

Is Evolution True?

By John C. Murphy

The evolutionary debate is complex on its own, but it is often further complicated by the use of a logical fallacy known as equivocation. Equivocation occurs when someone uses a term with more than one meaning in a misleading manner by glossing over which meaning is intended at a particular time.¹

This fallacy permeates the evolutionary debate because the word “evolution” has multiple levels of meaning. Even though equivocation is often unintentional, when exploring a question like “Is evolution true?” it is important to be able to understand and recognize it. Therefore we will discuss two subcategories of the broad word “evolution” (specifically, microevolution and macroevolution) that lead to much of the misunderstanding.

Darwinian Evolution

In 1859 Charles Darwin published his classic work *On the Origin of Species by Means of Natural Selection*. In it Darwin proposed an explanation of how populations and organisms evolve. Darwin’s theory involved two main mechanisms:

1. Hereditary traits: In any population of organisms, individuals will exhibit slight variations. Often those variations are hereditary, meaning specific traits can be passed down from generation to generation.
2. Natural selection: Individuals with variations favorable within a particular environment are more likely to survive and pass on those variations to the next generation than individuals with less-favorable variations.

The concept of hereditary traits was already well known by Darwin’s time. The idea of natural selection was Darwin’s greatest contribution to the scientific community, and it is that for which he is most remembered.

Darwinian evolutionary theory proposes that over time these twin mechanisms can cause a population to look entirely different, demonstrating that species are not fixed.² A common textbook example used to illustrate Darwinian evolution is the Galapagos finches.³ Since 1977, biologists Peter and Rosemary Grant have directly observed the evolution of beak size in the population of Galapagos finches.

Within the Galapagos Islands, environmental factors such as drought and rainy seasons impact food source availability. Different beak shapes and sizes of some finches are more advantageous for gathering specific food sources, which depend upon the environmental conditions. Finches with these favorable beak characteristics are therefore able to survive challenging environmental conditions and pass along their traits. This is an example of natural selection driving *microevolutionary* modifications: changes that help an organism adapt and survive.⁴

Neo-Darwinian Evolution

When he proposed his theory, Darwin knew that traits were heritable, but he didn’t know why. As science advanced, we began to learn about genetics. We learned that some traits already exist in the [genome](#) and other traits arise due to mutations. With this revelation, the twin mechanisms of Darwinian evolution became genetics/mutation and natural selection. This revised theory is now called neo-Darwinian evolution.⁵

It might surprise many to learn that, so defined, most creationists accept neo-Darwinian evolution. Many prominent, reputable creationist leaders and organizations accept the mechanisms of genetic mutation and natural selection, acknowledging that, when combined, they have the ability to produce changes in a population, as illustrated by the Galapagos finches. This part of Darwin’s theory is demonstrable and generally uncontroversial; it accurately details how microevolutionary modifications can help an organism adapt and survive.”

¹ Aaron Larsen and Joellie Hodge, *The Art of Argument: An Introduction to the Informal Fallacies* (Camp Hill, PA: Classical Academic Press, 2010), 194.

² Alton Biggs, Whitney Crispin Hagins, and Chris Kapicka, “Section: 18.1: Natural Selection and the Evidence for Evolution, Darwin’s Explanation for Evolution,” *Biology: The Dynamics of Life* (Westerville, OH: Glencoe/McGraw-Hill, 1998), 427.

³ For a more detailed account, see Jonathan Weiner’s Pulitzer Prize-winning book *The Beak of the Finch* (New York: Vintage Books, 1994).

⁴ Stephen C. Meyer et. al., *Explore Evolution: The Arguments For and Against Neo-Darwinism* (Victoria, Australia: Hill House Publishers, 2007), 88.

⁵ *Ibid.*, 6–7.

Controversy

The controversy arises in regard to further assertions. In addition to mechanisms to explain the diversification of species (e.g., different beak shapes), Darwin proposed that these microevolutionary changes could gradually accumulate to the point where we see genuine creative potential. He believed the same mechanisms that could alter the size and shape of the beak could also explain the actual origination of the beak and the bird, as well as any other features we observe in life. Hence, *macroevolution* is the eventual construction and introduction of new features, systems, and body plans—not merely the alteration of existing features, systems, and body plans, as in microevolution.

In addition to microevolution and macroevolution, some have further categorized evolutionary processes:

- Chemical evolution: the origin-of-life hypothesis that suggests a complex chemical mixture of simple compounds was able to self-organize into the first life-forms
- Microbial evolution: transformations within single-celled organisms
- Speciation: when a new species arises and no longer mates with the parent species, which leads to common ancestry (e.g., all species of Galapagos finches share a common South American ancestor)
- Common descent: when multiple kinds of animals share a common ancestor (e.g., the belief that all primates share a common ancestor from 5–7 million years ago)
- Universal common descent: the belief that all life-forms share a single common ancestor⁶

This is the point at which many creationists begin to dispute the theory of neo-Darwinian evolution. The concepts of chemical evolution, macroevolution, common descent, and universal common descent simply do not enjoy the same empirical demonstrability as microevolution, microbial evolution, and speciation. Creationists assert that chemical evolution, macroevolution, common descent, and universal common descent are assumed to be true by their proponents though they have not yet been demonstrated. As such, for creationists, these theories remain open questions within science.

It is important to recognize that proponents of evolution will often provide examples of microevolution, microbial evolution, or speciation—which are widely accepted and generally uncontroversial even within the creationist community—and reason as if they are demonstrating the legitimacy of macroevolution, common descent, or universal common descent. This is a textbook example of equivocation. The validation of one kind of evolution doesn't necessarily substantiate the veracity of a different type.

Examining the Fossil Record

You will find similar doubts expressed within the evolutionary community itself. Many evolutionists question whether the same neo-Darwinian mechanisms that validate microevolution, microbial evolution, and speciation are capable of constructing the sort of comprehensive transformations required to account for macroevolution, common descent, and universal common descent.⁷

Darwin himself recognized that the fossil record, at the time, failed to support his theory. He noted:

The number of intermediate varieties, which have formerly existed on the earth, [must] be truly enormous. 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. The explanation lies, as I believe, in the extreme imperfection of the geological record.⁸

Darwin then offered predictions as to the sort of transitional fossils he would expect to be found in the future, stating that he anticipated the record to be much more supportive and confirmatory in regard to his theory.

However, over a century later, paleontologists Niles Eldredge and Stephen Jay Gould publicly acknowledged that the fossil record consisted mainly of sudden appearance and stasis (a period of little or no evolutionary change), which fail to

⁶ Dr. Fazale Rana, "Long-Term Evolution Experiment: Evidence for the Evolutionary Paradigm?, Part 1 (of 2)," *Reasons to Believe*, November 12, 2009, <http://www.reasons.org/articles/long-term-evolution-experiment-evidence-for-the-evolutionary-paradigm-part-1-of-2>. Also see Stephen C. Meyer and Michael Newton Keas, "The Meanings of Evolution," in *Darwinism, Design, and Public Education*, ed. John Angus Campbell and Stephen C. Meyer (East Lansing, MI: Michigan State University Press, 2003), 136–144.

⁷ *Ibid.*, 155. Stephen C. Meyer and Michael Newton Keas detail an impressive list of published dissenters in the endnotes of their essay "The Meanings of Evolution."

⁸ Charles Darwin, *On the Origin of Species*, ed. William Bynum (London: Penguin Classics, 2009), 250.

demonstrate the gradual macroevolution of life that Darwin proposed:

Paleontologists just were not seeing the expected changes in their fossils as they pursued them up through the rock record. . . . That individual kinds of fossils remain recognizably the same throughout the length of their occurrence in the fossil record had been known to paleontologists long before Darwin published his Origin. Darwin himself . . . prophesied that future generations of paleontologists would fill in these gaps by diligent search. . . . One hundred and twenty years of paleontological research later, it has become abundantly clear that the fossil record will not confirm this part of Darwin's predictions. Nor is the problem a miserably poor record. The fossil record simply shows that this prediction is wrong.⁹

Convinced that the fossil record was failing to corroborate the macroevolutionary part of Darwin's theory, Gould and Eldredge proposed their own theory—known as punctuated equilibrium—claiming that macroevolution must occur in sudden jumps (known as saltationism) as opposed to Darwinian gradualism.¹⁰

In 2007, Gene Hunt, from the department of paleobiology at the Smithsonian Institution's National Museum of Natural History, published a peer-reviewed paper in *Proceedings of the National Academy of Sciences*. Hunt's team conducted a comprehensive study of the fossil record and determined that the fossil record fails to support gradualistic, directional models of evolution such as neo-Darwinism.

"Directional evolution," Hunt noted, "is rarely observed within lineages traced through the fossil record . . . very few sequences provide unequivocal support for this model. . . . The rarity in the fossil record of lineages with this degree of directionality is therefore meaningful, and it requires explanation."¹¹ Hunt's team concluded that the sudden appearance and lack of directional evolution documented in the fossil record, from an evolutionary perspective, was more supportive of saltationist models such as punctuated equilibrium. (It is worth noting here that a fossil record consisting of sudden appearance and stasis would also corroborate creationist models of existence.)

Gould and Eldredge are not alone in their assessment of the neo-Darwinian explanation. Dr. James Shapiro, a professor in the University of Chicago's department of biochemistry and molecular biology, has critically noted:

There are no detailed Darwinian accounts for the evolution of any fundamental biochemical or cellular system, only a variety of wishful speculations. It is remarkable that Darwinism is accepted as a satisfactory explanation for such a vast subject—evolution—with so little rigorous examination of how well its basic thesis works in illuminating specific instances of biological adaptation or diversity.¹²

Dr. Shapiro published a peer-reviewed paper in 2010 and a book in 2011, in which he observed that gradualistic neo-Darwinian evolution appears incapable of constructing new biochemical or cellular systems. Dr. Shapiro proposed the concept of natural genetic engineering as a possible alternative saltationist solution to the macroevolutionary leaps that, from an evolutionary perspective, must have occurred in nature.¹³

In 2007, Dr. Michael Behe, a professor of biological science at Lehigh University, published his book *The Edge of Evolution: The Search for the Limits of Darwinism*. Appealing mostly to evolutionary studies in the HIV virus and malaria parasite due to their abundant population sizes and rapid mutational rates, Behe argues that the neo-Darwinian mechanisms appear to have a boundary—an "edge" as he calls it—in their constructive potential. He summarizes:

The bottom line: Despite huge population numbers and intense selective pressure, microbes as disparate as malaria and HIV yield similar, minor evolutionary responses. Darwinists have loudly celebrated studies of finch beaks, showing modest changes in the shapes and sizes of beaks over time, as the finches' food supplies changed. But here we have genetic studies over thousands upon thousands of generations, of trillions upon trillions of organisms, and little of biochemical significance to show for it.¹⁴

To be clear, Gould, Eldredge, Hunt, and Shapiro remain proponents of evolution. Even though they doubt the neo-Darwinian mechanisms can provide a complete explanation of our existence, they do believe macroevolution has occurred.

⁹ Niles Eldredge and Ian Tattersall, *The Myths of Human Evolution* (West Sussex, England: Columbia University Press, 1982), 45–46.

¹⁰ Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1985), 192–195.

¹¹ Gene Hunt, "The Relative Importance of Directional Change, Random Walks, and Stasis in the Evolution of Fossil Lineages," *Proceedings of the National Academy of Sciences*, 104 (November 20, 2007): 18404–18408, www.pnas.org/cgi/doi/10.1073/pnas.0704088104.

¹² William A. Dembski, "Introduction: The Myths of Darwinism," *Uncommon Dissent: Intellectuals Who Find Darwinism Unconvincing* (Wilmington, DE: ISI Books, 2004), 308. This quote is cited in the endnotes. The original quote came from James A. Shapiro, "In the Details . . . What?," *National Review* (September 16, 1996), 62–65.

¹³ See "Mobile DNA and Evolution in the 21st Century," *Mobile DNA Journal* (December 2010). On page 1, Shapiro writes, "The origins of complex adaptive novelties at moments of macroevolutionary change" remains an "unresolved question in evolutionary theory." On page 9, he writes, "Single amino acids changes (the neo-Darwinian mechanism) are more suitable for modulating existing functional properties than generating capabilities that did not exist previously." Also see *Evolution: A View From The 21st Century* (Upper Saddle River, NJ: FT Press Science, 2011), 128: "Little evidence fits unequivocally with the theory that evolution occurs through gradual accumulation of 'numerous, successive, slight modifications.' On the contrary, clear evidence exists for abrupt events of specific kinds at all levels of genome organization."

¹⁴ Michael J. Behe, PhD, *The Edge of Evolution: The Search for the Limits of Darwinism* (New York: Free Press, 2007), 140.

Creationists will often quote scientists critiquing various elements of evolutionary theory as evidence that “evolution” as a whole is not yet demonstrated. However, doing so is misleading and deceptive.

Whether vs. How

Many proponents of evolution proclaim that the truth about *whether or not* macroevolution has happened is being confused with theories involving how it happened. They assert that whether or not macroevolution has happened is an established fact: it is beyond doubt that it did. How it happened, they acknowledge, is still open to debate.

For example, Eldredge himself has stated:

The common expression “evolutionary theory” actually refers to two rather different sets of ideas: (1) the notion that absolutely all organisms living on the face of the Earth right now are descended from a single common ancestor; and (2) ideas of how evolutionary process works. Creationists love to gloss over the rather clear-cut, simple distinction between the idea that (1) life has evolved, and the sets of ideas on (2) how the evolutionary process actually works.¹⁵

Let’s take a look at this argument. To start, we must recognize that Eldredge’s statement is another example of equivocation. In his first mention of point 1 he refers to evolution in the sense of universal common descent. When he revisits point 1, the definition has changed from “absolutely all organisms . . . are descended from a single common ancestor” to merely “life has evolved,” which could mean simply microevolution or speciation. In the first example Eldredge refers to a definition of evolution that remains disputed even among proponents of evolution; he then switches to a definition of evolution that few—even creationists—would argue. Although likely unintentional, statements like this are deceiving and confuse the issue.

In response to the questions of whether or not and how, the creationist argues that evolutionists are missing the point entirely.

For example, imagine that the police are called to a residence because a person has been reported as deceased. Initially it appears to be death by natural causes; however, family and neighbors report that they are certain the spouse was responsible for the fatality. The police now have to determine whether or not there was a murder. In order to establish this fact they will need to ascertain how the victim perished. If they are unable to verify how the victim died, then many would assert the police are incapable of truthfully answering the question of whether or not a murder took place, despite the strongly held beliefs of the family and neighbors.

The point of the analogy is that there are alternative, viable explanations. The evidence is not sufficient to establish the validity of one (the murder charge) over the other (death by natural causes) until the police are able to establish how the person perished. Along these lines, many creationists assert that the veracity of macroevolution, common descent, and universal common descent are merely assumed, not demonstrated. Similar to the question of whether or not a murder took place, if one cannot establish *how* macroevolution has occurred, then one is unable to validate the question of *whether or not* it has.

But the evolutionist who embraces materialistic naturalism—which is defined below—believes there to be no viable alternative explanation. From this perspective, some form of macroevolutionary explanation *must* be true. Therefore, it is assumed to be a fact, even though the evidentiary details remain unknown.

The Flaw in Materialistic Naturalism

Now, if materialistic naturalism accurately represents the nature of reality, then this could be a reasonable inference. However, materialistic naturalism is merely a philosophical assumption—one that contains a major conceptual deficiency in regard to explaining human existence. Materialistic naturalism cannot provide even a theoretical account for the evolution of conscious, mindful, rational agents possessing free will in a universe that consists entirely of mindless, meaningless physical particles.

¹⁵ Niles Eldredge, *The Triumph of Evolution and the Failure of Creationism* (New York: Henry Holt and Company, LLC, 2001), 24. Also see National Academy of Sciences, *Science and Creationism: A View from the National Academy of Sciences* (Washington, DC: National Academy Press, 1999), 28: “Those opposed to the teaching of evolution sometimes use quotations from prominent scientists out of context to claim that scientists do not support evolution. However, an examination of the quotations reveals

that the scientists are actually disputing some aspect of *how* evolution occurs, not *whether* evolution occurs” (emphasis in original). Also see Richard Dawkins, *The Greatest Show On Earth: The Evidence For Evolution*, (New York: Free Press, 2009), 17: “Biologists often make a distinction between the *fact* of evolution (all living things are cousins), and the *theory* of what drives it” (emphasis in original).

Let's examine this issue more closely, starting with the basic definition of materialistic naturalism. The Center for Naturalism explains:

Naturalism is simply the understanding that there exists a single, natural, physical world or universe in which we are completely included. There are not two different worlds, the supernatural and natural. . . . Naturalism says we are completely physical, material creatures, a complex, highly organized collection of atoms, molecules, cells, neurons, muscles, bone, etc., produced by evolution. So we don't possess immaterial souls, or spirits, or any "mental" stuff inside us that's separate from our physical being. . . . We are not "causally privileged" over the rest of nature, that is, we don't get to cause without being fully caused ourselves. To think that would be to hold a supernatural view of ourselves, the opposite of naturalism.¹⁶

So materialistic naturalism, by definition, denies the reality of anything immaterial. However, the existence of our libertarian freedom—our ability to think, act, and reason freely—seems to require some mental or spiritual reality that is independent and capable of directing the biological machine that is our body. Put more simply, the reality of libertarian freedom just cannot be explained by the current understanding of evolution. Though the existence of this "self" appears evident to each of us, materialistic naturalism implies that this is merely an illusion. Consequently, so is free will.

Cornell University's Professor William Provine clarifies this issue:

Modern science directly implies that the world is organized strictly in accordance with mechanistic principles . . . free will as it is traditionally conceived—the freedom to make uncoerced and unpredictable choices among alternative possible courses of action—simply does not exist. . . . There is no way that the evolutionary process as currently conceived can produce a being that is truly free to make choices.¹⁷

Neuroscientist and author Sam Harris confesses, "Many scientists and philosophers realized long ago that free will could not be squared with our growing understanding of the physical world. . . . The problem is that no account of causality leaves room for free will."¹⁸

I think it would be more accurate to say that "no account of causality *from the perspective of materialistic naturalism* leaves room for free will." And yet, immaterial thoughts, rationality, and free will still appear to be a demonstrable part of life, an observable component of human existence. This stubborn fact can't simply be reasoned away or swept behind the veil of a philosophical worldview.

Internationally respected atheist and philosopher Thomas Nagel acknowledges this in his book *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False*:

For a long time I have found the materialistic account of how we and our fellow organisms came to exist hard to believe, including the standard version of how the evolutionary process works. The more details we learn about the chemical basis of life and the intricacy of the genetic code, the more unbelievable the standard historical account becomes . . . it seems to me that, as it is usually presented, the current orthodoxy about the cosmic order *is the product of governing assumptions that are unsupported*, and that flies in the face of common sense . . . the origin and evolution of life and mind will not be explainable by physics and chemistry alone. An expanded, but still unified form of explanation will be needed, and I suspect it will have to include teleological elements [i.e. elements of purpose and design].¹⁹

Earlier we noted that if materialistic naturalism accurately represents the nature of reality, then assuming a macroevolutionary explanation to be factual could be a reasonable inference, despite its inability thus far to demonstrate how macroevolution may have happened. However, if materialistic naturalism is incapable of explaining something as visibly apparent as our ability to think, act, and reason freely, then this worldview is inadequate. Moreover, if this philosophical position is shown to be dubious, then there is no rational basis for simply assuming that a macroevolutionary account of our existence is a fact.

So Is Evolution True?

If we are referring to microevolution, microbial evolution, or speciation, then we can confidently answer yes. All three appear to have been demonstrably validated and are considered by most to be uncontroversial.

¹⁶ "Q & A on Naturalism," *Center for Naturalism*, www.centerfornaturalism.org/faqs.htm.

¹⁷ As quoted by Phillip Johnson in *Darwin On Trial* (Downers Grove, IL: InterVarsity Press, 1993), 126–127.

¹⁸ Sam Harris, *The Moral Landscape: How Science Can Determine Human Values* (New York: Free Press, 2010), 103–104.

¹⁹ Thomas Nagel, *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False* (New York: Oxford University Press, 2012), 5, 33, emphasis added.

However, if we are referring to chemical evolution, macroevolution, common descent, or universal common descent, then the answer isn't so simple. Many proponents of evolution have assumed from a naturalistic perspective that these have occurred and must be true. However, in perusing the scientific literature, the question as to how they could have happened remains very much open. Furthermore, if libertarian freedom is a real part of our existence, then even materialistic naturalists seem to admit that no evolutionary theory appears capable of explaining that existence. There simply isn't enough empirical evidence to validate these theories as factual.