

## Does Natural Selection Exist? A Critique of Randy Guliuza's Claims

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### Abstract

How the biblical kinds diversified into the species we see today is a pressing research puzzle in the young-earth model of origins. My analysis specifically evaluates Randy Guliuza's two central claims with respect to this question: (1) that natural selection does not exist; (2) that "programmed filling" is superior to natural selection on biblical and scientific grounds. I show that Guliuza fails to provide scientific or biblical justification for these assertions. Therefore, Guliuza's claims represent speculation misstated as scientific fact, and the role of natural selection post-Creation and post-Flood remains an open question.

**Keywords:** natural selection, programmed filling, adaptation

### Introduction

How did the modern diversity of life arise from the created kinds of Genesis 1 and, more immediately, from the kinds taken on board the Ark? Did natural selection play a role? Over the course of 2011 and the beginning of 2012, Randy Guliuza published a series of articles in answer to this question in which he argued that natural selection does not exist and that a mechanism he termed "programmed filling" is a superior explanation for adaptation and diversification (Guliuza 2011a; Guliuza 2011b; Guliuza 2011c; Guliuza 2011d; Guliuza 2012). Subsequently, his articles were reviewed favorably (Gaskill and Thomas 2012). In this analysis, I critically evaluate Guliuza's claims and show the shortcomings of his model.

### The Role of Natural Selection

Guliuza's denial of natural selection is evident throughout his article series, both implicitly and explicitly. Implicitly:

Imaginary environment-based selector. (Guliuza 2011a, p. 15)

There is no real "selector" in any adaptive chain of events. (Guliuza 2011a, p. 15)

The "selector" is simply a mental perception and not grounded on reality. (Guliuza 2011a, p. 12)

[Natural selection] is presented in most schools as absolutely true in spite of its ill-defined basis, its invisible operation, and the fact that there is no real "selector"—because attributes inherent to organisms actually do all the work. (Guliuza 2011a, p. 15)

It is *only* in the mind that this kind of "selection" actually takes place. (Guliuza 2011a, p. 15, emphasis his)

"Selection" inappropriately describes what transpires at the organism-environment interface on every level. (Guliuza 2011b, p. 12)

No tangible force or agent can truly be linked to "selection"—even by analogy or metaphor. (Guliuza 2011b, p. 14)

It's difficult to dislodge things [natural selection] that exist only in someone's mind. (Guliuza 2011b, p. 12)

*External forces* are illegitimately given credit for the capabilities of the organisms. (Guliuza 2011b, p. 14, emphasis his)

What has not been quantified is any "selecting" force or intelligence. (Guliuza 2011b, p. 15)

The words "natural" and "selection" in no verifiable way accurately describe *observable* interactions between an organism and its environment. (Guliuza 2011b, p. 15, emphasis his)

"Selector" is a mental perception that is not grounded on reality. (Guliuza 2011b, p. 15)

"Nature selects for..." is the exact opposite of reality. (Guliuza 2011c, p. 13)

Scientifically, neither a natural selecting agent nor unlimited variability has ever been documented. (Guliuza 2011c, p. 13)

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. (Guliuza 2011c, p. 15)

Engineers routinely measure external forces in real processes as they exert their influence. If there was a "selection detection" meter in existence and it was placed on any organism "undergoing the process" to actually sense the "molding force" "operating" on it, what would it register? The meter would stay at zero. (Guliuza 2011c, p. 15)

The relevance of selection is not in actual field studies. (Guliuza 2011d, p. 14)

Supporters of selection should consider that the reason for selection's irrelevance is not that it is weak beyond belief, but that there is, in fact, nothing tangible to measure. (Guliuza 2011d, p. 14)

Incredibly, with still no empirical evidence that a real selection actually happens, contemporary supporters

of natural selection now think that they actually “see” selection happen via the actions of environmental stresses. (Guliuza 2012, p. 12)

Guliuza also denies natural selection explicitly:

“Selection” only happens in someone’s mind. (Guliuza 2011b, p. 14)

Nobody has ever seen a “selection” happen. (Guliuza 2011b, p. 15)

It’s *only* in the mind that “selection” actually occurs. (Guliuza 2011b, p. 15, emphasis his)

“Selection” is not really real. (Guliuza 2011b, p. 15)

“Selection” only happens in the mind of beholders who attribute results to external powers that are not rooted in reality. (Guliuza 2011c, p. 15)

“Selection” only exists as a mental construct. (Guliuza 2011c, p. 13)

The illusion that natural selection operates on organisms. (Guliuza 2011c, p. 12)

Natural selection—is a phantasm. (Guliuza 2012, p. 12)

At first glance, Guliuza’s claims seem to contain a kernel of truth. After all, evolutionists often wax metaphysical, attributing god-like qualities to natural selection. However, “natural selection” is a nuanced term, and Guliuza fails to wrestle with the other definitions of this term.

As evolutionists know and often state explicitly, another definition of the term “natural selection” refers to the *process* that occurs repeatedly in nature.

But if variations useful to any organic being do occur, assuredly individuals thus characterised will have the best chance of being preserved in the struggle for life; and from the strong principle of inheritance they will tend to produce offspring similarly characterised. This principle of preservation, I have called, for the sake of brevity, Natural Selection. (Darwin 1859, p. 127)

Clearly, “natural selection” also refers to the operation of several fundamental biological processes: (1) variation; (2) differential survival; (3) inheritance of traits from the survivors. As subsequent discussion will show, Guliuza fails to address this *process* use of “natural selection” when justifying his rejection of the term.

Guliuza rejects natural selection because of what he sees as several “warning signs.” The first is the multiple uses of the term “natural selection” in evolutionist literature. In this section of his argument, he recognizes that “process” is one use of “natural selection,” but Guliuza never returns to this definition to wrestle with its full implications.

Are multiple definitions of a term a good warning sign that the core concept is flawed? Apply Guliuza’s standard to Christianity. If a curious unbeliever were to ask multiple self-professed evangelicals what Christianity is and what it looks like in practice, he

might get multiple answers. Suppose the unbeliever asked John MacArthur, Billy Graham, Joyce Meyer, Joel Osteen, Tony Campolo, and Jim Wallis for a definition, the unbeliever would end up very confused and may reject Christianity by Guliuza’s standard.

This rejection would be clearly misguided. Why? Because multiple definitions do not necessarily reveal an underlying error; they may simply reveal that diverse people co-opt a term (“Christianity” or “natural selection”) for their own purposes. Thus, multiple definitions for “natural selection” by professing evolutionists do not necessarily constitute grounds for rejecting every form of natural selection. Rather, they constitute grounds for examining every use of the term and individually accepting or rejecting the different nuances. Guliuza fails to do the latter in his article series.

The second “warning sign” Guliuza identifies is the supposed contradiction between “natural selection” and biblical truth (Guliuza 2011a). Here Guliuza perpetuates the error he committed in the first step. His failure to investigate the multiple uses of “natural selection” becomes obvious in his justification for the “contradiction” between the term and Scripture.

Striking squarely at God the Designer, natural selection is the evolutionist’s way to explain the origin of life’s design without appealing to God. Natural selection isn’t merely something to explain biological diversity. It plainly asserts that there is no intelligent design, that claims to such are lies, and what people see that looks like real design is all an illusion of design. (Guliuza 2011a, p. 13)

Clearly, Guliuza is referring to the metaphysical use of “natural selection” in this section of his argument. His justification of his claim contains no treatment of the *process* of natural selection, and his subsequent articles do not distinguish between the two when claiming a conflict with Scripture. The *process* of natural selection does not oppose Scripture; the metaphysical uses of the term do.

The third warning sign he identifies (Guliuza 2011a) is actually just a repetition of his error. He rightly attributes to evolutionists the act of “ascribing intelligence where none exists,” but even evolutionists admit that “natural selection” is a metaphor, a point which Guliuza himself later expounds upon. This “warning sign” is again irrelevant to the *process* of natural selection, but Guliuza lumps all definitions together.

Guliuza’s fourth warning sign is puzzling: “Metaphor replaces empirical evidence” (Guliuza 2011a, p. 14). Does Guliuza really think that evolutionists are scrambling around, trying to find evidence of the process of natural selection? Is there a big secret that evolutionists won’t admit? His justification:

As Dr. Coyne noted, natural selection was resisted for decades by most scientists and is still not fully embraced due to an absence of empirical evidence. (Guliuzza 2011a, p. 14)

This statement refers to a quote from Jerry Coyne that Guliuzza cites earlier in the article:

Natural selection has always been the most contested part of evolutionary theory. Many people who have no problem with evolution bridle at the thought that it's all driven by a mindless and unguided natural process.... [N]atural selection wasn't widely accepted by biologists until about 1930. The main problem was, and still is, a paucity of evidence.... It's this difficulty that leads Dawkins to observe that natural selection is on wobblier legs than the other tenets of evolutionary theory. (Guliuzza 2011a, p. 12)

Is Jerry Coyne still searching for evidence of natural selection? Consider another quote from Coyne from the very same article that Guliuzza originally cites:

We've observed natural selection in real time: bacteria evolve resistance to antibiotics, plants to herbicides, insects to insecticides. This is genuine natural selection, even though the species are responding to human interference with the environment. And if you don't like those, biologists have cataloged dozens of "real" cases of natural selection in which species ranging from plants to birds adapt to natural changes in the environment. (Coyne 2010)

Coyne obviously does not believe that natural selection is without empirical justification. What did Coyne mean, then, in his original statement? Consider the full context for Coyne's original quote:

The main problem was, and still is, a paucity of evidence. While the idea of natural selection seems eminently sound, people want to see it actually changing species in nature. And since the process is usually very slow, that evidence is hard to get for living organisms and nearly impossible for fossils. (Coyne 2010)

Coyne's "paucity of evidence" clearly does not mean "absence of empirical evidence" as Guliuzza states. It means that few, if any, examples exist of natural selection driving speciation. Guliuzza mistakenly represents Coyne's statement.

Also, consider Coyne's statement a year prior, in his book *Why Evolution Is True*:

But natural selection posed a number of problems for biology as well. What is the evidence that it operates in nature? Can it really explain adaptations, including complex ones? Darwin relied largely on analogy to make his case: the well-known success of breeders in transforming animals and plants into organisms suitable for food, pets, and decoration. But at the time, he had little direct evidence for selection acting in natural populations. And because, as he proposed,

selection was extremely slow, altering populations over thousands or millions of years, it would be hard to observe it acting during a single human lifetime.

*Fortunately, thanks to the labors of field and laboratory biologists, we now have this evidence—lots of it.* (Coyne 2009, pp. 115–116, emphasis mine)

Later on in the book, Coyne cites classic examples of natural selection in the wild, including Darwin's finches. Coyne clearly believes natural selection is backed by evidence.

Guliuzza cites one other argument in favor of the supposed absence of evidence for natural selection:

There is no evidence lacking that organisms generate traits that fit changing environments. (Guliuzza 2011a, p. 14)

Here he cites the supposed "fact" of his concept of "programmed filling" as evidence against the existence of natural selection. No justification is cited to demonstrate the validity of "programmed filling," and, as subsequent discussion will reveal, Guliuzza does not provide documented scientific justification for "programmed filling" in any of his articles.

Guliuzza's fifth warning sign—"Admissions that natural selection is not literally true" (Guliuzza 2011a, p. 14)—is no surprise, given his prior failure to separate the metaphysical use of natural selection from the practical *process* use. Of course evolutionists admit that nature doesn't literally select. Guliuzza has already established that evolutionists label the term a "metaphor." If anything, this "warning sign" scores points against the metaphysical use of natural selection, not against the process use. Hence, this "warning sign" is a non-starter.

In subsequent articles Guliuzza cites seven more reasons for rejecting "natural selection." First, he claims that natural selection is at the heart of evolution (Guliuzza 2011b, pp. 12–13). No controversy here. Reproduction is also at the heart of evolution, but no creationist would deny this fact of biology.

Second, Guliuzza reiterates that evolutionists ascribe intelligence to nature (Guliuzza 2011b, p. 13). No controversy here, either—if we limit the discussion to the metaphysical use of "natural selection." Otherwise, this point is another non-starter.

Third, he objects to "selection' literally applied apart from a real 'selector'" (Guliuzza 2011b, p. 13). This objection is valid, but simply a reiteration of the metaphorical use of the term. Why bring it up again? Because, according to Guliuzza, "selection' only happens in someone's mind" (Guliuzza 2011b, p. 14). Again, Guliuzza fails to distinguish between process and metaphysics.

Fourth, Guliuzza again claims, in essence, that the "fact" of "programmed filling" refutes natural selection (Guliuzza 2011b, pp. 14–15). Without careful exegesis or scientific support, this assertion is simply

left as such. More discussion of this occurs in the second half of my analysis.

Fifth, Guliuzza claims natural selection is simply an illusion, again missing the distinction between process and metaphysics (Guliuzza 2011c). He also claims that selection cannot be measured, which is true if selection is simply a metaphysical concept. However, in the *process* of natural selection, traits can be correlated with environmental changes; gene frequencies can be quantified in parents and offspring; etc. Thus, even this specific objection confuses definitions.

Sixth, Guliuzza cites actual papers on selection (Guliuzza 2011d). However, his “selection” of references is puzzling. His first citation is to a review from 2001 which identified a small role for natural selection in the field—but this review covered papers published only between 1984 and 1998. Excluded from this review were some of the key papers on Darwin’s finches before 1984 (for example, Boag and Grant 1981) and after 1997 (for example, Grant and Grant 2002; Grant and Grant 2006). In fact, based on the listing of papers in the 2001 review which Guliuzza cites, even some of the papers published on Darwin’s finches during that 14 year period were excluded (for example, Schluter, Price, and Grant 1985).

Guliuzza’s second citation is to a review on the molecular evidence for selection, and his third to an abstract of a talk given by Kurt Wise, which also highlights the limited number of examples of selection in the wild. Absent from Guliuzza’s discussion of the literature is, again, explicit treatment of studies on Darwin’s finches as well as other textbook examples of the process of natural selection in the wild. Despite these omissions, he concludes:

The relevance of selection is not in actual field studies. (Guliuzza 2011d, p. 14)

To claim that a limited number of field studies exist in support of natural selection might be a true statement. To claim that no field studies exist would be a leap over logic and data. Guliuzza does the latter.

Seventh, Guliuzza claims that natural selection is idolatrous (Guliuzza 2011d, pp. 14–15). Is it? In its metaphysical sense, yes. In the process sense, no. Guliuzza already alluded to this claim in his second article:

As a label applied to the normal outworking of organisms’ innate programming that enables them to fill environments, [natural selection] steals credit from the organism and ultimately from the Lord. (Guliuzza 2011b, p. 15)

What if the environment *did* select organisms? Would this really steal credit from the Lord? The Creator of organisms is also the Creator of the environment, and He gets glory from both.

In his last article on natural selection (Guliuzza 2012), Guliuzza raises one final objection to natural selection—that the concept is inherently circular. Creationists before Guliuzza have highlighted the circularity of the phrase “the survival of the fittest”—circular in that the “fittest” are identified by those that survive. However, Guliuzza’s objection is not centered so much on the circularity of the definition but specifically on Thomas Huxley’s defense of natural selection:

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 2012, p. 13)

Guliuzza claims that this “is the *opposite* of reality” (Guliuzza 2012, p. 14, emphasis his). Is it? Plants cannot survive without certain types of soil, and “particular circumstances may be more favourable for one plant and less so for another” is an accurate description of this phenomenon.

Guliuzza insists—without scientific justification—that “what happens at the organism-exposure interface *depends solely on the organism’s traits* and how *they* interact with the exposure and has nothing to do with the exposure itself” (Guliuzza 2012, p. 14, emphasis his). Organismal survival has *nothing whatsoever* to do with the environment?

In sum, the core arguments Guliuzza uses to attack natural selection are based on a failure to address the fact of multiple definitions of the term “natural selection.” Over and over, Guliuzza denounces and demonizes natural selection, all the while failing to address the *process*.

### Programmed Filling

A major reason for Guliuzza’s rejection of natural selection is his enthusiasm for his replacement for natural selection, a concept he terms “programmed filling.” Guliuzza treats this aspect of his thesis different from his attacks on natural selection. Rather than make a long linear argument, Guliuzza sprinkles his claims about programmed filling throughout his five articles.

Guliuzza defines “programmed filling” largely in opposition to his straw man of natural selection:

Natural selection is...simply a mental construct that actually “steals” credit for what organisms are programmed to do. (Guliuzza 2011c, p. 14)

[Natural selection] fails to give the Lord credit by acknowledging the *endogenous* power He has masterfully programmed into His creatures. (Guliuzza 2011c, p. 15, emphasis his)

The power to solve environmental problems really resides...strictly within well-designed innate capabilities of organisms. (Guliuzza 2011a, p. 12)

Are an organism's abilities to adapt due to non-natural internal capacities programmed into them by God to enable them to fill His earth, or are adaptive traits due to exogenous ecological variables that select for or against them and, via these pressures, shape an organism's genetic information as its traits are naturally selected by environments? (Guliuzza 2011c, p. 12)

The conditions specified to be environmental "selection" are in reality the unfolding of genetic abilities programmed into the *organisms themselves*. (Guliuzza 2011a, p.15; Guliuzza 2011b, p.15 emphasis his)

Darwin's masterful rhetoric subtly reversed the real power source at the organism-environment interface. Framed in modern biology's context, it's now clear that credit is taken from the organism's DNA and reproductive mechanisms and given to the environment. He successfully deflected attention from an organism's God-given capacity to reproduce offspring with heritable, variable traits that turn out to be suitable to environments, and invalidly terms that as a *selection* of "nature." (Guliuzza 2011b, p. 13, emphasis his)

The Lord enables creatures via reproduction of variable, heritable traits to fulfill His purpose. Organisms are programmed with this power. They are the active party at the organism-environment interface to either succeed or fail. Environments *are* problems or opportunities that organisms are programmed to try to deal with so they can fill them. Organisms generating traits suitable to an environment fill, pioneer, or move into that environment—they are not "selected for." (Guliuzza 2011b, p. 15, emphasis his)

The power to solve ecological challenges—adaptation—resides in organisms and not environments. (Guliuzza 2012, p. 15)

In regard to *problem solving* at the organism-environment interface, living organisms are active, environments are passive. They must reproduce variable heritable traits that "fit" (meaning suitable to solve vital problems in) their environments—or pioneer into a "new" environment. If no members of a group generate suitable traits, the group goes extinct. If some members generate traits that fit, they fill that niche. The ability to generate beneficial variations *already resides* in living organisms. (Guliuzza 2011c, p. 14, emphasis his)

Creatures have intelligence-based systems to reproduce variable heritable traits that comprise their endogenous power to solve environmental problems, enabling them to fill the earth. (Guliuzza 2011c, p. 15)

At a minimum, "programmed filling" seems to refer to the genetic abilities of creatures that permit reproduction of "variable, heritable traits" that allow

organisms to adapt to environments. However, this is part and parcel of the *process* of natural selection. Guliuzza is simply re-labeling Darwin's definition.

If this is all Guliuzza meant by "programmed filling," then his entire case is really nothing more than a verbal dispute over terminology, and not a genuine hypothesis about what actually occurs in nature. However, Guliuzza takes "programmed filling" a step further. Again, since Guliuzza seems to have as his main focus the rebuttal of the metaphysical use of natural selection, it is no surprise that, when Guliuzza swings the pendulum on this issue, he swings it to the opposite extreme, waxing to metaphysical heights in his descriptions:

Environmental stresses are nothing more than conditions to which organisms are exposed—and in and of themselves are neither "favorable" nor "unfavorable." (Guliuzza 2012, p. 14)

Whether one ecology is favorable for some organisms and not others has everything to do with the traits produced by organisms and nothing to do with any so-called selective power of nature. (Guliuzza 2012, p. 15)

It is really the organism's traits that are doing all of the work. (Guliuzza 2012, p. 14)

Everything about adaptations is innate to an organism. (Guliuzza 2012, p. 15)

What happens at the organism-exposure interface *depends solely on the organism's traits* and how they interact with the exposure and has nothing to do with the exposure itself. (Guliuzza 2012, p. 14, emphasis his)

It is difficult to imagine that environmental stresses are not "favorable" in any sense of the word. Certain soils are clearly "favorable" to the development of certain plants and crops. The sudden extinction of a plant food source for a finch represents an "unfavorable" condition for the finch's existence. The environment (for example, ultraviolet light, carcinogenic chemicals, etc.) *causes* mutations. The sudden death of organisms in the area around Mount St. Helens in May of 1980 cannot be divorced from the environmental catastrophe (the volcanic eruption) that transpired. Guliuzza cannot exclude a role for the environment without straining credulity.

Strong claims demand strong support. What evidence does Guliuzza cite for this extreme view?

There is no evidence lacking that organisms generate traits that fit changing environments. (Guliuzza 2011a, p. 14)

Again, this "evidence" is intrinsic to the process of natural selection. The fact that organisms generate traits that fit changing environments is not in dispute. The real question is whether evidence exists that demonstrates that the environment plays *no role whatsoever* in the adaptation process.

Guliuza cites only two peer-reviewed studies in the entirety of his five articles to justify his view. What did the first study (a study of mouse coat color (Linnen et al. 2009) uncover? “Elaborate innate molecular mechanisms” (Guliuza 2011c, p.13). Yet the researchers did not identify the mechanistic origin of the relevant allele, and they did not rule out all actions of the environment.

The second study (on resistance to polychlorinated biphenyls in Atlantic tomcod (Wirgin et al. 2011)) also examined the molecular basis for the resistance phenotype, but without identifying the mechanistic origin of the relevant allele. Is this the “evidence” proving that “what happens at the organism-exposure interface *depends solely on the organism’s traits* and how *they* interact with the exposure and has nothing to do with the exposure itself?” Guliuza never eliminates an environmental role (for example, ultraviolet light causing mutations) for the adaptation process. He simply states his hypothesis as scientific fact.

Perhaps the strongest case for programmed filling comes from analogy to the design process that human engineers use when solving problems:

In design processes, an engineer’s power flows from his knowledge to see and select specific materials and processes that build a plan suitable to solve a problem. Engineers are active and the problem is passive. If their plan solves a problem, it is a misrepresentation to view the process from the perspective of the problem and claim that the “problem selected” the best plan. (Guliuza 2011c, p. 14)

DNA’s information corresponds to a real engineer’s thinking and selecting. Environments are the problem—not the solution. In regard to *problem solving* at the organism-environment interface, living organisms are active, environments are passive. They must reproduce variable heritable traits that “fit” (meaning suitable to solve vital problems in) their environments—or pioneer into a “new” environment. If no members of a group generate suitable traits, the group goes extinct. If some members generate traits that fit, they fill that niche. The ability to generate beneficial variations *already resides* in living organisms. (Guliuza 2011c, p.14, emphasis his)

The problem with this analogy? At best, it is simply a metaphor. At worst, it deifies DNA. Does Guliuza really think that DNA “thinks” and “selects”? In either scenario, Guliuza fails his own test. Having just criticized evolutionists for replacing evidence with metaphors and for deifying the environment, Guliuza commits one or both of the same errors—but on the organismal side of the equation, rather than the environmental side.

In reality, adaptation involves both the environment and the creature. Both the metaphysical speculation

by evolutionists and the programmed filling concept propounded by Guliuza miss the real explanation for this process.

Could Scripture bolster Guliuza’s programmed filling claims? He thinks so:

An *organism-based* paradigm is biblical. (Guliuza 2011a, p. 15; Guliuza 2011b, p. 15, emphasis his)

What Scriptures demonstrate the “fact” of programmed filling?

The Lord’s purpose for programming capabilities into organisms to adapt to dynamic environments is clear. “And God said unto them, Be fruitful, and multiply, and replenish [fill] the earth” (Genesis 1:22, 28; 8:17; 9:1, 7). He commanded *organisms* to fill all ecological niches. Adaptability is just a tool or stepping stone that enables the ultimate purpose of filling. As traits are expressed in a population of organisms, some will “fit” better to different environmental conditions. This means they are physiologically more suitable and better able to extract resources. Organisms with those traits fill, pioneer, or move into that environment—they are not “selected for.” The organism has the power and is active to either succeed or fail. (Guliuza 2011a, p. 15, emphasis his)

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). (Guliuza 2011b, p.15, emphasis his)

That the Lord Jesus would design abilities into His creation to do His good pleasure—that is, multiply and fill the earth (Genesis 1:22; 8:17; 9:1) via designed reproductive abilities (Genesis 1:11)—demonstrates His Lordship and creation’s dependence. (Guliuza 2011c, p. 15)

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. (Guliuza 2012, p. 14)

None of these passages *exclude* a role for the environment. When God commanded creatures to fill the earth, He did not specify the mechanism by which this task would be accomplished. Nothing in Scripture explicitly forbids agency on the part of time, space, matter/energy and the environment. Verses 1 and 2 of Genesis 1 do not identify these things solely as *conditions*, unable to exercise any agency whatsoever at any time.

Furthermore, an active role for the environment in adaptation also would not diminish the Creator’s Lordship in any way. Since He created the environment, does He not get the glory when the environment exercises agency as well?

Conversely, an increased role for the environment would not in any way decrease our dependency. Surely Guliuzza would agree that all creatures are dependent on the environment and have been dependent from the beginning (Genesis 1:30)!

Thus, “programmed filling” is a mechanism read *into* the text of Scripture, not flowing explicitly from it.

Guliuzza claims one final line of evidence supporting the existence of programmed filling, a phenomenon familiar to advocates of the process of natural selection:

A “process” may be the best description of selection. Advocates of process *always* include three necessary conditions: 1) reproduction of traits 2) which differ in ability to solve environmental problems 3) and which are heritable.<sup>17</sup> Immediately, a major disconnect should become evident in the minds of these believers. The conditions specified to be environmental “selection” are in reality the unfolding of genetic abilities programmed into the *organisms themselves*. (Guliuzza 2011a, p. 15, emphasis his)

Has Guliuzza finally recognized the *process* definition of natural selection? No. Consider the original quote (as per his reference #17 above to a book chapter by John Endler) from which Guliuzza’s three points were taken:

“Natural selection” can be defined as a *process* that occurs if and only if these three conditions are present: the population has (a) variation among individuals in some attribute or trait (phenotypic variation); (b) a consistent relationship between that trait and mating ability, fertilizing ability, fertility, fecundity, and/or survivorship (fitness variation); and (c) a consistent relationship, for that trait, between parents and their offspring, which is at least partially independent of common environmental effects (inheritance). (Endler 1992, p. 220, emphasis his)

Has Guliuzza accurately reproduced this definition? Condition (3) for Guliuzza clearly corresponds to condition (c) of Endler’s statement. Condition (1) for Guliuzza seems to correspond to condition (a) for Endler. Condition (2) seems to misstate Endler’s words in condition (b). Nowhere does Endler imply that organisms solve problems in the process of natural selection. (Neither does Endler imply that the environment “solves” any problems, in contrast to Guliuzza’s claims that evolutionists somehow tip the balance of “power” to the environment). Endler simply restates what Darwin had already articulated (see quote above) about the *process* of natural selection. Guliuzza *adds* to Endler’s words the emphasis on organisms solving problems. Thus, Guliuzza claims that the “process” of natural selection supports programmed filling only after mistakenly reproducing definitions—an error he apparently repeats in at

least two subsequent articles (Guliuzza 2011c, p. 13; Guliuzza 2012, p. 15).

Guliuzza extends this error by claiming that programmed filling is measurable while natural selection is not:

Organism-based metrics such as fertility, gene frequencies, or death rates can be quantified as populations generate traits suitable to fill changing environments. What has not been quantified is any “selecting” force or intelligence. Nobody has ever seen a “selection” happen. The words “natural” and “selection” in no verifiable way accurately describe *observable* interactions between an organism and its environment. (Guliuzza 2011b, p. 15, emphasis his) “Fertility,” “gene frequencies,” “death rates”—this is what scientists measure when studying the *process* of natural selection. Yet Guliuzza claims these metrics as his own and accuses natural selection of being unscientific and unquantifiable.

Guliuzza’s conclusion?

To say that “creatures are programmed to fill the earth” is measurable, scientifically accurate, and biblical. (Guliuzza 2011c, p. 15)

As we have observed, Guliuzza provides no scientific data or biblical exegesis to support this assertion. His entire argument is based on a failure to distinguish between the process and metaphysical uses of “natural selection,” on a misstated restatement of the process of natural selection, on sweeping but scientifically unjustified statements about the scientific “evidence” for programmed filling, and on specific biological mechanisms which he reads into the text of Scripture. Thus, his claims about “programmed filling” represent another case of hypothesis stated as fact.

## Conclusion

To summarize, Guliuzza’s series of articles make very bold claims while committing numerous scientific, exegetical, and logical errors. Guliuzza never wrestles with the *process* definition of “natural selection,” and he lumps all definitions of “natural selection” into one—a rhetorical method that any Christian would object to if used against Christianity. Guliuzza also defines his concept of “programmed filling” against his straw man definition of “natural selection.” This results in a strong resemblance between “programmed filling” and the *process* of natural selection, except that Guliuzza strains scientific credulity when he excludes any role for the environment. Furthermore, Guliuzza states programmed filling as a fact without biblical or scientific support. Clearly, Guliuzza’s claims represent, at best, hypotheses stated as scientific fact. This is a serious scientific error.

In analyzing Guliuzza’s claims, I have not sought to nit-pick isolated sentences or tangential statements. Instead, I have attempted to address the central

thrust of his arguments. His claims about natural selection and programmed filling are the essence of his theses.

The question of post-Creation and post-Flood diversification remains open, as does the question of the role of natural selection. Could organisms themselves play more of an active role in this process than advocates of natural selection have previously considered? Might designed mechanisms of generational adaptation exist? Might the environment play more of a role in adaptation than any creationist has imagined to date? Any of these hypotheses are possible at the moment. Good science demands that these hypotheses be investigated with experiments, data, and careful reasoning, not with unjustified assertions of fact.

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