobel Chemistry Prize fourteen years later (1960). From the beginning, many variables which should be considered in using the technique were recognized, several by Libby and his co-workers:^{1, 2}

1. Cosmic ray flux through the earth's atmosphere

2. C-14 concentration in the ocean and atmosphere

3. C-14 decay half-life

4. Migration of carbon atoms into or out of earth materials

5. Local variation in carbon isotope concentrations, called fractionation

These variables will be discussed briefly from the viewpoint of creationist contributions to the subject.

Cosmic Ray Flux

Creationists have promoted two important mechanisms for the variability of the initial item on the above list. The first mechanism involves the existence of a pre-flood water vapor canopy surrounding the early earth. The origin of this canopy model has been traced by Bernard Ramm, unfortunately in a sarcastic setting.³ Ramm gives credit for early canopy literature to H. W. Kellogg (1936) and C. T. Schwarze (1947). This proposed canopy reduced the penetration of cosmic rays through the early earth's atmosphere by absorption. The reduced flux of cosmic rays in turn lessened the production of C-14 during pre-flood history. The result is an apparent radiocarbon age of pre-flood samples which is far greater than actual. An example is the flood-deposited coal resource which is largely free of C-14 as expected from the canopy model. The thick carbon dioxide cloud cover of Venus provides a present day example of a planetary canopy. Nevertheless, the existence of an initial earth canopy remains to be accepted by the scientific world.

The second mechanism for the quenching of incident cosmic rays, studied by Thomas Barnes, is an exponentially increasing terrestrial magnetic field as one moves *backward* through time.⁴, ⁵ An increased deflection of cosmic rays away from the earth results from an increasing magnetic field in accordance with the Lorentz force. Current discussion, however, is usually limited to multiple short term events during magnetic field reversals, the last one presumed to have occurred 20 millennia ago.⁶

The mechanism of a single intense magnetic field having blotted out C-14 production in history is simply not accepted by secular science. In fact, the official summary of increased, (i.e., increased in former times over the present figure) magnetic field values recorded since 1839 is no longer available, a discouragement to those who wish to investigate the magnetic field decay phenomenon.⁷

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