PROOF EVOLUTION IS FALSE

A Paper

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Abstract

This paper will present proof that naturalistic evolution is an inadequate explanation for the origin of (1) the universe, (2) life and (3) human life and that the cause of these three areas must be intelligent.

Definition of Terms

Proof: Inductive reasoning uses an evidence-based approach for discovering truth. Like all scientific arguments, *induction* cannot prove something to be true absolutely but only to a certain degree of probability.¹ This paper will present deficiencies of the naturalistic evolutionary model as well as evidence of an intelligent cause. It will be concluded using *abduction* (inferring a certain explanation is more plausible or credible than competing explanations) that it is more plausible to assert an intelligent cause for origins.²

Evolution: This paper addresses three types of *naturalistic* evolution: cosmic, chemical and biological evolution. Cosmic evolution is the origin of matter from non-matter, chemical evolution is the origin of living matter from non-living matter and biological evolution is the origin of higher life forms from lower life forms.³ *Naturalistic* evolution means the coming into existence of these areas through natural and unguided processes.

¹ Unless one has a perfect induction, which is rare.

² It is possible (and valid) to argue the existence of an intelligent cause using all four methods of rationality. The other two not mentioned are *deduction* (inferring from one or more propositions what follows necessarily) and *adduction* (inference drawn from direct encounter with something). For a compelling deductive argument see Shawn Nelson, *Proof Christianity Is True: A Summary of the Works of Norman Geisler* (Temecula: Geeky Christian, 2013).

³ It will be shown that there is no such thing as "simple life" but that even a single cell amoeba is irreducibly complex.

"Is false" means that all three types of evolution could not have happened without an intelligent cause.

Operation and Origin Science

When discussing origins, a distinction between *operation* and *origin* science must be acknowledged.⁴

Empirical science (or operation science) is an investigation into how things operate in the present. It is concerned with present, regular, observable and repeatable events. Hypotheses can be constructed *and then tested* through further experimentation and observation.

Forensic science (or origin science) deals with things that are no longer occurring in the present. It is an attempt to explain how events were caused in the past, events that are unrepeatable and therefore cannot be observed. It is a speculative. Past events must be reconstructed and conclusions about its cause must be drawn by viewing the evidence that remains.

Causality and Uniformity

Forensic science (origin science), rests on two fundamental principles.

The *principle of causality* states that every event has an adequate cause.⁵ This principle forms the basis of modern science.

⁴ In a recent debate between Bill Nye and Ken Ham, Nye downplayed this distinction, calling it a construct that is only used by creationists but one that doesn't actually exist within the scientific community. (See Bill Nye and Ken Ham, "Debate at the Creation Museum," (video), accessed February 4, 2014, http://debatelive.org.) Nye's statement is difficult to accept because science is founded on the scientific method which, as any introductory science book defines, is the "systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses." See *Oxford Dictionary*, s.v. "Scientific Method," accessed February 8, 2014, http://www.oxforddictionaries.com/us/definition/american english/scientific-method. A distinction must be made between the things we can test directly today in a lab verses things we cannot test because they occurred in the past and are no longer recurring (e.g., the creation of the universe). Introductory forensic science books indicate that "geology, astronomy, archaeology, paleontology" fall under forensic science for this reason. See Max M. Houck and Jay A. Siegel, Fundamentals of Forensic Science, 2nd ed. (Amsterdam: Academic Press, 2010), 51. Furthermore, that this distinction exists and is valid within the scientific community is clear in that the fields of cosmology, biology, and anthropology have forensic counterparts in cosmogony, biogeny, and anthropology.

The *principle of uniformity* states that certain causes tend to produce the same kind of events (or uniform experience). For example, water flowing over rocks tends to round the edges of the rock, wind blowing on water tends to produce waves, and so forth.

Natural and Unnatural Causes

There are two types of causes: natural and intelligent. Many people can recognize the difference between natural and unnatural objects in nature. For example, it is fairly obvious to most that rounded river bed rocks, sand dunes, waterfalls and canyons have natural causes while things like sandcastles, car engines, computers and Mount Rushmore have intelligent causes. But what can be done when a cause isn't obvious or is in dispute? The principles of forensic science (causality and uniformity) can be applied to determine its type of cause.

Forensic Example—Finding A Dead Body

Imagine we found a dead body in a house and we want to know whether the cause was natural or unnatural and intelligent (a murder). We must use forensic science because we are dealing with an investigation into something that occurred in the past which nobody observed. In our investigation, if we find that the house was locked, the man and the room show no signs of being disturbed, but an examination of his heart reveals a heart attack, we can conclude he died from a *natural* cause. However, if there's a broken window, a few tables knocked over, and a bullet hole in the man's chest, we conclude he died from an unnatural or *intelligent* cause.

It is this type of investigation that we must follow when investigating the origins of the universe, life and human life and whether they had a natural or intelligent cause.

⁵ The principle of causality does not say *everything* has a cause, but everything that has a beginning has a cause (everything that is finite, contingent and dependent). If something is eternal and independent (whether the universe or God), it does not need a cause. See Norman Geisler, *Systematic Theology, Volume Two: God, Creation* (Minneapolis, MN: Bethany House Publishers, 2003), 655.

The Universe Had a Beginning

There are five lines of evidence that the universe is not eternal but had a beginning. These five lines of evidence can be remembered with the acronym SURGE.

S—Second Law of Thermodynamics

The principles of thermodynamics are "regarded as inviolable and are applied constantly to engineering and the sciences." The *first law of thermodynamics* is a "fundamental physical principle stating that the total amount of energy in the universe is constant and cannot change." In other words, the amount of energy stays the same—it is not being created or destroyed. The *second law* states that "entropy in a closed system either remains constant (if the system is in equilibrium) or increases" as time proceeds. This fixed amount of energy is becoming more unusable because the amount of disorder, or entropy, is increasing. Eventually, it will hit maximum entropy, and at that point, nothing can change anymore—everything will have "run down." If the universe is a closed system (and it is), and it's "running down," it cannot be eternal and therefore had a beginning which requires a cause. British astrophysicist Arthur Eddington said:

The Law that entropy increases—the Second Law of Thermodynamics—holds, I think, the supreme position among the laws of Nature... if your theory is found to be against the Second Law of Thermodynamics I can give you no hope; there is nothing for it but to collapse in deepest humiliation.⁹

⁶ Norman L. Geisler, *Baker Encyclopedia of Christian Apologetics* (Grand Rapids, MI: Baker Academic, 1999), 723.

⁷ Dipak K. Basu, ed., *Dictionary of Material Science and High Energy Physics* (Boca Raton, FL: CRC Press, 2001), 74.

⁸ James P. Wolfe, *Elements of Thermal Physics*, 5th ed. (Plymouth, MI: Hayden-McNeil Publishing, 2013), 16.

⁹ Arthur Stanley Eddington, *The Nature of the Physical World* (New York: The Macmillan Company, 1929), 74. (emphasis mine)

U—Universe is Expanding

The Steady State theory was a popular view in the first half of the 20th century. It held that "the universe is always expanding but maintaining a constant average density" because matter was "being continuously created to form new stars and galaxies at the same rate that old ones become unobservable". ¹⁰ In other words, the universe was thought to be eternal.

However, popular opinion changed in the 1920s when Edwin Hubble, working at Mt. Wilson Observatory, observed that the further a galaxy is from earth, the faster it seemed to be moving away. The idea of an expanding universe was born. This theory would later become commonly known as the "Big Bang" theory. Since we know that the universe is expanding, if we extrapolate this expansion backwards in time, we come to a singularity—a beginning.

R—Radiation From the "Big Bang"

In 1965, two Bell Labs scientists, Arno Penzias and Robert Wilson, were attempting to bounce radio waves off of balloon satellites. They noticed that they received a faint radiation signal regardless of where they pointed the antenna. What they discovered was the radiation "afterglow" of the Big Bang itself.¹¹ American astronomer and physicist Robert Jastrow said of this radiation:

No explanation other than the Big Bang has been found for the fireball radiation. The clincher, which has convinced almost the last doubting Thomas, is that the radiation discovered by Penzias and Wilson has exactly the pattern of wavelengths expected for the light and heat produced in a great explosion. Supporters of the Steady State theory have tried desperately to find an alternative explanation, but they have failed.¹²

¹⁰ Encyclopedia Britannica, s.v. "Steady State Theory," accessed February 8, 2014, http://www.britannica.com/EBchecked/topic/564427/steady-state-theory.

¹¹ "The Big Bang," Big History Project, accessed February 8, 2014, https://www.bighistoryproject.com/thresholds/1.

¹² Robert Jastrow, God and the Astronomers (New York: W. W. Norton, 1978), 15-16.

G—Great Galaxy Seeds

Scientists theorized that if the Big Bang had occurred, there should be "ripples" or variations in this cosmic background radiation. In 1992, NASA's Cosmic Background Explorer (COBE) found these ripples.¹³ Hailed by Stephen Hawking as "the discovery of the century, if not all time," these ripples were what allowed matter to form into galaxies (which is why they are also referred to as "Galaxy Seeds").

The ripples show that the explosion and expansion of the universe was precisely tweaked to cause just enough matter to congregate to allow galaxy formation, but not enough to cause the universe to collapse back on itself. Any slight variation one way or the other, and none of us would be here to tell about it. In fact, the ripples are so exact (down to one part in one hundred thousand) that Smoot called them the "machining marks from the creation of the universe" and the "fingerprints of the maker." ¹⁴

E—Einstein's General Relativity

Einstein postulated in his General Theory of Relativity that space, matter and time are corelated and interdependent (there cannot be one without the others). What this means is that if matter came into existence through a singularity like the Big Bang, then so did space and even time itself. In 2011, NASA's Gravity Probe B provided empirical confirmation that Einstein's theory is correct.¹⁵

The Cause of the Universe Must Be Supernatural (Beyond Nature)

These five lines of evidence prove the universe is not eternal, but had a beginning. Since causality states that everything that has a beginning has an adequate cause, there must be an

¹³ The infrared photos can be seen at NASA's Cosmic Microwave Background website. See "Legacy Archive for Microwave Background Data," accessed February 8, 2014, http://lambda.gsfc.nasa.gov.

¹⁴ Norman L. Geisler and Frank Turek, *I Don't Have Enough Faith to Be an Atheist* (Wheaton, IL: Crossway, 2004), 83.

¹⁵ "Gravity Probe B Confirms Two Einstein Theories," PhysOrg.com, May 4, 2011, accessed February 8, 2014, http://phys.org/news/2011-05-gravity-probe-einstein-theories.html and http://en.org/news/2011-05-gravity-probe-einstein-theories.html and http://en.org/news/2011-05-gravity-probe-einstein-theories.html and https://en.org/news/2011-05-gravity-probe-einstein-theories.html and <a href="https

adequate cause of the universe, either natural or unnatural. But the cause of the natural world cannot be by nature (it cannot be self-caused). Therefore, the cause of the universe must be supernatural (beyond nature).¹⁶ It is this line of reasoning that influenced agnostic astronomer Robert Jastrow to admit: "That there are what I or anyone would call *super-natural* forces at work is now, I think, a scientifically proven fact."¹⁷

The Cause Must Also Be Intelligent

There are three lines of evidence that the cause of the universe is intelligent.

First, creation from nothing implies that creation was *willed* into existence. The universe once did not exist—and it did not ever have to exist. But since it *did* come to exist it shows that somebody with a mind and will decided to cause it to exist.

Second, we know the cause is intelligent by looking at what was created. The universe reveals advanced planning of a great mind. Not only is life complex (to be discussed shortly) but it appears that the universe was fine-tuned for human life from the beginning—commonly called the *anthropic principle*. Jastrow, speaking about this principle said:

The anthropic principle is the most interesting development next to the proof of the creation, and it is even more interesting because it seems to say that science itself has proven, as a hard fact, that this universe was made, *was designed, for man to live in.* It [the universe] is a very theistic result.¹⁸

Third, an intelligence of great superiority is indicated by what Einstein called the *harmony of natural law*:

¹⁶ The idea of a multi-verse (to which we currently have no evidence) does not solve the issue of causality, but merely pushes it back. There cannot be an infinite number of universes causing universes. There would still need to be a cause outside of the first universe which is beyond that the "nature" of that first universe.

¹⁷ Christianity Today, A Scientist Caught between Two Faiths: Interview with Robert Jastrow, August 6, 1982, 8. (emphasis mine)

¹⁸ Ibid., 17.

The harmony of natural law... reveals an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection.¹⁹

American astronomer former atheist Allan Sandage adds:

The world is too complicated in all of its parts to be due to chance alone. I am convinced that the existence of life on earth with all its order in each of its organisms is simply too well put together... The more one learns of biochemistry, the more unbelievable it becomes unless there is some kind of organizing principle—an architect.²⁰

The Naturalistic Cosmic Evolution Explanation Is Inadequate

The evidence points to our universe having a beginning, originating from a supernatural cause (outside of nature), and having a cause that is intelligent. Any model which contradicts these points (such as a self-caused universe, uncaused universe, or a purely naturalist cosmic evolutionary model) does so at the peril of science. This is the first strike for evolution. But it gets worse. The origin of the universe is the first in a cumulative series of challenges for evolution. Next is the origin of first life.

Part 2—First Life Must Have Had An Intelligent Cause

There Are Just Two Options, Really

There aren't many options when it comes to the origin of first life. In fact, there are two:

(1) life spontaneously appeared on its own through chemical reactions in non-living matter and then continued to evolve through naturalistic processes, or (2) life is the result of an intelligent cause.²¹ Noble Prize-winning biologist George Wald said, "There is no third position."²²

¹⁹ Albert Einstein, *The World As I See It* (New York: Philosophical Library, 1949), 29.

²⁰ Alan Sandage, "A Scientist Reflects On Religious Belief," *Truth*, 1985, 54.

²¹ See Robert Jastrow, *Until the Sun Dies* (New York: Norton, 1977), 62.

²² George Wald, "The Origin of Life," in *Life: Origin and Evolution*, reprinted in *Scientific American*, August, 1954.

Spontaneous Generation

The popular view in chemical evolution is called spontaneous generation. This view asserts that conditions on early earth allowed the formation of amino acids which developed into DNA and ultimately complex cells. This process is believed to have occurred over four billion years ago and was aided by the sun, volcanic activity and other purely naturalistic processes.²³

The Miller-Urey Experiment

Experiments have been conducted to try to prove spontaneous generation. Most notably was the famous experiment conducted by Stanley L. Miller and Harold C. Urey in 1953 which attempted to show that given the proper amount of chemicals, heat and electricity, life could eventually arise on its own in a sealed environment. However, this is an example of "investigation interference." The chemicals they used to simulate the "primordial soup" didn't exist in the supplied concentrations, but they were intelligently chosen produce the desired reactions. They withheld oxygen from the experiment since no oxygen can be present for the experiment to work, yet many evolutionists believe some amount of oxygen must have been present in the early earth's atmosphere for life to have evolved. They ignored that the very means of producing life (radiation) would also destroy it. They had a mechanism to collect only the amino acids that were produced. No wonder British mathematician, astronomer and astrobiologist Chandra Wickramasinghe, considered to be one of Britain's most eminent scientists, called these types of experiments "cheating!" Even if one were to consider these

²³ Norman L. Geisler and Ronald M. Brooks, *When Skeptics Ask* (Wheaton, Ill.: Victor Books, 1990), 223.

²⁴ Some evolutionists reject the notion that the primordial atmosphere contained abundant oxygen for this reason. However, since life cannot evolve without the presence of oxygen, this creates another critical problem: how did the atmosphere get its oxygen? See Bruce Dorminey, "Oxygen's Ancient Rise Still One of Earth's Biggest Mysteries," Forbes, August 31, 2013, accessed February 22, 2014, http://www.forbes.com/sites/brucedorminey/2013/08/31/oxygens-ancient-rise-still-one-of-earths-biggest-mysteries/.

²⁵ Phil Fernandes, *The Atheist Delusion: A Christian Response to Christopher Hitchens and Richard Dawkins* (United States: Xulon Press, 2009), 34.

types of experiments valid, the only things that are produced are amino acids, which are considered to be the "building blocks of life." No experiment to date has proven life can be generated from non-living matter. On the contrary, it has been disproven (see next).

Problems with Spontaneous Generation

There are three critical problems with the theory of spontaneous generation.

First, it was disproven. It was once widely believed that living things could originate from nonliving matter. But this was proven false by Francesco Redi and Louis Pasteur:

Although Francesco Redi, an Italian physician, disproved in 1668 that higher forms of life could originate spontaneously, proponents of the concept claimed that microbes were different and did indeed arise in this way... in 1864... in a series of masterful experiments, Pasteur proved that *only preexisting microbes could give rise to other microbes (biogenesis)*.²⁶

Pasteur later commented on the results:

Never will the doctrine of spontaneous generation recover from the mortal blow struck by this simple experiment. *No, there is now no circumstance known in which it can be affirmed that microscopic beings came into the world without germs, without parents similar to themselves.* Those who affirm it have been duped by illusions, by ill-conducted experiments, spoilt by errors that they either did not perceive or did not know how to avoid.²⁷

Second, "No evidence exists that such a soup ever existed."²⁸ This is seen here:

If there ever was a primitive soup, then we would expect to find at least somewhere on this planet either massive sediments containing enormous amounts of the various nitrogenous organic compounds, amino acids, purines, pyrimidines and the like, or alternatively in much metamorphosed sediments we should find vast amounts of nitrogenous cokes. In fact no such materials have been found anywhere on earth... There

²⁶ Encyclopedia Britannica, s.v. "Microbiology," accessed February 8, 2014, http://www.britannica.com/EBchecked/topic/380246/microbiology. (emphasis mine)

²⁷ John H. Mann, *Louis Pasteur: Founder of Bacteriology* (New York: Charles Scribner's Sons, 1964), 60. (emphasis mine)

²⁸ David L. Abel and Jack T. Trevors, "Three Subsets of Sequence Complexity and Their Relevance to Biopolymeric Information," *Theoretical Biology and Medical Modelling*, August 11, 2005, accessed February 8, 2014, http://www.tbiomed.com/content/2/1/29.

is, in other words, pretty good negative evidence that there ever was a primitive organic soup on this planet that could have lasted but a brief moment.²⁹

Third, life would likely be older than the earth itself under the evolutionary model. A recent paper published by evolutionary geneticists suggests life could be 2.7 times older than earth itself! It's argued that the complexity of life has increased exponentially, doubling every 376 million years. Extrapolating this rate backwards in time, they conclude that life began *before* the earth was born, possibly very shortly after the Big Bang:

Linear regression of genetic complexity (on a log scale) extrapolated back to just one base pair suggests the time of the origin of life = 9.7 ± 2.5 billion years ago. Adjustments for potential hyperexponential effects would push the projected origin of life even further back in time, close to the origin of our galaxy and the universe itself, 13.75 billion years ago.³⁰

Other conclusions are (1) it took roughly 5 billion years for life to reach the complexity of bacteria, (2) there was no *intelligent* life in the universe prior to earth, (3) life was brought to earth by meteoroids, asteroids or comets, (4) *intelligent* life has just begun to appear in our universe and is not as evenly distributed as the Drake equation suggests and (5) it took *many cumulative rare events* for life to originate from scratch.³¹

How is it that life arose outside our solar system, possibly very shortly after the Big Bang, in far worse conditions, travelled and survived a very lengthy interstellar space voyage, entered our atmosphere unharmed, found an environment conducive for evolution, and produced the myriad of life forms we see today? Those are "many cumulative rare events" indeed!

With so many complications, it's no surprise that there is "no firmly accepted standard model for the emergence and early evolution of life on Earth." In 2011, the Origins Project

²⁹ J. Brooks and G. Shaw, *Origin and Development of Living Systems* (New York: Academic Press, 1973), 359. (emphasis mine)

³⁰ Alexei A. Sharov and Richard Gordon, "Life Before Earth," Cornell University Library, March 28, 2013, accessed February 21, 2014, http://arxiv.org/abs/1304.3381.

³¹ Ibid.

³² Richard Egel, Dirk-Henner Lankenau, and Armen Y. Mulkidjanian, *Origins of Life: The Primal Self-Organization* (New York: Springer, 2011), 289.

gathered together two dozen evolutionary scientists at Arizona State University for an update on how first life began.³³ One *Scientific American* blogger summarized the event this way: "Geologists, chemists, astronomers and biologists are as stumped as ever by the riddle of life."³⁴

Spontaneous generation has been disproven, there is no evidence for it, and scientists are at a loss to explain it. It would seem that chemical evolution has no leg to stand on. Since there really is no other explanation other than an intelligent cause, it would seem that this is currently the only possible explanation. This is the second strike against evolution.

Part 3—Human Life Must Have Had An Intelligent Cause

The third and final area of evolution discussed here is biological evolution. Biological evolution is the assertion that "random mutations occur and natural selection continually acts on the surviving mutation, leading to improvements and changes in species over time." However, it will be shown that "complex life" such as animal and human life requires an intelligent cause. Since the theory of biological evolution is a slippery one, the arguments against it can be remembered with the acronym SLIP.

³³ Dennis Overbye, "A Romp Into Theories of the Cradle of Life," The New York Times, February 21, 2011, accessed February 8, 2014, http://www.nytimes.com/2011/02/22/science/22origins.html?r=1&ref=science.

³⁴ John Horgan, "Pssst! Don't Tell the Creationists, but Scientists Don't Have a Clue How Life Began," February 28, 2011, accessed February 8, 2014, http://blogs.scientificamerican.com/cross-check/2011/02/28/pssst-dont-tell-the-creationists-but-scientists-dont-have-a-clue-how-life-began/.

³⁵ Joseph A. Kuhn, "Dissecting Darwinism", *Baylor University Medical Center Proceedings* 1 (January 2012): 1, accessed February 13, 2014, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246854/.

³⁶ As will be discussed in this section, it's really not appropriate to speak of "complex life," as even the simplest of life is actually quite complex.

S—Status? Still Unproven

The Scientific Method Requires Observation

Science is founded on the scientific method which involves "systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses." Many are under the impression that macroevolution has been proven by this method, that is, by direct observation and experimentation—but it has not. Macroevolution still remains an unproven theory. 38

Observing Changes Within A Kind Is Not Proof

One of the top strengths of the Darwinian model is adaptation³⁹ and proponents point to this as the empirical evidence which satisfies the hypothesis. Popular textbooks discuss the beak shapes of the finches in the Galapagos Islands or the peppered moths in England, insect populations becoming resistant to DDT, or germs becoming resistant to antibiotics. However, these are all examples of microevolution (changes within a type); macroevolution (the origin of new types of organisms), on the other hand, has never been observed. The macroevolution hypothesis is based on "the inference is that these minor changes can be extrapolated over many generations to macroevolution." One evolutionist admitted many of his peers find this transference untenable:

³⁷ Oxford Dictionary, s.v. "Scientific Method," accessed February 8, 2014, http://www.oxforddictionaries.com/us/definition/american_english/scientific-method.

 $^{^{38}}$ Darwin himself refers to it "my theory," "the theory," or "theory of creation" nearly 100 times in *On the Origin of Species* (see XI, XIII, XV, VI, et al.).

³⁹ Joseph A. Kuhn, "Dissecting Darwinism", *Baylor University Medical Center Proceedings* 1 (January 2012): 1, accessed February 13, 2014, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246854/.

⁴⁰ John D. Morris, "What Is the Difference between Macroevolution and Microevolution?," February 13, 2014, accessed February 13, 2014, http://www.icr.org/article/1156/285/.

A long-standing issue in evolutionary biology is whether the processes observable in extant populations and species (microevolution) are sufficient to account for the larger-scale changes evident over longer periods of life's history (macroevolution). Outsiders to this rich literature may be surprised that *there is no consensus on this issue*, and that strong viewpoints are held at both ends of the spectrum, *with many undecided*.⁴¹

More damning was the 1980's *Science* article which summarized the conclusion of 150 of the world's leading evolutionary theorists who gathered together that year to decide whether microevolution can produce macroevolution:

A wide spectrum of researchers—ranging from geologists and paleontologists, through ecologists and population geneticists, to embryologists and molecular biologists—gathered at Chicago's Field Museum of Natural History under the simple conference title: Macroevolution. Their task was to consider the mechanisms that underlie the origin of species and the evolutionary relationship between species. ... The central question of the Chicago conference was *whether the mechanisms underlying microevolution can be extrapolated* to explain the phenomena of macroevolution. At the risk of doing violence to the positions of some of the people at the meeting, *the answer can be given as a clear, No.*⁴²

Observing Similarity Is Not Proof

Another recognized strength of Darwinian evolution is similarity across species.⁴³ An evolutionary tree is a way for evolutionary biologists to illustrate the evolutionary path between every living species. Species are placed on the tree based on similarities to other species, creating directional change (the various branches on the tree). However, the ability to categorize based on a directional path is not proof that macroevolution has occurred. An absurd illustration may help. It's possible to take all airplanes from the dawn of flight all the way up to modern stealth aircraft and place them in an evolutionary tree. But the ability to categorize by similarity does not prove a naturalistic evolution of the airplane.⁴⁴ Likewise, one could classify a

⁴¹ Sean B. Carroll, "The Big Picture," *Nature*, February 8, 2001, 669, accessed February 13, 2014, http://www.icb.ufmg.br/labs/lbem/aulas/pg/carrol02nat-macroevolution.pdf. (emphasis mine)

⁴² Roger Lewin, "Evolutionary Theory under Fire," *Science*, 1980, 210:883. (emphasis mine)

⁴³ Joseph A. Kuhn, "Dissecting Darwinism", *Baylor University Medical Center Proceedings* 1 (January 2012): 1, accessed February 13, 2014, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246854/.

 $^{^{44}}$ On the contrary, we know each iteration was the result of an intelligent cause.

directional path from a small teaspoon, to a pan, and to a pot. But it's equally absurd to suggest teaspoons evolved into pots through some natural means. On the contrary, each was created independently through an intelligent cause. Observing similarity does not prove evolution.

L—Lack of Fossil Evidence

The lack of evidence in the fossil record is a critical blow to biological evolution.

No Sign of Macroevolution in the Fossil Record

Charles Darwin said in *Origin of the Species*:

Why then is not every geological formation and every stratum full of such intermediate links? Geology assuredly does not reveal any such finely graduated organic chain, and this, perhaps, is *the most obvious and gravest objection* which can be urged against my theory.⁴⁵

To say that there is lack of evidence for macroevolution in the fossil record is an understatement. Noted atheist and paleontologist Stephen Jay Gould admitted:

We do not see slow evolutionary change in the fossil record... change seems to be abrupt because the intermediate steps are missing. The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils.

After admitting that the fossil record "seems to show so little of evolution directly," that it "was never 'seen' in the rocks," how those professing gradualism "almost never see the very process we profess to study," ⁴⁶ Gould went on to say:

Most species exhibit no directional change during their tenure on earth. They appear in the fossil record looking much the same as when they disappear; morphological change is usually limited and directionless. [Further,] in any local area, a species does not arise

⁴⁵ Charles Darwin, *On the Origin of Species* (New York: The Harvard Classics, 1909–14), chapter 10, 1, accessed February 13, 2014, http://www.bartleby.com/11/1001.html. (emphasis mine)

⁴⁶ Stephen Jay Gould, *The Richness of Life: The Essential Stephen Jay Gould*, ed. Paul McGarr and Steven P R. Rose (New York: W.W. Norton, 2007), 263-264.

gradually by the steady transformation of its ancestors: *it appears all at once* and "fully formed."⁴⁷

It is unclear how one can get a more damning confession from one of the world's most beloved atheistic science writers.

What About "Intermediate Links?"

Archaeopteryx was once thought to be a two-legged dinosaur. Once hailed as a "missing link" between birds and dinosaurs, it was discovered that it possessed fully formed flight feathers just like modern flying or gliding birds, and was simply reclassified. Then there is the "Piltdown Bird" (1912) which was thought to be the missing links between apes and humans. It was later exposed forty-one years later to be fake (they combined an ancient human skull with the jaw of a modern orangutan). Archaeoraptor was hailed as "the missing link between terrestrial dinosaurs and birds that could actually fly" and was later discovered to be a fabrication—they had glued a dinosaur tail to the body of a primitive bird. Bambiraptor (1993) was proclaimed as "the most bird-like dinosaur yet discovered" but it was later discovered that "hair-like projections and feathers were not found with the fossil, but [had] been added [there] based on theoretical considerations." There are also the supposed "missing link" discoveries between apes and man:

Neanderthal man, known to be fully human; Piltdown man, later discovered to have been due to a fraudulent combination of human skullcap with an ape's jaw; Java man, consisting of an ape skull and a human femur, found separated by many meters, and later disavowed by its discoverer; and Australopithicus africanus, the skull of an infant ape

⁴⁷ Ibid.

⁴⁸ Brian Thomas, "Early Bird Gets the Boot: Researchers Reclassify Archaeopteryx," August 5, 2011, accessed February 13, 2014, http://www.icr.org/article/6249/.

⁴⁹ Jonathan Wells, *Icons of Evolution: Science or Myth? Why Much of What We Teach About Evolution Is Wrong* (Washington: Regnery Publishing, 2002), 124.

⁵⁰ Ibid.

⁵¹ Ibid.

which typically bore a slight resemblance to a human child's skull. ... Nebraska man, America's own ape-man... consisted of only one tooth, later discovered to be that of a pig. 52

Considering the field of paleontology is so riddled with fraud, it's a wonder scientists would hail any new discovery as a missing link! One would think that evolutionary scientists who claim to base a career on the scientific method would be a bit more careful and objective in their analysis of the evidence.

Where Do Living Fossils Fit?

There are species that don't seem to fit the Darwinian timescale at all. For example, the African coelacanth fish is believed to have started evolving 400 million years ago and went extinct 70 million years ago. It was believed this fish was an intermediary type between fish and amphibians and other tetrapods. However, 309 of these fish have been found alive since 1938! Furthermore, an analysis of its DNA shows it is similar to other types of fish, not land animals.⁵³ Other examples of "living fossils" include graptolites,

the tuatara (supposedly extinct since the Cretaceous Period until found still living in New Zealand), the Lepidocaris crustacean (only found as fossils in Devonian rocks), the Metasequoia conifer tree (thought extinct for the past 20 million years), the Neopilina mollusk (supposedly extinct for 280 million years), the lingula brachiopod ("extinct" since the Ordovician), and even the trilobite (chief index fossil of the even more ancient Cambrian Period).⁵⁴

I—**Impossible to Achieve**

Biological evolution is impossible to achieve naturalistically.

⁵² John D. Morris, "Did the Evolutionists Present a Good Case at the Scopes Trial?," 1995, accessed February 13, 2014, http://www.icr.org/article/1143/.

⁵³ Tim Clarey and Jeffrey Tomkins, "Coelacanths: Evolutionists Still Fishing in Shallow Water," April 29, 2013, accessed February 13, 2014, http://www.icr.org/article/7412/.

⁵⁴ Henry Morris, "The Profusion of Living Fossils," 2000, accessed February 13, 2014, http://www.icr.org/article/774/.

Self-Organization is Contrary to Second Law

The idea that complexity can increase over time by means of a purely natural process is contrary to the second law of thermodynamics.⁵⁵ Billions of years cannot produce complexity and order. Rather, time makes things more disordered.

Suppose you throw red, white, and blue confetti out of an airplane 1,000 feet above your house. What's the chance it's going to form the American flag on your front lawn? Very low. Why? Because natural laws will mix up or randomize the confetti. You say, "Allow more time." Okay, let's take the plane up to 10,000 feet to give natural laws more time to work on the confetti. Does this improve the probability that the flag will form on your lawn? No, more time actually makes the flag less likely because natural laws have longer to do what they do—disorder and randomize. ⁵⁶

Three Types of Order in Nature

There are three types of order in nature.

First, there is *specified* order. Quartz crystals fall in this category. The structure of crystals is specific, precise and ordered but simple and repetitive. An example of this pattern would be: "ROCK ROCK ROCK."

Second, there is *complex* order. Random copolymers are molecules attached together in a random order to form a larger molecule.⁵⁷ Unlike crystals, however, they are not simple but complex (composed of two or more parts) and not repetitive like the pattern "PQUX RPBWT TE ZAX".

⁵⁵ Saying evolution doesn't violate the second law because the earth is not a closed system (it receives energy from the sun) is a failure to recognize *the universe* ultimately is a closed system where our solar system and earth reside.

⁵⁶ Norman L. Geisler and Frank Turek, *I Don't Have Enough Faith to Be an Atheist* (Wheaton, IL: Crossway, 2004), 124-125.

⁵⁷ Encyclopedia Britannica, s.v. "Copolymer," accessed February 8, 2014, http://www.britannica.com/EBchecked/topic/136658/copolymer.

Third, there is *specified complexity*. This type of pattern is more than something that is ordered—it has *complex order* with *clear* and *specific* functions.⁵⁸ Examples of specified complexity include looking up in the sky on a hot summer's day and seeing the words "DRINK COKE," going to the breakfast table and seeing "GOOD MORNING" spelled out with cereal letters, or finding a piece of wood washed ashore that has the words "SEND HELP—I'M STRANDED!" etched into its side.

Life has the third type of order; it is both specified *and* complex. Atheist, award winning British chemist and National Academy of Sciences member Leslie Orgel (1927-2007) said,

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.⁵⁹

Specified Complexity Requires an Intelligent Designer

This type of order, specified complexity, requires an intelligent designer.

First, many disciplines today look for specified complexity as a sign of intelligence. These include cryptography, random number generation, archaeology, and the search for extraterrestrial intelligence (SETI). ⁶⁰ Interestingly enough, specified complexity played a key role in the movie popular 1985 movie Contact by Carl Sagan:

In that novel, radio astronomers discover a long sequence of prime numbers from outer space. Because the sequence is long, it is *complex*. Moreover, because the sequence is mathematically significant, it can be characterized independently of the physical processes that bring it about. As a consequence, it is also *specified*. Thus, when the radio astronomers in Contact observe specified complexity in this sequence of numbers, they have convincing evidence of extraterrestrial intelligence... Sagan based the SETI researchers' methods of design detection on actual scientific practice.⁶¹

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⁵⁸ Norman L. Geisler and Ronald M. Brooks, When Skeptics Ask (Wheaton, Ill.: Victor Books, 1990), 217.

⁵⁹ Leslie Orgel, *The Origins of Life* (New York: Wiley, 1973), 189. (emphasis mine)

⁶⁰ William A. Dembski, "In Defense of Intelligent Design," accessed February 8, 2014, http://www.designinference.com/documents/2005.06.Defense of ID.pdf.

⁶¹ Ibid.

Second, the probability of such complex patterns arising in nature on its own is so minuscule that it is near mathematical impossibility. Atheist and astronomer Sir Fred Hoyle (1915–2001) said:

Biochemical systems are exceedingly complex, so much so that the chance of their being formed through random shuffling of simple organic molecules is exceedingly minute, to a point indeed where it is insensibly different from zero. [So there must be] an intelligence, which designed the biochemicals and gave rise to the origin of carbonaceous life.⁶²

Third, the letter frequency in DNA is the same as human language. The word frequencies of all natural languages follow Zipf's Law. It was argued by Anastasios and Panagiotis Tsonis in 1996 that DNA does not follow this pattern. However, both changed positions in 2002 based on further research. The new conclusion was that DNA does indeed follow Zipf's Law when the proper definition of a "word" is used:

During the past few years... attempts have been made to search whether or not DNA obeys a law similar to Zipf's law for languages. The key issue in such attempts is what could possibly constitute a "word" in DNA sequences... We focused our attention on genomes (rather than individual genes) and considered that a given genome is a language whose "words" are the different domains, which are found in proteins. This is a much more realistic approach... These results indicate that all four genomes obey the law $f \propto r^{-a}$ with a remarkably close to one, which is identical to Zipf's law for natural languages. We conclude that Zipf's law can be recovered in genomes if the appropriate definition of a "word" is used.⁶⁴

The conclusion is that DNA has the same level of specified complexity as human language. But human language has an intelligent creator (humans). Therefore, DNA "language" must also have an intelligent cause.

⁶² Sir Fred Hoyle and Chandra Wickramasinghe, *Evolution from Space* (New York: Touchstone, 1984), 143.

⁶³ Anastasios A. Tsonis, James B. Elsner, and Panagiotis A. Tsonis, "Is DNA a Language?," August 12, 1996, accessed February 8, 2014, http://www.deepdyve.com/lp/elsevier/is-dna-a-language-jveQwoVJTM.

⁶⁴ Panagiotis A. Tsonis and Anastasios A. Tsonis, "Linguistic Features in Eukaryotic Genomes", *Wiley Periodicals, Inc.* 7, no. 4 (2002): 1. (emphasis mine)

Fourth, the sheer amount of specified complexity is staggering. The DNA inside of every human cell contains five million pages of information. That's equivalent to 25,000 books of two-hundred pages. Even a "simple" one single-celled amoeba contains the equivalent of 1,000 copies of the Encyclopedia Britannica.⁶⁵ Carl Sagan said this about the human brain:

The information content of the human brain expressed in bits is probably comparable to the total number of connections among the neurons—about a hundred trillion bits. If written out in English, say, that information would fill some twenty million volumes, as many as in the world's largest libraries. The equivalent of twenty million books is inside the heads of every one of us. The brain is a very big place in a very small space... The neurochemistry of the brain is astonishingly busy, the circuitry of a machine more wonderful than any devised by humans.⁶⁶

To grasp this, imagine being at Madison Square Garden for a basketball game. One would need to stack 1,000 books on *every single one* of the 20,000 seats in the stadium in order to fill it with the same amount of info as the human brain. The ceiling wouldn't be high enough!⁶⁷

How do evolutionists explain such specified complexity? Some theorize that complexity arose through natural law-like processes formed somewhere along the way of evolution. But, these processes have not been observed, let alone identified. In short, "no convincing answer has been given to date" from the evolutionary community. ⁶⁸ This is entirely unsatisfactory. But it gets worse.

Irreducible Complexity

An irreducibly complex system is a system containing two or more parts where, if any single part is removed, the system ceases to function. Mousetraps, car engines, and Rube

⁶⁵ Norman Geisler, *Systematic Theology, Volume Two: God, Creation* (Minneapolis, MN: Bethany House Publishers, 2003), 663.

⁶⁶ Carl Sagan, *Cosmos* (New York: Ballantine Books, 1985), 278. (emphasis mine)

⁶⁷ Norman L. Geisler and Frank Turek, *I Don't Have Enough Faith to Be an Atheist* (Wheaton, IL: Crossway, 2004), 139.

⁶⁸ William A. Dembski, "Explaining Specified Complexity," September 13, 1999, accessed February 8, 2014, http://www.leaderu.com/offices/dembski/docs/bd-specified.html.

Goldberg machines are good examples of irreducibly complex systems. Which part of a mousetrap can you remove and still have it work? The hammer that crushes the mouse? The spring that moves the hammer? The catch which lets the hammer go when the unsuspecting mouse nibbles on the cheese? The platform that holds everything in place? The answer is not any one piece can be removed and have it still function—it is irreducibly complex.

Life is Irreducibly Complex

Life not only has specified complexity as we have seen previously but it is also *irreducibly* complex. How is this damaging to Darwinian evolution? It nullifies the claim that life can arise gradually over time through random mutations. In a chapter entitled "Difficulties of the Theory" in *Origin of the Species*, Charles Darwin said:

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. But I can find out no such case.⁶⁹

It turns out, *all* organs fit this description! All organs are made up of cells and tissue. The technology in Darwin's day prevented him from seeing the inner workings of the cell and its subcellular structure. But the electron microscope of the 20th century gave us this first look. What did we find? In the words of Michael Behe, biochemist and author of *Darwin's Black Box: The Biochemical Challenge to Evolution*, we discovered that:

Life is based on machines—machines made of molecules! Molecular machines haul cargo from one place in the cell to another along "highways" made of other molecules, while still others act as cables, ropes, and pulleys to hold the cell in shape. Machines turn cellular switches on and off, sometimes killing the cell or causing it to grow. Solar-powered machines capture the energy of photons and store it in chemicals. Electrical machines allow current to flow through nerves. Manufacturing machines build other molecular machines, as well as themselves. Cells swim using machines, copy themselves with machinery, ingest food with machinery. In short, *highly sophisticated molecular*

⁶⁹ Charles Darwin, *On the Origin of Species* (New York: The Harvard Classics, 1909–14), chapter 6, 1, accessed February 13, 2014, http://www.bartleby.com/11/6005.html. (emphasis mine)

machines control every cellular process. Thus, the details of life are finely calibrated and the machinery of life enormously complex.⁷⁰

Just how complex is a eukaryote cell? There are *twenty* parts and each part has its own distinct function. Mitochondria produce the cell's energy, the endoplasmic reticulum processes proteins, the Golgi apparatus acts as a way station for proteins being transported elsewhere, the lysosome disposes of the cell's garbage, secretory vesicles store cargo before it's sent out of the cell and the peroxisome helps metabolize fats.⁷¹ All of these pieces must be in place for life to work—like a mousetrap or a car engine, it is irreducibly complex. Evolution must not just explain how *one* of these parts evolved but how *all twenty* of these parts evolved—together!

Irreducibly complex systems like mousetraps, Rube Goldberg machines, and the intracellular transport system cannot evolve in a Darwinian fashion. You can't start with a platform, catch a few mice, add a spring, catch a few more mice, add a hammer, catch a few more mice, and so on: The whole system has to be put together at once or the mice get away. Similarly, you can't start with a signal sequence and have a protein go a little way towards the lysosome, add a signal receptor protein, go a little further, and so forth. It's all or nothing.⁷²

Second, irreducible complexity is beyond the cell. It is found in the components that provide ciliary motion (what allows cells to "swim"), propulsion by bacterial flagellum (a biological rotary propeller system), vesicular transport, blood clotting, vision, "features of the immune system like clonal selection, antibody diversity, and the complement system," "biosynthesis of the larger amino acids, lipids, vitamins, [and] heme." These features could not have developed gradually because their components are all irreducibly complex.

⁷⁰ Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, 2nd ed. (New York: Free Press, 2001), Kindle Edition: Location 112-18. (emphasis mine)

⁷¹Ibid., Location 1550-57.

⁷² Ibid., Location 1692-96.

⁷³ Ibid., Location 2118-20.

⁷⁴ Ibid.. Location 2475.

Third, there is irreducible complexity at the system level. The human body is made up of ten major organ systems which must work together as one unit. There is the digestive system (throat, stomach, intestines, colon, gallbladder), skeletal system (bones, cartilage, ligaments, tendons), reproductive system (male: testes, scrotum, penis, prostate; female: ovaries, uterus, vagina), integumentary system (skin), muscular system, nervous system (brain, spinal cord, nerves), endocrine (hormonal) system (thyroid, sweat glands), excretory system (kidneys, liver), respiratory system (nose, throat, lungs, diaphram) and circulatory system (blood, vessels, heart). Each system depends upon the other—they would all need to evolve together, *simultaneously*, for the body to function normally. Joseph A. Kuhn, MD, writes in the Baylor University Medical Center journal:

Such [evolutionary] changes would require far more than could be expected from random mutation and natural selection. Since these systems are irreducibly complex and individual *mutations in one organ would not be beneficial for the organism*, these random mutations in all aspects... would *need to occur simultaneously*. Therefore, the human body represents an irreducibly complex system on a cellular and an organ/system basis.⁷⁶

Fourth, there is irreducible complexity at the ecological level. Biologists Zuill and Standish said the nitrogen cycle, with its series of interconnected oxidation and reduction reactions, is evidence of irreducible interdependence in ecology.⁷⁷ In this cycle, humans and animals provide carbon dioxide to plants while plants provide oxygen to humans. Microbiologist Andrew Fabich points to honeybees as another example.⁷⁸ Plants require bees for pollination;

⁷⁵ Encyclopedia Britannica, s.v. "Organ" accessed February 10, 2014, http://www.britannica.com/EBchecked/topic/431855/organ.

⁷⁶ Joseph A. Kuhn, "Dissecting Darwinism", *Baylor University Medical Center Proceedings* 1 (January 2012): 1, accessed February 13, 2014, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246854/.

⁷⁷ Henry A. Zuill and Timothy G. Standish, "Irreducible Interdependence: An IC-Like Ecological Property Potentially Illustrated by the Nitrogen Cycle", *Origins* 60 (2007): 6-40, accessed February 13, 2014, http://www.grisda.org/origins/60006.pdf.

⁷⁸ Andrew J. Fabich "Of Mousetraps and Men: How Ecology Exhibits Irreducible Complexity," February 10, 2009, accessed February 13, 2014, http://www.strengthsandweaknesses.org/NewsletterArchive/2009.02.10.htm.

bees require the food that plants provide. Other examples include the relationship between certain insects and bacteria, between vascular plants and fungi, and the four-part symbiotic relationship between leaf-cutting, fungus-farming ants, plants, and both macro and micro fungus. Fabich concluded:

...all living organisms interact with and change their environments and, yet, do not destroy their natural environment unless the ecosystem becomes imbalanced. Without any guiding force or intelligence, ecosystems have a tendency towards self-destruction and do not give themselves the opportunity to exist in the first place: they are doomed from the beginning. The only way for any ecosystem to exist is for the ecosystem to have existed and function in its entirety from its origin. Therefore, ecosystems cannot come into existence by Darwinian mechanisms because they are *irreducibly complex*.⁷⁹

Astrophysicist Hugh Ross underscores the challenge that irreducible complexity presents to the naturalist:

Naturalistic evolutionary models must explain how both or all the symbiotic partners *emerged and developed simultaneously*—and in proximity—with the specific morphological and biochemical features in place to permit the transfer of mutually beneficial—or absolutely essential—goods and services to the other(s). An even greater challenge may be to explain how symbiotic relationships became so ubiquitous in the biological realm. ⁸⁰

P—Plausibility Problems

Even if one disagrees with the previous argument that macroevolution is impossible because of specified and irreducible complexity, at best, it is highly improbable.

Macroevolution Requires Nine Conditions

Geneticist R.H. Byles said there are nine conditions, *all of which must be met*, for macroevolution to occur.⁸¹ (1) Advantageous mutations reduce non-mutated population size.

⁷⁹ Ibid.

Hugh Ross, "Symbiosis Studies Reveal Stunning Complexity," March 1, 2010, accessed February 13, 2014, http://www.reasons.org/articles/symbiosis-studies-reveal-stunning-complexity. (emphasis mine)

⁸¹ R.H. Byles, "Limiting Conditions for the Operation of the Probable Mutation Effect" Social Biology, 19 (March, 1972):29-34.

Therefore, they must occur in a neutral (non-hostile) environment otherwise the organism will not be retained in the population. Very few locations would meet this criterion. (2) Since natural selection weeds out rather than preserves mutations in a gene pool, the mutation cannot make any structural change in the organism. (3) The net effect of the mutation must be unidirectional yet "most recurrent mutations have been observed to retain the potential for back mutation."82 (4) There must be a high mutation rate, in the order of "one in ten thousand and one in a million per gene per generation" in higher organisms. He adds that even this figure is small and would, "would result in a very small change in a given gene pool, even given large numbers of generations. This has long been considered one of the major stumbling blocks to the [Probably Mutation Effect]." (5) The population must be large because small populations can be easily destroyed by a mutation. But the effects of the mutation of a large population are zero. (6) Organisms with many genes add more complications. Like point two, mutations in these organisms must be also selectively neutral relative to the gene which mutates. (7) There must be "little or no hybridizing admixture," or "crossbreeding" with others of the same kind. (8) "The genetic structures involved must have high 'penetrance'" (must be highly susceptible to mutation). (9) There must be "high heritability" (its genetic information must be heritable), a condition which is "almost never met for mutational phenotypes." With so many requirements, one can conclude:

It appears that the probability of meeting any one of these conditions in nature is *extremely low, if not non-existent...* the fifth and seventh conditions effectively cancel each other out, as do the third and eighth, and we are forced to the conclusion that it is impossible to meet all the conditions. Mutation cannot be the mechanism for macroevolution.⁸³

⁸² E. Calvin Beisner, "Mutation Fixation: A Dead End for Macro-Evolution," 1987, accessed February 13, 2014, http://www.icr.org/article/270/.

⁸³ Ibid. (emphasis mine)

All things considered—the unlikeliness that mutations can meet all nine required conditions for macroevolution, the impossibility of specified and irreducible complexity arising from natural processes, the lack of evidence for macroevolution in the fossil record—it's a strike for biological evolution.

Put All Three Together: A Plausibility Nightmare

The biggest *plausibility problem* for naturalistic evolution is that for it to be true, each of the three types of evolution would need to be true. Cosmic evolution (origin of matter from non-matter), chemical evolution (origin of living matter from non-living matter) and biological evolution (origin of more complex life from simpler life) would *all* have to be true *cumulatively*. ⁸⁴ But as we have seen, each pillar in the evolutionary hypothesis has fatal issues.

"Three Strikes, Evolution—You're Out!"

In summary, cosmic evolution cannot be true because the universe (which must have a cause because it has a beginning) could not have caused itself, but must have a supernatural and intelligent cause (because it did not have to be). Chemical evolution goes against the work of Louis Pasteur, lacks historical evidence (there likely never was an early, primordial soup), and its proponents are ultimately are at a loss to explain it. Biological macroevolution remains unobserved, is impossible to accomplish because of irreducible complexity, and lacks empirical confirmation and geological evidence. Evolution seems to be a hypothesis that doesn't have a leg to stand on. Since there are really two options, an unintelligent, naturalistic evolutionary process or an intelligent cause, ⁸⁵ the only adequate explanation for the origin of the universe, life and human life is a supernatural, intelligent cause.

⁸⁴ There are two more pillars of evolution that would need to be addressed as well: psychological evolution (conscious life from non-conscious life) and anthropological evolution (rational life from non-rational life). However, these are outside the scope of this paper.

⁸⁵ See page 10, "There Are Just Two Options, Really."

Appendix 1: The Analogy of the Canyon

Michael Behe, professor of biochemistry at Lehigh University, came up with a great analogy which may help explain why people continue to find the theory of evolution appealing. It was so helpful to me that I decided to summarize it here in an appendix.

Imagine there is a deep four-foot ditch completely separating you and your neighbor. One day you find your neighbor in your yard and you ask how he got there. If he says, "I jumped," that seems like an acceptable answer. However, imagine the gap is now a 100 foot wide canyon. Suddenly "I jumped" isn't acceptable! But suppose he begins to explain his arrival into your yard this way:

He did not come across in one jump. Rather, he says, in the canyon there were a number of buttes, no more than 10 feet apart from one another; he jumped from one narrowly spaced butte to another to reach your side. Glancing toward the canyon, you tell your neighbor that you see no buttes, just a wide chasm separating your yard from his. He agrees, but explains that it took him years and years to come over. During that time buttes occasionally arose in the chasm, and he progressed as they popped up. After he left a butte it usually eroded pretty quickly and crumbled back into the canyon. ⁸⁶

This story teaches us three lessons. First, a "jump" can be offered as an explanation for how a gap was bridged, but it's the gap's width that determines whether it was really plausible. Second, crossing a huge gap is made more plausible if it's turned into a series of smaller, consecutive jumps. Third, you can't argue with someone who says they used smaller stepping stones to bridge the gap if they also claim that those stones have since disappeared.

Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, 2nd ed. (New York: Free Press, 2001), Kindle Edition: Location 268-73.

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