

Science, Evolution, and Intelligent Design

Part II: Evolution

Précis

Presented to

The Roundtable in Ideology
Trinity Baptist Church
Norman, OK

Richard Carpenter
November 2008

I. The Origin of Life¹

A. Two Competing Origin of Life Models

The *macroevolutionary model* of the origin of life states that life was self-generated from nonliving (organic) matter. The first living organism evolved from lifeless matter by the accidental assembly of matter, without the intervention of a super-intelligent mind.

The *design model* states that nonlife never produces life and that the first life forms were the direct result of a super-intelligence.

B. The Complex Nature of the Cell

The smallest component of life is a *cell*. In the mid-1800s, the time of Charles Darwin, the cell was considered a black box – its inner workings were completely unknown. It was not until after World War II, with the help of electron microscopy, that subcellular structures were discovered, revealing an overwhelmingly complex molecular structure.

The cell is in fact extremely complex, more so than a large chemical factory. The cell takes in raw materials from the environment, processes them, and yields a product that can be used in its own environment (inside the cell) as well as be sent out to be used somewhere else in the city (organism). Not only that, but the cell fights off intruders and makes exact copies of itself.

Darwin did not understand the complexity of the cell, but he proposed a criterion by which macroevolution could be falsified:

If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.²

Using Darwin's own criterion, we can demonstrate that the theory of macroevolution is scientifically implausible. Clearly raw materials alone will not produce such a specified and complex system. Energy, matter, and time are not the only ingredients needed to assemble living things; information must also be present to get the job done.

C. DNA

The DNA molecule is the fundamental building block of all living things. It determines the form and function of the cell and passes on genetic information from one generation to the next by making exact copies of itself. The entire chemical metabolism is preprogrammed by the genetic code. That code consists of sequences of four *nucleotide bases* known by the

¹ Based on *Unshakable Foundations*, Chapter 6: "Questions About the Origin of Life."

² *On the Origin of Species*, 171, quoted in *Unshakable Foundations*, 116.

letters *A, T, C,* and *G.* Groups of three bases (such as *ATC*) code for specific proteins. This coding system is analogous to the series of dashes and dots that comprise the Morse Code.

Information Theory is the sub-discipline of molecular biology that seeks to describe the data storage and retrieval systems in biological systems. The concepts and principles developed in communication systems and computers are directly applicable to the problems encountered in molecular biology.

D. Specified Complexity

Recall that *the second law of thermodynamics* results in an increasing level of disorder (entropy) over time. The inverse of that law is the *law of specificity*, in which information returns to a highly ordered state.

The biological term *species* is derived from the law of specificity. In fact, this law gives a clear distinction between nonliving matter and life. This distinction can be summarized as follows:

Living organisms are distinguished by their *specified complexity*. Crystals ... fail to qualify as living because they lack *complexity*; random mixtures of polymers fail to qualify because they lack *specificity*.³

Thus, the message “CAT CAT CAT” contains order but *lacks complexity*. A chain of random polymers containing the message “AG TCTT ACTGG” has a complex nature but has no function – it *lacks specificity*. So, crystals in a piece of quartz are specified by not complex; random mixtures of polymers are complex but not specified. Life is distinct from nonliving matter in an essential way: it is both *specified* and *complex*.

Geisler updates William Paley’s famous “watchmaker argument” in light of modern molecular and information theory. A rounded stone is recognized as resulting from natural processes of erosion. On the other hand, the faces on Mount Rushmore are immediately recognized as the result of intelligent activity.⁴

Astronomers Fred Hoyle and Chandra Wickramasinghe placed the probability that life would originate from nonlife at an extraordinarily small $10^{-40,000}$.⁵ For us to believe that purely natural forces could have produced that kind of highly specified and complex order, we would have to make an utterly blind leap of faith! Moreover, in light of the science of information theory, we would be forced to reject the conclusions discovered in that field, which confirm the need for life to have an intelligent cause. For these reasons, we reject the idea that life could have risen out of non-living matter by natural forces alone.

³ *The Origins of Life*, 41 (emphasis added), quoted in *Unshakable Foundations*, 127.

⁴ *Origin Science*, 159-64, quoted in *Unshakable Foundations*, 128-130.

⁵ *The Natural Limits to Biological Change*, 86, quoted in *Unshakable Foundations*, 133.

E. An Intelligent Designer

A single message from outer space, even one sentence, would be enough proof for the late Carl Sagan to conclude that intelligent life had caused it. Using the same kind of reasoning, one can also conclude that the origin of the genetic code discovered in the first living cell had an intelligent cause.

Each cell nucleus contains a digitally coded database larger in information content than all 30 volumes of the Encyclopedia Britannica. Further, the information content of the human brain is estimated at 10^{14} bits. This information content and storage capacity causes us to conclude that the origin of life had a super-intelligent cause.

Science was used to discover three major attributes that correspond to the Ultimate Designer: it is powerful, eternal (outside of time), and super-intelligent. Since the Designer is outside time, we can also logically conclude that it is not subject to temporal change because change requires time. Therefore, this Designer must be an infinitely powerful, intelligent, and unchanging Being.

II. The Origin of Species (Macroevolution)⁶

Geisler and Bocchino define macroevolution as “a theory or model of origins that holds to the idea that all varieties of life forms emanated from a single cell or ‘common ancestor.’”

Macroevolutionists believe that once the first living cells came into existence, it was just a matter of time, natural selection, and random molecular biological changes in their genetic information systems (mutations) that caused new characteristics (*microevolutionary* changes⁷) to occur. According to Darwinism, these small, successive microevolutionary changes came about via random genetic variations initiated by a changing environment, which exerted various pressures on the organisms. This prompted them to mutate in order to survive, and eventually the most adaptable organisms did (survival of the fittest). Based on this Darwinian model of the origin of species, macroevolutionists believe that every species, including man, has a common ancestor.

A. Gradualism and Punctuated Equilibria

The classical view of macroevolution is *gradualism*. It asserts that very long periods of time are needed to occur transitional or intermediate forms of life. New life forms appeared gradually as a product of natural selection and genetic mutations over very long periods of time (millions of years).

Observational evidence for gradualism is severely lacking. There are very few fossils that can be considered life forms in transition. Instead, life forms appear in the fossil record fully formed and change relatively little across the geologic strata. Stephen Jay Gould and Niles Eldredge therefore developed a variation of macroevolution called *punctuated equilibria*. They suggest that new life forms were created by “rapid bursts of speciation” which occurred over relatively short periods of time (hundreds or thousands of years). The highly accelerated rate of speciation supposedly explains the paucity of intermediate fossils.

B. The Design Model

The *design model* is a theory of origins asserting that all life forms were designed to experience only limited genetic variations (microevolution) in order to adapt to and survive the stresses caused by environmental changes. These changes are confined within a *created kind* (see below). This model predicts that the fossil record will not bear witness to transitional forms but will manifest evidence of life forms appearing on earth abruptly and fully formed, confirming their cause: sudden bursts of creation. These life forms will experience limited change and no directional modifications.

⁶ Based on *Unshakable Foundations*, Chapter 7: “Questions About Macroevolution.”

⁷ Many creation biologists prefer not to use the term “microevolution” because it could imply that Darwinian evolution has occurred on a small scale. In fact, changes within a created kind (e.g., horse/donkey/zebra; see below) always result from a *loss* of information (genetic defects). See http://www.answersingenesis.org/home/area/faq/dont_use.asp#micro_macro.

Within this model, only limited microevolutionary changes will occur over long periods of time. Similarities among life forms are the result of a common design specification, not a common ancestor.

C. Natural Selection and Macroevolution

Macroevolutionists appeal to an analogy called *artificial selection* to explain to support their claim that there are no limits on the amount of change in a biological system. But artificial selection and natural selection are in the most critical respects exactly the opposite – the former relies on an intelligent designer (e.g., a dog breeder)!

For instance, fruit flies (*Drosophila*) have been thoroughly investigated and genetically altered in the laboratory. But despite all efforts, *Drosophila* remains what has always been – a fruit fly. Instead of demonstrating that genetic boundaries do not exist, *Drosophila* has proved just the opposite.

Mathematical models are believed by macroevolutionists to illustrate that chance genetic mutations, over long periods of time, can produce the specified complexity required for life and for new life forms to arise. Yet one statistician demonstrated the near impossibility of even that:

On a computer, William Bennett set one trillion monkeys to typewriters, typing ten keys a second at random. We would have to wait a trillion times the estimated age of the universe before we would even see the sentence, “To be, or not to be: that is the question.”⁸

Most likely, the monkeys are not sitting quietly at their workstations, but are busy tearing up their papers and throwing typewriters off of desks. Similarly, virtually all mutations are destructive mistakes that are harmful to the survival of the organism.

We conclude that intelligence is the real “missing link” in the chain of macroevolutionary theory. Operation science knows of no mechanism to support biological novelty by way of cumulative mutations.

D. The Fossil Record

Five thousand life forms appear suddenly in the rock strata. In uniformitarian geology, this *Cambrian explosion* occurred 543 million years ago and lasted no more than ten million years – a blink of an eye in evolutionary terms. The fossil record shows no evidence of transitional fossils and consequently does not accurately describe a large class of observations. The phylogenetic tree is nothing but twigs (microevolution) and leaves. The truth is that there are no missing links, but rather a missing chain, representative of enormous gaps in the record. We conclude that gradualism is not supported by any known mechanism in operation science, nor is there any credible observational evidence available to sustain in based on paleontology.

⁸ *Scientific and Engineering Problem Solving with the Computer*, referenced in *The Natural Limits to Biological Change*, 157-58, referenced in *Unshakable Foundations*, 151.

E. Evaluating Punctuated Equilibria

Punctuated equilibria is not a newly discovered scientific mechanism; it is merely an attempt to keep the macroevolutionary model alive by restating the facts. Stephen Jay Gould admits,

[T]o preserve our favored account of evolution by natural selection we view our data as so bad that we almost never see the very process we profess to study.⁹

Gould goes on to describe two features particularly inconsistent with gradualism:

- *Stasis*, the lack of directional change of fossils and the limited nature of morphological change.
- *Sudden appearance* of fossils “fully formed.”

Both gradualism and punctuated equilibria share two severe scientific flaws of the macroevolution model: (1) There is *no scientific mechanism* to account for unlimited genetic change, and (2) There is *no observational evidence* to support its claims.

Michael Denton further critiques macroevolution:

The gaps which separate species: dog/fox, rat/mouse, etc., are utterly trivial compared with, say that between a primitive terrestrial mammal and a whale or a primitive terrestrial reptile and an Ichthyosaur; and even these relatively major discontinuities are trivial alongside those which divide major phyla such as mollusks and anthropods.¹⁰

F. Bariminology¹¹

Throughout the creation week, God created animals “each according to its kind” (Gen. 1). Adam gave names to “all the cattle, and to the birds of the sky, and to every beast of the field” (Gen. 2:20). Modern creation biologists refer to these created kinds as *baramins*, from the Hebrew words *bara* (created) and *min* (kind). The word was coined by creation biologist Frank Marsh in 1944.

Baramins are believed to correspond roughly to *families* rather than *species*. (*Family* is two taxonomic ranks higher than *species*, with *genus* intervening.) For instance, the “dog” kind is considered to be a single baramin. It includes coyotes, jackals, wolves, and other “species” that are capable of hybridizing. (It has been noted that evolutionary science has no satisfactory definition of species.)

⁹ *The Panda's Thumb*, 181, referenced in *Unshakable Foundations*, 164.

¹⁰ Michael Denton, *Evolution: A Theory in Crisis* (Bethesda: Adler & Adler, 1986), 193-95, referenced in *Unshakable Foundations*, 166.

¹¹ Based on Todd Charles Wood, “Bara-What?,” *Answers*, 3:4 (2008), accessed at <http://www.answersingenesis.org/articles/am/v3/n4/bara-what>; and “The Current Status of Baraminology,” *Creation Research Society Quarterly Journal* 43:3 (2006), 149-158, accessed at http://www.creationresearch.org/crsq/articles/43/43_3/baraminology.htm.

III. Bibliography

- William R. Bennett, Jr., *Scientific and Engineering Problem Solving with the Computer* (Englewood Cliffs: Prentice Hall, 1976).
- Darwin, Charles, *On the Origin of Species* (New York: NAL Penguin Inc., 1958).
- Dawkins, Richard, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design* (New York: W. W. Norton & Company, 1986).
- Denton, Michael, *Evolution: A Theory in Crisis* (Bethesda: Adler & Adler, 1986)
- Geisler, Norman L., and J. K. Anderson, *Origin Science: A Proposal for the Creation-Evolution Controversy* (Grand Rapids, MI: Baker Books, 1987).
- Geisler, Norman, and P. Bocchino. *Unshakable Foundations: Contemporary Answers to Crucial Questions About the Christian Faith*. (Minneapolis, MN: Bethany House, 2001).
- Gould, Stephen Jay, "The Verdict on Creationism," *New York Times Magazine*, July 19, 1987.
- Gould, Stephen Jay, *The Panda's Thumb* (New York: W. W. Norton & Co., 1982).
- Hawking, Stephen W., *A Brief History of Time* (New York: Bantam, 1988).
- Lester, Lane P., and Raymond G. Bohlin, *The Natural Limits to Biological Change* (Grand Rapids, MI: Zondervan, 1984).
- Orgel, Leslie, *The Origins of Life* (New York: Wiley, 1973).