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Theistic Evolution Contra Thomas Aquinas: A Response to Mariusz Tabaczek's Account of "Evolutionary Transitions"

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In this article I will address the problem of Mariusz Tabaczek's account of evolutionary transitions. My goal is to demonstrate that his solution cannot be called Thomistic by any reasonable standards. But before I get into the core of his explanation I will first summarize the main line of the polemic that we have had around the compatibility between Aristotelian-Thomistic metaphysics and biological macroevolutionary theory. First, I will reiterate my arguments from the book *Aquinas and Evolution*[1]. Then I will present Tabaczek's response to my arguments and his explanation of evolutionary transitions as he presented them in his book *Theistic Evolution*[2]. Finally, I will present the critique of Tabaczek's solution and show that his argument actually destroys the very bases of Aristotelian-Thomistic metaphysics.

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[1] M. Chaberek, *Aquinas and Evolution: Why St. Thomas' Teaching on the Origins is Incompatible with Evolutionary Theory?* 2nd edition, The Chartwell Press 2019.

[2] M. Tabaczek, *Theistic Evolution: A Contemporary Aristotelian-Thomistic Perspective*, Cambridge: Cambridge University Press 2024.

Reiteration of my arguments

In my book *Aquinas and Evolution*, I explained that theistic evolution is rejected by Aquinas's teachings in two ways – (1) explicitly, because Aquinas's metaphysics contradicts the idea of the natural transformation of species and (2) a fortiori, because his positive teachings on creation support separate creation of species. Under the first of these two categories I presented five arguments:

1. The lack of a sufficient cause in evolution.
2. The fact that an accidental change cannot result in a substantial change which means that new species (understood as entirely new natures, natural species) cannot emerge via any natural process.
3. The metaphysical principle that nothing is the cause of its own nature which means that it cannot be a cause of a nature of anything else. By this principle one organism cannot give birth to an organism of a different species (nature).
4. The fact that the evolutionary account effectively removes two out of four Aristotelian causes by reducing the efficient cause to the material cause and the formal cause to the final cause.
5. On Aquinas's view, the distinction of things comes directly from the intention of the first agent (God) and thus species created by God are desired by God. God produced many and different things (different according to their perfection) in order that the universe would better reveal His power and wisdom. The grades of beings are designed and intended by God. This contradicts the theistic-evolutionary view on which nature is in a constant flux and God is supposed to constantly guide nature to produce new species out of previous species. The evolutionary approach effectively destroys the order of creation established by God.

Regarding the second category (i.e., arguments a fortiori), I divided it into two subcategories which are differentiated according to two possible approaches:

(1) The first one is historical, by which I mean that Aquinas's account of the origin of the universe supports the direct creation of species. This is evidenced by his comments on the Genesis account of creation which (within the lines of Catholic tradition) includes the division into the first creation and the second creation, the latter including *opus distinctionis* and *opus ornatus*. The work of adornment (*opus ornatus*) is where Aquinas places the creation of animals and man. Since species were formed directly by God and distinguished according to their kinds from the beginning they could not have been produced by any natural process including the process of evolution. Thus, Aquinas's historical theology contradicts the story told by theistic evolutionists.

(2) The other approach is systematic by which I mean that Aquinas explains in metaphysical terms how new

species can be brought into existence. According to Thomas, things can start to exist either through a change or through creation. He says that there are four things that cannot begin to exist through a change: angels and rational souls, the celestial bodies, the matter of the elements and the first hypostases in each species, that is, "the first generators similar in the species to the thing generated." As examples Thomas gives first man, first lion, and other of this kind[3]. Thus the positive account of the origin of species as construed by Aquinas reveals that their creation is not just a matter of biblical interpretation (historical theology) but a metaphysical necessity as well.

My Adversary's response

Now, let's see which of these arguments were addressed by my Adversary. In the book *Theistic Evolution* there are eight pages under the title "A Response to an Objection" (p. 169–177)[4] out of which five pages (sic!) are devoted to challenging my definition of species. However, upon careful reading it turns out that my Adversary's own definition of species closely resembles mine. Tabaczek, similar to me, appeals to the substantial form as defining the relevant meaning of species in the debates over evolution[5]. Besides, his "Response" boils down to a charge that I (allegedly) identify methodological and ontological versions of naturalism (p. 176). I had responded to this argument in my book *Knowledge and*

[3] "All these things that come to existence through creation have God alone as their immediate cause. And these are those things that cannot come to existence neither by motion nor by generation (…) owing to the necessity of a generator [parent] similar according to species to the thing generated. And for this reason first hypostases were created directly by God. This includes the first man, the first lion, and other of this kind, because man cannot be generated otherwise but from man" (*Super. Sent*., lib. 2, d. 1, q. 1, a. 4, co). "According to faith one cannot say that something is a cause of something else after God, except by way of movement or generation. Hence all things that do not begin by generation must have God as their immediate (direct) cause. And these are the Angels, the souls, the heavenly substances, the matter of elements and the first hypostases in every species" (*Super Sent*. lib. 2, d. 18, q. 2, a. 2, co).

[4] Page numbers in parentheses refer to the book M. Tabaczek, *Theistic Evolution: A Contemporary Aristotelian-Thomistic Perspective*, Cambridge: Cambridge University Press 2024.

[5] In Tabaczek's words: "Species can be defined as a universal category expressed in and abstracted from concrete living beings that are determined by a particular type of essence. The latter is constituted by a specific kind of SF which – as a metaphysical principle of actuality – actualizes its correlative metaphysical principle of pure potentiality, that is, PM.", *Theistic Evolution*, 81. Cf. 83, 154, 156. My definition reads: "From a metaphysical perspective, a natural species includes organisms that share the same nature. In this context *nature* is defined by Aquinas as *the essence of a thing as it is ordered to the proper operation*. From the same, metaphysical perspective, natural species can be seen as living beings (composites of form and matter) that share the same substantial form". M. Chaberek, *Aquinas and Evolution*, 2nd edition, The Chartwell Press 2019, p. 25.

Evolution three years before he published his critique[6].

What is striking is the fact that in the alleged "Response to an Objection" there is not even an attempt to bring up any of my objections let alone respond to it. Thus there is no "definitive answer" that Mr. Ramage claims to have found in the book[7]. In fact, there is no answer at all.

Surely, this is not the entire content of the book. One may search for some responses in other places including those in which my Adversary tries to explain the proportionate cause of evolution (p. 48, 216) and the way how an evolutionary change would be explained in metaphysical terms (p. 34–36). I will address both arguments in the following sections of this paper. Still, in another place we find a brief answer to my second argument stating that an accumulation of accidental changes will not bring about a substantial change. Tabaczek writes:

> Accidental changes indeed cannot bring a new nature in an already existing thing (this is a straw man argument on the part of an antievolutionary approach to Thomism as no follower of Aquinas that is open to evolution argues in this way) (p. 37).

The only author whom Tabaczek references who supposedly holds such view is me. But I never said any such thing. It is true that the argument is a straw man. But this straw man is produced and then disproved by no one but my Adversary himself. What I said was:

> According to biological macroevolution, the accumulation of so many accidental changes over a ***vast time***, ***over subsequent generations***, will ***ultimately*** produce a substantially new form of life, meaning a new species (in a philosophical sense). But this is impossible, because accidental change will always produce only accidental differences, never bringing about a new substance or a new nature for a thing. The creation of a new substance would require substantial change: that is, the production of a new substantial form. This is why the originating of species by natural evolution is metaphysically impossible [emphases added][8].

In the following sections I will explain why my Adversary's account of "evolutionary transitions" fails to resolve this otherwise obvious obstacle to biological macroevolution. Here I just want to emphasize that I did not say that "accidental changes (…) cannot bring a new nature in an already existing thing".

Regarding my arguments a fortiori, Tabaczek simply states that the work of distinction (*opus distinctionis*) and the work of adornment (*opus ornatus*) are just regular operations of nature so that the act of creation applies just to the first creation (the creation of the universe out of nothing

[6] M. Chaberek, *Knowledge and Evolution: How Theology, Philosophy and Science Converge in the Question of Origins*, Eugene, OR: Resource Publications 2021, p. 179–180.

[7] In a recent online entry Matthew J. Ramage expressed an opinion that Mariusz Tabaczek's book *Theistic Evolution* "definitively answers all of [Chaberek's] qualms" regarding theistic evolution. https://www.fivebooksforcatholics.com/evolution-and-creation/ (20.06.2025).

[8] M. Chaberek, *The Metaphysical Problem for Theistic Evolution: Accidental Change does not Generate Substantial Change*, "Forum Philosophicum" 26 (2021) 1, p. 35–49, 38.

in the beginning of time) (p. 191–2).[9] By this account, *opus formationis*[10] is meaningless, it never happened. Tabaczek's view boils down to saying that God created the universe in one act and from then on He acts only providentially. This obviously is not what Aquinas or any Christian author would ever allow to say.

Moreover this view entails a serious problem: If evolution is a "law of nature" which operates uniformly from the beginning to the end of the existence of the ordered universe (Cosmos), and God is supposed to work through evolution as a primary cause, it follows that God never rested from His work. This view clashes with any interpretation of the divine Sabbath. The problem of how to explain the Sabbath of the Lord is a universal problem for theistic evolutionists who cannot tell the difference between the divine work throughout the "six days" (the work of creation) and the divine rest on the "seventh day" (the work of providence).[11] Whereas most theistic evolutionists believe that God still creates the universe through the process of evolution (on this account God never rested by which they confuse the work of creation with the work of providence) Tabaczek believes that God acted by creation only once in the beginning of time. The consequence of this approach is that God rested before the first day was over (contrary to the clear teaching of the Bible and Aquinas) and that nothing but matter and time was actually created by God.

My Adversary thus does not show how to reconcile evolution with Aquinas. Instead, he explicitly rejects a substantial part of Thomas's positive teaching on creation. An overall impression is that my Adversary cherry-picks from Aquinas what supposedly matches his views and ignores or flat out rejects what does not[12].

[9] M. Tabaczek, *A Contemporary Aristotelian–Thomistic Perspective on the Evolutionary View of Reality and Theistic Evolution*, "Religions" 15 (2024) 524. https://www.mdpi.com/2077–1444/15/5/524 (20.06.25).

[10] *Opus formationis* – the work of formation is a term covering both the work of distinction and the work of adornment.

[11] By the way, there is a little bit of irony in the fact that some theistic evolutionists (notably Stanley Jaki) reduce the meaning of the Genesis account of creation to a justification of the Sabbath. But if evolution was to form the universe then there was never any divine Sabbath, because evolution works uniformly throughout the entire existence of the material universe. Hence on this approach, Genesis is reducible to the justification of the Sabbath, but the Sabbath itself has never occurred. As a result the Genesis account of creation becomes totally meaningless.

[12] An astounding example of such an approach is the table in his book (p. 158–160) with twenty phrases taken out of context and presented as "evidence" that Aquinas's teaching supports natural emergence of species. The quoted phrases actually can be classified into three categories: (1) Those that do not support Author's thesis at all (10 quotes). (2) Those that speak about something different and in fact are irrelevant (7 quotes). (3) Those that may be mistakenly interpreted as justifying evolution (3 quotes).

The problem of sufficient cause

Even a layman who has little knowledge about biology and evolutionary theories would quickly realize that macroevolution implies spontaneous growth of complexity in the world of life over time. Evolutionists typically realize that if there is progress in evolution it requires an explanation by reference to a higher cause. But because they are reluctant to accept such a cause they are generally dismissive of the idea of progress[13]. It seems clear, however, that one cannot consistently maintain that in evolution there is no direction and no progress whatsoever and at the same time maintain that evolution produced all species from single-celled organisms through all plants and animals to apes and humans. If there is this kind of natural continuum in nature (as both atheistic and theistic evolutionists believe) then there is progress, direction and growing complexity in evolution. If so, the question that naturally follows is: What kind of cause produces this kind of effects? The basic principle of being and reasoning is that every effect needs a sufficient cause, i.e., a cause that is capable of producing the effect.

One way of answering this problem by Thomistic evolutionists is their appeal to many different causes instead of just one or two, such as random genetic mutations and natural selection. They believe that although one or two causes do not account for the sufficient cause in evolution nevertheless an entire ensemble of different causes working together does. Even though I responded to this argument in *Aquinas and Evolution*,[14] my Adversary brings up the same argument as if nothing had been said on the topic:

> We might speak here about an evolutionary causal matrix (or causal polygeny), where relevant contributors to a given species transition are incredibly many. Their number might be, in fact, virtually impossible to estimate. In addition to genetic mutations, we may name a number of other accidental changes (…) such as genetic recombination, gene transfer, genetic drift, and changes classified as epigenetic (…) we currently learn more about the synergy of evolution and development (evo–devo), as well as the importance of cultural, behavioral, physiological, and ecological inheritance (biological niche construction). Among additional factors, having causal influence on speciation, we find geographic, ecological, and reproductive barriers, as well as natural selection (…) Furthermore, the organisms in question are closely linked in ancestral–descendant relations within populations in a given evolutionary lineage, which

[13] Stephen Jay Gould famously wrote: "Progress is a noxious, culturally embedded, untestable, nonoperational, intractable idea that must be replaced if we wish to understand the patterns of history." Stephen J. Gould, *On Replacing the Idea of Progress with an Operational Notion of Directionality* in M. Nitecki, *Evolutionary Progress*, Chicago: Chicago University Press 1988, p. 318–338, 319.

[14] "Multiplication of causes does not make them more suitable. Similarly, in designing a machine, ten uneducated people cannot make up for a counsel of one engineer, and it does not matter whether there are ten or a thousand tinkerers if none of them has the appropriate knowledge". M. Chaberek, *Aquinas and Evolution*, p. 69.

> extends over extremely long periods of time, counted in hundreds of thousands or millions of years. Hence, the proportionate cause of a species transformation is not a single law or forcebut the concurrence of a highly complex set of causal agents, contributing to a speciationevent or rather a multifaceted history of an evolutionary transition (p. 48–49, cf. 216)[15].

The Author successfully lists virtually all factors discussed in current debates over evolution but he ignores the fact that none of them is universally accepted by all biologists and some of them have been rejected by the majority of biologists[16]. It seems therefore that the Author is not dealing with an actual state of science. But the major problem with his response is philosophical: His argument is based on a dubious assumption that multiplying the causes is equivalent to increasing their capacity of producing a desired effect.

To show the inadequacy of this reasoning let us resort to an analogy. Imagine there is a construction site. Most of the building materials have been delivered, the ground is cleared, all machinery is brought to the site. There is even an office and a number of workmen ready to pick up their tasks. The only thing that is missing is the plan of the building and an engineer who is capable of reading complex technical drawings. The construction cannot start off because there is nobody to know what and how to build.

Drawing on this analogy we may say that the solution proposed by Tabaczek and other Thomistic evolutionists is to increase the number of workmen and deliver more energy and materials. Let's say that there were just five workers and now we have fifty. Would that start the construction process? No, because none of them has the plan and none of them

[15] Cf. M. Tabaczek, *A Contemporary Aristotelian-Thomistic Perspective*, op. cit., p. 9.

[16] The crisis of neo-Darwinian synthesis has been well documented. First, there was a closed meeting of leading biologists in Altenberg, Austria in 2008. The proceedings published two years later show that some foundational principles of neo-Darwinism were challenged by the participants (Evolution: The Extended Synthesis, edited by M. Pigliucci, G. Müller. MIT Press, 2010). Then, in 2016 there was another high-profile conference organized by the Royal Society in London. World leading experts in evolutionary biology recognized the serious crisis in neo-Darwinian synthesis and proposed some alternatives. This fact has been recognized by many biologists including leading evolutionists such as James A. Shapiro. One of the scientists who thoroughly documents the limits of the neo-Darwinian mechanism is biochemist Michael Behe. Behe has shown that random mutations do not produce any biological novelty. They work through breaking genes and inactivating important functions. Genetic mutations therefore show devolution rather than (creative) evolution. Devolution in some cases helps organisms but in no way does it serve to produce new complex biochemical systems (similarly blowing up a bridge may help a retreating army to stop the chase, but this does not help the army to acquire new weaponry). The conclusion is that the leading evolutionary mechanism is actually inapt for creation of new species. Many evolutionists propose new explanations for "evolutionary progress", but – as Behe and others show – none of these new proposals withstand basic scientific critique. It is only regrettable that Tabaczek ignores the actual state of science while claiminig that he modifies Aquinas in order to reconcile his teachings with "modern science". See M. Behe, *Darwin Devolves: The New Science About DNA That Challenges Evolution*, HarperOne 2019.

knows how to read it. So it really does not matter how much steel and concrete, how much energy, and how many unqualified workers there will be present at the site, the construction will not begin unless at least one person with necessary skills and knowledge arrives. And this is precisely the problem of evolution. It does not matter how many accidental factors Tabaczek can list. What matters is whether there is at least one, or whether a combination of any of the causes is capable of producing the effect. Tabaczek assumes it can, but he does not prove it. Philosophically speaking, none of the listed causes and none of their combinations can, because these are all material factors which are unable to think and create new designs of life.

In the quoted passage Tabaczek also smuggles in a very popular argument from "extremely long periods of time" for evolution to work. But he does not seem to realize that time is not a cause here either. Again an analogy may help: Imagine a drop falls on a rock. At each drop a few particles building the rock are chipped off so that after millions of years we see a significant crack in the rock produced by erosion. But which one is the real cause here – the time or the drops? In fact, these are the drops and not the time. Surely, if water works for a longer time it will produce a greater effect. But still, if the drops do not fall on the rock, it does not matter how long they do not fall – they will not produce any effect regardless of whether the drops do not fall for a year or billions of years. And this is why the popular appeal to the immense time available for evolution fails: Evolution could have produced all of the estimated billions of species over hundreds of millions of years if it could produce a few new forms of life over a few years, which we do not see to be the case[17].

Again, the reason why it cannot stems from the fact that to produce a new form of life one needs a new plan, new design, a new idea of how to realize the phenomenon of life in the real world with its multiple physical and biochemical rules and constraints. None of the factors quoted by Tabaczek has the power to invent new designs and resolve technical problems. None of them has foresight which is absolutely necessary to produce information and irreducibly complex biological structures. Life is packed with information and irreducible complexity. This is why neither the appeal to multiple material causes nor the appeal to immense amounts of time does anything to explain the sufficient cause of evolution. Evolutionists cannot explain the growing amount of information and designs in the history of life because they appeal to material and accidental factors alone. On the other hand, an appeal to intelligent design allows us to make some

[17] Paleontologists generally agree that currently extant species constitute at a maximum 5% – but more probably less than 1% – of all species that ever existed. Michael L. McKinney estimates the number of currently living species at 50 mln whereas the total number of those that existed in history of Earth at 5–50 bln. Other biologists estimate the number of current species at about 11 mln. See: Michael L. McKinney, *How do rare species avoid extinction? A paleontological view*, in Kunin, W.E.; Gaston, K.J. (eds.), *The Biology of Rarity: Causes and consequences of rare–common differences*, Springer Science & Business Media, p. 110–129, 110.

progress on this front, but Thomistic evolutionists reject intelligent design and favor "the power of generation" over the power of an intellect. And this is why in Thomistic evolution the sufficient cause is missing. Generation will never make up for creation[18].

The account of the „evolutionary transitions"

The main argument for the alleged compatibility between Aquinas and evolution that my Adversary keeps reproducing in his different writings consists of the idea that a new species (new natural kind) emerges whenever the disposition of matter in the parental organisms attains the aptitude for a new substantial form. The Author explains:

> An evolutionary transition might be (…) defined (…) as a series of minor genetic and epigenetic changes that effect minor phenotypic variations (accidental changes). These variations (…) may become permanent (…) which, in turn, gradually changes the "proximate disposition" of PM underlying subsequent organisms of the lineage L1 of the species S1. This process (…) might lead to a precise instant in which the PM underlying the ovum and the sperm coming from particular female and male organisms of sexually reproducing species S1, at their entering the substantial change in which they join and give origin to a new organism, is not disposed to be actualized by the "old" type of SF that defines species S1 but by a "new" type of SF that defines species S2, which is educed from the potentiality of the PM that underlies them. The new organism (or organisms, as the process described hereis commonly considered to be taking place within a population) starts a new lineage L2, which happens to be the lineage of the new species S2 (p. 34).
>
> Gametes–parental ovum and sperm–are separate entities and may be treated as instrumental causes, acting under the principal causation of the organisms that produced them (see *Q. de pot.* 3, 11, ad 5). Normally, when they join, entering thus a substantial change, which originates a new organism, the PM that underlies them is disposed to be actualized by the original SF of the type S. In the case of an evolutionary transition, however, accidental changes in the DNA and the epigenetic causal factors inherently affecting the phenotypes of the consecutive organisms within the lineage L1 lead to the situation in which PM, actualized by the SFs of given ovum and sperm, produced by female and male organisms of species S1, is disposed to be actualized in the substantial change these gametes enter by a new SF of the type S2, which is educed from its potentiality. This originates the new evolutionary lineage L2 (p. 35).

[18] Tabaczek brings up Brian Carl's idea that in evolution it is not just the generative power but also the "influence of heavens" which makes up for the sufficient cause of the emergence of new species. I responded to Carl's claims in a separate paper (M. Chaberek, *Creation Is Not Generation: A Response to Brian Carl*, "Studia Gilsoniana", Jan-March 2021, p. 11–43). Here just a note that more energy from "heavens" does not make things any easier because, again, energy is not what makes new species. Design is.

> The result is an organism whose SF belongs to a natural kind that differs from that of its parental organisms[19].

I already pointed out that this argument is nothing new among Thomistic evolutionists. It had been proposed by Charles De Koninck almost a century ago, and I had responded to it in *Aquinas and Evolution* long before Tabaczek presented his version of this argument[20]. In my previous polemic with Tabaczek I asked, where does the new substantial form (S2) come from? Regrettably, my Adversary while delivering a lengthy response (twice as long as my critique) failed to address my question[21]. In what follows I will elucidate four major problems with this argument which render it totally untenable in the light of Aristotelian-Thomistic (A-T) metaphysics.

1. The problem of the origin of substantial forms

Upon reading through my Adversary's argument one cannot fail to notice that he does not explain where the new substantial form comes from. According to his account, accidental changes (evolutionary processes) produce new dispositions in matter up until there is one fertilization in which an emerging individual is not animated by the substantial form belonging to the previous kind but a new one, belonging to a new kind. But from this account one does not know where the new substantial form is supposed to come from. It simply pops up from nowhere. If it is actually new, it cannot be passed on by the parents, because parents pass on their own substance to posterity.

The reason why Tabaczek fails to explain the origin of substantial forms is nested in his erroneous understanding of the form-matter composite. On his account, new kinds of animals (i.e., new natures, new species) are produced by evolution tinkering with matter of the organisms whereas according to A-T metaphysics, the entire specification of a being comes from the form rather than matter. So, the entire idea of how an organism is to be built and live, propagate and function, is embedded in the substantial form. New forms are like new concepts, new ideas, of how to realize a living being. In each species we find a number of solutions to very practical problems – how to breathe, how to feed, how to move around, how to produce cells, what kind of cells, etc. etc. The number of such solutions is virtually infinite in each species. These solutions are intelligent responses to the constraints and requirements of the physical reality of our planet. Metaphysically speaking these solutions are realized by the substantial form which – in combination with matter – results in a substance, that is a living being.

[19] M. Tabaczek, *A Contemporary Aristotelian-Thomistic Perspective*, op. cit., p. 7.
[20] M. Chaberek, *Aquinas and Evolution*, op. cit., p. 78–80.
[21] M. Tabaczek, *Evolution and Creation – A Response to Michael Chaberek's Critique of Theistic Evolution*, "Nova et Vetera. English Edition" 22 (2024) 1, p. 255–284.

In contrast to Tabaczek's "materialism" (the search for explanation on the material level), Aquinas explains that these entirely new forms are realized by God in the act of creation by which a new living being is educed from the potentiality of matter. Aquinas's account explains therefore two fundamental problems – where the new substantial form comes from (from the divine mind) and how it is produced in matter (by the direct divine act which makes up for the sufficient cause).

Even though Tabaczek failed to answer my question about the origin of substantial forms, in one place he accidentally betrays how he understands this issue:

> The causal input of such an array of causes is stored and transmitted from generation to generation, up to the point in which ***a given organism is able to educe a new kind of SF from the potentiality of PM*** [emphasis added][22].

From this passage we gather that this is "a given organism" which "educes" a new kind of substantial form. But which one is the "given organism"? Is it the parental organism? It cannot be, because this one transmits the substance of its own which is clear from Aquinas's and Aristotle's account of animal generation (see below, no. 2). So, it must be a new organism, the one produced in this act of generation. But this is entirely illogical, because there is no organism if there is no combination of form and matter. If the new kind of organism emerges in conception (as Tabaczek claims) then this new organism does not exist before there is conception. How can this "given organism" educe the new kind of SF if it does not yet exist? And how can any organism (or anything for that matter) be a cause of itself?

I presume that the quoted phrase is just a verbal lapse that accidentally made it to the text but this only confirms that Tabaczek is lost on the question of the origin of substantial forms. His view boils down to saying that a new kind of organism produces itself. This is not in keeping either with the principle of sufficient cause or with basic logic. It is a *petitio principii* fallacy. Aquinas following Aristotle clearly teaches that no organism is the cause of its own nature:

> [W]hen a horse is generated, the generating horse is indeed the reason why the nature of horse begins to exist in this being, but it is not the essential cause of equinity. For that which is essentially the cause of a certain specific nature, must be the cause of that nature of all the beings that have that species. Since, then, the generating horse has the same nature, it would have to be its own cause, which is impossible. It remains, therefore, that above all those participating in equinity, there must be some universal cause of the whole species. . . . [I]t must be reduced to that which is essentially the cause of that nature, but not to something which participates in that nature in a particular way[23].

[22] M. Tabaczek, *A Contemporary Aristotelian-Thomistic Perspective*, op. cit., 9.

[23] Thomas Aquinas, *De substantiis separatis*, c. 10, 58. "'[E]ssence' has to signify something that is common to all natures on account of which various beings fall under the diverse genera and species,

On Tabaczek's account an individual produced in generation is a cause of a new species. But according to Aquinas this is impossible, because this would mean that a thing is a cause of itself. It is clear that Tabaczek's account cannot be called Thomistic in any relevant sense, but I also doubt that it satisfies the requirements of basic logic.

2. The mistaken account of animal generation

The second reason why Tabaczek's account of "evolutionary transition" contradicts the A-T meaphysics is that he adopts a different understanding of animal generation from the one proposed by Aristotle and adopted by Aquinas. According to Aristotle and Aquinas, no new nature is produced in generation. Instead, the parents (or parental organisms) pass on to their posterity their own substantial form (which is realized in each individual as an individual form). Aquinas is quite clear about it when he says:

> Since the generator is like the generated, it follows of necessity that both the sensitive soul, and all other like forms *are naturally brought into existence by certain corporeal agents* [parents – M.Ch.] that reduce the matter from potentiality to act, through some corporeal power of which they are possessed [the gametes – M.Ch.] (…) As it matters not whether we say that something is moved by the instrument or by the principal agent, so neither does it matter whether we say that the soul of the generated is caused by the soul of the generator, or by some seminal power derived therefrom [emphases added][24].

Thus on Aquinas's view, in animal generation parents produce the soul (which is the substantial form) of an offspring either directly or through the medium of gametes. Either way, the soul belongs to the same species as the parental organisms. Thus there aren't any "substantial changes" in generation, because the production of a new individual form of the same species entails just the accidental changes, while the substance of parents (which neither they themselves, nor any individual of the same species had produced) is passed on to subsequent individuals in generation.

as for example humanity is the essence of man, and so on for the rest" *De ente et essentia*, c. 1.

[24] *S. th.*, I, q. 118, a. 1, co. The entire passage reads: "Now the more powerful an agent, the greater scope its action has: for instance, the hotter a body, the greater the distance to which its heat carries. Therefore bodies not endowed with life, which are the lowest in the order of nature, generate their like, not through some medium, but by themselves; thus fire by itself generates fire. But living bodies, as being more powerful, act so as to generate their like, both without and with a medium. Without a medium – in the work of nutrition, in which flesh generates flesh: with a medium – in the act of generation, because the semen of the animal or plant derives a certain active force from the soul of the generator, just as the instrument derives a certain motive power from the principal agent. And as it matters not whether we say that something is moved by the instrument or by the principal agent, so neither does it matter whether we say that the soul of the generated is caused by the soul of the generator, or by some seminal power derived therefrom" (Ibidem).

Contrary to this, Tabaczek believes that animal generation consists of a series of substantial and accidental changes that may end up in new substantial form:

In the case of speciation, parental organisms (…) while efficiently causing their offspring, bring to the final completion *a complex nexus of accidental and substantial changes* extended over time and space[25].

> In the process of reproduction [parents] bring about ('educe') from the potentiality of matter the SF proper to the specific biological species to which they belong. This takes place during the process of *substantial change*, the result of which is the origination of a new living organism [emphases added][26].

The reason why Tabaczek speaks about substantial changes in generation is because he does not distinguish between substantial form as existing in this individual (*substantia prima*) and substantial form as such, i.e., the one shared by all individuals belonging to one species (*substantia secunda*). Surely, in generation the first one needs to be produced by parents, but the latter is not produced by the parents and remains the same throughout generations[27]. But evolution – if it were to happen – would require the production of entirely new forms of life, that is, new substantial forms as such (*substantia secunda*), which cannot be brought about by a series of accidental changes. Thus generation is not a series of substantial and accidental changes as my Adversary believes, rather it is a production of an individual substance which participates in the nature of its parents.

Tabaczek's account encounters a serious problem stemming from the fact that one matter cannot be actualized by two substantial forms simultaneously:

> Of one thing there is but one substantial being. But the substantial form gives substantial being. Therefore of one thing there is but one substantial form. (…) The same is to be said of the sensitive soul in brute animals, and of the nutritive soul in plants, and universally of all more perfect forms with regard to the imperfect (*S.th.* I, q. 76, a. 4, s.c., co.)[28].

Since there can be only one substantial form in a living being, accordingly matter in one individual (*materia designata*) cannot be disposed to two different substantial forms. But this is exactly what Tabaczek's account necessitates: one matter (that of the parental organism) has to be simultaneously disposed to accept the form of the parents and a new kind of form, the one that is to emerge in the offspring. Thomas says that parents produce the soul of posterity. Now, whether in sexual or a-sexual generation the parental organism delivers matter with the disposition to its own substan-

[25] M. Tabaczek, *Theistic Evolution*, p. 196, cf. p. 191.

[26] Tabaczek, *Evolution and Creation*, p. 276–7. Cf. p. 280, 283, footnote 73.

[27] It is also important to remember that the first substance and the second substance are not two different things. Rather they are two aspects of one reality of a substance.

[28] Non potestessequodmateria simul perficiaturduabusformissubstantialibus, quia unamateria non est capax nisi uniusessesubstantialis. *De veritate*, q. 15, a. 2, ad 11. "Two disparate substantial forms cannot be in the same thing at the same instant" *Quodlibet* VII, q. 4 a. 2, s.c.

tial form. Therefore that matter is not apt to accept any other substantial form. Tabaczek, however, believes that a new substantial form appears in posterity, because matter is disposed differently (in such a way to accept this new substantial form). Hence, Tabaczek's proposal contradicts the A-T understanding of animal generation.

3. A mistaken account of hylemorphism

According to my Adversary, a new substance emerges when a new disposition in matter appears in a long chain of plant/animal generation. The disposition is produced by "accidental changes in the DNA and the epigenetic causal factors". Once a new disposition appears in a "precise instant" of a single generation (in case of sexual reproduction at the moment of fertilization) the prime matter is actualized by a new type of substantial form "which is educed from its potentiality". As I pointed out (in no. 1), we do not know what is supposed to educe the new substantial form, and we do not know where it is educed from. Matter cannot exist without any form. So, if there is matter then it is disposed to this particular form wherefore no new substantial form can just pop into existence.

This leads to another problem with my Adversary's solution. On his account, the disposition of matter changes "under the form" up until it reaches a point of a single generation in which it becomes disposed to a new substantial form. According to A-T hylemorphism, the disposition of matter can be understood either as some aptness of matter to form or as some accidental property of a substance, specifically its quantity, as any composite requires a specified amount of matter for its existence. Thus, the disposition of matter is not different from matter itself as being realized in this particular being[29].

Now the problem with Tabaczek's concept of "evolutionary transitions" is that it accounts just for the change of disposition in matter in subsequent generations, which boils down to accidental changes. But if the same matter is supposed to undergo a substantial change it needs to be substantially changed by the new substantial form which produces the substantially new disposition in matter.

The root reason why Tabaczek does not account for this latter type of change stems from the fact that he splits substance into three: (1) matter, (2) the disposition of matter and (3) form, and he takes it as a real distinction (*in re*) while for Aristotle and Thomas this is only a virtual distinction (*in intellectu*). In any real composite one cannot split form and matter, because they constitute one substance. This is clearly expressed by Aquinas:

> If, however, the intellectual soul is united to the body as the substantial form (…) it

[29] Cf. *Aquinas and Evolution*, p. 78–80.

> is impossible for any accidental disposition to come between the body and the soul, or *between any substantial form whatever and its matter*. The reason is because since matter is in potentiality to all manner of acts in a certain order, what is absolutely first among the acts must be understood as being first in matter. Now the first among all acts is existence. Therefore, it is impossible for matter to be apprehended as hot, or as having quantity, before it is actual. But matter has actual existence by the substantial form, which makes it to exist absolutely, as we have said above. (…) Wherefore *it is impossible for any accidental dispositions to pre-exist in matter before the substantial form, and consequently before the soul*. [Emphases added] (***S. th.***, I, q. 76, a. 6, co).

We see that according to Aquinas, there is nothing in-between matter and form. Rather they are united substantially (contrary to what Tabaczek implies). Moreover matter cannot be disposed to the form that is yet non-existent, which is necessary on Tabaczek's account. If my Adversary were correct we could not speak about the unity of any material being – it would not be one substance, but just a conglomerate of matter, dispositions of matter and form. But this contradicts the A-T concept of a *synolon*, which consists of (1) matter and (2) form (substantial form). Hence, Tabaczek contradicts A-T hylemorphism on two counts:

First, by saying that the disposition of matter can change without changing the form he makes the distinction real (while it is only virtual) thus destroying the very idea of substance. Surely, on the A-T view it is true that accidents change in subsequent generations, but this is due to another composition in being – that of substance and accidents, by which accidents (accidental forms) change, but not the substance of a thing (the substantial form).

Second, he introduces the third component in a composite being, which is the disposition of matter. Accordingly, on the A-T view, we can speak about (1) accidental changes and (2) substantial changes, but on Tabaczek's view there are (1) accidental changes, (2) the changes of disposition and (3) substantial changes.

Additionally, we should notice that on Tabaczek's view the problem of the origin of new substantial forms (3) is reduced to, and – in a way – hidden under the changes of dispositions (2). Thus the new species is produced by accidental changes that create new dispositions while the new substantial form simply pops up from nowhere. Tabaczek says it is "educed from prime matter" – but he does not explain who or what educes it, or how educes it, or where the prime matter is located. Is it in the parental organism? In the gametes? In the fertilized egg? If it is the matter of parents or their gametes, then it is disposed to the substantial form of the parents, so it cannot be disposed to any new kind of substantial form. But if it is the matter of an embryo then where did the embryo take its disposition and substantial form from to even begin to exist?[30] The A-T approach resolves all these problems by

[30] Michael Bolin, who presented this argument long before Tabaczek did, appeals to the direct divine act, by which a new substantial form is created at the moment when matter is properly disposed.

postulating that matter with the form is delivered by parents. But this excludes the possibility of a new substantial form emerging in generation.

We should also notice that on Tabaczek's account, changes in matter are supposed to bring about a new form. According to A-T hylemorphism, however, it is quite the opposite – disposition is produced in matter by the form, because the form is the entire specification of matter:

> Forms are not consequent upon the disposition of matter as their first cause; on the contrary, the reason why matters are disposed in such and such ways is that there might be forms of such and such kinds. Now, it is by their forms that things are distinguished into species. Therefore, it is not in the diversity of matter that the first cause of the distinction of things is to be found (*ScG* II, c. 40, n. 3).
>
> No accident is consequent upon matter unless communicated by the form (*De ente et essentia,* 5)[31].

On Tabaczek's account, these are dispositions in matter which are the reason for assigning a new species to a given being. This view needs to end up in a conclusion that there is no substantial form as the active principle in being. In contrast, Aquinas teaches that matter is the principle of individuation, which means that individuals within one species differ by designated matter and accidental forms, but the reason why things belong to *different species* is found in their forms rather than matter:

> The difference of form which is due only to the different disposition of matter, causes not a difference according to species but only a numerical difference: for different individuals have different forms, diversified according to the difference of matter (*S. th.*, I, q. 85, a. 7, ad 3)[32].
>
> Those things whose distinction from one another is derived from their forms [and these are different species of life – M.Ch.] are not distinct by chance, although this is perhaps the case with things whose distinction stems from matter. Now, the distinction of species is derived from the form, and the distinction of singulars of the same species is from matter. Therefore, the distinction of things in terms of species cannot be the result of chance; but perhaps the distinction of certain individuals can be the result of chance (*ScG* II,c. 39, n. 3).

Clearly, according to Aquinas, different accidental changes in the dispositions of matter can only account for the differences between the individuals belonging to the same species, but they will never produce an individual belonging to any new species. In fact, if we consistently follow Tabaczek's view, we need to conclude that

Thus we can call Bolin's view materialistic occassionalism. But Tabaczek's view is simply incoherent. If there is nothing to produce substantial form then there cannot be such a thing and therefore his view boils down to materialism simply, because accidental changes in matter is what produces different species. Michael J. Bolin, *And Man Became a Living Being: The Genesis of Substantial Form*", A lecture delivered at Wyoming Catholic College, October 25, 2013; https://sancrucensis.files.wordpress.com/2015/01/and-man-became-a-living-being.pdf (20.06.2025).

[31] Latin original phrase: Nullum accidens consequitur materiam sine communicatione formae.

[32] See also: *S. th.*, I, q. 115, a. 3, ad 2; *S. th.*, III, q. 77, a. 2, co.

the difference of species is established by an accidental difference which makes the very notion of species irrelevant. Species is just a name for an individual which differs from other individuals. And this conclusion takes us to the next problem, a one primarily of a logical nature.

4. The problematic logic of the argument

Let's assume that Tabaczek is right: dispositions in matter change due to accidental changes until a new substance (new nature) pops out of nowhere. So we have parents that give birth to an individual of a new kind (/species/nature). And what happens next? By definition and by observation individuals of one kind interbreed with other individuals only if they belong to the same kind (/species/nature). So the individual of a new kind has nobody to interbreed with and the supposed "evolutionary transition" is stuck in a dead end.

A possible answer to this challenge could be that there are two or more individuals which – owing to the same evolutionary factors – undergo the same process of transformation and therefore acquire the same new substantial form and produce the same new species.[33] But this cannot be, because the input premise was that the new species is generated by a series of accidental changes. If, however, there is exactly the same effect of a series of changes achieved over and over again in different individuals (at the same time and space, in the same order, in male and female, etc.) they are not accidental anymore. This solution therefore contradicts the assumptions.

This is why evolutionist, including my Adversary, typically resolve this problem by claiming that the biological difference between the posterity belonging to a new species (let's call it species B) and those belonging to the previous species (species A) on the evolutionary chain of change is too small to preclude interbreeding between B and A. As Tabaczek puts it:

> According to the theory of biological evolution, the newborn first representative of

[33] Biological evolutionists typically say that these are not individuals but entire populations that evolve. To show the problem with this response we can employ a following analogy: Charles stole a car and by doing so became a thief. The prosecutor put Charles on trial accusing him of being a thief. In defense of Charles the attorney responds: "In fact we do not know if Charles is a thief, because Charles is a man. By stealing Charles made humanity fall under the charge of theft. You cannot blame Charles, because he is just one of humans. Blame humanity not Charles". Similarly evolutionists: When faced with the problem who was the partner for the first squirrel, ant or eagle (or any new species) respond that it is not an individual but the entire population that becomes squirrel, ant or eagle (or any other species). Thus they export the problem to a more general level and hide it under the cover of a population. The fact that biological evolutionists typically describe evolution by reducing the entire process to the mathematical models of population genetics greatly helps to perpetuate this fallacy. In reality populations are not homogeneous entities, they do not constitute a single being. If there is really an emergence of a new species it has to happen in an individual and the problem remains unresolved.

> the species S2 is in most aspects and dispositions similar to the organisms of the preceding species S1 from which it originates. (…) In fact, the differences between immediately adjacent phylogenetically related taxa are not so radical (p. 38).

But this response encounters at least two difficulties:

First, how can two individuals belonging to two different species interbreed? If they can then again the very notion of species, or any relevant definition of natural kind is lost, because one of the criteria to mark two individuals as belonging to two different species/kinds is that they cannot interbreed. This is why Tabaczek in another place contradicts the previous assessment by saying:

> We should emphasize that (…) each organism in an evolutionary lineage must belong to a distinct and clearly defined species. (…) [T]here can be no organisms that are literally "in-between" ancestral and descendant species, not belonging to either one of them (p. 34–5).

The reason why my Adversary and other evolutionists, including Darwin himself,[34] uphold these two contradictory views derives from the following problem: If two species are similar enough to interbreed they cannot be called two different species in any relevant sense and then evolution does not produce anything that could be justly called a new species (kind/nature). And if the two species are different enough to actually call them two different species (kinds/natures) then the difference between them is too big to allow them to interbreed. Either way evolution does not work.[35]

Second, let's assume that the first rather than the second of the two quoted statements is true and two individuals belonging to two different species (A and B) are not so "radically different" from each other so that they can produce offspring. Then the question follows: To which species does the product of such generation belong? If this is an individual belonging to either of the parental species A or B then evolution does not make any progress. It only generates A or B from A or B.

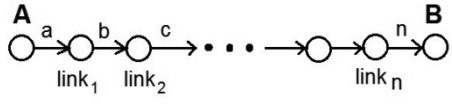
Since, however, posterity takes the genetic material and other types of infor-

[34] I provide some examples from Darwin in *Knowledge and Evolution*, p. 96–114.

[35] Someone could respond that in the first statement Tabaczek speaks about the biological understanding of species and in the second about the metaphysical. But if this were the case it would only reveal a missing part of his definition of species which should define species independently for biology and philosophy (preferably theology as well) and then compare and reference the three definitions to one reality. This is precisely what I had done when defining species in *Knowledge and Evolution* (p. 85–90). Without such definitions it is hard to conduct an interdisciplinary conversation. Nevertheless, Tabaczek criticized my approach, claiming that it entails confusion (*Theistic Evolution*, p. 169–174). I don't think he read my account attentively, because there is no confusion between different concepts. Rather I defined species separately for each domain of knowledge according to its terminology and then presented how it refers to one reality. And this is what is missing in my Adversary's account of species. Nevertheless, if one claims that the two quoted statements refer to two different realities then one needs to conclude that Tabaczek's account has nothing to do with biological reality, which means it does not apply to any real processes happening in nature thus being irrelevant in the debates on evolution.

mation from both parents the actual result of this kind of generation would be something combining A and B, that is, a third species. This means that the evolutionary chain of generations (which at some point educed B from A) in the next generation again brings about a new species (we can call it AB or BA). And who would be a partner for this new species to interbreed with? Again, under the assumption that two different species can interbreed it must be A or B, which again would result in ABA or ABB (etc.). Still, in the next generation another species, a blend of the existing species, will be created and so on *ad infinitum*. We see therefore that such evolutionary vision of life renders the very notion of species meaningless (or impossible) because at the end of this reasoning species is reduced to an individual.

We can explain this problem by referring to the following schema depicting an idea of an evolutionary transition from species A to species B.



Philosophical evolutionists call A and B different species (or different natural kinds) and linking forms (link1, link2 etc.) the "transitional species"[36]. Lower case letters (a,b,c, (…) n) mark subsequent generations. On this account, a new species is supposed to emerge in one generation. My Adversary calls it a "precise instant at which the primary matter (…) is disposed [to be actualized] by a new substantial form of species S2"[37]. In the schema it would be species B that emerges in generation n.

But this scenario creates a problem: Generation "n" is not different from generation "a", "b" or "c", because each of them is just natural generation that produces offspring that differs from the parents. On what grounds therefore Tabaczek concludes that generation "n" produces a new kind of animal but generation "a", "b" or "c" does not? What is the criterion of assigning the name "new species" or "new kind" to A and B while not assigning it to any of the links? The distance between A and link1 is not any larger or different than the distance between link1 and link2, between link2 and link3, etc. How do we know therefore that the circle marked with A actually represents one species and link2 or linkn does not? And if it does, then why is it not marked as species C rather than a link? And if it does not belong to a new species, does it then belong to the species A or already to the species B? All of these are unanswerable questions, because on the evolutionary account the very notion of species is empty. There are only individuals on a continuum that differ more

[36] Darwin uses many different names when referring to the "true" species, such as "parental", "distinct", "aboriginal," "aboriginally distinct," "independent," "dominant," "well-marked," "well-defined," and "original species." The linking forms he calls: "doubtful species," "incipient species," "subspecies," or "intermediate species."

[37] M. Tabaczek, *The Metaphysics of Evolution: From Aquinas's Interpretation of Augustine's Concept of Rationes Seminales to the Contemporary Thomistic Account of Species Transformism*, "Nova et Vetera. English edition" 18 (2020) 3, p. 945–972, 967.

or less from each other. This is nominalism.

In my book *Knowledge and Evolution* I proposed that the core reason why evolution must end up in illogical claims and/or nominalism is the impossibility of believing simultaneously in two things: (1) the real existence of substances and (2) the transformation of substances into other substances by accumulation of accidental changes. The latter idea contradicts the very nature of being (reality) which had been intellectually grasped by Aristotle and adopted by Aquinas. Since evolution (biological macroevolution) requires the latter it cannot accommodate the former. And this is why Tabaczek's account needs to ultimately end up in logical contradictions and/or nominalism.

Is nature continual or gradual?

In a section titled "Matter Striving for Perfection – *Scala Naturae*" (p. 31–33) my Adversary quotes Aristotle's *Historia animalium* in order to show that the Philosopher considers nature a continuum of beings from the simplest plants to animals to humans[38]. Based off these few quotations my Adversary proposes that "The position of Aquinas with regards to *scala naturae* is analogous. Similar to Aristotle, he notices a spontaneous tendency of nature toward superior forms in the process of generation and corruption" (p. 32). As evidence of such similarity, Tabaczek quotes Aquinas from *Summa contra Gentiles* where Thomas speaks about biological generation[39]. Unfortunately, there is a twofold confusion

[38] "Nature proceeds little by little from things lifeless to animal life in such a way that it is impossible to determine the exact line of demarcation, nor on which side thereof an intermediate form should lie. (…) [T]here is observed in plants a continuous scale of ascent towards the animal. So, in the sea, there are certain objects concerning which one would be at a loss to determine whether they be animal or vegetable" Aristotle, *Historia animalium*, VIII,1 English text after: https://penelope.uchicago.edu/aristotle/histanimals8.html (20.06.2025).

[39] "[T]he more posterior and more perfect an act is, the more fundamentally is the inclination of matter directed toward it. Hence. in regard to the last and most perfect act that matter can attain, the inclination of matter whereby it desires form must be inclined as toward the ultimate end of generation. Now, among the acts pertaining to forms, certain gradations are found. Thus, prime matter is in potency, first of all, to the form of an element. When it is existing under the form of an element it is in potency to the form of a mixed body; that is why the elements are matter for the mixed body. Considered under the form of a mixed body, it is in potency to a vegetative soul, for this sort of soul is the act of a body. In turn, the vegetative soul is in potency to a sensitive soul, and a sensitive one to an intellectual one. This the process of generation shows: at the start of generation there is the embryo living with plant life, later with animal life, and finally with human life. After this last type of form, no later and more noble form is found in the order of generable and corruptible things. Therefore, the ultimate end of the whole process of generation is the human soul, and matter tends toward it as toward an ultimate form. So, elements exist for the sake of mixed bodies; these latter exist for the sake of living bodies, among which plants exist for animals, and animals for men. Therefore, man is the end of the whole order of generation" (*ScG*, III, c. 22, n. 7).

in my Adversary's account which needs to be clarified in order to show that his argument is totally empty.

First confusion (and the obvious one) is that the quoted passage from Aquinas, in which Thomas speaks about the "inclination of matter" to ever "higher form" and man being "the end of the entire (process of) generation", refers precisely to the process of biological generation and nothing else. But the process of generation is limited to an individual and not to the entire world of plants, animals and humans. So these words of Aquinas are to be understood according to what Thomas (following Aristotle) believes about human generation in which matter first receives the vegetative form then the sensory form and ultimately the human form. By this account we can say that matter tends to a higher form but this is matter of this particular being. This process will only end up in the species that was conceived in the beginning and will not transform a thing of one species into a thing of another species. Here my Adversary simply confuses phylogenesis (the idea of generation of different species from one species) with ontogenesis (the idea of generation of one individual from another individual of the same species). Evolution adopts the first but Aquinas speaks about the latter. Thus there is no argument supporting the holistic evolutionary vision of life in these passages[40].

The second confusion requires more explanation. Aristotle indeed conceives all nature as almost seamless graduation from the lowest to the highest species. This vision may be slightly boosted by his lack of factual knowledge about different organisms, and especially their genetics and internal organization[41]. Nevertheless, the gradualism which is the subject of Aristotle's considerations differs from the linear vision of life that is required by biological macroevolution. In the first case we are talking about *scala naturae* – which means that there are actually scales in nature which are disconnected by different grades which implies the existence of leaps in such vision. The Medieval philosophers spoke about *scala naturae*, because the existence of the whole array of organisms, that completely fill in the different grades of nature, was for them another evidence of design in nature – God designed not just particular species, but also the entire ensemble of species which taken together reveals another layer of design. And this is what they meant by *scala naturae*.

What evolutionists mean is quite different from *scala naturae*. According to the evolutionary vision, species might constitute grades, but the leaps in between the grades of living beings are (or must have been at some point) filled in with the intermediary forms to the point at which nature is entirely seamless. This is because evolution cannot

[40] It is worth noting that this confusion is not unique to Tabaczek and I had responded to it in *Aquinas and Evolution* long before he fell to it.

[41] For instance, genetics alone (leaving aside other domains of biology) teaches that 10–30% of genes in any given organism is unique to its species. This obviously inserts quite a distance between the rungs of the ladder of life.

accept any physical leaps. Thus the Medieval philosophers speak about gradualism (stairs or a ladder) whereas today's evolutionists speak about the fluidity of nature in which there are no grades but only uninterrupted continuum of forms (a slide). These are two very different visions: the first one implies that nature is perfectly designed whereas the latter implies that most of nature is an unadapted product of tinkering with different forms.

In order to better explain this difference we need to introduce one crucial distinction. When Aristotle or Aquinas speak about different grades in nature they mean something that we could call *conceptual links* between different forms of life. However, when evolutionists speak about nature in terms of a continuum they mean something that we can call *physical links*. The difference between a conceptual link and a physical link is such that the conceptual link represents an idea of life that – in a way – takes something from two other ideas whereas the physical link means that there is a biological continuum trough physical generation among all species.

Let's provide an example. Among animals we have those that walk, jump and fly, for example ants, grasshoppers and dragonflies. We can say that a grasshopper (in terms of its locomotion) is something in-between ants and dragonflies, because it takes from the first that it has legs and from the latter that it travels in the air. But we know that the grasshopper's locomotion is not just a combination of the two other types of locomotion but rather a unique way of motion that partially resembles the other two. In this sense we can say that a grasshopper is a conceptual link between an ant and a dragonfly. Everywhere throughout the entire nature we see this kind of conceptual links.

However, the evolutionary account requires something more than that, namely, physical links. What would those be? If we want to go from a walking insect to a jumping one we need a number of modifications such as a new type of legs with different muscles. And similarly if we want to go from a jumping insect to a flying one we need a series of modifications, such as wings instead of robust legs. Evolutionists rather universally agree that it is impossible to transition from a walking to a jumping insect in one generation, therefore they need to postulate intermediate forms. Thus we would need to see a form that starts to grow jumping legs first by producing larger and longer bones, stronger and larger muscle, a new nervous system, a new brain etc. etc. And then from a jumping insect evolution would need to produce something like incipient wings (for instance some kind of non-functional flaps) that little by little become functional wings with muscles, nerves, etc. etc. Now, it is quite obvious that most of these physical links would be non-functional dead-ends of evolution. And this is why on this account nature should be dominated by such misfits.

The point here is that the believers in macroevolution need the physical links while what we find in nature are only the conceptual links. And this is quite logical,

because the only way how an organism can be functional is when it is designed according to a coherent concept rather than haphazardly modified by random variations.

Another consequence of the fact that only conceptual links may actually exist in nature is that there are real leaps in the realm of life. (Aristotle might not have realized it as much as we do today due to his lack of biological knowledge). But it is hard to even imagine what would be a linking form between life and non-life? Evolutionists may indicate something like viruses, which have no life by themselves, so they are non-living beings. But conceptually they might be considered something in-between. But, again, conceptual is not physical and there is no physical link between viruses and living cells. Next, what would be an intermediate between a prokaryotic and eukaryotic cell? What would be an intermediate between a single-cell and a multicellular organism? Again, one may think of a colony, but a colony is nothing like an independent organism constituting a separate entity. So, we cannot even imagine anything in between, because a single cell is an organism "by itself" and a multicellular requires another level of organization, that is, a set of organs which are themselves built of cells. Things are either non-living or living, either procariotic or eucariotic, either an organism is single-celled or multicellular, either it has limbs or not, and if it has there are either two or four (or more) limbs (and even if there were three-limbed organisms still they would be either two or three limbs and nothing in between). Either an animal has feathers or not (and feathers are very complex things), either it has a gene or not, and the same could be said about any substantial feature of any organism. In many cases we may find conceptual links, like different types of eyes that can be ordered according to the amount of complexity, but we never find physical links, that is, intermediate forms which would be at the same time necessary (because "nature does not jump", as evolutionists say) and impossible due to their lack of functionality and survivability.

Thus we see how confused and unrealistic is my Adversary's appeal to Aristotle's gradual view of life and the Medieval notion of *scala naturae* in order to justify biological macroevolution. These notions do not help to reconcile the classic view of nature with evolution because they actually speak about two completely different realities. The first explains the existence of conceptual links which by themselves point toward design in nature while the latter speaks about the physical links which are hard to imagine or impossible altogether. The fact that they have never been found in the fossil record may additionally buttress the presumption that they may have never existed and thus macroevolution may have never occurred.

Conclusion

Based on my Adversary's disparate claims it is hard to establish what he is actually arguing for. Sometimes he emphasizes that biological macroevolution may be squared with Aquinas after some modifications[42], sometimes that substantial changes need to be implemented into Aquinas[43], sometimes that something needs to be added beyond Aquinas[44] and still in other places he suggests a head-on opposition between the two[45]. This unclear and erratic formulation of his views may suggest an adoption of a very convenient but not quite consistent position by which one can present to the audience exactly the type of conclusion they want to hear: If they claim an overt incompatibility, to the extent that it is hard to argue against, then we can admit incompatibility. But when it is desired to say that Aquinas is compatible with "modern science" we can say that such compatibility has been shown by our Author. This attitude reminds of a kid who wants to eat the cake and keep the cake so that he can entertain the pleasure of both at the same time.

Another striking inconsistency in my Adversary's attitude is his claim that we need to go "beyond the way Aquinas understood and explained creation" by "taking into account contemporary science" and "the current status of evolutionary biology in particular". According to our Author, such modification "proves the flexibility" of Aristotelian–Thomistic philosophy. But just a page later the same Author says:

> Most importantly, the Aristotelian–Thomistic metaphysics applied in the context of biological evolution presents itself not as an aged doctrine that is limited to humble listening and adjusting of its principles to the new scientific theories, but, quite to the contrary, as a voice that has much to offer[46].

Which one is true? The overall impression from Tabaczek's works is exactly what he tries to deny: Aquinas's doctrine is limited to humble listening and adjusting of its principles to the new scientific theories. Hence the many manipulations on Aquinas's teachings that he performs without even the smallest attempt at any critical assessment of the actual state of science. For our Author on one hand there is "contemporary science" which in fact is nothing

[42] "Some adjustments to Aquinas's theological system" are required to fit it into theistic evolution (*Theistic Evolution*, 157).

[43] Aquinas is compatible with evolution if we "modify Aquinas in four substantial aspects". Nota bene, this formulation is a mere tautology because any idea substantially modified can be reconciled with any other idea. M. Tabaczek, *Afterword to the Polish Edition of Thomistic Evolution: A Catholic Approach to Understanding Evolution in the Light of Faith*,"Nova et Vetera. English edition" 22 (2024) 1, p. 225–237.

[44] M. Tabaczek, *A Contemporary Aristotelian–Thomistic Perspective*", op. cit., 21.

[45] "There is no place for transformism in Aquinas, just as there was none in Augustine" (*Theistic Evolution*, 163).

[46] M. Tabaczek, *A Contemporary Aristotelian–Thomistic Perspective*", p, 21–22.

more but just an opinion of some biologists (and even this group does not speak with one voice) and on the other there are Aquinas's teachings. If a contradiction is apparent, then Aquinas needs to be "modified" and "adjusted".

This attitude fails at least on two counts: First, truth (including the scientific truth) is not established by the consensus of a majority. As philosopher of biology Paul Nelson put it – it is Nature alone that has to decide[47]. Secondly, my Adversary does not seem to see a difference between facts of nature, interpretations of these facts (a theory) and philosophical postulates that maybe uttered by biologists as much as by philosophers. Indeed, a majority of biologists would agree on philosophical postulates such as universal common descent. But facts alone, not theories (let alone philosophical postulates), should modify our (or Thomistic) views about the origins of life. One such fact is the lack of spontaneous generation in nature. The discovery of this fact would definitely modify Aquinas's view, had he lived in our times, making his teachings even less susceptible for the abuse by the so-called "Thomistic evolutionists".

I have shown that there are substantial problems with Tabaczek's interpretations of A-T metaphysics which actually render them entirely non-Thomistic. The core problem of his approach is that he accepts a natural transformation of species which has to end up in either monism or nominalism. Assuming Thomistic realism there is no way out of either of these dead-ends, because if substance really exists in individuals (as A-T metaphysics teaches) then it is not possible to transform it into another substance via a series of accidental changes. And if this was possible then either substance would be reducible to accidents or accidents would make up for substance. The former is nominalism, the latter is monism.

I have shown that my Adversary's interpretations contradict several essential doctrines of St. Thomas and create several substantial difficulties: (1) He rejects Aquinas's historical theology. (2) He contradicts the A-T account of causation (he does not explain the sufficient cause of evolution). (3) He has not shown were new substantial forms come from on his account of "evolutionary transitions," which means he does not resolve

[47] I am tempted to quote here an opinion about scientific consensus expressed by Michael Crichton: "Historically, the claim of consensus has been the first refuge of scoundrels; it is a way to avoid debate by claiming that the matter is already settled. Whenever you hear the consensus of scientists agrees on something or other, reach for your wallet, because you are being had. Let's be clear: the work of science has nothing to do whatsoever with consensus. Consensus is the business of politics. Science, on the contrary, requires only one investigator who happens to be right, which means that he or she has results that are verifiable by reference to the real world. In science consensus is irrelevant. What is relevant is reproducible results. The greatest scientists in history are great precisely because they broke with the consensus. There is no such thing as consensus in science". Michael Crichton, „Aliens Cause Global Warming," Michelin Lecture, California Institute of Technology, January 17, 2003 as quoted in Robert J. Marks, *Non-Computable You*, Seattle: Discovery Institute Press 2022, 124.

the problem of "evolutionary transitions". (4) He distorts A-T hylemorphism, which on his account ruins the unity of substance and ultimately renders the very notion of substance meaningless.

Obviously, if the modification of Aquinas's teachings cuts through the core doctrines to the point where it actually destroys the basic concepts of classical metaphysics it is hard to acknowledge that any actual reconciliation has been achieved. Just like in the saying: "The surgery was successful although the patient died".

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Theistic Evolution Contra Thomas Aquinas: A Response to Mariusz Tabaczek's Account of "Evolutionary Transitions"

Keywords: metaphysics, evolution, creationism, transformism, Thomism

This paper is a response to several claims made by Mariusz Tabaczek in his book *Theistic Evolution* (Cambridge 2024). It begins with a reiteration of the arguments by Michael Chaberek against the "Thomistic" version of theistic evolution. Then, the response by Tabaczek is presented. It is shown that the response is fragmentary and that it does not address some of the core issues raised by Chaberek. Next, the metaphysical concept of evolutionary changes as conceived by Tabaczek is presented. The remainder of the article concerns the problems of the presented concept. Among them there is lack of explanation of the origin of new substantial forms in biological macroevolution. Besides Tabaczek's explanation contradicts Aristotelian-Thomistic account of animal generation as well as classic doctrine on hylemorphism. At the end some problems with logical consistency of Tabaczek's explanation are indicated. The paper concludes that Tabaczek's explanation of biological macroevolution cannot be called Thomistic by any reasonable standards.

Ewolucja teistyczna kontra Tomasz z Akwinu. Odpowiedź na Mariusza Tabaczka koncepcję „przejść ewolucyjnych"

Słowa kluczowe: metafizyka, ewolucja, kreacjonizm, transformizm, tomizm.

Niniejszy artykuł stanowi odpowiedź na kilka twierdzeń zaprezentowanych przez Mariusza Tabaczka w książce *Theistic Evolution* (Cambridge 2024). W części wstępnej przypomniane zostają argumenty Michała Chaberka przeciwko „tomistycznej" wersji teistycznej ewolucji. Następnie przedstawiona zostaje odpowiedź Tabaczka oraz zostaje wykazane, że odpowiedź ta jest fragmentaryczna i pomija niektóre kluczowe argumenty Chaberka. Następnie zostaje przedstawiona metafizyczna koncepcja zmian ewolucyjnych Tabaczka. Pozostała część artykułu omawia problemy koncepcji Tabaczka, między innymi: brak wyjaśnienia skąd biorą się nowe formy substancjalne w makroewolucji biologicznej. Ponadto koncepcja ta zaprzecza arystotelesowsko-tomistycznej doktrynie dotyczącej rodzenia się zwierząt oraz jest nie do pogodzenia z klasycznym tomistycznym ujęciem hylemorfizmu. Wreszcie wskazuje się na logiczną niespójność koncepcji Tabaczka. Wniosek z tych rozważań jest taki, że koncepcja ewolucjonizmu zaprezentowana przez Tabaczka nie może być nazywana koncepcją tomistyczną ponieważ zaprzecza samym podstawom metafizyki tomistycznej.