FOSSILS AND UNCERTAINTY

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Three gross models are discussed briefly by which one might account for the generation of the fossil record. The models are concerned with the generation of the accumulated genetic complexity. They have features which exclude each other. It is contended that present observers have not and probably cannot find a way to make a choice between them based upon the fossil record alone.

This impasse is likened to that in physics known as the Heisenberg uncertainty principle.

The only known escape from this dilemma is a free-will choice between the options. The creationist point of view is one of these options, and has two very important strengths: (1) It is consistent with the historical records such as the Bible. (2) It is consistent with the second law of thermodynamics.

I. Theory Assuming Isolation of Planet Earth

The existence of fossils is offered commonly as evidence to support the present so-called theories of evolution. These theories involve the implicit assumption that all changes in genetic structures occur at or near the earth's surface as the result of various probabilistic processes.

Nuclear and electronic processes of the physical and chemical world are assigned the causal roles. In the past, from the long time fossil accumulation point of view, whatever genetic changes occurred have been implicitly assumed to result from random events.

The overall picture evolutionists have in mind usually appears to feature the earth isolated in space except for the exchange of radiation with space. This radiation has strongly stochastic features. In this situation, any significant events involving genetic change would be expected to be matters of chance.

The entire evolutionary process is pictured as the integrated effect of an extremely long and large sequence of chance events. This view can be summarized by using the diagram of Figure 1.

This diagram is used to present the main features assumed for a genetic process leading to a species of high complexity. The genetic complexity changes with time. A main feature is the supposed overall trend with time toward higher complexity. When the process is examined, with "fine grained" sampling in time, it is seen to consist of small discrete steps to either higher or lower complexity.

Darwin claimed that the process he called natural selection forced the curve to rise with time rather than fall. Each species would have been represented by a separate curve. Toward the origin of time, all curves might coalesce because of presumed common ancestry. As time moved toward the future, the proposed evolutionary branching would lead to a distinct curve for each species.

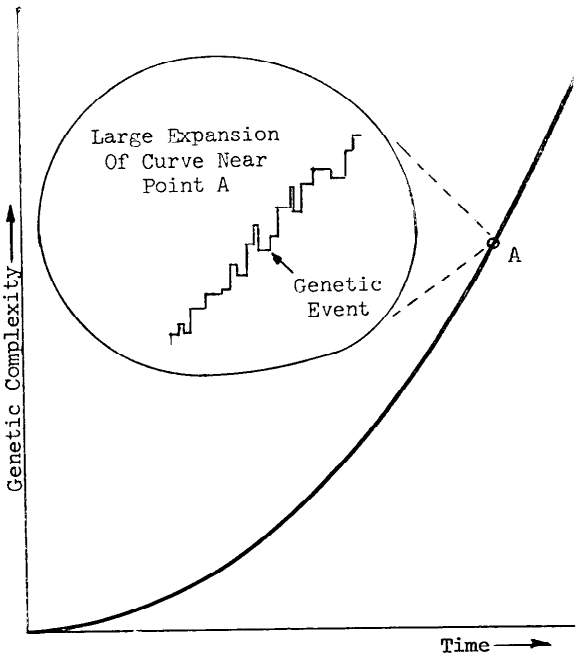

Figure 1. Evolutionary build-up of the genetic complexity of a living species.

No scales for the two axes need be attempted for the purposes of this discussion. Even if this were attempted, the data would be difficult to define and of very low accuracy.

This overall process is assumed to account for the layered fossils observed near the earth's surface. The flora and fauna which are believed to have had small genetic complexity were deposited first. Layers deposited later include flora and fauna believed to have increasing genetic complexity.

In Darwin's time the possibility of space travel was ignored, or assumed to be much less probable than the existence of isolation for planet Earth. In fact, this assumption is dominant today in many "scientific" circles.

However, today, modern man has observed the first "transports" from the earth to the nearby

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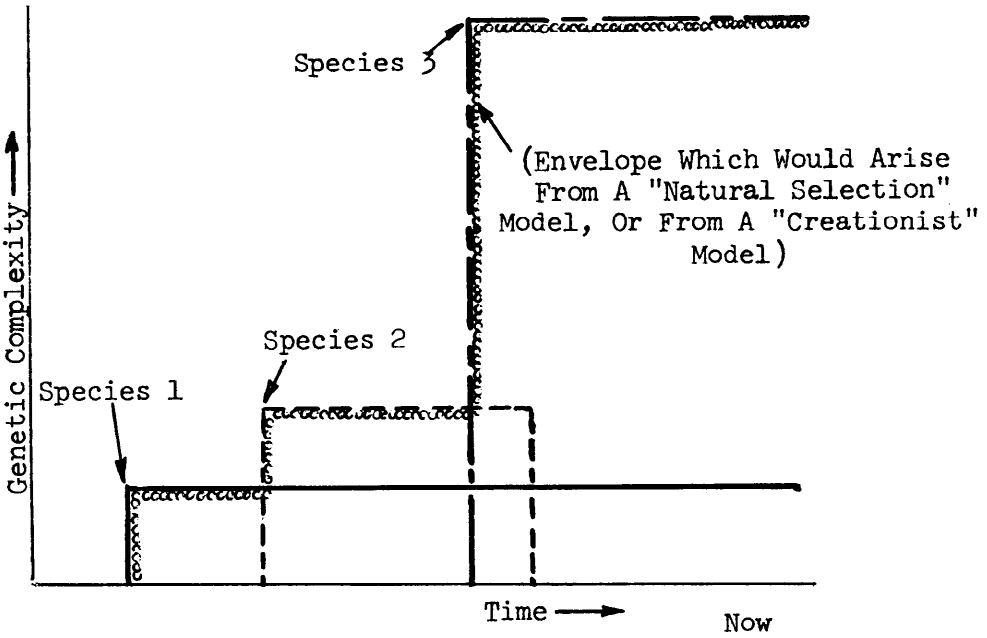

Figure 2. Transport build-up of the genetic complexity.

moon satellite and return. Instrument laden probes have been sent past planets Venus and Mars. Perhaps some material has been transported there. Some of it may be living; that is, it may contain genetic structures. What status should the assumption of planet Earth isolation in terms of living material transport have now? Clearly, the dominance of theories dependent upon the assumption of isolation of the earth, in terms of genetic material transport, need a new examination.

One model of the process by which known fossils have been deposited here on the earth has been described above, including Figure 1.

II. Possibility of Genetic Structure Transport

Consider now another process, represented in Figure 2. Consider an extreme condition, so that certain consequences might be noted. Assume all genetic complexity changes are transported to the earth from some other celestial body and none occur on the earth. Species arrive presumably on the earth and disappear from the earth abruptly. Their existence would appear to consist of either a step function, for a species which is still here, or a rectangular pulse in time for species which existed earlier and are now extinct.

Further, assume the genetic complexity and time of a new arrival can have any value specified by the external source or sources of these genetic structures. To ease the transport burden, assume this genetic material can be transported in egg and sperm or fetal forms with suitable delay of their usual development process.

A simple case is indicated in Figure 2. Species number 1 is the earliest one observed and it exists now. Species 2 appeared later and became extinct. Species 3 appeared most recently and it exists now. This would generate a three layer fossil record. The middle species in the time sequence is now extinct, the other two still exist.

By superimposing many types of insertion events in the right time sequence and genetic complexity sequence, any specified fossil record could be generated. As the granularity of the events becomes more fine grained in time and genetic complexity, it would be possible to structure the process so that the envelope of the superimposed events gives the appearance of slow change in the upward direction as indicated in Figure 1. On the coarse grained Figure 2, this is suggested by the dotted line which always has an upward trend.

There is another less detailed way to describe this type of model. Assume that planet Earth serves as the greenhouse or laboratory which some Superior Source has created and is sustaining. Space isolation permits controlled transport, insertions of new genetic structures, and their reinsertions as desired. Fossils are the debris remaining after the sequence of events in the controlled process.

Once again a familiar dilemma must be faced. Two assumptions, which appear to human beings to be mutually exclusive, can be consistent with the same set of observed facts. In some limited respects, this situation is like the "arrival" of Lobachevski's non-Euclidean geometry on the

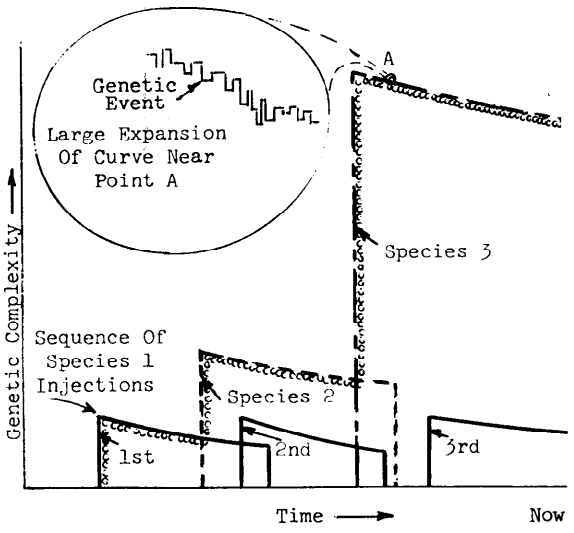

Figure 3. Transport-decay build-up of the genetic complexity.

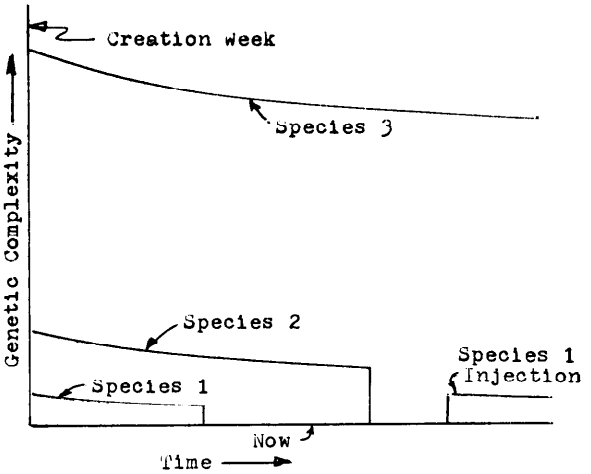

Figure 4. A Creation-week view of the generation of genetic complexity.

mathematical scene, or Heisenberg's uncertainty principle on the physical one. In the case of fossils, both creationists and evolutionists, starting from opposing assumptions, can explain this particular subset of observations. Thus the title of this paper has been stated as "Fossils and Uncertainty."

III. Genetic Structure Transport and Decay

The situation can have another aspect. Assert now that most of the assumptions associated with the transport model for fossils are used. However, assume that all transport of genetic structures is followed by genetic degradation.

The step and pulse types of insertion of genetic material are now replaced by types such as those shown in Figure 3. Species are still inserted abruptly. Assume, also, that subsequent to an insertion of a species, the general trend of the genetic complexity of descendents of that particular species is downward.

This would provide a limited spectrum of genetically distinguishable entities all of which could abruptly become extinct at some point in time. This is indicated as the first injection of a sequence starting from species number 1. If this species sequence is to be sustained for a large fraction of time it could be reinserted as desired.

The insertion of the sequence starting with species number 2 is very much like that indicated in Figure 2. However, it now has an added feature. Again, over the time interval for which it exists, a short downward spectrum of genetic complexity exists which would add some variety to the flora or fauna of this sequence. The sequence starting from the insertion of species number 3 would be similar.

The figure indicates, by an expanded insert, the noisiness in the genetic domain observed as genetic mutations. Now, however, the general trend is shown as downward.

In this case, as in Figure 2, the fossil record observed now would be very simple, embellished over Figure 2 only by some spread in the genetic spectrum, principally into small regions below the species insertion level.

Assuming superposition applies, by greatly expanding the number and distribution in genetic complexity of the insertions, a very complicated fossil record could be generated. This record can show an increasing overall genetic complexity for all species, while any individual species, and subsequent descendents, is undergoing a downward trend.

IV. A Creation Week Point of View

The Bible asserts that all observable physical and genetic complexity occurred comparatively abruptly during Creation Week. This is shown in Figure 4 as the impulse in genetic complexity at the extreme left of the time scale. Again, this figure represents the time history of a small number of species.

Species number 1 has become extinct. The fossil record indicates that extinctions have occurred. The Bible asserts that such events can occur. However, limited attention is given to extinction, or details are ignored. But, according to the overall graphic historical record extinction has occurred.

Also, according to present historical events, extinction has occurred in the recent past, and is expected to occur in the future. Consider the endangered species.

Such relationships are indicated by species number 2 in Figure 4. Species number 3 represents those which will go on to the end of time, at least in the presently observable universe.

The species number 1 injection is included as a reminder that God could reestablish a presently extinct species at His option. He could use the continuing creation mode, perhaps including the transport-to-earth mode. Of course, the present creation is finished according to the Bible.

This brings the discussion to a principal contention of the author. The fossil record is the result of processes and details which must be highly uncertain to observers of fossils. Also, interpretations of the fossil record involve basic assumptions which likewise must be highly uncertain.

There is no scientific way of knowing whether continuing creation of genetic structure and/or its transport to earth has or has not occurred. Certainly, God could do this, and continue to do it, at His option.

If genetic structure transport to earth has occurred, and continues to occur, this would mask strongly the effects of genetic mutations at the earth's surface. And this would block any knowledge as to whether an isolated sequence of mutations, between genetic structure insertions, would have a trend which shows increasing, constant or decreasing genetic complexity.

In Figure 1, the assumption of inherently increasing genetic complexity caused by chance alone *seems* to deny the second law of thermodynamics. In Figure 3, order, negentropy, is always decreasing, except for any changes that might be caused by genetic transport to earth. This is consistent with the second law of thermodynamics.

Reproduction, replication, reprinting are all names for processes which postpone the loss of essential structural information in spite of material decay processes. Ultimately, and slowly, however, structural changes occur. These changes are errors in replication which could inexorably lead to less order, lower negentropy, for a given sequence of species.

In Figure 4, a creationist point of view, order started abruptly during creation week. This view point is built upon a unique contribution from the Bible, which Biblical creationists believe is the unique document inspired and sustained by the Creator. Many events related in the Bible are consistent with the second law of thermodynamics.

V. The Stored Record

Present day observers of scientific processes cannot deduce *initial* conditions from observations of the present state of the physical universe, including any processes. If they are to know what the initial conditions were, they must be revealed by the Initiator and Observer of the first events and subsequent events. This revelation could be made through any physical recording mechanism. The choice is in the hands of the first Initiator and Observer.

Many human beings believe One God is the Creator and Revealer of the creation, and that the Creator's mode of revelation was the Word as recorded in the written form known as the Bible. The Creator makes "the news," arranges for its revelation to human beings and for its recording in written form. The Creator has provided the historical base from which creationists derive their faith.

A written record is the most durable, powerful, pervasive, and efficient recording method available to human beings. God has always known this and has used it, in the format of the Bible, as one main mode which permits knowledge of the Creator.

Scientists and engineers are continually believing and using the concept of abrupt and highly complex initial states in dealing with various aspects of the physical world. To these specialists the concept is necessary. For them, an abrupt creation ought to be and often is both necessary and sufficient, with regard to the beginnings of the known universe.

The concept that order, negentropy, always decreases when a creator or controller does not intervene in a process, is also essential to present day science and engineering. In only a very limited and localized sense, human beings participate in processes which are labelled inventive or controlling.

VI. Conclusions

Present ideas and beliefs about genetic origins appear in more than one "scientifically" plausible form. Hypotheses implicit within them are often mutually exclusive and presently untestable. At the present stage of scientific development and knowledge, it is absurd to give the theories labelled as evolution so much attention to the exclusion of other theories. Looking back from the present, it was much more absurd in Darwin's time.

Observation of the present fossil record cannot now, and perhaps never can, provide a clear "scientific" choice between sets of possible processes accounting for genetic origins. Three sets of processes, that can be consistent with and cannot be dismissed by appeal to the fossil record, have been presented in this paper; namely, (1) Abrupt Creation at or near the

earth's location; or (2) the process called evolution confined to the earth's location; or (3) either process accompanied by genetic transport from other locations in the universe.

Processes and events comprising genetic origins cannot be uniquely implied by appeal to one set of known "scientific" processes. It is claimed here that this uncertainty is "scientifically" fundamental. It is resolvable, at the present time, and perhaps for all time, only by a free will choice between the alternatives.

To the author, and other Biblical creationists, a written record, the Bible, reveals the one most plausible alternative concerning genetic origins. According to this alternative, "the beginning" was a remarkably abrupt and complete Creation set of events generated by one Creator.

Also, according to the Bible, the original highly ordered state continually proceeds toward disorder, when the order is not sustained and renewed by God, the Creator and Controller. The second law of thermodynamics is one manifestation of this process.

Proponents of the "theories" now labelled as evolution deny that genetic origin and continuation processes are continually subject to the second law of thermodynamics. Yet after much effort, these proponents have been unable to demonstrate that order emerges spontaneously from disorder. They also continue to selectively ignore and belittle graphic records left by previous generations of human beings.

Belief in Creation or evolution is a matter of faith. From this point of view they are both religious positions. All of religion and science has always started, and the author expects will always start, from certain ideas, which are not subject to "scientific" observation by human beings in their "present" time. Hence uncertainty about origins will always be potentially great to many persons who want to ignore or deny the existence and necessity of faith.

FOSSIL MAN AND THE CREATION CONCEPT

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Anthropology is based on the evolutionary philosophy. Early discoveries in Europe were used to establish a "sequence of cultures" of prehistoric man which has been extended with variable success to other parts of the earth.

Glacial deposits and cave remains correlated with the glacial "period" have been related to the "pluvials" of non-glacial regions again with variable success.

*This study contains a brief review of the discovery of Neanderthal Man, **Pithecanthropus** of Southeast Asia, and **Australopithecus** of South Africa. Evidence is given to show that these "races" were not evolutionary in nature, but degenerative.*

Earliest cities of the Middle East show a surprisingly high degree of culture. It is noted that early man, as he led a nomadic life, faced adverse conditions that resulted in deterioration, particularly of the skull features, but as they settled down and established an agricultural and urban civilization, these primitive characteristics disappeared.

Discovery of modern-appearing skulls below "primitive" ones, or contemporaneous with them, disputes the claim that these crude forms were the result of "evolution."

It is suggested that anthropologists take a new look at the evidence, and align anthropology with the Genesis account of creation and the Flood. The creationist philosophy will give an interpretation that is superior to that of "evolution."

Introduction

Two philosophies have dominated science and theology since ancient times. In this study consideration will be given to the influence of these philosophies on the question of the origin of man.

About 1500 B.C. the book of Genesis was written, containing the statement that man was created in the image of God. This concept became a basic doctrine of Hebrew theology, and was incorporated into Christianity.

About 500 B.C. Greek philosophers began their studies, and some developed the philosophy of naturalism. According to this concept, human life as well as animal life had arisen through natural processes. In modern times this philosophic background became the basis for the so-called theory of organic evolution, by which evolution-

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