

# Refuting Dubious Claims Regarding Natural Selection

Jason Lisle, Bible Science Institute, PO Box 1414, Aledo, Texas 76008

## Abstract

Randy Guliuzza has made some controversial claims regarding the cause and nature of adaptation of organisms to their environment. Specifically, he claims that natural selection does not exist, that the environment is never the cause in the process of adaptation, and that organisms' ability to self-adjust is the cause of speciation. We examine Guliuzza's claims in four areas: (1) consistent and correct use of terminology, (2) logical coherence, (3) scientific accuracy, and (4) theological faithfulness. We find that Guliuzza's claims fail in each one of these categories. Guliuzza's central claims are mere rhetoric and do not stand up to rational scrutiny. Moreover, Guliuzza's view implicitly denies the omnipotence and sovereignty of God by restricting God's design and power to organisms. We then consider how to discuss natural selection and adaptation properly, by applying careful scientific reasoning and correct terminology. We find that natural selection is very real and scientifically observable. And we find that adaptation of organisms always involves an environmental causal factor.

**Keywords:** natural selection, adaptation, speciation, causation, equivocation

## Introduction

Before we address the specific issues, by way of overview, the errors in Guliuzza's articles fall into four major categories:

(1) *Terminology.* Guliuzza fails to define terms and use them consistently. It is an essential part of the scientific process to carefully and specifically define terms, particularly in cases where a word has multiple lexical definitions. In particular Guliuzza never defines and fails to consistently use words and phrases such as “adaptation, natural selection, and power” to name a few. Moreover, Guliuzza seems to shift between the various meanings of these words in multiple ways within an argument—the fallacy of equivocation. This makes it nearly impossible for the reader to discern what it is that Guliuzza actually means by what he writes. It's like trying to nail down Jell-O.

(2) *Logical coherence.* Even when he is given the benefit of the doubt on terminology, Guliuzza makes numerous mistakes in logic. Even one logical fallacy is sufficient to render an argument unreliable. Yet, many such errors are present in Guliuzza's articles and presentations. As will be shown, these include fallacies such as reification, equivocation, bifurcation, begging the question, question-begging epithets, complex question, ad hominem, “no true Scotsman,” and irrelevant thesis. More subtle errors include the conflation of linguistic tokens with referents, and the conflation of a genuine argument with a verbal dispute.

(3) *Factual scientific errors.* It is important that everything we say and write is true to the best of our ability. Yet, Guliuzza has a tendency to state untested hypotheses as if they were established

fact. In addition, many of Guliuzza's claims are demonstrably false, as will be shown below. Unfortunately, Guliuzza continues to promote these false claims, even after they have been exposed as false.

(4) *Biblical and theological errors.* Some of Guliuzza's statements are either implicitly or explicitly unbiblical. Perhaps most significant is Guliuzza's failure to acknowledge that God uses means to accomplish His will. It's very easy to get the impression in Guliuzza's articles that he genuinely thinks that God does *not* sovereignly control the environment. But the Bible teaches that God uses the environment to accomplish His will (e.g. Genesis 6:17). This is in contrast to human designers, who have very little control over the external world.

This error seems to be at the root of the others. *Namely, Guliuzza limits God to what a human engineer could do.* A human engineer has no control over the environment; thus, his creation must have the innate capacity to function in whatever environment it is likely to encounter. Guliuzza falsely assumes this is also true of God; but God is not limited in such a way. God is sovereign over both organisms and environment (Psalm 50:12) and does whatsoever He pleases (Psalm 115:3).

In the fifth section of this paper, we will explore rational alternatives to Guliuzza's ideas. We will examine the importance of the issue and give consideration to how we might move forward from this.

Before we examine each of these in detail, we note that some qualified creation scientists have already published refutations of Guliuzza's articles. Purdom and Jeanson (2016) define and defend natural

selection and show how the truth of this topic refutes evolution, thereby refuting Guliuzza's misconceptions in the process. The critique of Jeanson (2013) was very succinct and focused only on the first category of error—Guliuzza's failure to define biological terms or to use them consistently. The critique was designed to prompt Guliuzza to actually define his terms, and to begin using them more carefully and consistently.

Unfortunately, this did not occur. Instead of rising to the scientific challenge, defining his terms, and using them consistently, Guliuzza replied with a lengthy three-part response that was basically a repeat of what he had written in his series (Guliuzza 2014a, b, c). He did not deal with the scientific evidence for the process of natural selection, but merely pointed out that he had used the word "process" in some of his previous writings. But this was never in doubt and is irrelevant to Jeanson's paper.

At no point in this reply did Guliuzza ever define the terms "natural selection" or "adaptation"—the very terms that Jeanson had pointed out were undefined in the original articles. He simply added *new* undefined terms, as we show below, and reiterated his confused thinking about natural selection. Thus, far from countering Jeanson's critique, Guliuzza actually confirmed it—something that Jeanson pointed out in his reply to Guliuzza's three-part response article (Jeanson 2014). Guliuzza's response contained a host of logical fallacies and theological errors as well—something we will examine below.

Let's now examine some of Guliuzza's writings for specific examples of the above errors.

### **1. Examples of undefined terms and inconsistent usage.**

Guliuzza fails to write a clear and coherent article with accuracy and precision. Science is not only about getting the facts right and drawing logical inferences; it is also about communicating ideas with clarity.

If three different people read one of Guliuzza's articles, it is likely that they will come away with three different opinions as to what Guliuzza is actually saying. Some will say they largely agree with Guliuzza because they pass over the confusing or inaccurate claims and focus primarily on the things that Guliuzza gets right: that evolutionists fail to give glory to God for the design seen in the natural world, that natural selection cannot result in evolution, that organisms are extremely well designed. There's no argument there; creationists have been saying these things for decades. Others will read the problematic sections in the best possible light: "I don't think he actually means what he says, he simply means \_\_\_\_." Still others will assume that Guliuzza actually means what he writes, will spot the errors, and will naturally disagree with them.

The eighteenth century theologian and hymn writer Isaac Watts wrote a scholarly book on the topic of logic. This book was used as a textbook in schools for many years. In Chapter 6, Watts writes about the importance of using clear, precise writing to convey an idea. Garbled writing fails to communicate and may indicate that the author himself does not fully understand the topic on which he writes. Watts states,

Have a care of making use of mere words instead of ideas, that is, such words as have no meaning, no definition belonging to them; do not always imagine that there are ideas wheresoever there are names; for though mankind hath so many millions of ideas more than they have of names, yet so foolish and lavish are we, that too often we use some words in mere waste, and have no ideas for them; or at least, our ideas are so exceedingly shattered and confused, broken and blended, various and unsettled, that they can signify nothing toward the improvement of the understanding....

Never rest satisfied, therefore, with mere words which have not ideas belonging to them, or at least no settled and determinate ideas. Deal not in such empty ware, whether you are a learner or a teacher; for hereby some persons have made themselves rich in words, and learned in their own esteem; whereas in reality their understandings have been poor, and they knew nothing. (Watts 1724)

Watts then encourages the reader to carefully define any important terms at the outset of any discussion, and to use those terms consistently throughout. This truly is an important aspect of all scientific writing, and guards us against using mere verbiage empty of rational content. Yet, in Guliuzza's writings there is a consistent failure to define key terms.

### **The Term "Natural Selection"**

For examples of this, consider his first article in the Acts and Facts series (Guliuzza 2011a). In this article Guliuzza laments "A survey of research documents reveals no consensus definition of natural selection." Yet, ironically, at no point in his article does Guliuzza himself ever define natural selection. Even recently, Guliuzza discusses what he believes to be the "the ill-defined concept of natural selection" (Guliuzza 2018). Is it really "ill defined?"

*The American Heritage Science Dictionary* defines natural selection as, "The process by which organisms that are better suited to their environment than others produce more offspring. As a result of natural selection, the proportion of organisms in a species with characteristics that are adaptive to a given environment increases with each generation."

The *Merriam-Webster's Dictionary* similarly defines natural selection as “a natural process that results in the survival and reproductive success of individuals or groups best adjusted to their environment and that leads to the perpetuation of genetic qualities best suited to that particular environment.”

Dictionary.com synonymously defines natural selection as “the process by which forms of life having traits that better enable them to adapt to specific environmental pressures, as predators, changes in climate, or competition for food or mates, will tend to survive and reproduce in greater numbers than others of their kind, thus ensuring the perpetuation of those favorable traits in succeeding generations.”

The *Oxford Dictionary* succinctly defines natural selection as “The process whereby organisms better adapted to their environment tend to survive and produce more offspring.” The *Cambridge Dictionary* synonymously defines natural selection as “the theory that organisms with characteristics that allow them to live successfully in a particular environment will reproduce organisms with the same characteristics.” The *Collins English Dictionary* defines the term as “a process by which species of animals and plants that are best adapted to their environment survive and reproduce, while those that are less well adapted die out.”

All of these definitions are perfectly clear and consistent. Indeed, I have not found a single dictionary that gives any other definition. Can there be any doubt that this is the definition of the term? As a last resort someone might say, “all the dictionaries are wrong.” But this would be tantamount to saying “I refuse to use words in the same way that other people do.” Dictionaries merely record the way that most people use a word, which is by definition the meaning of the word. Successful communication requires both the sender and receiver of any information to use the same meaning for the words. Therefore, Guliuzza’s claim that natural selection is ill-defined is without merit.

Namely, natural selection is the claim that: (1) there are variations in organisms, (2) some of which are more conducive to survival in a particular environment than others, and (3) organisms with such favorable traits are more likely to survive and reproduce than those that lack such traits. It’s hard to deny that this does indeed happen. A pair of fish deposited on a rocky mountain outcropping will not survive and reproduce as well as a pair of mountain goats in the same location. And conversely, a pair of mountain goats deposited in the middle of the ocean will not survive and reproduce as readily as a pair of fish. Natural selection is easily observed all over the world.

In popular usage, natural selection is simply called “survival of the fittest.” Stated this way, we can see that natural selection is necessarily true, because it is analytically true (true by virtue of the definition of the words). Namely, the “fit” are defined to be those that are most able to survive in an environment. Thus, survival of the fittest is basically saying “survivors survive.” Well, yes—by definition they must.

And so, just by consulting dictionaries, we can see that Guliuzza’s claim (that natural selection is ill-defined or has no consensus definition) is demonstrably false. Guliuzza laments that he can’t (explicitly) find the definition in “research documents.” But that’s hardly surprising since the term is so well-known and is even found in a standard dictionary. Most research documents in astronomy don’t define what a telescope is. This is precisely because the definition is so well known—there’s no need to define what everyone already understands. Moreover, Guliuzza himself never—at any point in this article or any of his articles—actually defines what natural selection is. He then goes on to argue against the existence of something that he has not defined—something that he claims has no consensus definition.

But if something is not defined, then how can any argument whatsoever be made for or against its existence? Thus, the reader is left wondering, “What exactly does Guliuzza mean when *he* uses the term natural selection?”

Giving Guliuzza the benefit of the doubt, and assuming that he is using the correct definition of natural selection (that survivors survive), it is hard to understand how he could claim the following. He writes in his first article (Guliuzza 2011a), “Natural selection contradicts biblical truth.” Really? Where does the Bible deny that survivors survive? Where does the Bible claim that it is *not* the case that animals with traits favorable to survival are in fact more likely to survive and reproduce in greater numbers? I am aware of no such verse.

Furthermore, the Bible contains an *example* of natural selection. Which animals perished during the worldwide Flood? All air-breathing land animals outside the Ark died (Genesis 7:21–22). But fish survived. There was no need to bring fish on board Noah’s Ark (Genesis 6:17–20) because fish are well suited to an aquatic environment. Many fish survived outside the Ark, but no air-breathing land animals did because they are not suited for an aquatic environment. This is the very definition of natural selection. So Guliuzza’s claim that natural selection is unbiblical is demonstrably false.

Even more, Guliuzza claims that natural selection does not actually exist. Does Guliuzza actually deny that organisms with traits more conducive to

survival in a particular environment tend to survive and reproduce in greater numbers than those that lack such traits—the definition of natural selection? In his second article in the series (Guliuzza 2011b), he makes a number of claims that natural selection is not real. Consider the following:

Guliuzza writes, “Selection’ is not really real.” (Guliuzza 2011b). That seems pretty clear! He also writes, “Selection’ only happens in someone’s mind.” And “It’s only in the mind that ‘selection’ actually occurs.” He continues, “No tangible force or agent can truly be linked to ‘selection’—even by analogy or metaphor.” Guliuzza writes, “It’s difficult to dislodge things [referring to natural selection] that exist only in someone’s mind.” In his third article, he continues, “Nature selects for...’ is the exact opposite of reality” (Guliuzza 2011c). It seems that Guliuzza is teaching that natural selection is false and does not actually occur in reality.

Suppose we deposited two fish—a male and female of the same species, and two birds likewise in an enclosed aquarium. According to natural selection, the fish will be more likely to survive and reproduce in that environment than the birds. If we came back some time later, we would expect the birds to be dead, but the fish may well still be alive. Now since Guliuzza denies natural selection, presumably he must believe that the birds have an equal or greater probability of surviving in that environment than the fish. Guliuzza may deny that he believes such, but then he would be contradicting his professed belief that natural selection is not true. Of course, the Lord Himself performed this very type of experiment. During the global Flood, fish did not need to be brought on the Ark because they were well suited to an aquatic environment. But all air-breathing land animals (outside the Ark) perished (Genesis 7:21–22).

Strangely, after arguing that it does not exist, Guliuzza then goes on to explain all the things that natural selection *does*. In his first article (Guliuzza 2011a) we read that natural selection “contradicts biblical truth...plainly asserts that there is no intelligent design...induces thinking...has played [a significant role] in chipping away at biblical truth...steals glory from God...[has power] to captivate a mind...” In his second article (Guliuzza 2011b) we read that “The power of ‘natural selection’ to imprison minds must always be taken seriously.” Guliuzza writes that natural selection “steals credit from the organism and ultimately from the Lord.” Yet, just two sentences later, he writes that “selection’ is not really real.”

However, if natural selection does not actually exist, then how can it do *any* of the things Guliuzza claims that it does? Perhaps Guliuzza merely means to imply that the *concept* of natural selection does

these things, and not natural selection itself. But the wording is ambiguous, so we are left to wonder. It is clear that Guliuzza strongly dislikes natural selection and wishes to persuade the reader to similarly hate natural selection. But how does this even remotely imply that natural selection doesn’t exist?

The generous reader might suppose that Guliuzza is merely referring to the *term* natural selection, rather than the actual process of organisms with suitable traits reproducing in greater numbers. Perhaps he merely means to argue that the terminology should be changed since it is allegedly misleading but he is not actually denying survival of the fittest. On the surface, there appears to be some evidence to support this interpretation. In his first article in the series (Guliuzza 2011a), Guliuzza at one point states, “Given that ‘selection’ really is an inaccurate and false term....” He then asks, “do the words ‘natural’ and ‘selection’ in any verifiable way accurately describe observable interactions between an organism and its environment? Have the words ‘natural’ and ‘selection’...?” [emphasis added.] It sounds very much like he is discussing the term, not the process. In his second article, Guliuzza states that Darwin “invalidly terms that as a selection of ‘nature’” (Guliuzza 2011b). So, again, it seems like maybe it’s just the *term* that he dislikes, without denying the process.

However, the notion that Guliuzza is merely (and consistently) referring to the *term* natural selection and not the process itself is simply not congruent with Guliuzza’s claims that natural selection “is not really real.” All terms that are used are real—otherwise they couldn’t be used.

Moreover, it is inconsistent with the introduction of his first article to believe that Guliuzza is merely claiming that the *term* natural selection ought to be swapped out for some other term. This cannot be what he is arguing because he claims that we should “regularly evaluate *all* scientific ideas to ensure they are not rooted in unrecognized false assumptions and are instead fixed in reality. Case in point: ‘natural selection’” (Guliuzza 2011a) [underlines added]. Note that it is not the *term* that Guliuzza argues ought to be evaluated, but the *scientific idea* that we are to check to see if it is “fixed in reality.”

Terms are simply labels invented by people. They are not scientific ideas, and they are not expected to be fixed in reality. For example, the term “lion” is not a scientific idea, and there is nothing fixed in reality that would force us to use that particular term to refer to the animal. Had history developed differently, we might refer to lions with a very different term. Therefore, on some level, Guliuzza is not just suggesting a change in terminology. He seems, at least sometimes, to be arguing that the

underlying idea of natural selection—that survivors survive—is somehow false.

Then again, at other times, he seems to be arguing against using the *term* natural selection. It seems like he isn't sure himself whether he is against the term or the idea that survivors survive. He rapidly oscillates between these two uses, without explicitly identifying which use is in play.

### The Term “Adaptation”

Another term that Guliuzza fails to define or use consistently is the term adaptation. Guliuzza uses many words to express his ideas about the *cause* of adaptation. But, unfortunately, he never specifies what he *means* by adaptation, and seems to use the word in different and inconsistent ways. This is a critical error in reasoning, because in biology, there are actually two *very different* types of adaptation. Furthermore, these two different types of adaptation have very different causes. Thus, if Guliuzza is going to rationally discuss the cause of adaptation, he must indicate which of the two types of adaptation he is addressing—something he never does.

When we speak of organisms adapting to their environment, this always implies a *change* of some sort. But there are two fundamentally different ways in which we can say that organisms adapt to an environment. One kind is when the physiology of an *individual* organism is changed in response to particular environmental pressures *without any changes in its DNA*. For example, when people live for a period of time at high altitude, their red blood cell count increases to compensate for the lower levels of oxygen. But no change occurs in the person's DNA. This change would not be passed onto any children.

Another kind of change is when a *population* of organisms experiences a net shift in the most commonly expressed traits due to a shift in relative allele frequency. In other words, the most common alleles in the DNA of a group of organisms are not the most common alleles of their ancestors. The population has *genetically* adjusted to a changing environment. No individual organism changed, but the net DNA of the group changed over time.

Notice that the first kind of adaptation mentioned above is non-genetic. It does not involve any changes in the DNA and is therefore usually non-heritable. In other words, the person who engages in vigorous exercise will adapt by becoming more muscular—but his children will not be born more muscular than they would be otherwise and their DNA will not be different than it would be otherwise.

Notice that the second kind of adaptation involves a net change in the DNA of a population. This type of adaptation *is* heritable. For example, some dogs have alleles for short fur, others for long fur. If a

group of dogs consisting of both long fur and short fur varieties is released into a very hot environment, those dogs with longer fur have a tendency to die from heat exhaustion. After a time, only the short-furred variety is left. So, a change has taken place *in the population*; those alleles that produce long fur have been eliminated from the group because the dogs that carried them died. The dogs—as a population—have adapted to their environment, not because any individual dog adjusted its physiology, but rather because those dogs lacking the right traits for that environment died. And of course, the short-furred dogs that survived will have pups that are short-furred. This type of adaptation is heritable. And the cause is very different from the other type of adaptation.

Unfortunately, Guliuzza never specifies which type of adaptation he is discussing. Sometimes, it seems like he is discussing the heritable, genetic adaptation of a group of organisms. In his first article (Guliuzza 2011a) he states, “organisms possess traits they generate to solve the problems of a new environment, ones that enable their descendants to pioneer into new niches.” This suggests he is referring to genetically heritable changes in DNA that would be passed onto “their descendants” allowing them to “pioneer into new niches.”

In a later article entitled “Engineered Adaptability” (Guliuzza 2012b) Guliuzza explicitly refers to heritable traits, suggesting that he is addressing the genetic type of adaption. He says, “The first purpose for reproducing adaptive variable heritable traits was to solve changing environmental challenges, ultimately, to multiply and fill the environments—not to survive.” Yet, in the previous paragraph, he seems to refer to the physiological adaptability of an individual organism when he says, “Entities must possess a minimum system to maintain adaptable function.... If any one of these components is removed, the system's adaptability is lost...” And later, he writes, “Organisms possess information-based cellular mechanisms underlying their parts, development, and adaptive abilities.” He later gives an analogy to a submarine’s adaptability, which is presumably an analogy to the individual organism’s physiological adaptation, not genetic adaptation since submarines do not reproduce.

Guliuzza seems to continually shift between non-genetic, physiological adaptation within an organism, and the genetic adaptation of a group of organisms, without recognizing that these are two entirely different processes, with different mechanisms. He seems to think that by showing the cause of one, he has also proved the cause of the other since they are called by the same word. This is an equivocation fallacy. One certainly gets the impression from his

articles that Guliuzza is not aware of the distinction between these two different kinds of adaptation.

### The Term “Power”

In his logic textbook, Isaac Watts gives some examples of words that are commonly used in place of actual ideas. And one of those words is “power.” When undefined, it is a very ambiguous word.

One certainly sees this type of error in Randy Guliuzza’s articles. In particular, we see much use of the word power with regard to adaptive change. Yet, nowhere does Guliuzza actually specify what he means by power. This is well-illustrated in Guliuzza’s third article in the “Darwin’s Sacred Imposter” series (Guliuzza 2011c). Here Guliuzza uses the word power (or powers) 35 times! Yet he not *once* specifies what he means by it.

Guliuzza’s main objective in his third article is to convince the reader that “adaptive power” (whatever that is) is internal, or intrinsic to the organism, not external or environmental. But since it is not remotely obvious what Guliuzza means by power, his arguments are meaningless. He begins by asking “Is Adaptive Power External or Internal? Does functional power reside internally or externally?” (Guliuzza 2011c). Already the reader is encouraged to think about this mysterious substance adaptive power and consider where it may be hiding.

There are of course, legitimate types of power that are well-defined. There is electrical power. There is mechanical power. These are real forces in nature. But what sort of force is adaptive power? Is it electrical in nature? Is it a mechanical force applied over a distance? What is adaptive power made of—atoms, energy, quarks?

Power is generally associated with ability of some kind. But this really doesn’t clarify anything. What does it mean *scientifically* for something to have ability? Do ants have the power to be killed? We know that ants can be killed, but where does the power reside? Is it inside the ant, or is it in the shoe that steps on the ant, or the person who wears the shoe? These are meaningless questions because “power” is not clearly defined. The death of an ant is simply what happens when the weight of a shoe upon it exceeds the strength of the ant’s exoskeleton. There is no need to invoke some mysterious and undefined power and then try to figure out where this power resides.

Yet, this is precisely the type of meaningless question that Guliuzza asks and purports to answer in his third article. In a spectacular example of a question-begging epithet fallacy, Guliuzza states, “Those who understand that organisms are ‘programmed’ by God to ‘fill’ environments accurately identify *internal* forces as the power source” (Guliuzza 2011c). And again, in his first article, he states, “True

realization comes when recognizing that the power to solve ecological challenges has always resided in the organism and not in the environment” (Guliuzza 2011a). Exactly *why* internal forces must be the cause of the still-not-defined power is not stated. But what are these internal forces? Guliuzza explains, “These are the outworking of internal systems that enable reproduction of variable traits that are inheritable—which are always observed to operate in the context of the whole organism (Guliuzza 2011c).”

So apparently, since internal systems enable the organism to reproduce variable traits, the power is internal. But wait a minute. Aren’t external entities *also* necessary for an organism to survive and reproduce offspring with variable traits? Don’t most organisms need some kind of food or source of energy from the external environment? Don’t living organisms require water from the external environment so that they can survive and reproduce? So if Guliuzza’s reasoning is that power is internal because internal things are necessary for reproduction and variation of traits, then power is also external because external things are also necessary to reproduce—*by exactly the same reasoning*.

### 2. Logical Coherence

It is in the area of logical consistency where Guliuzza’s articles fail. Logic is the study of the principles of correct reasoning. Guliuzza commits the most common fallacies. Let’s examine a few in detail.

#### Equivocation

Most words have multiple lexical definitions—definitions that would be found in a typical dictionary. However, in any given statement, a word can have only one primary meaning. In a well-written sentence, context will make clear which meaning is being used. Such clarity is necessary for communication to be accomplished. This is particularly important when making a logical argument; the terms must be used clearly and consistently. When a person fails to be consistent in his use of terminology within an argument, this is called the fallacy of equivocation. Consider this example:

1. Feathers are very light.
2. Light is the fastest substance.
3. Therefore, feathers are the fastest substance.

The above argument is an equivocation fallacy because the word “light” is used in two different senses between the two premises, and thus the conclusion does not follow. Now this is a very obvious example of equivocation because we readily recognize that light is being used in two different senses. But the equivocation fallacy is far more slippery when the terms are undefined or when the difference in their meaning is subtle.

Evolutionists make use of this fallacy masterfully to persuade the uneducated that evolution (in the particles-to-people sense) is true. They will say, “You cannot deny evolution because bacteria can evolve resistance to antibiotics.” But this uses “evolve” or “evolution” in two different senses. Bacteria can certainly *change*, under certain circumstances, which is one definition of evolution. But it is not the sense of the term evolution that is in question. It’s the evolution of one fundamental kind of organism into another that is in doubt; and bacterial resistance to antibiotics does not establish *this meaning of evolution*.

### **Equivocation on “Adaptation”**

We have seen previously that Guliuzza conflates the two fundamentally different types of biological adaptation. This is an equivocation fallacy, because showing the cause of one type of adaptation does not establish the cause of the other type of adaptation. In his article on “Engineered Adaptability” (Guliuzza 2012b), Guliuzza seems to be describing the non-genetic adaptability of an individual organisms when he writes,

Entities must possess a minimum system to maintain adaptable function, comprised of three well-matched interacting components: 1) an input component to gather data on external conditions; 2) a reference program that defines performance in specific external conditions and has a logic segment to compare input data to the reference; 3) an output feature that executes actions maintaining performance. If any one of these components is removed, the system’s adaptability is lost, i.e., the system is irreducibly complex. These well-matched components are intrinsic to adaptable organisms. (Guliuzza 2012b)

It seems clear that Guliuzza is discussing a feedback mechanism where an *individual* organism adjusts its physiology in response to environmental conditions—without any changes in its DNA. These kinds of changes are generally non-heritable, and definitely non-genetic. That is, the DNA *does not change*.

Guliuzza then goes onto explain how this can account for adaptation, but he switches without notice to the other type of adaptation—the genetic and heritable shift of allele frequency in a *group* of organisms which does not involve the above mechanisms. He says, “For example, if an organism’s traits were not robust—and they were only plastic—this might suggest unlimited evolutionary change” (Guliuzza 2012b). No, it won’t—because evolutionary change must involve modifications to the DNA—which the mechanisms Guliuzza previously discussed will not do. Human beings have DNA sequences that single-celled microbes do not; thus, no amount of non-

genetic adaptation could possibly convert a microbe into a person.

Guliuzza then says, “If an organism’s traits were not plastic, but only robust, this might suggest *fixity of species*” thereby implying that the mechanisms he previously discussed can account for *speciation*. However, *different species have different DNA!* Lions differ from tigers by 19 million to 20 million DNA based pairs (Cho et al. 2013). But again, Guliuzza has only discussed the mechanisms *that do not affect an organism’s DNA*.

So, very subtly, Guliuzza has argued that mechanisms that adjust an organism’s physiology without adjusting its DNA can somehow explain how different species of the same kind developed differences in their DNA! How? How can a process that does not change DNA be the process that changes DNA?

### **Equivocation on “Natural Selection”**

Most significantly Guliuzza equivocates on the meaning of the term natural selection. He never defines the term. But from context, he appears to use the term inconsistently in several different ways within an argument—an equivocation or “bait and switch” fallacy. Most significantly, Guliuzza appears to be committing the fallacy of conflating a *referent* with a *verbal token*.

In logic, a *verbal token* is a word or term that represents something else. The thing that the verbal token represents is called the *referent*. By convention, single quotation marks are used if we wish to specify the verbal token rather than the referent. So, when we use the word “elephant”—the verbal token is the word itself. The referent is the actual animal. Now it should be very obvious that a verbal token is not the same thing as its referent. That is, the word elephant is not itself an *actual* elephant.

In his articles, Guliuzza seems very confused about whether he is dealing with the verbal token natural selection or the *referent* natural selection—the claim that survivors do in fact survive or the process of survivors surviving. Namely, is he referring to the term itself or the actual process of animals with certain traits being able to out-compete others in a particular environment? There are four possibilities:

1. Guliuzza is consistently referring to the verbal token—the term.
2. Guliuzza is consistently referring to the referent—the concept or process.
3. Guliuzza is unaware of the difference and uses the term and referent definitions interchangeably.
4. Guliuzza is using the term to draw an inference about the referent.

Let’s examine each of these possibilities in turn.

If the first option were true, then many of

Guliuzza's statements would make no sense, particularly when he argues that natural selection does not actually exist. In his second article Guliuzza writes, "Selection' is not really real" (Guliuzza 2011b). Now, obviously the *term* "selection" is a real word. So it wouldn't make sense that Guliuzza is denying the reality of the term. After all, it would be self-refuting for Guliuzza to *use* the term selection to argue that there is no such thing as the term selection. He continues, "It's difficult to dislodge things [natural selection] that exist only in someone's mind." Again, he seems to be arguing that the *referent*—the process of natural selection—does not occur in reality. Since the term natural selection does occur all the time, in both written and spoken language, clearly, the term exists. Guliuzza even uses the term. Again, he writes that natural selection is a false paradigm; since a paradigm is a view of the world, again it seems that Guliuzza is against the concept itself, not just the term.

Moreover, it is inconsistent with the introduction of his first article to believe that Guliuzza is merely claiming that the *term* natural selection ought to be swapped out for some other term because he writes that we should "regularly evaluate *all* scientific ideas to ensure they are not rooted in unrecognized false assumptions and are instead fixed in reality. Case in point: 'natural selection.'" (Guliuzza 2011a) [underlines added]. It seems here that Guliuzza is discussing the scientific *idea* of natural selection—the *concept* that survivors survive, and not the term natural selection. So option 1 cannot be correct.

On the other hand, if the second option were true (that is if Guliuzza were consistently discussing the *referent*—the claim that survivors survive), then again we find many statements that simply make no sense. In his first article (Guliuzza 2011a), he writes, "Do the words 'natural' and 'selection' in any verifiable way accurately *describe* observable interactions between an organism and its environment?" Here he seems to be addressing terminology—the *words* natural and selection. He goes on to ask, "Have the words 'natural' and 'selection' been effectively employed to divert attention away from recognizing...?" Again, he appears to be addressing the terminology rather than the referent.

Guliuzza goes on to complain that there is "no consensus definition of natural selection." We saw above that this is not true. But for the sake of argument, if Guliuzza were correct that natural selection has no consensus definition, then how could he say anything about the referent? If a term is not well-defined, then how can anyone possibly conclude anything at all about the referent? How can we rationally say anything about the referent, if we don't know what the referent is?

Only *after* a term has been defined can we begin any rational discussion of its referent. But before a term is defined, nothing whatsoever can be rationally said about its referent, *because the definition specifies what the referent is*.

Of course, natural selection is perfectly well-defined. But the point here is that Guliuzza believes it is *not* well-defined—leaving the referent ambiguous in his mind. But if Guliuzza doesn't know what the referent is, then how can he possibly discuss it? Therefore, since Guliuzza claims that natural selection is not well-defined, and since he never defines it himself, we must conclude that he cannot be consistently referring to the referent, since he himself has tacitly admitted that he doesn't know what the referent is in his insistence that the term is not well-defined.

This leaves us with options 3 and 4. It doesn't really matter which of these two options Guliuzza has taken, because *both* are equivocation fallacies and are therefore logically absurd. In both cases, Guliuzza uses information about one thing to conclude something about a *different* thing. With option 3, the equivocation is unintentional. In such a case, Guliuzza fallaciously concludes something about a referent on the basis of a verbal token because he thinks they are the same thing. But of course, they are not the same thing. And thus, properties of the verbal token cannot be used to draw any rational inferences about the properties or existence of the referent.

With option 4, the equivocation is still there, but is intentional. In such a case, Guliuzza *does* understand that a verbal token is not the same thing as a referent, but nonetheless fallaciously concludes something about the referent on the basis of the verbal token. This is the same equivocation fallacy as with option 3 because it is irrational to draw any inferences about a referent on the basis of its verbal token.

In fact, *it is impossible to deductively conclude anything whatsoever about the existence or properties of a referent merely from the properties of its verbal token*. Yet, this seems to be the form of Guliuzza's argument. He seems to be arguing for the non-existence of the process of natural selection on the basis of his personal discomfort regarding the verbal token assigned to it.

The thrust of Guliuzza's argument would seem to be: "Natural selection' (the verbal token) is a misleading term; therefore, natural selection (the process) does not exist." But this is a fallacious equivocation of a verbal token and a referent. Even if we grant for the sake of hypothesis that the term natural selection is misleading, there is simply no logical basis for drawing the conclusion that the referent does not exist—that natural selection does not occur.

Perhaps Guliuzza is confused in thinking that a verbal token must *describe* its referent. That may happen in some instances. But there is no law of logic or rule of language that requires this, and it is therefore fallacious to deduce anything about the referent on the basis of its assigned verbal token. Nonetheless, Guliuzza seems to assume that there is something wrong with a term that does not describe its referent. He at least hints at this with a question he raises in his first article (Guliuzza 2011a): “Do the words ‘natural’ and ‘selection’ in any verifiable way accurately *describe* observable interactions between an organism and its environment?” Presumably, he wants the reader to answer “no” and then draw the conclusion “Therefore natural selection isn’t actually real.”

### ***Is the Term “Natural Selection” Misleading?***

It is fallacious to assume that natural selection does not exist on the basis that its term is misleading. Moreover, it is not obvious that the term natural selection is in fact misleading at all. We already know the definition of natural selection: that those organisms best suited to their environment are more likely to survive and reproduce than others. Is natural selection a fitting term for this process?

First, consider the word natural. This term has several definitions. But our discussion pertains to the scientific use of the term. In science, natural refers to the normal, repeatable, predictable operation of the universe. The Bible teaches that God is responsible for the normal operation of the universe because He upholds all things by the Word of His power (Hebrews 1:3). Furthermore, God upholds the universe in a relatively uniform way for our benefit. Thus, there are basic cycles of nature because God has promised a degree of uniformity in nature for our benefit (Genesis 8:22).

In this sense, the concept of natural is contrasted with supernatural. Natural refers to the way that God normally upholds His creation; supernatural refers to an unusual and extraordinary act of God that goes above and beyond the normal way He upholds His creation.

This is where we get the idea of natural laws. These include the laws of gravity and motion, the laws of thermodynamics, and so forth. Natural laws describe the ordinary, consistent, and uniform way that God upholds His creation. Natural laws are not a replacement for God’s power—they are an *example* of God’s power. But God is under no obligation to always uphold His creation in the way that we describe as natural law. He normally does so for our benefit. But when God acts in a way that is above and beyond natural law, we call this a supernatural action.

The term “select” is defined as “to choose (as by fitness or excellence) from a number or group: pick out.” Thus, if the verbal token natural selection aptly describes its referent, then natural selection would refer to “the way that God normally chooses.” Is this misleading or does this fit the definition of natural selection?

In fact, it fits very well. God normally selects organisms for survival that are well-suited to their respective environments. If a fish and bird are both deposited on a rocky outcropping, God normally selects the bird for survival since it is best suited to a non-aquatic environment. The Lord is not required to do this of course. God could enable the fish to survive indefinitely on dry land, but this would not be a normal (natural) selection, but rather a supernatural selection. Thus, we must conclude that Guliuzza is mistaken in thinking that natural selection is somehow misleading. And, even if it were, that would have no bearing on the truth of the issue since verbal tokens are not required to describe their referent.

Guliuzza repeatedly emphasizes in his articles that selection requires a *conscious* selector. In his third article (Guliuzza 2011c), he writes, “Selection is a non-random, deliberative, cognitive action indicative of intelligence.” And again, “Nature selects’ bears a presumption of inherent intelligence...” [underline added]. In his fifth article (Guliuzza 2012a), Guliuzza states, “Since ‘selecting’ is always an act of intelligence...”. In the first article (Guliuzza 2011a), he writes, “People know that to ‘select’ something is presumptive evidence of volition—a special *choice-making* capacity implicit in intelligence....nature is portrayed as somehow *thinking...*” But there are at least three severe flaws in Guliuzza’s reasoning: one is a factual error, the second is a theological error, and the third is a linguistic error.

First, the words select and selection do not necessarily require (as a matter of definition) intelligent or conscious thought, and Guliuzza provides no support for his claim to the contrary. Many selections may indeed involve an intelligent agent. But there is nothing in the definition of the word that *requires* such. The *Merriam-Webster’s Dictionary* defines select as to choose (someone or something) from a group. A choice involves picking one option of several. This choice *may* be a conscious one, but it wouldn’t have to be as we show below. As long as some members of the group are distinguished or separated from other members, selection has occurred—by definition.

Are there any examples of non-conscious selection? Certainly. A lottery machine can randomly *select* six balls from dozens, yet it has no mind. This not only refutes Guliuzza’s claim that selection always requires cognitive action, but it also refutes his claim

that selection is always “nonrandom.” And there are many other examples of non-conscious selection. Consider the following.

Hemoglobin preferentially *selects* carbon monoxide to bind with over and against oxygen. Machines can be programmed to *select* even though they have no mind at all. Coin slots can be made to *select* only quarters, and to reject all other forms of currency. A salt shaker preferentially *selects* small grains to fall out rather than large ones. A standard Blu-ray player is designed to *select* only discs that have a particular region code, and to reject all others. Computers make selections constantly. In fact, the only thing computers really are designed to do at a fundamental level is *select* either zero or one. And each choice is determined by their programming, not conscious reflection. So clearly, picking out or choosing only certain members of a group does not necessarily involve conscious reflection. It can be done in a purely mechanical and natural way.

Moreover, the *biological* definition of selection—which is the one most relevant to the issue—does not even mention “choice” at all, to say nothing of a conscious choice. *Merriam-Webster* reports that the medical/biological definition of selection is “a natural or artificial process that results or tends to result in the survival and propagation of some individuals or organisms but not of others with the result that the inherited traits of the survivors are perpetuated.” By the biological definition of the word, selection happens whenever some organisms in a group survive and reproduce while others do not. *The biological definition of the word does not require consciousness or even a visible selector!* Just because a word ends in “tion” does not necessarily mean that a conscious subject is required. *Extinction* does not require a conscious *extinctor*.

Second, even if we granted that (contrary to the definition) a selection must require *conscious* volition, Guliuzza has committed an egregious theological error in claiming that there is no conscious selector when survivors survive. In his first article (Guliuzza 2011a), he states, “But evidence is absent for a real ‘selector’...” He continues, “Given that [natural] ‘selection’ really is an inaccurate and false term, and since it is only a deceptive figure of speech that attributes selection ability where there is no selector, wouldn’t it be wise to point these facts out?” (underline added). Guliuzza again refers to “the fact that there is no real ‘selector....’” In his second article, he writes, “Show me the selector (Guliuzza 2011b).”

But isn’t Guliuzza forgetting something? Has he left out something that is rather important in the Christian worldview? What about God? In an ultimate sense, isn’t God in control of everything that

happens in the universe? Isn’t it ultimately by God’s conscious plan for a fallen world that organisms die at times? As we have seen, the term “natural” refers to the normal way that God upholds His creation. *God* is the selector. Guliuzza’s failure to recognize this may stem from poor theology.

The natural forces (that Guliuzza claims have no power to select because they have no conscious mind behind them) are in fact direct actions of the mind of God. Natural forces are not an alternative to God’s power, but an *example* of God’s power. In the ultimate sense, God Himself selects which organisms survive in which environments. And God does this selection primary through *natural* forces—which are the consistent and uniform way that God normally accomplishes His will.

So Guliuzza’s mistake here is a severe and rather embarrassing oversight for a professing Christian. Guliuzza does a decent job of reminding readers that God designed organisms. But he consistently forgets or doesn’t realize that *God designed the environment too*, and God sovereignly controls both organisms and their environment by the Word of His power (Hebrews 1:3).

Third, Guliuzza makes a linguistic error in assuming that language must always be used in a literal way. Yet Guliuzza constantly complains that natural selection is a non-literal figure of speech. In his first article he lists a few “admissions that natural selection is not literally true.” We are tempted to ask, “So what?” Even if we grant for the sake of argument that the term natural selection is somewhat non-literal, how would that in any way make the referent *non-existent* or *false*?

The Bible personifies wisdom in Proverbs 1, as if wisdom were a *woman* (Proverbs 1:20–33). Wisdom is said to have a voice and to shout in the streets (1:20). She stands at the entrance of the city gates and utters sayings (1:21). She says, “Turn to my reproof, Behold, I will pour out my spirit on you; I will make my words known to you” (1:23). She *laughs* when calamity befalls those who ignored her (1:25–26).

Now, wisdom does not *literally* do these things. Guliuzza rejects natural selection on the basis that the term (in his view) is somewhat non-literal. By the same reasoning, Guliuzza—if he were logically consistent—would have to reject Proverbs 1:20–33, since it too is non-literal. By Guliuzza’s reasoning, what the Bible teaches in Proverbs 1:20–33 is a “false paradigm.” But that would be absurd. Therefore, Guliuzza’s equivalent argument against natural selection is also fallacious.

What’s more, the Bible attributes conscious activity to nature—the very thing that Guliuzza claims to be unbiblical. In 1 Corinthians 11:14, the Apostle Paul rhetorically asks, “Does not even nature

itself teach you...?" Yes, nature teaches. But isn't teaching normally a conscious act? By Guliuzza's reasoning, Paul was mistaken to say that nature teaches. Guliuzza might say, "Show me the teacher?" But of course, the teacher is God, just as the selector is God. Nature is simply the term we use for the way that God normally controls His creation.

### **Special Pleading**

Of course, scientists use figures of speech all the time in our research. Chemists speak of "hydrophobic" chemicals—those that tend to not mix with water. Hydrophobic literally means water-fearing, which seems a fitting metaphor for chemicals that are repelled by water. Presumably, no chemist believes that hydrophobic substances are *literally* afraid of water. It's a figure of speech. Is that wrong? Of course not. Can we conclude that hydrophobic chemicals are "not really real" since their verbal token involves a metaphor? That would be absurd. Likewise, even if we were to grant that the term natural selection involves non-literal usage, this would in no way argue against the paradigm that survivors do in fact survive.

At times, Guliuzza does seem to realize that non-literal language is perfectly acceptable. But then he turns around and argues that it's *not* acceptable for the term natural selection. But his reasoning makes no sense. For example, in his first article, Guliuzza says,

He [Darwin] confided, "In a literal sense of the word, no doubt, natural selection is a false term...it has been said that I speak of natural selection as an active power or Deity; but who objects to an author speaking of the attraction of gravity as ruling the planets?" No one objects to that metaphor, since attractive gravitational forces are real and measurable. (Guliuzza 2011a)

So Guliuzza doesn't object to the metaphorical use of gravity as "ruling" the planets because he says that attractive gravitational forces are *real and measurable*. But by that same reasoning, no one should object to a metaphorical use of natural selection. After all, aren't the forces of nature involved in natural selection real and measurable? There are all kinds of forces of nature that act on organisms and affect their survival and reproduction—barometric pressure, radiation, heat, electromagnetic radiation, and so on. So by Guliuzza's own reasoning, no one should object to a non-literal natural selection since the forces of nature are real and measurable. By the way, one of the forces of nature that acts on organisms and can affect their survival and reproduction is *gravity*—a force that Guliuzza himself explicitly concedes as real and measurable. We must admit that when an organism is bumped off of a high cliff, gravity can have a very profound effect on its survival.

Guliuzza's error here is the logical fallacy of *special pleading*—having a double standard. When scientists use figures of speech as a shorthand way of describing something, Guliuzza argues that this is okay if there are real measurable forces involved. There are real measurable forces involved in natural selection. But Guliuzza exempts natural selection from his own standard and argues that its usage is still fallacious. But he gives no reason for making such an arbitrary exception.

Moreover, as we saw above, the term natural selection is not necessarily non-literal anyway. Only if one insists that (1) selection always requires intelligence (which is not strictly required in the definition of *select*), and (2) that the intelligence of God should not be counted (contrary to the Christian worldview), would we conclude that natural selection is a non-literal description of what is going on. And even then, non-literal figures of speech are allowed in science, as long as they are not used in a fallacious way.

Special pleading is always a failure to think *consistently*. It occurs when a person arbitrarily fails to apply a criterion to one view that he does apply to all other views. Guliuzza commits this fallacy throughout his article series. Some examples are from his third article (Guliuzza 2011c) in which he writes, "There are several reasons why it is scientifically and theologically inappropriate to apply 'selection' in any way to describe what transpires at the organism-environment interface." He then lists four reasons. His first is "Indispensable: 'Nature Selects' Is the Heart of Evolution."

In other words, Guliuzza suggests that since natural selection is assumed by evolutionists to be essential for evolution, that we ought to reject natural selection (either the term or the concept/process—again it isn't clear). But by *exactly the same reasoning*, we would have to reject mutations. After all, evolutionists would claim that mutations are also the heart of evolution. In fact, they are far more essential to the process than natural selection because natural selection doesn't actually generate any new traits. Natural selection merely is the process by which failed variations are removed. It is *mutations* (allegedly) that drive organisms to evolve.

Moreover, reproduction is absolutely essential to evolution. Without reproduction, descendants will not evolve from ancestors, because there will be no descendants. So, if it is "scientifically and theologically inappropriate to apply 'selection' in any way to describe" what is actually happening on the basis that selection "is the heart of evolution", then by the same logic it must be "scientifically and theologically inappropriate" to describe animals as being able to reproduce, since reproduction is

essential to evolution! But that of course is absurd. So Guliuzza dismisses such reasoning when it yields results that are obviously absurd, but then embraces the very same reasoning when it yields a conclusion that he likes. He just isn't thinking consistently.

Another reason Guliuzza gives for why he thinks "it is scientifically and theologically inappropriate to apply 'selection' in any way to describe what transpires at the organism-environment interface" is "Illusion: 'Selection' Only Exists as a Mental Construct" (Guliuzza 2011c). Of course, the process of natural selection (survivors surviving) is observed in reality. So Guliuzza's statement is false. But even if it were true, would the existence of something that only exists as a concept make it inappropriate to use that concept? Does Guliuzza suppose that only physical things exist? If so, then Guliuzza's thinking is dreadfully materialistic and unbiblical.

After all, numbers exist only as a mental construct. Numbers are defined as "a concept of quantity." They are non-physical. They cannot be seen or touched because they are abstract. Physical objects can come in certain quantities that are represented by a number; we can have three oranges. The oranges can be touched, but not threeness. So numbers are purely conceptual; but that doesn't make them scientifically and theologically inappropriate. If he were consistent, Guliuzza would have to reject the entire field of mathematics.

In his second article (Guliuzza 2011b), Guliuzza writes "Since no tangible force or agent can truly be linked to 'selection'—even by analogy or metaphor—using the word puts evolutionists in a dilemma." Is Guliuzza really suggesting that we cannot legitimately use words that are not linked to a tangible force or agent? What about the word justice? This word describes an abstract concept and is therefore not linked to a tangible force or agent. Does that mean that we can't use the word justice without facing a logical dilemma? For that matter God Himself is not a tangible force or agent because He is not (normally) capable of being touched. Should we therefore never speak about God? When Guliuzza's reasoning is applied *consistently*, the absurdity becomes clear.

### **Special Pleading**

#### **Regarding the Environment vs. Organisms**

Guliuzza expends much effort in the attempt to convince his readers that the environment plays no causal role in adaptation. (Most creation scientists would say that God uses both organisms and the environment to accomplish the adaptation of His creatures—both have a role). He claims that in all cases the primary cause of adaptation is the organism itself, and not the environment. But his reasoning is based on a particularly egregious example of special pleading. Consider the argument in his third article:

Creatures do fit their environments very well, environmental elements can be seen, so it was thought likely that some type of environmental force caused these remarkably suited adaptations. But "nature" is unthinking, while most features in organisms seem so perfectly designed. How can a human brain reconcile those incongruent facts? (Guliuzza 2011c)

So, what is the thrust of Guliuzza's argument? Essentially, he is suggesting that the environment cannot be the cause of adaptation because nature is unthinking. Thus, Guliuzza concludes that the organisms are the cause—that they have "endogenous power to solve environmental problems." Guliuzza's reasoning seems to be this:

1. The cause of adaptation is either the organism or the environment.
2. The environment has no intelligence, and thus cannot be the cause of adaptation.
3. Therefore, organisms are the cause of adaptation.

Putting aside for the moment that premise 2 is logically unproved, and that premise 1 is a bifurcation fallacy, the argument is dreadfully inconsistent. The exact same reasoning can be used to conclude that the *environment* is the cause of adaptation—not the organism. This is because *most organisms on earth are unthinking*. Plants are unthinking, yet they often adapt to their environment. Bacteria are unthinking, yet they adapt to their environment. Unthinking organisms vastly outnumber thinking organisms. So, when we realize that most organisms on earth are unthinking, we find that Guliuzza's reasoning leads to the opposite of his conclusion:

1. The cause of adaptation is either the organism or the environment.
2. Most organisms on earth have no intelligence, and thus cannot be the cause of adaptation.
3. Therefore, the *environment* is the cause of adaptation.

We see that Guliuzza's reasoning is self-contradictory. The only reason why he did not realize this is because he failed to apply his own reasoning consistently—the fallacy special pleading.

Careful reasoning reveals that both the first and second premises of the argument are false. The first premise is a bifurcation fallacy. The second premise assumes that intelligence is necessary for adaptation. But this isn't strictly true. The retina of the eye is able to adapt to a wide range of brightness conditions—yet the retina does not have intelligence.

"But the retina was *designed* by an intelligence" some might respond. The intelligence isn't necessarily in the organism, but rather belongs to the organism's Creator. And in some moments of clarity, Guliuzza seems to realize as much. In his third article, he states, "Creatures have intelligence-based systems

to reproduce variable heritable traits..." (Guliuzza 2011c). This is certainly true, but this doesn't alleviate Guliuzza's error—it is still special pleading. The reason: both organisms *and the environment* were designed and created by the intelligence of God.

Thus, one cannot rationally conclude that organisms and not the environment are the cause of adaptation on the basis that organisms are designed by God—*because the environment was also designed by God*. Why did Guliuzza overlook this consideration?

A particularly striking example of this inconsistent reasoning is displayed in Guliuzza's fourth article (Guliuzza 2011d), in which he states,

When websites show a subterranean water table 'selecting' trees with longer roots (rather than recognizing that trees have an innate capacity to produce longer roots enabling them to live in areas with deeper water tables), astute atheists can see that intelligence-based power has been ascribed to the inanimate water table—so why not attribute it to some god?" (Guliuzza 2011d)

The inconsistency is clear: Guliuzza is upset that intelligence has been (allegedly) ascribed to the environment (water) rather than the organism (trees). *But since when do trees have intelligence?* Neither the trees nor the water table have any intelligence at all. And both were designed by intelligence. It is accurate for Guliuzza to say that some "trees have an innate capacity to produce longer roots enabling them to live in areas with deeper water tables"—even though they have no intelligence. Thus, it is equally accurate to say that the water table has the innate capacity to reach the trees with the longer roots—even though water table has no intelligence. By definition, natural selection has occurred in this instance. Yet neither the organism nor the environment has consciousness or volition. The intelligence behind this selection is God.

### ***The Fallacy of Irrelevant Thesis***

In some arguments, the conclusion simply cannot be deduced from the premises even though true statements have been made—the fallacy of irrelevant thesis. This fallacy is most seductive when the conclusion *seems* to follow from the premise. But careful reasoning shows no connection.

This fallacy is very evident in Guliuzza's fourth article (Guliuzza 2011d), where he argues that natural selection doesn't exist on the basis that evolutionists ascribe to it things that it cannot literally do. But an evolutionist's incorrect ideas about the role of natural selection have *no logical bearing* on whether or not natural selection exists. After all, a child might think that clouds cause wind. But his false view about the power of clouds does not make clouds cease to exist!

Likewise, evolutionists sometimes attribute power to natural selection that it does not literally possess. Guliuzza states as much and gives some examples, "God-like capabilities accorded to selection pour from both peer-reviewed and popular evolutionary literature. For example: ...‘natural selection has fashioned wings for flight, fins for swimming and legs for walking...’" No doubt natural selection can't do any of those things. Guliuzza therefore concludes that selection is not real. But how does this even remotely follow logically?

For example, secular astronomers often attribute to gravity things that it cannot possibly do. Gravity is said to have created the first stars and galaxies and is ultimately responsible for the formation of the earth. Of course, gravity cannot literally do those things. Should we therefore conclude that gravity does not exist on the basis that it cannot do what secularists claim it can do?

This type of reasoning makes no sense. Yes, evolutionists sometimes misuse natural selection. But this doesn't cause natural selection to cease to exist. Survivors still survive. By definition they must.

In his fourth article (Guliuzza 2011d), Guliuzza states, "Selection' is a clever label applied to the normal outworking of an *organism's* innate programming that enables it to fill environments. Thus, it steals credit from the organism and ultimately from the Lord." How does that conclusion follow? God designed both organisms and environments. Natural selection *always* involves an interaction between the organism *and* the environment. Consequently, we can always examine the interaction from the organism's perspective, *or* the environment's perspective. Guliuzza claims we must look at it from the organism's perspective and that the alternative steals glory from God. But why? Isn't God sovereign over the environment too? Didn't God design both organisms and the environment?

### ***Begging the Question***

In his fifth article (Guliuzza 2012a), Guliuzza states, "Astoundingly, in spite of today's broad unquestioned belief in selection, two early questions still remain unanswered: 1) Since 'selecting' is always an act of intelligence, what justified Darwin's application of 'selection' to unconscious nature; and 2) where was any tangible thing in nature that actually did the selecting?" In both points, Guliuzza begs the question—he assumes the very thing he is attempting to prove.

In his first point, Guliuzza simply states without proof that selecting is always an act of intelligence, so that he can argue against the existence of selection in nature due to the alleged lack of intelligence in nature.

But of course, the biological definition of selection does not require a literal selector at all, much less an intelligent one. Guliuzza merely assumes that selection requires intelligence—one of the very things he is supposed to be proving. And, theologically, there is an intelligence behind everything that happens in nature since all creation is upheld and controlled by God (Hebrews 1:3).

In his second point, Guliuzza begs the question by tacitly assuming that when selection happens there must be a tangible thing in nature to do the selecting. By that logic, we could prove that extinction does not occur, because what tangible thing in nature does the extinguishing? If extinction doesn't require a tangible extinctor, then why must selection require a tangible selector? Further, why must the selector be a part of nature? Guliuzza simply asserts this without proof. But nothing in the biological definition of selection requires a physical selector at all, let alone a selector that is part of nature. God is a transcendent being. He is not part of nature, and yet it is His mind (in the ultimate sense) that *selects* what will happen from among all possible options of what could happen. Guliuzza has tacitly assumed that God doesn't count as the selector so that he can then argue that there is no selector. This begs the question. We could just as easily prove that atheism is true by insisting that God doesn't count.

### **The Question-Begging Epithet Fallacy**

The fallacy of using emotionally loaded rhetoric instead of logic to persuade people of a point that is logically unproven is the question-begging epithet fallacy. By manipulating emotions, this is perhaps the most seductive kind of fallacy. Guliuzza is absolutely masterful at using rhetoric to persuade people of conclusions that are logically unproven or even absurd. And such rhetoric is found throughout his articles on this topic.

In his first article, Guliuzza states, “Since proponents of natural selection erroneously view the organism-environment interface from the environment’s side...” (Guliuzza 2011a). But wait a minute. Where did Guliuzza *logically establish* that it is erroneous to view the organism-environment interface from the environment’s side? What argument did he make for this? What experiments establish this? Guliuzza gives no evidence of this at all. It appears that he simply doesn’t emotionally like viewing things from the environment’s side and so he smuggles his unproven belief into a sentence as a premise to prove something else.

As another example from his fourth article, Guliuzza (2011d) states, “Thus, creationists have been encouraged to re-evaluate all evolutionary ideas—even those presumed to be well-established

like ‘natural selection’—to assess their biblical accuracy and scientific reality, and replace them with better explanations.” Did you catch the unproven claims? For one, Guliuzza simply asserted that natural selection is an evolutionary idea. He offered no evidence of this, but merely smuggled the claim into a sentence that is primarily about something else. Perhaps he hoped the reader would subconsciously accept the claim after it has been repeated enough times.

But a rational argument requires evidence. As a matter of historical fact, natural selection was *not* an evolutionary idea. Rather, the concept was first clearly discussed by the *creationist* Edward Blyth (more than 20 years before Darwin), who saw it as the way that God providentially accomplished adaptation of His creatures. Furthermore, the Bible contains several instances of natural selection. We have seen that the organisms that survived the Flood outside of the Ark were those organisms best fitted to an aquatic environment—the very definition of natural selection. So, the concept of natural selection predates Darwinian evolution. But it would be much harder for Guliuzza to vilify natural selection if he admitted that it is a *creationist* concept. So he falsely credits Darwin with the idea.

Consequently, Guliuzza uses rhetoric rather than logic to falsely imply that the concept of natural selection was Darwin’s idea, and thereby convince people to hate the word selection. In his article on “Major Evolutionary Blunders: Survival of the Fittest, Eugenics, and Abortion,” Guliuzza begins discussing “Darwinian natural selection” [underline added] (Guliuzza 2016). What exactly is *Darwinian* natural selection, in contrast to natural selection that was discovered by the creationist Blyth? Guliuzza, as usual, does not define his terms. This seems to be merely another sophism to convince people that the process of natural selection was Darwin’s idea. Darwin may have coined the term; but he did not invent the concept. (Even if natural selection had been discovered first by Darwin, it would be fallacious to conclude that it is therefore wrong on that basis. That would be a genetic fallacy. After all, DNA was discovered by two evolutionists; but that doesn’t make DNA false).

Consider Guliuzza’s claim in his article on “Major Evolutionary Blunders: Survival of the Fittest, Eugenics, and Abortion” where he laments, “Indeed, even some Christians claim in language akin to eugenicists that natural selection, though fueled by death, helps the population by getting rid of genetic defects and thus preserves the viability of a population by removing those members with severely harmful or lethal characteristics” (Guliuzza 2016). But doesn’t it?

Is it not indeed the case that genetic defects can be removed from populations by the death of the organism? That's necessarily true for lethal genetic defects. But what rational argument does Guliuzza present to counter such a fact? None whatsoever is presented. Indeed, can anyone deny that organisms with lethal characteristics are removed from the population? How could that *not* be the case? If the organism is not removed by death, then its genetic defects were obviously *not lethal*.

In the same article, Guliuzza also employs another rhetorically useful but logically fallacious claim. He states, "By default, evolutionists must champion natural selection, but various non-evolutionists profess to be big fans also" (Guliuzza 2016). Of course, I've not met anyone who is a big fan of natural selection. But the emotionally-loaded rhetoric serves its purpose. That is, how despicable that even creationists love the fact that less fit-organisms die! But believing that unfit organisms die (which is true by definition) doesn't even remotely mean that one has to be a fan of the process or happy about it.

As another example of a question-begging epithet, in his third article, Guliuzza quotes Thomas Huxley's defense of the terminology, "No one doubts at all that particular circumstances [nature or ecology in context] may be more favourable for one plant and less so for another, and the moment you admit that, you admit the selective power of nature" (Guliuzza 2012a). And how does Guliuzza respond to what seems like a pretty rational and evidently true statement?

He states, "Contained in this apparent unarguably self-evident statement of reality is an exceptionally shrewd twist in circular thinking that seductively diverts a mind from perceiving both its unreality and mysticism. This trick is bolstered when people refuse to even initiate careful examinations of how they could be fooled, since admissions of being fooled are very humbling" (Guliuzza 2012a).

Did you catch a logical counter-argument to Huxley's claim? Neither did I. In fact, Guliuzza's comment had no relevance to Huxley's statement. To better illustrate this, consider that Guliuzza's response would be equally irrelevant to *any* possible truth claim. Suppose a person said, "Two plus two equals four" and that Guliuzza responded as above: "Contained in this apparent unarguably self-evident statement of reality is an exceptionally shrewd twist in circular thinking that seductively diverts a mind from perceiving both its unreality and mysticism." That fails to refute or even have any bearing on the truth that two plus two equals four. Likewise, it has no logical bearing on Huxley's quote either.

Guliuzza admits that Huxley's statement is an "apparent unarguably self-evident statement

of reality." But he then claims that it is "an exceptionally shrewd twist in circular thinking." *No evidence of this is presented.* Guliuzza claims that it "seductively diverts a mind from perceiving both its unreality and mysticism." But where is the evidence for this? Guliuzza provides none. To what unreality and mysticism does Guliuzza refer, except perhaps to his own unproved assertion that selection doesn't exist? Guliuzza uses mere rhetoric rather than logic, hoping the reader will simply agree that Huxley's argument is somehow wrong, perhaps due to the sheer confidence with which Guliuzza states his claim—*but no evidence is provided.*

Guliuzza then calls Huxley's argument a trick. He attempts to appeal to the reader's pride. Who would want to admit they have been tricked? He then goes on to say that such a trick is "bolstered when people refuse to even initiate careful examinations of how they could be fooled, since admissions of being fooled are very humbling." No one wants to admit that he has no humility. Thus, the reader is encouraged to dismiss Huxley's argument, not for logical reasons, but so that he will not appear arrogant. It's a rhetorical trick, but absolutely no rational counter-argument has been presented.

In his third article, Guliuzza states, "Ascribing functional power to a real versus imaginary source (i.e., organism vs. environment, or internal vs. external) leads to profoundly different explanations" (Guliuzza 2011c). So eager is Guliuzza to convince his readers that the mysterious functional power (whatever that is) is in the organism and not the environment, that he here declares that the *environment is imaginary*. As a rhetorical device, this may fool a careless reader. You wouldn't believe that an *imaginary* thing could have functional power, would you? Well, then it must be in the organisms since they are *real*. But the astute reader will recognize that the environment is *real*—not imaginary.

More recently, Guliuzza has taken to calling his ideas about natural selection and adaptation as design-based organism-focused research. The phrase organism-focused is accurate, since Guliuzza certainly does focus on organisms to the exclusion of environmental causation. But the rest of the phrase is misleading in several ways, and thus constitutes a question-begging epithet fallacy.

First, if Guliuzza wants to contrast his approach with that of other creation scientists, then design-based simply won't do. Guliuzza's wording implies that other creationists don't approach research from a design-based perspective as he allegedly does. But that is simply false. If a creation scientist doesn't believe that life was designed, then he or she is not really a creationist at all. Being a creationist entails the premise that God created—thus organisms are

designed. All of us believe that life is designed, but creationists believe that the environment is also designed.

Second, how does Guliuzza's rhetoric *in any way* constitute research? Namely, *what experiment* has Guliuzza performed to test his hypotheses? Does he even have a well-defined hypothesis? What were his methods and procedures? What was the control group? Is there any evidence whatsoever that Guliuzza has applied the scientific method *to any of his claims*? You can read through his entire *Acts & Facts* series, his *Answers Research Journal* response to Jeanson's rebuttal, or his subsequent articles. We suggest that you will not find any evidence of any experiment that Guliuzza has actually performed, nor any plans of a future experiment that could distinguish his various speculations from any alternatives, and thus no evidence of actual scientific research.

Guliuzza continues to shift terminology and has more recently taken to calling his confused conjectures "continuous environmental tracking." Ironically, this phrase aptly describes Darwinian evolution, since organisms are said to evolve to (track) their environment and they do so continually, e.g. from fish to people. Rhetoric is no substitute for well-thought-out ideas. Guliuzza may continue to shift names for his thinking, but this will not cause it to become rational.

### **The Bifurcation Fallacy**

A bifurcation fallacy occurs when someone presents two options as the only two possibilities, when in reality there is a third (or more) option. When the correct option is excluded from the list, any false option can be concluded by a disjunctive syllogism. This type of fallacy can be extended to more than two options—but the fallacy remains when a legitimate option is not included.

Guliuzza commits this very fallacy in his attempt to convince the reader that all explanations of adaptation must exclude environmental causes. In his *Answers Research Journal* response, he states that his articles "contrasted explanations for the primary cause of adaptation of naturalism's environment-focused mechanisms of natural selection versus an organism-focused, design-based mechanism." He then asks, what the primary cause of change is, and suggests, "Answers could be a design-based, organism-driven one, or a naturalistic environment-driven one, or some combination of both." So, Guliuzza claims that the primary cause of adaptation is either (1) "design-based, organism-driven," or (2) "naturalistic environment-driven." And he gives lip service to a third option (3) "some combination of both" though he never really addresses this option (Guliuzza 2014a).

But are these the only two (or three) possible options? Perhaps the primary cause of adaptation is design-based, *environment* driven. Guliuzza never even considers that option. And the option of a naturalistic, organism-driven approach is similarly not even considered. Nor is the option of design-based, environment-and-organism synergistic approach even mentioned. Yet, this is the very option that most creation scientists would claim to be the correct one. Yes, *Guliuzza does not even consider or attempt to refute the very option that most creation scientists accept!*

It's easy to prove an hypothesis by simply dismissing the most likely alternatives and allowing only the preferred hypotheses. Guliuzza excludes the option of God using both the designed environment and the designed organisms to accomplish adaptation.

Furthermore, Guliuzza has arbitrarily linked the environment with naturalism, and has linked design with organisms. This makes it easier for him to draw Christians into believing his ideas. Christians rightly reject naturalism. So *Guliuzza simply arbitrarily attaches naturalism to the option he wants his readers to reject—the environment*. And since the only other option he has allowed is "organism" (via the bifurcation fallacy), rejection of naturalism demands acceptance of his claim. Clever, but fallacious.

This error is easily reversible. We might just as well claim, "Either the primary cause of adaptation is a naturalistic organism-based one, or an environmental design-based one. And clearly naturalism is unbiblical. Thus, we must conclude that the environment is the primary cause since the environment was designed by God." And so Guliuzza's reasoning, when applied consistently, can be used to draw the opposite conclusion of his own view.

In his fourth article, Guliuzza commits the bifurcation fallacy when he argues that natural selection is mysteriously defined on the basis that, "Supporters continue to sharply debate whether it is a process, concept, principle, cause, effect, or something else" (Guliuzza 2011d). Implicit in Guliuzza's argument is that natural selection can only be *one* of these things. That is, it is *either* a cause *or* an effect: it is *either* a process, *or* a principle.

But these are bifurcation fallacies because there is no rational reason why a perfectly well-defined thing cannot be all of these. A baseball smashing through a window is both the *cause* of the broken window, and the *effect* of person who threw or hit it. There is no contradiction there. The solving of a difficult math problem is a process, a principle, and a concept. There is no reason why natural selection must be merely one of the above, because they are not contrary to each other.

### **Circumstantial ad Hominem Fallacy**

The circumstantial ad hominem fallacy occurs when someone claims that an argument is made only because of a person's circumstances. An example would be, "Well of course you believe in Christianity; you were brought up in a Christian home." The seductive nature of this fallacy is that it may indeed be the case that a person's circumstances have led him or her to a particular belief. However, this has no logical bearing on the *truth* of the belief itself. In other words, I may indeed be strongly motivated to argue for Christianity on the basis of my upbringing—but that doesn't make Christianity false, or imply that my arguments for Christianity are somehow faulty! A person's motivation for making an argument is utterly irrelevant to the soundness of the argument.

Such an example is found in Guliuzza's fifth article where he states, "It's easy to think that environments are active in doing things—often bad—to organisms since we can see organisms die 'at the hands' of environmental influences. Thus, it's recognizably hard to see things differently from our long-term conditioning" (Guliuzza 2012a). Rather than making a logical argument against the claim that the environment actively does things to organisms, Guliuzza merely asserts that we see it this way due to our long-term conditioning. This is the circumstantial ad hominem because our long-term conditioning has nothing whatsoever to do with environmental forces acting on organisms. We should be grateful for the ability to observe that environmental forces do have an effect on a particular organism's survival, because they do. Moreover, the Bible directly teaches that they do (Matthew 13:4–8).

### **The Straw Man Fallacy**

The straw man fallacy occurs when a person misrepresents his opponent's position, and then attempts to refute that misrepresentation. The goal of this fallacy is to get people to reject the opponent's actual position, hoping they won't notice that the argument actually refutes a *different* position.

For example, an evolutionist might argue, "Creationists teach that God created all the species on earth in the locations we see them today. But some species have clearly migrated from other areas. So creationists are wrong." But of course, biblical creationists teach nothing of the kind. This hypothetical evolutionist has simply misrepresented the creationist's position in order to mock it. Guliuzza also commits the fallacy throughout his series of articles. Consider the following:

Guliuzza (2012a) states, "All supporters of selection assign one absolute non-negotiable attribute: Environmental stresses constitute 'the selective power of nature' as the *principal* operative

force leading to the existence of an organism's traits to solve environmental problems." This statement is demonstrably false. In fact, the majority of scientists who affirm natural selection would adamantly *deny* that natural selection in itself leads to the existence of an organism's traits. Rather, it is *the DNA* of an organism as processed by the cellular machinery using energy from the environment that leads to an organism's traits. And natural selection does *not* produce or alter the DNA of an individual organism.

Creation scientists affirm (and even most knowledgeable evolutionists will concede) that natural selection does not have any creative ability at all. It does not produce traits or alter traits. An organism's DNA is responsible for its traits. Natural selection simply refers to the death of the unsuccessful cases—those organisms whose DNA led to traits not conducive to survival in the given environment. And thus, natural selection explains why only some variations of organisms are found in a particular environment. It does not actively create or alter traits, a claim that Guliuzza falsely attributes to his opponents.

His next sentence is "Basically, ecology drives the frequency of traits in populations." He attempts to prove his false representation of what creation scientists teach about natural selection by giving examples of this *different* (and more accurate) assessment. But the two claims are entirely different. Guliuzza has pulled a bait-and-switch. Did you catch it? Frequency has been substituted for existence. Natural selection does indeed have something to do with the frequency of traits that are expressed in an environment (because those traits that are not conducive to survival tend to be eliminated—the definition of natural selection). But natural selection does not *produce* the existence of such traits.

In his third article, Guliuzza states, "Natural selection as a design process is only an illusion—meaning it cannot explain nature's design. It wrongly views problem solving from the perspective of passive environmental factors that are falsely empowered to 'select' the best traits" (Guliuzza 2011c). Guliuzza's first sentence here is true. The problem is: no one holds the view that Guliuzza is attempting to refute. Natural selection (by itself) is not intended to be a design process; it is doubtful that any scientist holds such a view. Rather natural selection simply refers to the death of organisms that do not already have traits suitable to survival and reproduction in a given environment. We will discuss below the fact that scientists sometimes use synecdoche in using the term natural selection to represent natural selection and *mutations*. But to be precise, evolutionist scientists would argue that the *mutations* result in an organism's design, not natural selection by itself.

Sometimes Guliuzza critiques an atheistic position, but then attempts to apply the *same* critique to creationists, as if they too were atheists. This is clearly a straw man fallacy. In his fourth article he states, “It is annoying when atheists are ahead of creationists in exposing false atheistic thinking. Such is the case with natural selection. Why? Because selection is not atheistic enough for thoughtful atheists. These take their faith seriously and can see that Darwin just replaced God as a supernatural cause for origins with a mystical agent, natural selection—a criticism applicable to creationist articles purporting to show ‘Natural Selection in Operation’” (Guliuzza 2011d).

The criticism is a blatant straw man fallacy. It is not applicable to creationist articles that show natural selection in operation, because creationists do *not* replace God with natural selection. Rather, creation scientists see natural selection as the *means* by which God accomplishes His will in today’s world. Nature itself is the normal way that God accomplishes His will. Guliuzza’s failure to understand that God works through means is a central theological error throughout his writings.

In his fifth article, Guliuzza states, “Purpose in nature is repudiated by selection-based thinking....” (Guliuzza 2012a). This is simply not true of creation scientists who understand and accept natural selection. Atheistic evolutionists may indeed repudiate purpose. But creationists believe that God has a purpose in mind for both organisms and the environment. And God often uses the environment to accomplish His purpose. The Genesis Flood is one such example. God selected certain organisms for survival. Others perished. Such selection-based thinking is fully *biblical* and consistent with God’s purpose.

In his first *Answers Research Journal* response Guliuzza states, “God is denied His rightful glory by those who ascribe ultimate causality of the created realm of nature to nature itself” (Guliuzza 2014a). But what creationist would ascribe “*ultimate* causality of the created realm of nature to nature itself?” The creationist acknowledges that God is the first cause of all things. The processes we observe in nature are not an alternative to God’s power, but an example of God’s power.

In his fourth article, Guliuzza states, “Natural selection is meant to explain the design of life and assure people see that what looks like real design is all an illusion of design—not merely something explaining biological diversity” (Guliuzza 2011d). This is certainly false. The concept of natural selection is scriptural (as we explored above) and was developed by the creationist Edward Blyth as the means by which God accomplished some aspects

of His will. The concept is a creationist one and was not meant to explain the design of life, but rather to explain why some organisms are not found in some environments. I have yet to encounter an evolutionist who holds the view that Guliuzza ascribes to them. My evolutionist professors taught that mutations—not natural selection—are the source of genetic diversity. Natural selection simply refers to the death of the unsuccessful cases.

And what of those evolutionists who wax poetic about natural selection designing things? In most cases they are using synecdoche—the part to represent the whole. If asked to state their view in a literal and precise way, they would say that mutations and natural selection are what allow evolution to happen; mutations are responsible for genetic variation and natural selection simply refers to the removal of those variations that don’t survive. I’m not defending the evolutionists’ view of course. But Guliuzza misrepresents them, which is not a cogent or ethical way to defend the faith. It is a straw man fallacy.

### ***Reification Fallacies***

Reification is a common figure of speech in which concrete (and sometimes personal) characteristics are attributed to an abstraction. A great illustration of reification is the personification of wisdom, as was mentioned above. Wisdom cannot literally cry out or hate arrogance. But as a poetic device reification can be a wonderful teaching tool. Scientists use this literary device when they speak of chemical affinity or hydrophobic substances. There is nothing wrong with reification in and of itself.

But when reification is used to draw conclusions that are logically unwarranted, it is a fallacy. This can happen when reification is used in a literal way. For example, consider an evolutionist who is asked how organisms managed to develop features that are so useful in their survival. Suppose he responded, “evolution figured out how to overcome such difficulties.” That would be a reification fallacy because evolution is a concept that doesn’t have conscious activity (figured out). Only a literal mind can figure out how to do something, and so the evolutionist’s response is fallacious and doesn’t really address the issue. It merely sidesteps it.

Guliuzza seems to realize that evolutionists do commit the reification fallacy from time to time. The problem is that Guliuzza himself commits this fallacy often in his own articles. Consider all the things that Guliuzza claims that natural selection can do. In his first article, selection is said to have the power to captivate a mind. It induces thinking and most significantly, natural selection steals glory from God.

People can steal things, but the act of survivors surviving certainly cannot. People can fail to praise God but not the concept of the more fit organisms reproducing in greater numbers than the less fit. So, when Guliuzza shifts the blame from people stealing glory from God to the term natural selection or to its referent, he has committed the reification fallacy. This is because neither the term natural selection nor its referent is a person with the capacity to either give or withhold praise.

### **The “No True Scotsman” Fallacy**

What is the cause of adaptation? One of Guliuzza’s central claims is that the cause is always the organism’s nature, and never external/environmental. In his *Answers Research Journal* response, Guliuzza states, “true causality of adaptation resides within innate systems of the entity/organism... Integrated systems [of an organism] as a whole are the only cause” [underline added] (Guliuzza 2014a).

Unfortunately for Guliuzza, and as we’ll see below, there are documented counterexamples. That is, there are cases where environmental forces directly change an organism. A UV light induced or x-ray induced mutation is an example. So how does Guliuzza maintain his position that the organism is the only cause, when there is evidence that the environment—at least in some cases—is the cause? Guliuzza simply dismisses those cases by insisting that the environment is not the *true* cause.

This is a textbook example of the “No True Scotsman” fallacy. A person commits this fallacy when he tries to protect his claim from an obvious counterexample by attempting to tacitly redefine the category by putting an adjective such as true in front of the term. The classic example from which the name is taken is this:

John says, “No Scotsman puts sugar on his porridge.”

Bill replies, “Not true. Angus is a Scotsman. And he puts sugar on his porridge.”

John responds, “Ah, but no *true* Scotsman puts sugar on his porridge.”

The problem with John’s response is that it doesn’t actually refute Bill’s counterexample. Instead, John is attempting to dismiss Bill’s counterargument by implying that Angus is not in fact a Scotsman at all *on the basis that Angus puts sugar on his porridge*. But that has nothing to do with the *definition* of a Scotsman. John does not produce any evidence that would actually demonstrate that Angus is not from Scotland—the *only evidence that is actually relevant to the claim*.

Likewise, Guliuzza dismisses obvious counterexamples to his claim that the environment is never the cause of adaptation by simply insisting

that the environment is not the *true* cause of adaptation. He is tacitly attempting to redefine cause so that it only applies to organisms and never to the environment, which simply begs the question. Unfortunately for Guliuzza, there is nothing in the definition of cause that restricts it to organisms or precludes environmental causes. So Guliuzza’s reasoning is fallacious.

### **The Fallacy of the Appeal to Consequences**

The fallacy of the appeal to consequences is an argument that concludes a claim to be either true or false on the basis of whether or not it leads to consequences that are desirable or undesirable.

Guliuzza argues in precisely this way that natural selection must not exist because it leads to the tragic view that organisms less fit to their environment are less likely to survive. In his article on “Major Evolutionary Blunders” Guliuzza states, “Darwinism [he’s actually referring to natural selection] is predicated on death eliminating ‘unfit’ members from populations of creatures as they struggle to survive” (Guliuzza 2016). The implication is that this would be horrible and therefore, we must not think natural selection is really true. In reality, organisms that are unfit (unable to survive) do indeed perish—by definition. That may be sad. But the fact that this may be unpleasant doesn’t make it false.

### **The Moralistic Fallacy**

Similar to the previous fallacy, the moralistic fallacy is the error of concluding that something must be true if it is morally right, and false if it is immoral.

Guliuzza commits this fallacy in his article on “Major Evolutionary Blunders: Survival of the Fittest, Eugenics, and Abortion.” He argues against the truth of natural selection on the basis that people attempting to implement it forcefully are morally wrong. In referring to the unethical practice of eugenics, he states, “Death-driven behaviors are tenaciously rooted in the fitness-survival-death mindsets that encompass selectionist thinking” (Guliuzza 2016). Some people have taken that fact that the less fit tend to die as license to actively kill less fit people—which is morally wrong and detestable (and commits the naturalistic fallacy). Since some people use natural selection to justify immoral behavior, Guliuzza apparently concludes that natural selection must not exist.

### **Incomplete and Inconsistent Reasoning**

In his fifth article Guliuzza states, “The reality is that the environment *just is*—it exists as temporal space of mindless, impartial, unconscious conditions to which *organisms are exposed* at their interface” (Guliuzza 2012a). In his attempt to persuade the

reader that the environment should be ignored when considering the cause of adaptation, Guliuzza makes a statement that has no logical meaning: "The environment just is." This is meaningless because it has no predicate term.

Categorical logic is all about the linking of two things either in a positive or negative way. For example: "The environment is good." This sentence links environment with the idea of good and does so in a positive, affirming way. In such a statement "the environment" is the subject. The predicate term is "good." Without the predicate term, the thought is incomplete because the environment is not linked with anything. The environment means nothing because it is logically incomplete. The reader is left to ask, "*The environment is what?*"

Perhaps Guliuzza meant to imply that the environment exists. Of course, the environment exists. Apparently, Guliuzza is trying to emotionally persuade the reader that the environment is unimportant, by inserting the adverb just. But the thought is still incomplete and logically meaningless. We can see the inconsistency by completing the thought, assuming that Guliuzza is implying the existence of the environment: "The environment just exists." But that's trivial because it is true of *everything* that exists. It's also true that organisms just exist. They do.

And once again we see that Guliuzza has not applied his reasoning in a consistent fashion. He is attempting to dismiss the environment's role in adaptation on the basis that "it exists as temporal space of mindless, impartial, unconscious conditions to which *organisms are exposed* at their interface." Putting aside for the moment that there is no logical means to draw such a conclusion from that premise, we note that the same argument can be used to draw the exact opposite of Guliuzza's conclusion. After all, the vast majority of organisms that adapt are *not* conscious—plants, microbes, etc. That is, they exist as "mindless, impartial, unconscious conditions" to which the *environment* "is exposed at their interface." By Guliuzza's thinking, organisms cannot therefore be the cause of adaptation—the opposite of his own view.

### 3. Science

In this section, we show that Guliuzza has made scientific claims that are unproven, and in some cases demonstrably false. We then move to examine a specific and critical error that is central to Guliuzza's claims involving causation. We also examine whether Guliuzza has fairly represented what scientists claim regarding the source of variation. And finally, we discuss how proper scientific methodology prevents the confirmation bias that is so evident in Guliuzza's writings.

### **Stating Hypotheses as Facts**

A hypothesis is a conjecture or speculation about some aspect of the universe that is open to scientific investigation. Scientists propose a hypothesis and then construct an experiment or observation that could potentially falsify the hypothesis. The experiment must be designed in such a way that it can distinguish between alternative hypotheses. In other words, if two different hypotheses predict the same outcome for an experiment, then such an experiment is useless and does not advance science. By performing a number of good experiments, the researcher is able to systematically eliminate competing hypotheses, reducing the possible explanations to a few, and perhaps to one—the correct answer. This is essentially the scientific method and it has proven to be an extremely effective tool.

However, Guliuzza skips all this and often simply states his initial conjecture as though it had been experimentally proven. This might indeed persuade non-scientists. They might assume by the confidence of Guliuzza's assertion that he has done his homework on the issue, performed the appropriate experiments, published in peer-reviewed literature, and thus has good reasons to back up his claim. But he hasn't. The dogmatic way that Guliuzza asserts his conjectures falsely implies that he has somehow proved them. But stating a conjecture as a fact is simply not an ethical way to promote an idea. Let's look at some examples of this.

In his third article, Guliuzza states, "Those who understand that organisms are 'programmed' by God to 'fill' environments accurately identify *internal* forces as the power source. These are the outworking of internal systems that enable reproduction of variable traits that are inheritable—which are always observed to operate in the context of the whole organism." (Guliuzza 2011c)

So Guliuzza has stated that the power source by which organisms fill their environments is always internal forces. But what *experiment* did Guliuzza do to establish this conclusion? What tools did he use to measure the internal forces and to identify the power source? What was the control group? What were the materials and methods? I find no evidence that Guliuzza has done any experiment whatsoever to prove his claim. Nor does he have scriptural support—as will be shown.

Moreover, what experiment could *conceivably* be performed to either establish or falsify Guliuzza's assertion? Since Guliuzza never defines what he means by power source, it seems unlikely that *any* experiment could be performed—even in principle—to test his ill-defined conjecture. We observe that organisms sometimes adapt to new environments, or environmental changes. But both Guliuzza's

conjecture and the alternative view can explain such observations. Namely, if the power source is *external* to the organism, then organisms will sometimes adapt to their environment; and if the power source is internal, then organisms will sometimes adapt to their environment. Guliuzza has performed no experiment whatsoever, nor has he even proposed one, that can distinguish his conjecture from any alternative. He hasn't even defined his terms to the point where such an experiment could be conceived.

Another example from Guliuzza's third article is this: "The ability to generate beneficial variations *already resides* in living organisms" (Guliuzza 2011c). Now this statement may be true for *many* specific instances. But Guliuzza has stated it without exception, as if it were always the case. This is clear from an earlier article where Guliuzza writes, "The theory [natural selection] fraudulently ascribes the powers of diversification to variables outside the creature when diversity depends solely on variables inside the creature" (Guliuzza 2010) [underline added]. It is clear the Guliuzza believes that the diversity of traits is *never* due to an environmental cause.

But how does he know that? Again, what experiment did Guliuzza do to conclude that *in all cases* the ability to generate beneficial variations already resides in living organisms? For this to be conclusive, Guliuzza would have to have done an experiment on all organisms at all times to see how their beneficial variations arose. Even to make a probabilistic argument, Guliuzza would have to have done many such experiments without finding any exceptions. But I can't find any evidence that he has done even *one* such experiment.

And in fact, other scientists have observations that refute Guliuzza's universal claim. There are observed instances of beneficial (within a given environment) variations arising due to a mutation (Anderson and Purdom 2009). External factors such as a cosmic ray or certain chemicals can cause mutations in an organism's DNA, which lead to traits that—in some environments—enable the organism to better survive and reproduce in that environment. These are still in the wrong direction to make evolution happen because they tend to remove genetic information rather than increase it. But they nonetheless happen. This is well-established observational science—not speculation about the past. It is directly observable in the present. So Guliuzza's universal claim has been scientifically falsified.

### **Does Selection Require a Conscious Agent?**

In his second article, Guliuzza states, "The word 'select' is an absolute necessity to Darwinism. Prior to 'natural selection' becoming accepted in the 1930s, the

ability to deliberate alternative outcomes and make choices was considered to be restricted to conscious agents. Volition was implicit of intelligence. In reality, deliberative capacity is still evidence of information-bearing agents. Choice-making abilities have never been observed by anything other than these agents or by things they have designed" (Guliuzza 2011b).

There are at least four problems with Guliuzza's claim. First, the *word* select is *not* an absolute necessity to Darwinism as Guliuzza claims. Guliuzza is again confusing a verbal token with its referent. The *concept* behind natural selection may be necessary for Darwinism, but not the word select. This is easy to demonstrate, because the concept of evolution can be described perfectly well without ever using the word select.

For example, the story is that:

mutations—mistakes in the DNA—lead to variations in organisms. Most of these variations lead to traits that are not conducive to an organism's survival—such organisms die and their DNA variations are eliminated from the genome. But, rarely, a mutation generates a trait that enables the organism to survive and out-reproduce other organisms that lack such a trait. Such rare mutations eventually outnumber those that lead to the death of the organism, for precisely that reason. And hence, organisms are said to gradually change over time, as their genome is altered.

Clearly, the evolution story can be told without invoking the word select.

Second, consider Guliuzza's claim that "prior to natural selection becoming accepted in the 1930s, the ability" to "make choices was considered to be restricted to conscious agents." This is the fallacy of irrelevant thesis, because the issue is not what the word select (or choice) meant in 1930, but rather what it means *today*. The meaning of a word is determined by *usage*, not etymology. And we have already seen that select *as it is defined today* need not be a conscious selection. The lottery machine can select six balls at random. Its selections are not conscious ones.

Third, Guliuzza has subtly contradicted himself. Consider his statement, "Choice-making abilities have never been observed by anything other than these agents or by things they have designed." Previously, he had been arguing that choice-making ability requires a *conscious agent*. But now he adds an exception: "or by things they have designed." But in allowing that exception, Guliuzza has lost his own argument. Here's why.

Guliuzza's argument that natural selection is an inappropriate term is based on his belief that selections or choices can only be made by conscious

agents—which the environment is not. But now he has conceded that non-conscious agents may indeed make choices/selections as long as they were *designed* by a conscious agent. The problem for Guliuzza is that the *environment was designed by a conscious agent*—God. Thus, by his own reasoning, Guliuzza should have no problem with the term natural selection.

Fourth, theologically speaking, nature is simply the name we give to the way God ordinarily upholds His creation. Thus, a natural selection would be the way that God normally selects, consistent with the definition of natural selection. When organisms are not sufficiently suited to their environment, God will normally select them to be terminated and recycled back into the environment. This is part of His plan for the world in which we live. God is certainly a conscious agent. Thus, Guliuzza should have no problem with the term natural selection.

### Introduction to Causation

What is causation? Guliuzza never defines this term. And based on his usage, he seems not to understand what it means—as we will see below. In logic and science, causation has a very specific and unambiguous definition. Causation is defined as *necessary succession*. One thing (A) is said to be the *cause* of another thing (B) if B followed in time from A and if B *must* follow from A under the specified circumstances.

When a moving billiard ball strikes a stationary one, the latter is set into motion. When the first ball struck the second, it *caused* the second ball to move. We know this because the motion of the second ball follows in time after being struck by the first ball, and it *must* follow in time. That is, it is *always* the case that (under the specified circumstances) a moving billiard ball striking a stationary one will set the second ball in motion. You could do this experiment a hundred times and get the same result. We rationally infer that the succession is necessary, and thus we have genuine causation.

There are many other factors involved of course. The second ball must be free to move—not superglued to the billiard table or against a rail. But *given these conditions*, whenever the first ball strikes the second, the second ball will move. The second ball's motion is always after (and only after) being struck by the first ball. And it happens every time. So we have good reasons to believe that the succession is necessary under the given conditions.

Note that succession is required but not sufficient for causation. After eating supper, it may start to rain. But eating supper did not cause the rain, because many times after eating supper it does *not* rain. So, there is (sometimes) a succession between eating and rain, but the succession is not *necessary*—meaning

it doesn't have to happen given the circumstances, and in fact it does not happen in all cases. It's just a coincidence when it does.

Science provides us with the means to distinguish causation—necessary succession—from other types of succession. The method by which we distinguish causal factors is *repeated experimentation*. For example, an experiment would readily affirm that when a baseball is struck by a bat, the motion of the ball is changed. This happens *every time* under sufficiently similar circumstances, indicating that the succession is *necessary* and not merely a coincidence. So, we can say that the striking of the ball with the bat is the *cause* of the ball's change in motion.

### Errors Involving Causation

In his *Answers Research Journal* response, Guliuzza claims that the *cause* of adaptation is always intrinsic to the organism, and *never* the external environment. He claims that “true causality of adaptation resides within innate systems of the entity/organism; thus, adaptation is best understood via systems analysis.” And again, He states, “Integrated systems [of an organism] as a whole are the only cause” [underline added] (Guliuzza 2014a).

This claim is easy to refute scientifically and has been refuted experimentally. As one example, cosmic rays (an environmental exposure) can strike DNA and directly change it. This results in altered traits—a variation that is environmentally caused.

This example also directly refutes Guliuzza’s principle number 5 in the same response where he states, “Sensors comprise the essential system component at the organism-environment interfaces—the principal trigger within an organism’s self-adjusting systems” (Guliuzza 2014a). But cosmic rays completely *bypass* any sensor in an organism, and directly change its DNA. And mutations can result in altered traits—one type of adaptation. So there is no doubt scientifically that Guliuzza is wrong in his assertion that the cause of adaptation is *always* the organism and *never* the environment.

Frankly, both types of biological adaptation necessarily involve environmental causation. For example, when human beings are exposed for a period of time to a low-oxygen environment, their red blood cell count increases. The increase in red blood cell count follows in time from the change in environment. So there is definitely succession. But is the succession *necessary*? Experiments show that this in fact always happens under the given circumstances (e.g. a living, healthy human). So the succession is not merely a coincidence—it is *necessary*. Thus, scientifically we must conclude that the lower oxygen levels are the *cause* of the increased red blood cell count.

Now, I'll be the first to point out that this environmental condition is not the *only* cause. The human body is designed in such a way that it can sense lower-oxygen levels and will respond by producing more red blood cells. Thus, the body's design is *also* a causal factor. However, adaptation will not occur without the environmental change—it is a necessary causal factor. Furthermore, the change in the external environmental conditions always results in the healthy human body producing more red blood cells. The succession is necessary, and therefore the environment is a cause by *definition*. Guliuzza's claim that the *only* cause is intrinsic is therefore demonstrably false.

Guliuzza seems to think that since the design of the organism is *also* a causal factor in this type of adaptation, that this implies that the environment is *not* a cause. After all, if the body were not designed in such a way as to respond to low oxygen levels by producing more red blood cells, then the change in the environment would not, by itself, induce any change in the body's red blood cell count. And it's certainly true that the organism must also be a certain way for the adaptation to occur; it is a causal factor. Can we therefore conclude that the environment is *not* a causal factor since it's not the *only* causal factor?

But that type of reasoning proves too much because when followed consistently it would also prove its own opposite. After all, without any change in the *environmental oxygen levels*, the body will not adjust by producing more red blood cells. Without the change in environmental conditions, adaptation will not occur, proving that the organism is not the only causal factor. Should we therefore conclude that the organism is not a cause since it's not the *only* cause?

Both the design of the body and the change in environmental conditions are necessary for this type of adaptation to occur. And since adaptation *only* occurs and *necessarily* occurs after (1) a change in environmental conditions and (2) when the right internal mechanisms are in place, we must conclude logically that both the environment and the organism are causal factors in adaptation. Guliuzza has committed a bifurcation fallacy in his implicit insistence that the cause is *either* the organism *or* the environment. By the definition of causation, *both* are the cause.

Guliuzza seems to want to limit the cause of adaptation to a *single* cause, which he sometimes refers to as the true cause or the primary cause. We saw above that true cause is an example of the no true Scotsman fallacy. And scientifically, it is unrealistic to speak of the one or only cause. Most things in the universe have multiple causes. Consider the following.

What is the cause of rain? Is it moisture in the atmosphere, an air temperature that is below the dew point, the abundance of water on earth, gravity, energy from the sun, rain clouds, or does God send rain? All of the above are involved. Without abundant water on earth, there would be no moisture in the air, without gravity the liquid water would not fall as rain, without energy from the sun there would be nothing to evaporate ocean water into the air, and there would be no rain clouds. Without a temperature below dew point, the moisture would remain in the air, and not condense as rain. Without God controlling all these things, none of this could happen. The cause of rain is multifaceted.

Multifaceted causation is biblical. The fact that God causes the rain to fall (Matthew 5:45) does not preclude atmospheric conditions also being a cause (Matthew 16:3). The fact that Pharaoh is the cause of his hardened heart (Exodus 8:32) does not preclude God also being the cause of Pharaoh's hardened heart (Exodus 9:12). So when Guliuzza (correctly) identifies organisms as a causal factor in adaptation, this does not in any way eliminate the environment as a cause as well. We've seen above that both the environment and organisms are necessary causal factors in adaptation.

Although the phrase true cause is simply part of a no true Scotsman fallacy, at other times Guliuzza asks in his *Answers Research Journal* response, what is the "primary cause of organismal adaptation?" Is this phrasing any better? The word primary means first either first in order of time or development or first in rank, importance, or value. Guliuzza asserts that the primary cause of adaptation is always the organism, never the environment. How he reaches that conclusion isn't exactly clear. And unfortunately, Guliuzza never specifies which meaning of primary he has in view. But let's consider each option separately and see if Guliuzza's assertion can be justified.

Let's consider first the possibility that Guliuzza takes primary to mean first in order of time or development. We've already seen that both the environment and the organism are causal factors in physiological adaptation. But which factor happens *first* in time? Does the organism's increased production of red blood cells happen first, and then the change in environmental oxygen levels afterward? Clearly not. The environmental drop in oxygen level always happens *before* the body begins producing increased quantities of red blood cells. So, we must conclude in this case that the primary (in the sense of first in time) cause is *environmental*—not organismal. Logic demands the opposite of Guliuzza's assertion.

In fact, in essentially all cases of physiological adaptation to a change in environment, doesn't the change in environment always happen *before* the

adaptation of the organism? And so, in virtually all cases, the environment is the *primary cause* of adaptation because it happens first in time. The organism also has a causal role, but this occurs later and is therefore *not primary*.

And what about the genetic variety of adaptation? What is its primary cause? Recall, this type of adaptation refers to the change in gene frequency within a population of organisms over a period of time. Genes that produce traits that are not conducive to survival in a particular environment tend to be eliminated. If the environment becomes very hot, those organisms not suited to heat tend to die, and those organisms with traits well-suited to heat survive and reproduce in greater numbers. Eventually, the hot environment has primarily organisms with DNA that produce traits suitable for heat.

But which happened first: the shift in gene frequency toward traits suitable for heat, or the environment becoming hot? Again, we see that the change in environment is the first or *primary cause*; the shift in gene frequency happens *later*. It is clear that in both types of adaptation, the primary cause (the first in time) is essentially always the environment. So if Guliuzza's view is that causal factors in the organism are primary (first in time), then it is demonstrably false.

Let's give Guliuzza the benefit of the doubt and suppose that he takes primary cause to be the cause that is first in rank, importance, or value. Unfortunately, this does not save his assertions from absurdity because this definition of primary is *subjective*—it will vary from person to person. What is considered important to one person may be unimportant to another. Something that is of very little value to one person might be highly valued to another. And so if Guliuzza takes primary in the sense of rank, importance, or value, then his claim becomes merely a subjective preference and is scientifically meaningless.

We saw above that both environmental conditions and organism's internal mechanisms are necessary for adaptation to occur. So which one is the most *important* in adaptation? When both are essential, it seems a meaningless question. It's a bit like asking: "Which is the more important constituent of salt: the sodium or the chlorine?" Both are essential for salt. Or in Guliuzza's wording, we may ask, "What is the true or primary cause of an airplane's ability to fly—the left wing or the right wing?" The bifurcation fallacy becomes clear.

Rather than speaking of a true cause (which is redundant at best, and the no true Scotsman fallacy at worst), or the primary cause which is ill-defined, it would be more meaningful to discuss *proximate*

causes and *distal* causes. The *proximate cause* is that which is closest to the event and immediately responsible for it. A *distal cause* is that which leads to the proximate cause. In billiards, the first ball striking the second ball is the *proximate cause* of the second ball's motion. The player striking the first ball with his cue stick is a *distal cause*.

Note that *both* are causes of the second ball being set in motion, because both are examples of *necessary succession*. That is, the second ball is always necessarily set in motion *after* the person strikes the first ball with his cue stick under the given circumstances (correctly aimed, etc.). It is meaningless to ask "which is the 'true cause' of the second ball's motion?" because the first ball striking the second is the proximate cause and the player striking the first ball is a distal cause. The proximate cause would not occur without the distal cause. There are often many distal causes. When the person decides to play billiards, his decision is a distal cause because it preceded the motion of the second ball, and necessarily so given the circumstances of the game.

The distal cause is often considered to be far more important than the proximate cause, as in legal proceedings. Imagine someone on trial for murder. Suppose that there were many witnesses to the crime, so that there is no doubt of the man's guilt. But is he really the *cause*? There is likely a very long chain of causes that led to the death of the victim. Perhaps the killer's father was abusive to him, leading the man to develop anger issues, which led to him yelling at his boss, which got him fired from work, which led to his poverty, which led him to commit crimes, which led him to pull the trigger of the gun, which fired a small projectile into the victim, which created a small hole, which allowed blood to escape the body, which led to low blood cell counts, which led to cellular oxygen deprivation, which caused the cells to cease to function, resulting in death.

Now which of these was the primary *cause* of the victim's death? All of these contributed and so they all are causal factors. Which one is considered the most important may depend on the situation. From a legal perspective, the killer is probably considered the primary cause. No rational person would sue the gun company for being responsible for the victim's death, even though the gun was a causal factor. And no one should blame God for failing to design a body that can live without oxygen. The distal cause in this case is the most relevant. On the other hand, the coroner is concerned with a more proximate-level cause. He reports the *cause* of death as a gunshot wound to the chest.

Both the killer and the bullet are *environmental* causes. And it seems perfectly reasonable and scientific to consider them the *causes* of the victim's

death. But not to Guliuzza. Since he has arbitrarily limited the consideration of cause or true cause to the organism, Guliuzza would report the cause of death as “the victim’s failure to be bullet-proof.” As absurd as that conclusion may be, it is the inescapable result of Guliuzza’s thinking. After all, God *could* have decided to design the human body to withstand bullets, or to function without blood. In such a case, the killer’s firing of the gun would have failed to kill the victim. That’s true perhaps, but it’s irrelevant to the claim at hand. Given the way that God did in fact create the human body, bullets fired into it (in certain places, at the right angle, etc.) will kill. The death happens after the bullets create sufficient blood loss, and necessarily so. Therefore, the bullets are indeed a cause—by definition.

Recall that from his “Engineered Adaptability” article, Guliuzza claims, “Designs either succeed or fail to solve problems.... In all cases, credit or blame resides with designers, *not* the exposures” (Guliuzza 2012b). So, by Guliuzza’s reasoning, the killer is not to blame for the victim’s death; the killer is merely an exposure. Rather, God—the Designer—is to blame! Why? It is because God failed to design the victim to be bullet-proof! Not only is this way of thinking irrational, it is deeply unbiblical as we will see below.

The killer—an *environmental condition* from the victim’s perspective—is responsible for the victim’s death. The *killer* should be punished, not the gun, the bullet, the victim’s circulatory system, or God. All of these things are involved as causal factors. But Guliuzza’s suggestion that “credit or blame resides with designers, not the exposures” would absolve the killer of the blame and place it instead on God!

### **Adaptation**

We saw in the first section that Guliuzza fails to distinguish between the two different types of biological adaptation. These are (1) physiological adaptation of an individual organism that does not affect the organism’s DNA, or (2) the shift in allele frequency in the DNA of a group of organisms over time, such that the DNA produces traits conducive to survival in that environment. The first type of adaptation is non-genetic; it does not affect an organism’s DNA. The second type of adaptation is genetic; the DNA of a group of organisms changes over time. Guliuzza seems not to understand this important distinction, leading to scientific blunders.

In particular, Guliuzza argues that *non-genetic* adaptation can result in speciation. However, speciation requires *genetic* adaptation, because different species have different DNA. In other words, if two organisms today have differences in their DNA, and yet they are descended from the same ancestor, then obviously, the DNA has changed from that of

their ancestor. So, non-genetic adaptations (which do occur) cannot be the cause of genetic adaptation because they do not affect the genome. Physiological adaptation that does not affect the DNA is therefore utterly irrelevant to speciation.

Guliuzza’s confusion on this issue is seen in his article “Fast Evolution Confirms Creationist Theory” in which he states, “A tenet of creationist theory maintains that creatures are designed for robust speciation. Although they cannot change into fundamentally different kinds, creatures can rapidly express a wide diversity of traits to fit changing environments” (Guliuzza 2017). So there is no doubt that he is attempting to explain speciation—that the relatively few kinds of animals aboard Noah’s Ark have given rise to the many species within their kinds. The DNA of these different species is different. Hence, whatever mechanism gave rise to the many species must necessarily involve a change in the DNA. But the mechanism Guliuzza invokes is *non-genetic*. He states,

These rapid changes fit much better with contemporary research that reveals how organisms possess elaborate built-in systems composed of sensors, cellular algorithms, and output responses that enable them to *continuously track environmental changes*—man-made or otherwise—so they can quickly fit and fill new niches.

Many organisms do possess sensors of a sort that can detect aspects of the environment; and many organisms are indeed capable of adjusting their own physiology (to a certain extent) to better survive in a given environment. *But this does not affect their DNA.* As far as we know, the response of an individual organism to its environment does not involve a change in the DNA sequence, and therefore cannot be responsible for speciation. Guliuzza continues to illustrate his confusion on this issue:

Up-to-date research shows that they may employ dozens of mechanisms including epigenetic, hybridization, cryptic variation, behavioral changes, unreduced gametes, directed crossover, regulated micro-RNAs or RNA splicing, horizontal gene transfer, and even modulation of an organism’s microbiota. None of these mechanisms require a struggle for life and death!

There are several problems here. Guliuzza is attempting to explain speciation—how the DNA of a common ancestor kind resulted in the different DNA of the many species. Yet, most of the mechanisms he mentions do not affect the sequence of DNA! Epigenetic changes—by definition—occur outside the DNA and do not affect its sequence. Likewise, behavior changes do not affect an organism’s DNA. Most people know better; you can modify your dog’s behavior through reward and punishment—

but this will not affect the DNA or behavior of its puppies. Such changes therefore cannot account for speciation—the topic of Guliuzza’s article.

Notice Guliuzza’s last point here: “None of these mechanisms require a struggle for life and death.” This again reveals Guliuzza’s confusion and lack of understanding of natural selection. No one would deny that the *creation of new variations* of organisms does not involve the struggle for life and death. But that is not the subject of the article—the subject is *speciation*. Speciation is not merely the creation of new variations, but also the subsequent survival of those variations in a given environment. That most certainly does involve a struggle for life and death as is readily observed.

Namely, we do not find species living in environments for which they are not suited. You may have noticed that we do find fish in lakes, but we seldom find fish on dry land—at least not for any length of time. Yet, we know that fish once existed (during the Flood year) in areas that are now dry land, because we find fossils of them. But why do the fish no longer live in such places, and what happened to these fish when the waters dried up? Guliuzza cannot consistently answer this simple question. But scientists can. The answer is that the fish *died* because they are not suited to a dry environment. This fits the very definition of natural selection, which Guliuzza denies.

### Lamarckism

Guliuzza’s view of adaptation is not new. It is actually Lamarckism. Jean-Baptiste Lamarck (1744–1829) was a French biologist who proposed that organisms physiologically evolve to their environment, and pass on such adaptations to their offspring. He believed that organisms would gradually change their own anatomy as needed, and then pass on those characteristics to the next generation with no extinction: evolution without natural selection. Thus, he believed that elephants originally had short trunks, but gradually adapted by lengthening their trunk in adaptation to their environment such that each successive generation had a longer trunk than the previous.

Similarly, Guliuzza states, “Creationists theorize that organisms’ innate systems enable rapid rates of trait diversification to explain how they continuously fill environmental niches—particularly post-Creation and Flood” (Guliuzza 2017). [He wrongly attributes this belief in a footnote to Nathaniel Jeanson. However, Jeanson has publically stated that he does *not* hold this view (Purdom and Jeanson 2016). Guliuzza’s statement reveals his own position—not Jeanson’s.] There is no doubt that Guliuzza refers to physiological adjustment, rather than heterozygosity

and natural processes, because he clarifies in a later sentence. He writes, “These rapid changes fit much better with contemporary research that reveals how organisms possess elaborate built-in systems composed of sensors, cellular algorithms, and output responses that enable them to *continuously track environmental changes*—man-made or otherwise—so they can quickly fit and fill new niches” (Guliuzza 2017)

Clearly, Guliuzza’s position is essentially the same as Lamarck’s, with one apparent exception: Lamarck believed that such adaptation was unlimited. At this point, Guliuzza switches to the standard creationist position—that organisms remain the same created kinds. But from Guliuzza’s perspective, there is no reason why such adaptation should remain within a kind. If organisms have an innate power to adapt to their environment and can pass on acquired traits to their offspring, why shouldn’t such adaptation continue indefinitely, giving rise to brand new kinds?

There is a good reason why scientists (both creationists and evolutionists) reject Lamarckian evolution: genetics. Lamarck published his ideas about continuous environmental tracking through the inheritance of acquired traits back in 1801. This was long before Gregor Mendel discovered the rules of heredity that form the foundation of modern genetics. Mendel found that offspring develop traits based on their parent’s genes—not on their parent’s experiences or acquired traits. Guliuzza’s understanding of genetics seems to be 200 years out of date.

### The Source of Design and Variation

What is the source of the design and variation we observe in living organisms? The creationist recognizes that God is ultimately responsible. Some things God accomplished instantly at creation; other things God brings about by various means over the course of time—providence. Given the details we have in Scripture, there are good reasons to believe that much of the design and variation of organisms was accomplished by God during the Creation week, but some variations have occurred over the course of time by providence.

Specifically, creation scientists teach that God created the basic kinds of organisms during the Creation week with the capacity to produce a great amount of variation in their expressed traits due to the many possible combinations of genes on the two sets of DNA contained in each individual (Jeanson and Lisle 2016). In addition to this, some variations can result from mutations that scramble the instructions in the DNA. While such mutations do not, as far as we know, add brand new genetic information to the genome, even a loss of information

can result in a new trait. For example, red hair in human beings appears to be the result of one or more mutations in our ancestry. Thus, the various traits we observe in all organisms are a result of God's plan—partly by information that God placed in the original genomes, and partly by mutations that God providentially allows.

In the evolution view, mutations *alone* are ultimately responsible for all traits of all organisms since the evolutionist does not allow for original kinds to be created with some design already. But notice something important: neither the creationist explanation of diversity nor the evolutionist explanation of diversity invoke natural selection as the *cause*. Why? The reason is that natural selection has no creative power at all. Rather, natural selection merely refers to the death of the unsuccessful cases—those variations that did not have traits suitable for survival in their given environment. Guliuzza seems to misunderstand this principle, resulting in straw-man fallacies. Like Don Quixote's valiant attacks on windmills, Guliuzza passionately argues against a position that no one holds.

In his second article, Guliuzza states, "Other factors like genetic drift, lateral gene transfer, sexual selection, epigenetics, and self-organization are believed to contribute to increased biological design, but these are minor players compared to 'selection'" (Guliuzza 2011b). This just isn't so. Creationists (and even the evolutionists with whom I have interacted) do not invoke natural selection to explain biological design. Rather natural selection explains why we *don't* find organisms that are *not* well-suited for survival in a particular environment. Evolutionists invoke *mutations* to cause diversity. They simply invoke natural selection to explain the culling of the majority of cases where mutations lead to decreased survival value in the given environment.

It's no wonder that Guliuzza complains that natural selection steals glory from God when he attributes abilities to it that go far beyond what even evolution scientists would claim. I can only guess how Guliuzza might have made such a mistake. It may be that he read certain statements out of context. For example, evolutionists often use the term natural selection as a shorthand way of saying "natural selection and mutations over time." This figure of speech is called *synecdoche*—the substitution of the part for the whole, or the whole for the part.

We use this figure of speech all the time when we say things like, "John could really use a raise; he has seven mouths to feed." In such a case, the mouth (part of a person) is used to represent the entire person. Since evolutionists consider evolution to happen by mutations and natural selection over long periods

of time, they sometimes use the part to represent the whole. By natural selection they mean natural selection and mutations or even evolution.

The use of synecdoche is an acceptable and appropriate way of speaking. Even the Bible uses synecdoche at times. In Proverbs 6:16–18, God expresses his displeasure of the people who sin, by representing them by the part of the body most associated with a particular sin. Likewise, it is acceptable for a scientist to say that gravity causes the moon to orbit when really it is gravity and angular momentum. And so if indeed mutations and natural selection are responsible for at least some traits found in environments to which those traits are well suited, then either the term natural selection or mutations is an appropriate use of synecdoche.

However, I would argue that the substitution of evolution for natural selection and mutations over time is *not* an acceptable use of synecdoche, because it begs the question to assert that natural selection and mutations over time can result in the evolution of a new kind of organism. So I'm *not* defending the evolutionist's substitution of natural selection for evolution. Rather, I'm pointing out that context makes clear that they often use the term natural selection to mean something more.

Guliuzza doesn't seem to realize this, and so his arguments are inadvertently straw-man fallacies. I will provide an example from Guliuzza's articles. In his second article, Guliuzza quotes evolutionist Dennet as saying "The fundamental scientific idea of evolution by natural selection is not just mind-boggling; natural selection, by executing God's traditional task of designing and creating all creatures great and small, also seems to deny one of the best reasons we have for believing in God.... The idea that natural selection has the power to generate such sophisticated designs is deeply counterintuitive" (Guliuzza 2011b).

Here, Dennet begins talking about *evolution* by natural selection, but then via synecdoche uses natural selection as a shorthand way of stating "evolution by (mutations and) natural selection." In context, Dennet is claiming that the process of *evolution* has designed all creatures—not merely the death of the unfit (natural selection) per se. Guliuzza misses this important point and uses Dennet's quote out of context to demonstrate that evolutionists supposedly believe that natural selection itself is what actually creates the designs; he states, "Dennett elaborated that 'selection' is the natural designer equivalent to God" (Guliuzza 2011b). But that completely misses Dennett's point. I agree that Dennet is wrong, but not for the reason Guliuzza claims.

Evolutionists often wax poetic about the power of evolution and/or natural selection. That's an

acceptable way to communicate their idea (even if their idea is wrong). It's only when they press the figure of speech too far—invoking a metaphor to solve a literal problem—that they have committed a genuine error in reasoning. That does happen sometimes, and we should refute such reasoning. *But it is improper for Guliuzza to arbitrarily take a scientist's metaphor as literal, and then criticize the scientist of taking a metaphor too literally.*

### **Confirmation Bias**

What is the difference between genuine science and pseudoscience? Most people recognize that science involves the testing of hypotheses. This is an essential component, but there is an additional aspect of science that PhD students must learn in order for their dissertations to be accepted. Scientific experiments must be constructed in such a way as to overcome a common error in reasoning called *confirmation bias*.

There is a tendency for human beings to consider only cases that would confirm their hypothesis, and not cases that would falsify it. Moreover, they often fail to consider how an *alternative* hypothesis might make the same prediction as their own. But, a good scientific experiment is one that could in principle *falsify* the specific predictions of a hypothesis and can be distinguished from predictions by other competing hypotheses. Consider this example involving pattern recognition.

An interviewer asks the subject to discover a mathematical rule regarding a sequence of three numbers. The interviewer knows the rule and gives an example of a sequence of three numbers that obeys this rule: 2, 4, 8. The subject is allowed to state any three numbers, and the interviewer will tell him “yes—this sequence obeys the rule” or “no—this sequence does not obey the rule.” The subject can ask as many times as he wants. Then when he thinks he has the answer, he states what he thinks the rule is. Usually, it goes something like this:

Subject: “1, 2, 4”

Interviewer: “Yes, that obeys the rule.”

Subject: “3, 6, 12”

Interviewer: “Yes, that obeys the rule.”

Subject: “4, 8, 16”

Interviewer: “Yes, that obeys the rule.”

Subject: “Okay, I think I know the rule: each number is twice the one that came before it.”

Studies have shown that the overwhelming majority of people answer approximately this way and draw this conclusion about the rule. And it is wrong. The actual rule is: each number is greater than the one that came before it. But most people don't apply scientific reasoning to the question; consequently, they end up with the wrong answer.

Most people quickly form an initial hypothesis about the rule—that each number is twice the one that preceded it, and they *only* ask questions that they expect to *confirm* that hypothesis. Moreover, they fail to consider that a different hypothesis might explain the data just as well as their own. This is the *confirmation bias*.

Scientifically, the subject *should* have tested some sequences where a “yes” response would *falsify* his initial hypothesis. If he had asked about “1, 2, 3” the “yes” response from the interviewer would immediately refute the subject's initial hypothesis about the rule. But most people never ask about a sequence that they expect to generate a “no” response. And thus, they are never relieved of their incorrect initial hypothesis.

It's fascinating that human beings are psychologically resistant to being wrong, and so we tend not to ask questions that would give a negative response. *One of the main purposes of graduate-level scientific training is to help aspiring PhD scientists to rid themselves of the confirmation bias.* Science students are trained to always consider the predictions of alternative hypotheses, and to construct experiments or observations that could easily falsify their own hypothesis if indeed it is wrong. Without such training, this confirmation bias tends to prevent good science and leads to erroneous results. Unfortunately, this is the kind of reasoning we see in Guliuzza's articles regarding natural selection. Consider his claim in the *Answers Research Journal* reply (part 1).

Systems analysis finds that the route from external condition to adaptation runs strictly through elements of organism's systems, and that removal of any one critical element stops the organism's self-adjustment, therefore, no single element or anything outside of the system(s) can be identified as a primary cause for adaptation. (Guliuzza 2014a)

Guliuzza's reasoning here seems to be this: (1) If any of the critical elements within an organism is removed, the organism fails to adapt. (2) Therefore, nothing outside the organism can be identified as the primary cause for adaptation. Putting aside for the moment that such a conclusion is logically unwarranted by the premise, we see that Guliuzza has *failed to consider the alternative case*. In other words, what happens if we remove the *environmental condition* that led to the organism's adaptation? In that case, the organism will *not adapt*. Therefore, by Guliuzza's reasoning, “nothing *within* the organism can be identified as a primary cause for adaptation.” If Guliuzza had applied his own logic to the alternative scenario, he would have seen that it leads to the opposite conclusion. But he failed to do so. This is confirmation bias.

In another example from the same article, Guliuzza states, “Thus, the term ‘natural selection’ is inherently misleading. It misascribes the true causality....—by not crediting such suitability as a success of the creature’s innately designed systems, but that it is ‘due to’ mystical ‘selection’ events by non-sentient things like death or the environment.” Namely, Guliuzza argues that the organism’s designed systems are the true cause of adaptation because the alternative is the environment which is non-sentient (it cannot think).

But Guliuzza failed to consider the reverse—namely most organisms on earth (plants, microbes, fungi, etc.) cannot think. Therefore, by Guliuzza’s reasoning, organisms cannot be the true cause of adaptation. Moreover, Guliuzza goes on and on about how organisms are *designed*—which is why he feels that they can be a true cause but not the environment. *But, Guliuzza never seems to realize that the environment is also designed by God.* Exodus 20:11a states, “For in six days the LORD made the heavens and the earth, the sea and all that is in them.”

Moreover, nowhere does Guliuzza give any possible experiment that could be conducted—even in principle—that would falsify his (ill-defined) claim that true causality is always within organisms, or that natural selection does not exist. Science is a lot more than simply rhetorical claims. Scientists seek to falsify their own hypotheses through rigorous experimentation. But Guliuzza has done nothing of the kind. I appreciate that he wants to refute evolution. But this needs to be done in a more honest and scholarly way. Guliuzza’s rhetoric is no substitute for actual scientific research.

### **Programmed Filling/ Continuous Environmental Tracking**

How then does Guliuzza account for the observation that organisms can, in many cases, adapt to their environment? If natural selection isn’t at least part of the mechanism, then what is? Guliuzza suggests that organisms adapt due to a process that he calls “programmed filling.” He describes this process in his third article as follows:

A population of organisms is observed only in environment A. Five years later, some organisms remain in environment A, some offspring and some original organisms are observed in new sub-environment B, and some have died. Ascribing functional power to a real versus imaginary source (i.e., organism vs. environment, or internal vs. external) leads to profoundly different explanations. Adherents of organism-based programmed filling explain that organisms with innate, developed, or inherited traits suitable to environment B pioneered

into it, while organisms with traits still fitting A stayed put, and it is yet uncertain why some died—a fact-restricted explanation. Information-based systems internal to organisms drive the process. (Guliuzza 2011c)

The hypothetical scenario of organisms moving into a new environment B is realistic. But does Guliuzza’s programmed filling explanation make sense? In reality, some organisms from environment A with traits *not* suitable to environment B will *also* move into it—and subsequently die. Again, Guliuzza seems to be considering only conscious animal life. But bacteria or plant seeds are carried by wind into all sorts of environments—not just those for which they have suitable traits. So *Guliuzza’s claim that “organisms with traits still fitting A stayed put” is simply not credible for most organisms on earth.* Guliuzza’s mistake is a very basic one in biology.

For the same reason, not all organisms with traits suitable to environment B will “pioneer into it” as Guliuzza suggests. A seed has no conscious choice where it lands. If it lands in A, that’s where it will take root, regardless of whether its traits are more suitable to A or B. Moreover, there is no guarantee that an organism will fail to survive in A, even if its traits are better suited to B, as long as its traits are *sufficient* for A.

Guliuzza seems to treat organisms as if they all had conscious thought, and volitionally moved to the environments that they believed would best suit them. But this could only work for the higher animals and man—and even then only in part. After all, an intelligent creature may not initially know if the new environment will be a good match for its traits. But Guliuzza’s explanation utterly fails on non-conscious organisms such as plants and microbes. Whether these organisms pioneer into a new environment or stay put *has nothing at all to do with their traits*; instead they will be moved by whatever external forces happen to interact with them. Whether they live or die in the new environment will depend on the conditions and their traits of course—but *not* how they got there. Guliuzza has committed a reification fallacy in implying that even unconscious organisms will move to the environment for which they are best suited.

Moreover, Guliuzza consistently misrepresents his opponents in order to refute a straw man argument. In his third paper, he contrasts his programmed filling with his distorted description of the alternative:

Promoters of environment-centered “selection” claim that any organism’s adaptive traits are *owing to* pressures from environment B that “selected for” its organisms from environment A, and both environments “selected against” the dead organisms—an explanation interwoven with

imaginary external forces and selectors. This account permeates scientific literature. (Guliuzza 2011c)

First, what scientist believes that natural selection is environment centered as Guliuzza claims? Notice that he provides no examples or any other evidence to back up his claim. On the contrary, scientists recognize that both the environment *and the organism* play a role in natural selection.

Second, what scientist believes that “any organism’s adaptive traits are owing to pressures from [the] environment?” This certainly is not the mainstream position. I’m not aware of any biologist that would argue that natural selection *literally* causes organisms to develop new traits. On the contrary, natural selection explains why organisms whose traits are not *already* suitable to a given environment tend to die in that environment, and thus are eventually not found in that environment. Selection never *produces* new traits. Mutations can lead to new traits through genetic information loss in some instances. And again, evolutionists sometimes use synecdoche: the phrase natural selection is used as a shorthand way of saying “natural selection and mutations.” But I doubt any biologist would argue that natural selection without mutations can produce any new traits at all. Again, we see that Guliuzza’s main points are simply straw man arguments.

Third, even the definition of natural selection is sufficient to refute Guliuzza’s straw-man argument. Recall from the dictionary that natural selection takes variations in organisms’ traits as a given. Indeed, none of the definitions in any dictionary give natural selection as a *cause* of variation in traits, but rather the resulting success or failure of an organism with those traits in a given environment. It does not attempt to explain why they are there and does not indicate that traits are somehow caused by environmental pressures. Rather, natural selection only accounts for how organisms interact with their environment. It explains why traits that are *not* conducive to survival tend to be eventually weeded out in a population. It does not attempt to explain the origin of such traits.

Hence, Guliuzza’s claim that “Natural selection as a design process is only an illusion—meaning it cannot explain nature’s design” (Guliuzza 2011c) is actually true. But it’s very misleading because no one believes that natural selection sans mutations is a design process. It’s a straw man fallacy. At best, *programmed filling o r c ontinuous e nvironmental tracking* is simply another name for *natural selection*. At worst, it is a gross distortion of reality, and a misrepresentation of what scientists actually claim.

#### 4. Theology

Faulty theology has devastating consequences. God is truth, and thus, a wrong view of God always

results in serious error. Few people have given careful conscious reflection on their own views of theology, and even fewer can precisely articulate their understanding of God. Nonetheless, a person’s view of God will eventually be revealed in his or her reasoning about other issues. Guliuzza is no exception. Some errors in his theology become evident when we carefully examine his writings about natural selection.

#### Biblical Examples of Natural Selection and Environmental Causation

We note first of all that Guliuzza’s central claims are contrary to the Bible. Namely, Guliuzza teaches that (1) natural selection does not exist, and (2) the environment is passive and does not act on organisms. In both cases, the Bible teaches the opposite.

Recall that natural selection is the observation that organisms that are well suited to their environment tend to survive and reproduce better than those organisms that are not well suited to their environment. Does the Bible have any examples of this? Of course. We have already seen that Noah was commanded to take two of every air-breathing land animal aboard the Ark to preserve their life because these animals are not suited for long-term aquatic survival. But Noah did not take fish or whales aboard the Ark because these are well suited to an aquatic environment. The Bible confirms that all air-breathing land animals not aboard Noah’s Ark died in the Flood (Genesis 7:21–22). This is the definition of natural selection.

We find another wonderful illustration of natural selection in Luke 8:5–8. Here Christ explains that the survival and reproductive success of a plant depends strongly on its environment. Namely, seeds that fell in good soil yielded a crop of 100. Yet, those same type of seeds that fell in other environments were *not* able to survive very long nor reproduce a crop, since they were not well suited for that type of environment. Again, this matches the very definition of natural selection.

Notice that the parable of the seed also refutes Guliuzza’s claim that the environment is irrelevant/passive/not a cause of reproductive failure or success. Indeed, the environment was the critical factor that controlled whether the seeds yielded crops or failed to do so. Jesus specifically says so. For the seeds that fell along the road, they were trampled and destroyed by external pressures (Luke 8:5). For the seeds that fell on rocky soil, they withered because they had no moisture from the external environment (Luke 8:6). For the seed that fell among the thorns, it was the *thorns*—an external environmental agent—that choked them out (Luke 8:7). Jesus did *not* say, “the seed among the thorns failed to overcome the

environmental challenge of the thorns,” as Guliuzza would insist. Rather, Jesus indicates that the thorns were the active agent to choke out the seedlings. *By Guliuzza’s reasoning, Jesus was wrong.*

Another great biblical example of environmental pressures causing the destruction of an organism is found in James 1:11. This passage states, “For the sun rises with a scorching wind and withers the grass; and its flower falls off and the beauty of its appearance is destroyed...” According to the Bible, what caused the grass to wither? Was it the failure of the [grass] to overcome an environmental challenge? No, the sun—an external environmental object—caused the grass to wither. Contrary to Guliuzza’s position, the Bible attributes the death of at least some organisms to an external, environmental cause.

### **Limiting God’s Design and Power to Organisms**

Throughout his articles, Guliuzza repeatedly limits God’s design and power to organisms. Not only does he fail to consider that God might sometimes use the environment to accomplish adaptation, but Guliuzza actually believes it would be unbiblical to consider such an option. For example, in his second article Guliuzza states, “A distinctive of living things is their goal-directed operation—one of which is filling ecological niches. This is in obedience to God telling ‘them’ to be ‘fruitful,’ ‘multiply,’ and ‘fill’ the earth (Genesis 1:22, 28; 8:17; 9:1, 7.) An organism-based paradigm is biblical. The Lord enables creatures via reproduction of variable, heritable traits to fulfill His purpose. Organisms are programmed with this power.” (Guliuzza 2011b). Furthermore, in his *Answers Research Journal* response, Guliuzza states, “The Lord directed His creatures to fill environments—before stress due to death or survival. (Notice that the Lord did not command environments to favor or disfavor living creatures in their efforts to survive)” (Guliuzza 2014a).

This is precisely the same type of fallacious reasoning that led well-meaning Christians to reject the heliocentric solar system—the fact that the earth orbits the sun. One statement, often attributed to Martin Luther, states, “People give ear to an upstart astrologer who strove to show that the earth revolves, not the heavens or the firmament, the sun and the moon....This fool wishes to reverse the entire science of astronomy; but the sacred scripture tells us that Joshua commanded the sun to stand still, not the earth.” (underline added)

Guliuzza’s reasoning is the same as the geocentrists: inferring that the mechanism by which God’s command is obeyed must be caused entirely by the object that God commands. But there is absolutely no scriptural or logical warrant for such a notion.

In other words, it would seem that Guliuzza’s reasoning is this: since God commanded organisms to go and multiply, they must have the ability entirely within themselves to do it. But this is unbiblical. In Matthew 12:10–13, Jesus commanded a man with a withered hand to stretch it out—something the man could not do without God’s help. In Acts 17:30 we read that God commands everyone everywhere to repent. Yet the Bible teaches that people are unable to repent and trust in Christ without the help of God (John 6:44; 1 Corinthians 12:3; 2 Timothy 2:25; Hebrews 12:17). God commanded Noah to take two of every living land animal on board the Ark (Genesis 6:19)—something that might have been difficult or even impossible for Noah to do by himself. So, God made the animals come to Noah (Genesis 6:20).

Thus, just because God commands organisms to go and multiply does not imply that they have the ability to do that without external help. Indeed, organisms require food and water from the environment in order to survive and multiply. So, it is fallacious for Guliuzza to conclude that the ability to adapt must always be solely limited to the organism. It may turn out to be the case that most of the time God uses primarily factors within organisms to accomplish adaptation. That would be an interesting hypothesis to test. But if God wants to use external factors, who are we to tell God He can’t do that?

### **Limiting God’s Design to What Human Beings Can Do**

It is clear from his writings that Guliuzza often limits God to what a human engineer could conceivably do (with sufficient time and unlimited resources). This is very clear from his *Answers Research Journal* response where he asserts (without any rational support) that “Organisms self-adjust by the same principles underlying how human-designed things self-adjust to changing environments” (Guliuzza 2014a). How does Guliuzza know this? What experimental evidence does he present to back up this extraordinary claim? None. It is simply something that Guliuzza arbitrarily assumes. Yet, this is the first principle of Guliuzza’s “New Approach to Adaptation.” But why should God be limited to what human beings can do? It often seems like Guliuzza’s god is far more limited than the biblical God.

As an example of this, Guliuzza recognizes that human engineers have no control over the environment and thus, they must program their machine with the ability to operate or adapt to any environment that they might reasonably expect it to encounter. Reasoning by analogy, Guliuzza infers that this must also apply to God. That is, Guliuzza assumes that God must have programmed into His organisms the ability to operate or adapt to any environment they are expected to encounter.

This is clear from his first article where Guliuzza states, “The conditions specified to be environmental ‘selection’ are in reality the unfolding of genetic abilities programmed into the *organisms themselves*. True realization comes when recognizing that the power to solve ecological challenges has always resided in the organism and not in the environment” (Guliuzza 2011a) [underline added]. And again, “The organism has the power and is active to either succeed or fail.” The implication is clear: allegedly, God never uses the environment to cause adaptation—it’s always the organism.

Now of course, God may choose to limit Himself in such a way if He so pleases. And it may be that God has chosen to use *mostly* in-organism designs to accomplish adaptation. But there are several reasons why we may not simply *assume* without a good reason that God is necessarily limited by the constraints that limit human engineers.

First, unlike human engineers, God has designed and currently controls both organisms *and the environment*. Thus, God can use either the organism’s programming *or environmental designs* (or both or neither) to accomplish His purpose. This is a gigantic oversight on Guliuzza’s part and is perhaps the source of many of his other errors.

Second, God knows exactly what environments his organisms will in fact encounter. An engineer makes an educated guess from probability considerations at the conditions his machine will likely encounter in the future. Sometimes he is right, and sometimes not. But God makes no guesses. He knows exactly what his organisms will encounter. And so if an organism fails to solve what Guliuzza calls an environmental problem, this is not an oversight on God’s part, *but is part of His plan*.

Third, reasoning from a human perspective, Guliuzza tacitly assumes that the only goal of each of God’s organisms is survival in order to fill environmental niches. After all, human engineers want their machine to survive at least until it completes its mission. But there is no reason to assume that God’s purpose for all organisms is *always* survival. God’s plan may involve some organisms moving into an environment where they are killed. In fact, we know this is part of God’s plan because it happens—and God accomplishes *all* of His plan. What God plans is what He does (Isaiah 46:10–11).

After all, one of Guliuzza’s main arguments is that natural selection steals glory from God because God is the one who designed organisms to adapt. And in his article entitled “Engineered Adaptability,” Guliuzza says, “Principle Ten: Designs either succeed or fail to solve problems. But environments never succeed or fail because they aren’t trying to do anything. In all cases, credit or blame resides with designers, *not the*

*exposures*” (Guliuzza 2012b). This idea is repeated in his *Answers Research Journal* response where Guliuzza claims, “In design analysis, environmental factors are just collections of conditions to which organisms are exposed. Credit or blame resides with the designer of any trait’s attributes for it to either succeed or fail in overcoming environmental challenges” (Guliuzza 2014b).

It may sound very pious. But if followed consistently, it leads to an atrocious and heretical conclusion. Guliuzza claims that credit *or blame* resides with the *designer* when designed things either succeed *or fail* respectively to solve environmental challenges. By Guliuzza’s reasoning, God deserves the credit when His organisms succeed in solving environmental problems, and God deserves the *blame* when organisms *fail* to solve environmental problems. And it is obvious that organisms do sometimes die—they fail to solve what Guliuzza calls an environmental problem. Does this mean we should *blame God*? By Guliuzza’s reasoning, we should! Guliuzza may not follow his own reasoning to that logical conclusion—but that is indeed the inevitable conclusion of his reasoning.

In contrast to Guliuzza’s thinking, the biblical approach is to recognize that God designed both organisms *and the environment* (Exodus 20:11) to do what they do, which does not always involve the survival of the organism. Indeed, God, if He so pleases, can cause the environment to destroy the very organisms He created (Genesis 6:17). Many of the organisms God created are now extinct. Is God to be *blamed* since His design for these creatures allegedly *failed*? Not at all. *None of God’s plans fail* (Isaiah 46:10). Organisms do not die because God’s design was insufficient to accomplish His plan. Rather, the death of organisms is part of God’s plan for a fallen world. It was by His design and accomplished by His power.

God does deserve credit for the marvelous design within the organisms that He created. And God also deserves credit for creating (and upholding) the environment. But it was never God’s intention that *all* organisms should be able to adapt to *all* environments. God sometimes uses environmental forces to destroy the very organisms He created—as happened during the global Flood. Thus, whether an organism lives or dies in a particular environment, God should be given the glory because His plan was accomplished in exactly the way He wanted to accomplish it! Ironically, it is *Guliuzza* who steals glory from God by failing to acknowledge that God *is also sovereign over the environment*, and by failing to understand that *even the death of organisms is according to God’s sovereign plan*. God is not to be blamed when organisms die as if they failed to

accomplish His plan, as Guliuzza asserts. Rather, God is to be praised in all things because He accomplishes all His good pleasure (Isaiah 46:10)

### **Deistic Thinking**

Perhaps the primary theological error, from which all others stem, is that Guliuzza has a quasi-deistic view of God. Deism is the view that God created the universe but is *not* involved in the day-to-day operation of the universe. The deist holds that God created laws of nature, and then stepped back, allowing the universe to run on its own, without any further help or influence from God. Deists reject miracles, and special revelation. I trust that Guliuzza is only *quasi*-deistic because he does accept the reality of miracles, and of special revelation. But it is clear from his writings, as we will see below, that Guliuzza believes that the *universe operates independently from God's power most of the time*.

I have no doubt that Guliuzza would *verbally* deny being quasi-deistic. But my argument is not about what Guliuzza *professes* he believes, but rather about what he *actually* believes (perhaps unwittingly) based on the reasoning exhibited in his articles.

Quasi-deistic theology is often revealed when people are asked to define natural laws and miracles. The quasi-deist might say, "Natural laws were created by God and they control the ordinary operation of the universe. A miracle is when God intervenes in nature by, for example, suspending a law of nature." So, in the quasi-deistic view, miracles are an example of God's present power, but natural laws are *not*. Guliuzza clearly holds to this type of thinking. In his third article he states, "Natural' indicates that God is not the source of this power" (Guliuzza 2011c).

This stands in contrast to the Christian worldview. The biblical God is not one who created natural laws in the past and then leaves the universe to run on its own, only occasionally intervening by suspending a law of nature. Rather, the biblical God constantly upholds the universe by His power (Hebrews 1:3), and directly causes the universe to behave in the way it does—what we would call laws of nature. In the Christian worldview, natural forces are not alternatives to God's power, but *demonstrations* of God's power. "Natural" therefore refers to the normal way that God exerts His power.

And so laws of nature are just as much an example of God's power as miracles. Both involve God controlling the universe to accomplish His will. A miracle is when God accomplishes His will in an unusual and extraordinary way. Laws of nature describe the normal and consistent way God upholds His universe. Contrary to Guliuzza's claim, the consistent Christian affirms that "Natural" indicates that God *is indeed* the source of this power."

Guliuzza's articles exhibit quasi-deistic reasoning—not consistent Christian reasoning. For example, in his fifth article he states,

The reality is that the environment *just is*—it exists as temporal space of mindless, impartial, unconscious conditions to which *organisms are exposed* at their interface. Time, space, matter/energy, and organisms are created as *conditions* (Genesis 1:1–2) which, barring supernatural intervention (e.g., Numbers 16:31–32; Daniel 6:22; Jonah 1:4, 17), don't act and certainly possess no "selective" capacity as the word is properly understood. (Guliuzza 2012a)

It seems pretty clear that in Guliuzza's view the environment is passive. It was created by God in the past and continues on its own today but does not act or do anything unless there is supernatural intervention. We clearly get a picture of a universe that runs autonomously without divine power except for those rare instances where God intervenes. However, Guliuzza's claim that "God is not the source of [the] power" of natural things is deeply unbiblical. The Bible teaches that God constantly upholds all of His creation by His power (Hebrews 1:3), and God constantly uses nature to accomplish His will (Ephesians 1:11).

### **God Works Through Means**

Following from quasi-deism, is the failure to recognize that God works through means. In his second article, Guliuzza states, "Ascribing glory to the Creator, and not to 'natural selection,' should itself be motivation enough" (Guliuzza 2011b). But, natural selection refers to the way that God normally selects. Guliuzza's error here is a bifurcation fallacy. He seems to assume that adaptation is either (A) accomplished by natural means, or (B) is caused by God. But there is no logical reason why God cannot accomplish adaptation by natural means.

To better illustrate the absurdity of Guliuzza's reasoning, simply apply it to anything else. For example, what holds atoms together? Most scientists would say that the electromagnetic force is what holds electrons in their orbitals around the nucleus. But by Guliuzza's reasoning, "Ascribing glory to the Creator and not to 'electromagnetic forces' should itself be motivation enough." But no Bible-believer would deny that God holds atoms together (Colossians 1:17). Electromagnetism is simply the term we use for the *way* in which God holds atoms together. Natural laws are not replacements for God's power, but examples of God's power. It follows that natural selection is not a substitute for God's power, but an example of God's power.

God normally works through means (John 5:17; Matthew 5:45; Romans 8:28). He can use organisms (whether of the thinking variety or the unthinking

variety) or the environment or both to accomplish His will (Isaiah 46:10–11). There is no biblical reason to limit God's design, power, purpose, and plan to His organisms. After all, organisms comprise only a small fraction of creation on a cosmically tiny planet. God is also sovereign over every planet, every asteroid, every comet, every trans-Neptunian object in our solar system. And God sovereignly controls all solar systems—all planets, asteroids, comets, and stars in our galaxy or in all galaxies in the cosmos (Hebrews 1:3). There is no reason to limit God's power and design (as Guliuzza has done) merely to the tiny fraction of creation that has DNA.

### Pre-Fall Considerations

Another significant theological error is evident in Guliuzza's *Answers Research Journal* response where he argues that his anti-natural-selection approach is better because it supposedly doesn't require death. He states, "Trapped theistic selectionists must contort biblical teaching into evolutionary molds. They attempt, though unsuccessfully, to justify death in a good way through God's omniabilities like, 'God is able to make good come out of even death itself. Natural selection, though fueled by death, helps the population by getting rid of genetic defects, etc.' (Purdom 2006, p. 275)" (Guliuzza 2014a). Furthermore, Guliuzza's quote occurs in the context of denouncing theistic evolution; but Purdom is a biblical creationist!

Unfortunately, Guliuzza gives no rational reason whatsoever why Dr. Purdom's statement is allegedly unsuccessful in justifying death, or how she must allegedly contort biblical teaching into evolutionary molds. On the contrary, Purdom's statement is perfectly biblical. The Bible teaches that *God instituted death* as the right punishment for Adam's sin (Genesis 2:17; Romans 6:23). While death itself is not good (punishments are unpleasant by design), it was good and right for God to institute it. Otherwise, He would be unjust.

And Purdom (2006) is absolutely right that the Bible teaches that God can bring good results from bad things (Genesis 50:20; Romans 11:11), and even from death itself. The most spectacular example of this is the crucifixion of Christ. God used the death of Jesus—the most horrific death possible of the only man who didn't deserve it—to accomplish the salvation of all God's people! How could Guliuzza have missed this? In fact, God works all things together for good for those who love Him (Romans 8:28). Furthermore, the Bible contains examples of natural selection as we have seen. Purdom's view is biblical. Guliuzza's is not.

Additionally, Purdom (2006) is quite correct that natural selection does serve to remove genetic

defects. Guliuzza might argue that his alternative to natural selection could work even without death—in an unfallen world. But this is logically irrelevant because the world we live in is fallen. There would have been no genetic defects in an unfallen world, and so that aspect of natural selection would have been unnecessary. But in today's world, death does occur. And providentially it occurs more frequently in organisms not well-suited to their environment—reducing their population size. In other words, natural selection does occur in today's world, and God brings some good from it—just as Purdom stated.

Moreover, natural selection would have happened before the fall too. Guliuzza frequently forgets about plants and other non-conscious organisms in his analysis. Only those animals (and mankind) that the Bible classifies as living creatures would not have died before the Fall, because only these are truly alive in the biblical sense of the word. Plants and microbes presumably had a cycle similar to the one they have today. There is no reason to assume that before the Fall they were somehow exempt from the analytic truth that survivors survive.

Even living creatures would experience some aspects of natural selection before the fall. Recall that natural selection involves not only survival, but reproduction as well. It would seem that in an unfallen world, living animals with traits well-suited to their environment would be able to out-reproduce those animals that lack such traits, even though neither would die. The net result would be that organisms with traits well-suited to their environment tend to be found in greater numbers in such environments, and not so much in others. And just like today, both the environment and the organism would be causal factors, contrary to Guliuzza's claim.

### Idolatry

One especially disturbing error in Guliuzza's writings is his claim that believing that natural selection exists is a form of idolatry. In his fourth article he has a section entitled "Idolatry: Ascribing Selective Ability to Inanimate Environmental Stresses" (Guliuzza 2011d). Of course, that is not even remotely the definition of idolatry. Interestingly, the Bible itself ascribes selective ability to inanimate environmental stresses—and does so in a way that reveals that God is behind such selections.

Proverbs 16:33 states, "The lot is cast into the lap, But its every decision is from the LORD." Yes, the Bible indicates that God is behind every decision that a *lot makes*. A lot is not an organism, but an inanimate environmental object. Yet, the Bible ascribes to it the ability to select—to make a *decision*. By Guliuzza's definition, the *Bible* here is committing idolatry!

In his fifth article, Guliuzza states, “We will cease to assert that something exists *due to* it being ‘positively selected,’ and also stop expressing mysterious thinking that ascribes false willful ability—the ability to select—to inanimate environmental stresses. We will then stop stating that inanimate things have conscious-like powers—which is the very definition of idolatry” (Guliuzza 2012a). At least four errors are found here.

First, that’s not the definition of idolatry. Idolatry is the worship of something that is not God as if it were God. It would be idolatry to worship the sun as God. But it is *not* idolatrous to recognize the sun’s divinely appointed role in giving light and heat to earth. It certainly would be idolatrous to worship natural selection as if it were God. But it is not idolatrous to recognize that God providentially allows some organisms with certain traits to die, while others thrive.

Second, Guliuzza has tacitly assumed that the ability to select must be a “willful ability.” But there is nothing willful about a lottery machine selecting six balls at random. A computer has no will, in the sense of conscious deliberation, yet it makes selections constantly. So it seems that Guliuzza’s statement here is a continuation of his mistaken assumption that selection must always involve a proximate mind.

Third, Guliuzza has assumed that “inanimate environmental stresses” cannot select on the basis that they do not have “conscious-like power.” This seems to stem from his quasi-deistic theology. The consistent Christian recognizes that God is behind everything that happens. Even “inanimate environmental stresses” are a result of His power. Thus, ultimately, God selects everything that happens—and He does so primarily by natural or providential means. God can use even unthinking objects to select or decide things, as Proverbs 16:33 teaches. God is the conscious power that is ultimately behind everything that happens.

Fourth, recall that one of Guliuzza’s main arguments that natural selection is wrong is that the environment is not conscious, and therefore cannot be responsible for adaptation. Yet Guliuzza consistently forgets that most organisms on earth are not conscious—yet they are often able to adapt. They do not have “willful ability.” But they do have ability.

In his fourth article, Guliuzza states, “Selection is idolatrous in the basest of ways. Not only does it ascribe intelligence-like powers to unconscious environmental features, like any other idol, but it induces people *not* to give the Lord credit for the incredible intelligence and machinery He has built into His creatures that enable them to adapt to environmental features” (Guliuzza 2011d). But his reasoning here is both arbitrary and inconsistent.

Namely, Guliuzza argues that selection “induces people not to give the Lord credit” for the organism’s ability to adapt. But why? Guliuzza makes no case for why natural selection—survivors surviving—should somehow influence people to not give credit to the Lord. Indeed, creation scientists recognize that God has designed all of nature—both organisms and environment. And we fully credit God for both the design of His organisms and His providential power displayed in the environment.

Perhaps Guliuzzathinksthat since natural selection (in his mind) focuses more on the environment than the organisms, that it causes people to overlook God’s design and power as displayed within organisms. But once again, Guliuzza fails to consider the alternative to his view. Namely, we could equally well argue that Guliuzza’s undue emphasis on the organism induces people to fail to give God glory for His providential power *displayed in the external environment*. God is sovereign over all of nature—not just organisms. So, Guliuzza would have to conclude that his own view is idolatrous by his own reasoning if he were logically consistent.

## 5. Summary and Conclusions

In summary, Guliuzza’s thinking on the topic of natural selection is extremely muddled and confused. This confusion is evident in his writings on the topic, which exhibit undefined terminology used in inconsistent ways. This makes it very challenging to evaluate exactly what it is that Guliuzza means by what he writes—possibly because he himself is confused in his thinking. Nonetheless, even when we give Guliuzza the benefit of the doubt by interpreting his writings in the best possible light, we find that his arguments regarding natural selection and adaptation are logically absurd, scientifically false, and theologically unbiblical.

## Regarding Natural Selection

Guliuzza certainly dislikes the term natural selection—that comes across. But how that premise can possibly lead Guliuzza to conclude that “selection” is not really real” is puzzling. The argument would only make sense if Guliuzza’s unstated premise is “whatever Guliuzza doesn’t like isn’t really real.” But that would be intellectually preposterous.

Do evolutionists sometimes misuse the term natural selection and ascribe to it powers that it cannot literally have? Sure. But that doesn’t make natural selection cease to exist. After all, secular astronomers credit gravity with the ability to assemble the first stars and galaxies—something that it cannot really do. Does this mean that gravity isn’t really real? Guliuzza confuses what natural selection *is* with what natural selection is *claimed to*

do. If someone claimed that Guliuzza could fly like superman—that would be false. Should we conclude, “Therefore, Randy Guliuzza does not exist?”

And should we give gravity a different name since evolutionists sometimes misuse it? We could start calling gravity “programmed attraction,” or “continuous environment attraction” but that hardly seems helpful. Simply redefining terms does absolutely nothing to advance the creationist position and makes communication with unbelievers difficult. Thus, Guliuzza’s relabeling of natural selection as programmed filling, design-based organism-focused research, or continuous environmental tracking contributes nothing to the creationist cause, except confusion.

Is the term natural selection misleading? That conclusion could only be defended if a person insists that all selection always requires a mind (in contrast to the many things that select that have no mind—lottery machines, computers, etc.) and that the mind of God doesn’t count—which would only make sense if God does not work through means. But God does work through means. And so, in a very real sense, all things that actually happen are God’s selections from what potentially could have happened. God works *all* things—including the adaptation and/or death of His creatures—according to the counsel of His will (Ephesians 1:11). Natural selection is the way that God normally selects, just as natural laws refer to the way God normally upholds creation.

But even if the term were misleading (in the sense that it does not really describe its referent), that has absolutely no logical bearing on the existence of the referent. *Most* verbal tokens do not describe their referent, and some are even *counter-descriptive* of their referent. Tomboys are neither Toms nor boys—but are actually girls—the *opposite* of boys! And Rhode Island is not an island at all.

Some readers might be thinking, “but maybe Guliuzza has a point; maybe we should start using different terminology to describe natural selection.” Of course, this isn’t really Guliuzza’s point. We’ve seen that he seems to believe on some level that the actual process of natural selection (survival of the fittest) isn’t actually true and is unbiblical. But even if Guliuzza were arguing that the terminology should be changed, this would be extremely unwise because we would lose the ability to communicate with unbelievers.

Communication between two people is only possible when both people understand the words in the same way. Thus, coining a new term (programmed filling, or continuous environmental tracking) to replace an old one (natural selection) only contributes to confusion and reduces the likelihood of successful communication. Rather than arguing over the

concept of adaptation, we would then have to argue over the concept *and the terminology*, multiplying the difficulty of the task before us. Furthermore, we run the risk of unbelievers misunderstanding our position: “So you don’t believe that animals adapt to their environments? You don’t believe that survivors survive?”

In his textbook on logic, Isaac Watts states, “In communicating your notion, use every word as near as possible in the same sense in which mankind commonly uses it; or which writers that have gone before you have usually affixed to it, upon condition that it is free from ambiguity” (Watts 1724). Since natural selection has a well-established and unambiguous scientific definition, we would do well to heed Watts’s advice.

Indeed, readers familiar with creation science literature will already be aware that natural selection is one of the most powerful arguments *against* evolution. The reason is simple: natural selection has no creative ability whatsoever, but evolution requires creative ability. In order for evolution (in the particles-to-people sense) to happen, somehow new information must be added to the genome. Yet, natural selection only refers to the removal of information in the genome, as organisms with traits unsuitable to their environment are killed. Guliuzza would have us abandon one of our best allies in the fight against evolution, merely on the basis that he doesn’t emotionally like the terminology. This is surely not a prudent option.

### **Regarding the Cause of Adaptation**

Guliuzza has claimed that the true cause of adaptation is always within the organism and never in the environment. But we have seen that his reasoning on this issue isn’t at all cogent. First, Guliuzza never specifies which type of adaptation he is addressing. Recall that physiological non-genetic changes occur by an entirely different process from the genetic shift that takes place in a group of organisms over time. Guliuzza seems to be unaware of the difference, and fallaciously argues that in-organism non-genetic physiological self-adjustments can somehow lead to *genetic* adaptation/speciation. This is scientifically preposterous. No combination of non-genetic changes will ever add up to a genetic change.

In arguing that the true cause of adaptation is always within the organism, and never the environment, Guliuzza gives several examples of organisms that are equipped to sense environmental conditions and are able to adjust their own physiology to better survive in such an environment. This certainly establishes that in many cases the organism’s internal mechanisms are one of the causes

of adaptation. But how does this remotely establish Guliuzza's claim that *in all cases* organisms are the *one and only* cause of adaptation? This again smacks of confirmation bias.

Giving many positive examples that are consistent with a universal claim does not prove the universal claim. Guliuzza can list as many examples as he wants of cases where the organism is a cause of its own adaptation, but this doesn't remotely prove his universal claim—that the *environment is never the cause*. Only one counterexample is necessary to refute a universal claim.

Moreover, there are *several* well-known scientific counterexamples to Guliuzza's claim. Mutations caused by x-rays or UV light are examples of environmental causes that instantly and genetically alter an organism. Cosmic rays (from the environment) bypass the organism's sensory organs and all its physiology, and directly alter the organism's DNA. The organism has no choice in the matter. And on rare occasions, such mutations might lead to traits that actually help an organism to survive in a particular environment. Most people would consider that an environmentally caused form of adaptation. But not Guliuzza.

First, he dismisses all such cases by appealing to the no true Scotsman fallacy. Namely, he'll argue that the environment is not the true cause—an ambiguous term that he never defines for the reader. Logicians speak of proximate causes and distal causes—but not true causes. It would seem that Guliuzza has silently decided to simply define in his own mind that a true cause is the cause that is within the organism. But this begs the question. We could equally well define the *true cause* as that which is external to the organism. Again, Guliuzza's shifting terminology is no substitute for rational argumentation.

Second, Guliuzza might add that the environment is not the true cause of adaptation in cases of mutation because the organism could have been designed to prevent such a mutation. But this would be no different than a murderer attempting to persuade a judge to find him not guilty on the basis that the person could have been designed to be bullet-proof. It's certainly true that the killer would not have achieved his goal (at least not by gunshot) if the victim were bullet proof. But that doesn't mean the killer is not responsible. He is still the distal cause of the victim's death.

Moreover, Guliuzza doesn't seem to understand that causation is multifaceted; that most things that happen have *multiple* causes. Event A causes event B which causes event C and so on. While B is the direct or proximate cause of C, event A is a distal cause. And in all cases, God is the ultimate cause

of everything that happens because He controls the universe. But biblically, that doesn't absolve man of his responsibility. The Bible endorses dual causality. Guliuzza apparently rejects it or doesn't understand it.

### An Analogy

Sometimes fallacious reasoning is best exposed when it is applied to a different and clearer situation. Consider the following analogy:

Did you know that the planets don't actually exist? You've heard of Jupiter, Saturn, Uranus, and Neptune. But if you believe in those planets, then you are an idolater! The names "Jupiter, Saturn, Uranus, and Neptune" are named after Roman and Greek gods. Yes, the Romans actually believed that Jupiter was the supreme god, the Roman version of "Zeus." But that is unbiblical—there is only one God. The names of these Roman and Greek gods don't remotely describe planets. Therefore, the planets Jupiter, Saturn, Uranus, and Neptune are not really real. The outer planets exist only in the mind.

You ask how we account for what *appears* to be Jupiter and Saturn in our night sky—or our telescopic views of Uranus and Neptune? These only appear to be planets due to our long-term conditioning. Design analysis reveals that these are in fact Matthew, Mark, Luke, and John. Those are biblical names. To think that Jupiter, Saturn, Uranus, and Neptune are real planets is to steal glory from God. But the Bible teaches that Matthew, Mark, Luke, and John are real.

And what about causation?

When a sniper shoots his victim, who or what is the killer? Most people would say that the sniper is the killer by virtue of the fact that we can see how his actions led to the death of the victim. But, in reality, it is a deceptive and idolatrous trap to think that snipers kill people. It's a clever twist because it certainly *seems* like he is the one doing the killing.

But in fact, he is not the *true* killer. After all, God *could* have designed the victim with bullet-proof skin. Then the sniper's shot would not have led to the death of the victim. True realization comes when we acknowledge that snipers are in no way responsible for the death of their victims. The true cause always lies with the victim. His design was simply insufficient to overcome the environmental challenge introduced by the sniper. The blame lies entirely with God, for failing to anticipate such a challenge. The sniper just is. Ability or failure to deflect a bullet lies entirely within the victim.

So, when Guliuzza's reasoning is applied to recognizable situations, the absurdity becomes

clear. Unfortunately, many laymen will not see the fallacious reasoning, and will be persuaded by Guliuzza's rhetoric.

### Is God an Engineer?

Guliuzza frequently reasons by analogy, citing an example of a human engineer and then fallaciously concluding that God must act in a similar way. This seems to be the main thrust behind Guliuzza's belief that all causal factors of adaptation are innate to the organism and never environmental. After all, human engineers have no control over the environment and thus must design their machines to adjust to whatever environment they might be expected to encounter. But is God limited in this way?

God is not an engineer. He is God. The Lord created both organisms *and the external environment*, and He sovereignly controls both. God can cause an organism to adjust itself, or He can use an external/environmental agent to adjust an organism. Or God can do away with an organism. When an organism dies, this is not a failure on God's part to anticipate an environmental challenge. No, it is part of God's plan and is entirely under His control. God can even use the environment to destroy the organisms He created, as He did during the flood year. God is not limited to organisms. He is Lord of *all*.

Is it therefore wrong to apply engineering terms to organisms? Not necessarily. Analogies can be helpful, providing we keep in mind what they are. Organisms are certainly well-designed, and analogies can help illustrate this. But they can also be pushed too far. We dare not limit God to what humans can do or even understand. Furthermore, it is fallacious to assume that engineering terms *must* be used in referring to organisms, since there are well-defined biological terms that are more precisely defined.

However, it would be unwise for creationists to use Guliuzza's terminology for a number of reasons. First, as we saw in section 1, Guliuzza does not use terminology in a consistent fashion. So what does he really mean by the terms he uses? It is not at all clear. Second, we would do well to avoid the impression that we are as confused about natural selection as Guliuzza is. Unbelievers who realize that Guliuzza's claims are nonsense and hear us use the same phrases in an affirming way may think that we are equally confused.

### Why Does this Matter?

Some readers may think, "Sure, Guliuzza is mistaken. But what's the big deal? Is it really necessary to document this and explain such errors?" It is very important for at least three reasons.

First, creationists already have an undeserved reputation of being dishonest, illogical, making

false claims, and not understanding science. When Guliuzza repeatedly makes such basic mistakes in logic, and in science regarding natural selection and causation, it legitimizes such claims. It gives evolutionists a reason to doubt creationists' claims on other issues. After all, if creationists don't understand something as basic as natural selection, why should they be trusted on their arguments against evolution, or their claims about the age of the earth?

If creationists claim that something doesn't exist (like natural selection) when in fact that thing can be directly observed, why take any of their other claims seriously? After all, we do observe that organisms with traits more conducive to survival and reproduction in a particular environment do in fact survive and reproduce in greater numbers than those organisms who lack such traits. That's the definition of natural selection. Evolutionists wrongly interpret these observations and infer that such a process can eventually result in one basic kind of organism becoming another kind. But their error of *interpretation* does not mean that we should deny the *observations*.

Second, Guliuzza has been presenting his errors *publically* and repeatedly. Many laymen have been taught this incorrect information, and now we have a problem to correct. If one of Guliuzza's followers repeats the errors to an evolutionist who knows better, this gives evolutionists a legitimate reason to write off creationists as not knowing anything about science. This surely does not advance the creationist movement. And it dishonors our Lord.

Third, and perhaps more important than the erroneous claims that Guliuzza makes, is the fallacious reasoning that leads to them. Christians have a moral obligation to defend the faith in a truthful and honest way. This means that we should not use logical fallacies to persuade people. Such errors might indeed persuade someone, but they remain fallacies—errors in reasoning. It might be effective to scare people into believing an idea by implying that they are idolaters if they don't. But it's not ethical. We have a moral obligation to present the truth in love.

Apologetics is much more than simply stating correct facts. Correct facts can be strung together in a fallacious and dishonest way to lead people to incorrect conclusions. Hence, the defense of the Christian faith requires rational thinking.

Furthermore, God is perfectly rational and makes no mistakes in reasoning. And we are supposed to think in a way that is consistent with His nature (Isaiah 55:7–8; Ephesians 5:1). Creationists need to think rationally, and defend the faith logically using correct definitions of terms. We need to speak and write with truth and clarity.

## Moving Forward

How then should we proceed? If we are going to defend biblical creation in an honest and rational way that is faithful to Scripture, then we should not follow Guliuzza's rhetoric. Instead, we need to be honest and scholarly in our approach, seeking peer review and accepting constructive criticism. We should not engage in equivocation fallacies but choose our words with careful precision.

Rather than using terms in non-standard ways, we should consult dictionaries to obtain the correct definitions of words so that we can communicate with others, and we ought to be consistent and clear in our word usage. When words have more than one meaning, we should specify which meaning we are using in a given context. We must recognize that natural selection is a very real and observable phenomenon—and that it is *not* evolution. That is, organisms do have variations in their traits, some of which lead to increased survival and reproduction in a given environment—and we find that such organisms tend to survive in such environments. It is an analytic truth that survivors do survive. But this never results in one kind becoming another kind.

We must give glory to God for both organisms *and the environment*, and not limit His sovereignty to one or the other. Consequently, we should not blame God for an alleged bad design when one of His creatures dies. God was the one that rightly instituted death of the living (*nephesh*) creatures as the punishment for Adam's sin. We should recognize that most events have numerous and multifaceted causes. Thus, God may (if He so pleases) use both environmental factors and internal factors to adapt His organisms to any given environment. And we certainly should not accuse people of idolatry for disagreeing with any particular hypothesis about how God accomplishes adaptation.

We should recognize that non-literal figures of speech are perfectly acceptable in science. If and when evolutionists literally attribute to natural selection things that it literally does not have the power to do—we should gently correct their thinking. We don't do this by shifting terms, but by pointing out that they have committed a reification fallacy. We should use terms in the standard and well-established way so that we can most effectively communicate with unbelievers, and so that they will not misunderstand.

Aspiring creation speakers or writers should crave and insist on proper peer review for their own ideas. Rather than dismissing legitimate criticisms, they should listen to biblically minded experts in the field and to correct their errors (especially before publication whenever possible). And they certainly should not be publically presenting ideas as fact for which they have no experimental support or relevant

training, particularly if such ideas have not been vetted by creation experts in the field. The Bible commands seeking wise counsel (Proverbs 1:5; 19:20) and repudiates autonomy. Proverbs 12:15 states, "The way of a fool is right in his own eyes, But a wise man is he who listens to counsel."

And what of Guliuzza's practice of restating natural selection using engineering terms? There may be some value in such analogies, as long as they are not taken to Guliuzza's unbiblical extreme. But it is wrong to argue that we must use these engineering terms, that we must view all interactions from the organism's point of view, and that to fail to do so is *idolatry*. That simply is not biblical or intellectually honest.

Moreover, since Guliuzza has committed so many egregious errors in reasoning and has made so many factually incorrect claims, it would be wise to *avoid* his terminology for now lest our opponents misunderstand our position. That is, we don't want people to think that we deny that God is sovereign over the environment, that natural selection isn't true, that survivors don't actually survive, that the environment has no causal role in adaptation, or that we don't understand the difference between genetic and non-genetic adaptation. In short, we must be careful of guilt by association.

We encourage Guliuzza to embrace the biblical and scientific practice of peer review, and to accept constructive criticism, particularly from people who have formal training in the relevant field. We ask that he be willing to correct previous mistakes in reasoning with humility, rather than attempting to defend them, and to refrain from ad hominem attacks against those who disagree with him.

We are certainly not opposed to every instance of using engineering terminology to describe some biological interactions. However, we resolve to approach the subject in a biblical and intellectually honest way. And we resolve to have our ideas pass peer review by experts in the field before presenting them to non-professionals. The way in which we defend the Christian faith matters.

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