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Metaphysics and Evolution: A Response to Dennis F. Polis

First I would like to express my gratitude to Dr. Dennis F. Polis for reading my paper on metaphysics and evolution¹ and taking his time to respond to it. His response is detailed and tackles many different issues, however many of them irrelevant to my argument. Hence I will limit my response to those charges of Dr. Polis that I find important in the context of my argument, or those that—in my view—rest on the greatest confusion around my paper. I will reduce my response to three major problems: 1) the definition of evolution, 2) the Aristotelian-Thomistic understanding of substance, and 3) the clarification of why Dr. Polis’s responses to my five arguments fail.

Definition of Evolution

In his critique of my take on biological evolution, Dr. Polis concludes: “To properly evaluate Chaberek’s thesis, we need to understand evolution as the majority of biologists do—which is not as he describes. It is unfair to criticize those responding to a theory in terms of an alter-

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¹ Michał Chaberek, “Classical Metaphysics and Theistic Evolution: Why Are They Incompatible?,” *Studia Gilsoniana* 8, no. 1 (January–March 2019): 47–81.

nate theory.”² Then Polis mentions three authors, but he does not show how any of them would deny my definition of evolution. My definition skips the particulars of these theories (and many other, including modern ones) and keeps what is essential for them in the context of evolution-creation debate. I explain in my paper that what is relevant in the debate is not so much the particular mechanism of evolution, because different mechanisms are proposed by different authors, but rather the “effects” of the supposed evolutionary process which is the diversity of species emerging from non-diversity. In other words, the crucial problem is whether the idea that natural secondary causes can produce the entire variety of species beginning with just one or a few living organisms. And this—contrary to what Dr. Polis says—is not different from what the vast majority of biologists believe. I defined evolution as “biological macroevolution.” This includes two restrictions. One is that we are talking just about biology, without entering other domains, such as evolution in culture, morality or physics (e.g., cosmic, prebiotic or social evolution). The second restriction is created by the word “macroevolution,” which clarifies that we do not debate the emergence of new varieties, races or even biological species. These are not controversial issues even for young earth creationists. Dr. Polis believes that there is no distinction between micro- and macroevolution in Darwin, therefore my definition is inadequate. However, as I explained, my discussion is not limited to just the Darwinian type of evolution, because “Darwinian” in this context signifies the mechanism, but does not have any bearing on the alleged effects of the process in the form of emerging biodiversity. It’s also not true that we cannot find macroevolution in Darwin. Surely, he does not use the word, or the distinction explicitly. This does not mean, however, that he is not a supporter of biological

² Dennis F. Polis, “The Compatibility of Evolution and Classical Metaphysics,” *Studia Gilsoniana* 9, no. 4 (October–December 2020): 551.

macroevolution. On the contrary, his belief that all living beings descended from one or a few ancestors boils down to believing in biological macroevolution. Dr. Polis implies that Darwin was not a supporter of universal common ancestry (UCA), but he gives into the illusive rhetoric of Darwin who very carefully proposed his most radical ideas in order to smuggle them into the scientific community without causing much opposition. Surely, both Darwin and his contemporary supporters (E. Haeckel, Th. H. Huxley) believed not just in UCA but also that life itself emerged spontaneously, without any supernatural or intelligent guidance.

Dr. Polis also brings up the crucial difference between Alfred R. Wallace and Charles Darwin by claiming that the first opted for “intelligently guided” evolution and the latter favored chance as the driving force of the evolutionary process. My Adversary believes that missing this distinction is a grave distortion to the definition of evolution. But I explained that in the evolution-creation debate it does not matter whether evolution is guided or blind. What matters is whether totally new natural species (new families or genera) can emerge by a process or must be created, that is, whether they emerged naturally or supernaturally. And this is the key issue at stake which makes irrelevant even such (otherwise significant) differences as the one between Darwin and Wallace. I agree that so far most critics of evolution have been focusing on the problem of randomness in the evolutionary process. But the entire first part of my paper explains why this has not been a correct formulation of the problem. Even so, Dr. Polis cannot get over the old attitude and adopt my perspective. For this reason, his claims such as “no relevant definition of evolutionary ‘randomness’ poses a metaphysical threat either to teleology or to theism”³ are irrelevant for my entire thesis.

³ *Ibid.*, 560.

It's a pity that on the one hand Dr. Polis cannot see the common points of the various evolutionary theories and on the other he does not provide his own definition of evolution that, according to him, would be compatible with classical metaphysics. Yet, the entire issue hinges upon definitions. It's also just a matter of wording whether we say that universal common ancestry is a "postulate" or a "hypothesis"—Polis does not explain how he understands the difference between the two, even though neither of the terms is specified by a universally accepted strict definition, whether in regular language or in the methodology of science. Similarly, it is just a matter of wording whether biological theory "have philosophical and theological implications" or "biological, philosophical and theological layers." As I explained in my paper, these are not the "implications" that pose the threat for theology but the very essence of the biological macroevolutionary theory. It is especially clear in Darwin who, on many occasions, challenges the classic Christian explanation to the origin of species. In his times, the explanation was "creationism," that is, the belief that species were created separately and directly by God. It is precisely this idea that Darwin combats with the entire force of his polemical thrust. Let me quote just one distinctive passage:

He who believes in separate and innumerable acts of creation will say, that in these cases it has pleased the Creator to cause a being of one type to take the place of one of another type; but this seems to me only restating the fact in dignified language. He who believes in the struggle for existence and in the principle of natural selection, will acknowledge that every organic being is constantly endeavouring to increase in numbers; [etc.].⁴

Is this an extension of Darwin's theory beyond biology, or rather the core of his idea? The problem is that when one proposes a natural explanation to the origin of species one excludes its supernatural expla-

⁴ Charles Darwin, *The Origin of Species* (London: John Murray, 1859), 186–187.

nation. And this is the very core of Darwin's message: species were not created but evolved naturally. He clearly places "special creation" against "the struggle for existence and natural selection." But it does not matter whether the natural explanation consists of random variation and natural selection or anything else. As I said, neither the mechanism of evolution nor the problem of its randomness plays any significant role in the evolution-creation debate. All evolutionists agree that species are connected by biological generation, i.e., there is physical continuity between different forms of life. And this is already contradictory to the Bible as interpreted by classic Christianity. Therefore, it is not the "philosophical and theological implications" but the very core of biological theory that poses a challenge both to the Bible and classical metaphysics. And this is how I defined the problem in my paper. Surely, my Adversary may define the problem differently, but then he does not argue against my arguments. Moreover, he does not prove that my posing of the problem is incorrect. Instead, he reduces my position to some pre-conceived ideas that miss the point of the debate.

Dr. Polis spends a lot of time on explaining different meanings of randomness and contrasting them with laws of nature. This discussion may be interesting on its own terms, but irrelevant in the context of my argument. Theistic evolution is the idea that God guides the evolutionary process, therefore it adopts some kind of finality. And I argue that it is the theistic form of evolution that challenges both the traditional Christian interpretation of Genesis as well as classical metaphysics. I do not argue against the "blind," "entirely random" variant of evolution as promoted by atheists. This variant is excluded by my argument *a fortiori*.

Regarding the "methodological differences," my Adversary believes that:

[S]cientific theses ought to be judged by the canons of the relevant science. If those cannons are inadequate, philosophical anal-

ysis should be directed to them. Fr. Chaberek uses metaphysics to attack a scientific thesis directly, asking “Is evolution (biological macroevolution) possible in light of classical metaphysics?”⁵

Well, there is a lot of confusion in this approach. First, if we are talking about the origins of the universe as such, or its essential elements, such as different kinds of living beings (plants, animals), these questions go beyond science. It is vain and even illogical to ask physics to explain the origin of physical reality, to ask chemistry to explain the origin of chemistry, or to ask biology to explain the origin of biology. The laws studied in any given science operate only when the physical reality described by the science is already there. This is why questions of origins, by their very nature, go beyond any given discipline as well as science as such. To know the answer we need theology and philosophy.

However, we can still ask whether the biological explanation of the origin of biology is correct on its own terms. This is where the scientific critique of evolutionary theories enters. Scientists who are proponents of intelligent design (and not only they) delivered devastating critiques of the basic claims of current evolutionary explanation of the origin of biological information and irreducibly complex systems. It seems that my Adversary knows next to nothing about this broad and growing literature or simply ignores it. So, the question is, what does science actually tell us? Is it true that science supports biological macroevolution in the Darwinian form, or perhaps it actually strays from the (neo-)Darwinian mechanism offering nothing compelling in its place? If we adopt incorrect premises from science, we may come to wrong conclusions in philosophy—I agree with this principle. However, true science, free from ideological bias, testifies to the inability of nature to produce biodiversity as we know it. The fossil record is in-

⁵ Polis, “The Compatibility of Evolution and Classical Metaphysics,” 550.

compatible with Darwinian theory and the Darwinian mechanism of random mutation and natural selection (even in its modern form and different variants) is incapable of explaining the origin of any significant biological novelties.⁶ I can fully subscribe to Dr. Polis's creed: "As Thomists, we take God's existence as a proven fact, and rightly hold that no sound interpretation of sound science can conflict with theism."⁷ It's simply that "sound science" denies macroevolution as much as "sound philosophy."

Dr. Polis writes: "[S]upporters of 'Intelligent Design' . . . typically [posit] evolutionary gaps where 'irreducible complexity' must be bridged by divine intervention."⁸ It would be desirable to see any reference or quote to support this claim.⁹ But we do not find it in Mr. Polis's article perhaps because none of the ID supporters says anything like this (at least I am not aware of any). Generally speaking it is the critics of Intelligent Design who bring up God whenever they cannot deliver an answer to strictly scientific arguments presented by ID proponents. On my end, since I am not a scientist, I explained several times, why creation, whether the first creation (*prima creatio*) or the second creation (*secunda creatio*) cannot be called an intervention.¹⁰ Even so, my Adversary copies this common mistake without any reflection.

⁶ A good example of how contemporary leading biologists are confused about the mechanism of evolution was a high-profile conference "New Trends in Evolutionary Biology" organized by The Royal Society in London in 2016. Most of the participants presented their skepticism about the ability of the neo-Darwinian mechanism to produce any significant biological novelty. A good commentary on that event can be found in the article "Why the Royal Society Meeting Mattered, in a Nutshell," *Evolution News* (December 5, 2016); available online—see the section *References* for details.

⁷ Polis, "The Compatibility of Evolution and Classical Metaphysics," 564.

⁸ *Ibid.*, 561.

⁹ Indeed, Dr. Polis refers one time to a single work by an ID proponent, Michael Behe's *Darwin's Black Box*. However, nowhere in that book one finds Polis's thesis that Behe proposes "divine intervention" to bridge the problem of irreducible complexity.

¹⁰ See, for example, Michał Chaberek, *Aquinas and Evolution* (Chartwell Press, 2019, 2nd edition), 205.

According to my Adversary, it is incorrect to combat science with metaphysics. But my starting point is somewhat different: Biology itself denies the macroevolutionary explanations and shows the inability of evolutionary mechanisms to produce new species (understood according to the definition provided in my paper). Hence, it is not that I challenge science with philosophy. Rather the scientific critique of the neo-Darwinian mechanism gains additional support from a metaphysical critique of biological macroevolution. After all, “truth cannot contradict truth,” so we see a perfect harmony between the scientific theory of Intelligent Design and classical metaphysics as taught by Aristotle and Aquinas.

Substance in Aristotle and Aquinas

Dr. Polis’s critique refers to the core premise of one of my metaphysical arguments. I am grateful to my Adversary that he brought up this question for two reasons. One is that it allows me to add more precision to this important issue. Second, because he tries to invalidate my argument by actually employing Aquinas and Aristotle’s teachings, which is not always the case among the critics.

Let me briefly reiterate my argument. According to classical metaphysics, material things consist of substance and accidents. This is especially true of living beings (such as plants and animals) because their immaterial principle (the soul or form) is highly specified. (It is not so much true about compounds and elements, because they are just conglomerates of particles, they do not have highly specified forms and, in a way, they are no-substances). The “iron law” of metaphysics is that accidental changes impact the accidents while substance is changed by the substantial change. This is an exhaustive and exclusive division—either the change is accidental or substantial, *tertium non datur*.

Now, in any given evolutionary process the changes applied to living beings (merely) have an accidental character, whether it is a genetic mutation or alteration of an organ, or a protein, or anything of that kind. Yet, it is postulated that with a gradual accumulation of accidental changes a new substance would be generated, such as the mammalian or bird substance resulting from an evolution of reptiles. According to classical metaphysics, the macroevolutionary scenario is impossible, because it does not matter how long the accidental changes would be accumulated in subsequent generations of a given species. They will always produce just accidental variants remaining within the nature of a thing, not entirely new natures such as cow from dinosaur or horse from crocodile.

Not surprisingly, this is what we actually observe in nature. If we try to modify a species, we can obtain different variations remaining within the limits of its nature, but if we attempt to trespass these limits (for example, by genetic modification), the result is either a lame or dead individual. Neither gives any hope for further evolution. This is how the “iron law” of classical metaphysics gets confirmed by natural investigations. Truth cannot contradict truth. Also nature itself generates a multitude of variants within given species according to the accidental factors that determine better adaptations in these or other conditions. The exact limits of the plasticity found in nature could probably be established by biological investigations, but they are not relevant to my argument. The point is that on the level of a distinct nature/substance the change may go only this far. Hence, biological macroevolution/universal common ancestry is metaphysically impossible.

To be as fair as possible, I will quote Dr. Polis’s response *in extenso*:

Let us turn to a philosophical discussion of species. Classical metaphysics follows Aristotle’s definitions of substance and species in the *Categories*.

A substance—that which is called a substance most strictly, primarily, and most of all—is that which is neither said of a subject nor in a subject, e.g. the individual man or the individual horse. The species in which the things primarily called substances are, are called secondary substances, as also are the genera of these species. For example, the individual man belongs in a species [*eidos*], man, and animal is a genus of the species; so these—both man and animal—are called secondary substances.

So substances are primarily ostensible unities (*tode ti* = this something) like Socrates or Bucephalus, and, secondarily, species and genera, not because they are ostensible unities, but because of the grammatical fact that they also serve as subjects of predication.

Aquinas is equally clear that species are not primary substances:

[I]t cannot be said that the notion of genus or species applies to human nature insofar as it exists in individuals; for in the individuals human nature does not have the sort of unity according to which it is some single thing pertaining to all, which the notion of universals requires.

It remains, therefore, that the notion of species applies to human nature insofar as it exists in the intellect.

A species, then, is not an *ens reale*, but an *ens rationis*.

Consequently, species cannot change in the proper sense, because they lack a material principle to serve as a principle of continuity; nonetheless, biological species can evolve. This is possible because the evolution of species does not mean that an *ens rationis* changes, but that a biological population instantiating to one species concept is succeeded by a population no longer instantiating that concept. Rather, the new population is the *fundamentum in re* for a new concept—the evolved species.¹¹

The core of the mistake in Dr. Polis's argument consists of this statement: "So substances are primarily ostensible unities (*tode ti* = this something) like Socrates or Bucephalus, and, secondarily, species and genera, not because they are ostensible unities, but because of the grammatical fact that they also serve as subjects of predication." The

¹¹ Polis, "The Compatibility of Evolution and Classical Metaphysics," 569–571.

“so” does not follow from the quoted *Categories* nor from Aquinas. What Aristotle and Aquinas say is that universals, once they are derived from individuals, do not exist in the individuals but independently, as ideas in the intellect. This is a no-brainer for anyone who knows classical Aristotelian epistemology. But the question is not whether a notion of species exists in reality (because it doesn’t, as no notion does), but whether there is a correspondence between the notion and the reality that the notion signifies and whether the notion is formed by the reality or *vice versa*. According to both Aristotle and Aquinas, the notion of species derives from the reality that it signifies. Aquinas nicely summarizes it in *De Ente et Essentia*:

[T]he notion of species applies to human nature insofar as it exists in the intellect. For human nature itself exists in the intellect abstracted from all individuating conditions, *whence it is uniformly related to all individuals [of this nature] which are outside the soul*, being equally a similitude of all, and thus leading to the cognition of all, insofar as they are humans. And since it has *this sort of relation to all individuals [of this nature]*, the intellect forms the notion of species and attributes to it.¹²

Species/genera, those that serve as part of a definition, do not exist in individuals because these are merely ideas. It does not follow, however, that those common natures are not somehow realized in individuals as their individual forms. Dr. Polis wrongly interprets Aristotle and Aquinas as nominalists— notions exist only in the intellect, in reality only accidents exist. (This, ironically, confirms my statement, challenged by Polis, that in order to accept biological macroevolution one

¹² “Ratio speciei accidat naturae humanae secundum illud esse quod habet in intellectu. Ipsa enim natura humana in intellectu habet esse abstractum ab omnibus individuantibus, et ideo habet rationem uniformem ad omnia individua, quae sunt extra animam, prout aequaliter est similitudo omnium et ducens in omnium cognitionem in quantum sunthomines. Et ex hoc quod talem relationem habet ad omnia individual intellectus adinvenit rationem speciei et attribuit sibi.” Thomas Aquinas, *De Ente et Essentia*, c. 2; available online—see the section *References* for details. The emphases added.

must be a nominalist, even if a subtle one). Aquinas says that genus /species cannot apply to individuals because in an individual there is a lack of universality. But he does not say that individuals of the same genus/species do not share the same substantial form or nature.

My Adversary ignores the more fundamental division into substance (substantial form and matter) and accidents that come together to constitute every individual. He confuses the idea of species with the substantial form. Substantial form is what exists in each individual of the same species, realized as individual form, but species is more like a definition of it. So in one sense species indeed is *ens rationis*, but this does not exhaust the problem of substance. Indeed, we get to know the substance of a thing thanks to its attributes (accidents) perceived by the senses, but it does not mean that an individual is reducible to its accidents. On the contrary, our mind (at least in the Aristotelian-Thomistic approach) can derive the general idea of a thing because the thing is not merely an ensemble of properties but there is a substance (substantial form) that the properties specify. If Polis was right, there would be nothing that the attributes could hang on and therefore there could be no individuals of highly specified essences, such as living beings. Dr. Polis trims metaphysics too narrow and makes an argument based on a statement cut out of its context and, in fact, with little relevance to my argument. Aquinas says that:

[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.¹³

And:

“[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, as for example humanity is the essence of man, and so on for the rest.¹⁴

Thus, there is something like “horse nature” that is passed on in generation of an individual that is the cause of this horse to be horse, i.e., of its “horseness.” It is therefore irrelevant that the idea of species remains unaltered in the intellect, even if the biological reality changes. In fact, the reality cannot change, because it is determined in generation by the nature/essence or substance that maintains and causes the species in those individuals. My argument relies on this part of classical metaphysics (ontology) rather than Aristotelian epistemology, a distinction that my Adversary seems to have missed.

The Five Arguments Stand

In this last part of my response I will show that Dr. Polis did not invalidate any one of my five metaphysical arguments against biological macroevolution.

¹³ Thomas Aquinas, *De Substantiis Separatis*, c. 10, 58; available online—see the section *References* for details. The emphasis added.

¹⁴ “[O]portet quod essentia significet aliquid commune omnibus naturis, per quas diversa entia in diversis generibus et speciebus collocantur, sicut humanitas est essentia hominis, et sic de aliis.” *De Ente et Essentia*, c. 1.

The First Argument

My first argument is based on the principle that “no effect exceeds its cause(s).”¹⁵ Dr. Polis’s response boils down to three counter-arguments:

1. “The power of causes is revealed in their effects, as we cannot know potencies directly, but only via their actualization. Thus, we must look at actual effects rather than *a priori* estimates to determine the power God has imbued causes with.”¹⁶

I agree with every word in this statement. And because we do not see species evolving into different species (like apes turning into humans or reptiles into birds) via natural generation, we cannot conclude that “God has imbued causes” with such powers. Since these things do not happen (and biologists such as Michael Behe and Stephen Meyer explain the biological reasons for why they cannot happen), the obvious conclusion is that God did not embed such powers in nature.

2. In his second counterargument my Adversary appeals to many causes rather than one. (“Clearly, insensate parents cannot form designs, novel or otherwise . . . Rather, offspring are the joint effect the parents and their environment,”¹⁷ etc.). I had responded to it at length in my book *Aquinas and Evolution*,¹⁸ so I refer my Adversary to it. A short answer is that it does not matter how many causes are involved, but whether the causes are proportionate to the effect. An uneducated man will not build a computer, even if he has a help of a thousand akin to him. From the premise that laws of nature are designed does not follow that they can design. In fact neither chance events nor laws of nature can produce new designs of life, no matter how many of them

¹⁵ See Chaberek, “Classical Metaphysics and Theistic Evolution,” 56–57.

¹⁶ Polis, “The Compatibility of Evolution and Classical Metaphysics,” 576.

¹⁷ *Ibid.*

¹⁸ See Chaberek, *Aquinas and Evolution*, 40 and 65–70.

would come together, simply because they lack foresight which is necessary to put together different parts in order to work toward one goal. Bringing God into the equation (as Dr. Polis and other theistic evolutionists do) begs the question, because if God was to overcome the limits of nature in evolution, then it would not be evolution anymore but some kind of creation. I do not argue against “some form of creation,” but against natural evolution as producing new species.

3. Dr. Polis, as some other of my adversaries, calls upon Aquinas’s long-abandoned and vague concept of new species emerging via spontaneous generation for help. Again, I had responded to this in *Aquinas and Evolution*.¹⁹ Still, I will make a brief comment on the margin of my previous answer.

First, we can clearly see that when discussing spontaneous generation Aquinas has a problem precisely with the principle of sufficient cause. This is why at the end of the day he calls for the help of “the influence of the heavens,” which for the medieval people were always a good reservoir of explanations because the heavens themselves remained a complete conundrum. (Like Darwin, who knew that there were no linking forms in the fossils, claimed that they were hidden under the beds of the oceans where in his times we couldn’t access). Today we know that there is nothing like spontaneous generation let alone new species coming to existence thanks to putrefaction. So why would contemporary theistic evolutionists quote the outdated science of the middle ages to allegedly defend “modern science”? They do not quote modern science, because they intuitively know that after the idea of spontaneous generation was excluded (by modern science) the principle of sufficient cause made biological macroevolution “from amoeba to human” less plausible than ever. There is simply no cause for such movement in nature while we know that everything works in the oppo-

¹⁹ See *ibid.*, 49 and 89–92.

site direction: from order to disorder, from complexity to simplicity. The total energy of the system is dispersed, the universe as a whole is entropic not emergent (as theistic evolutionists imagine). There is no reason that the biological realm would be exempted from these universal laws of nature. Species do not pop up but die out.

Another problem is that even bringing up spontaneous generation does not help much to defend biological macroevolution. First, these are only lower animals (bugs and worms) that can be born this way. So what about the vast majority of life? On Aquinas's account, they still must be created directly by God. So, if there is an incoherency in Aquinas (namely that on the one hand he admits that species cannot emerge otherwise than by creation and on the other he allows some exceptions in spontaneous generation), then it is the idea of spontaneous generation that sits in a weaker position. It represents "poor science" of the day that Aquinas had no tools to challenge. But his own principles testify in the opposite direction, therefore in the case of incoherency we need to abandon a couple of passages on spontaneous generation rather than the metaphysical principles that constitute the backbone of his entire work.

Secondly, spontaneous generation does not say anything about one species being generated from another in the process of natural generation. There is no idea of universal common ancestry, no idea of the transformation of species. Dr. Polis claims: "Of course, the mechanism of evolution is not putrefaction, but the metaphysics is the same."²⁰ Is it? If spontaneous generation can produce only lower animals, perhaps those lower animals do not require any higher causes than putrefaction combined with the "influence of the heavens." But it does not follow that the same causes could generate a higher animal species, like horse or human. And what about other metaphysical principles? In spontaneous generation there is no transformation of species as it happens in

²⁰ Polis, "The Compatibility of Evolution and Classical Metaphysics," 577.

biological macroevolution. So, even if “the metaphysics is the same,” it is the same only in a very limited sense, too limited to justify biological macroevolution and universal common ancestry.

The Second Argument

In response to my second argument—“no accidental change brings about new substance”²¹—Dr. Polis says two things. One is that:

Substantial changes occur when an organism is generated or dies. Everything that happens to it between generation and death is an accidental change, for its substance persists.²²

I must admit that I am somewhat surprised that my Adversary brings about this misunderstanding of my argument since I anticipated it in the very formulation of my argument.²³ In short, my Adversary confuses substantial form and individual form, the nature of a thing with its accidents. I agree, the individual substance persists in the individual throughout its life, but the nature of a species persists in its offspring and all individuals as long as they belong to the same species (as is clear from Aquinas’s statements quoted above).

The second thing Dr. Polis says is:

[N]o changes can happen to species or natures, which are immaterial *entia rationis* and so immutable. Secondary substances (genera and species), as concepts, do not change. Only primary substances (individual material beings) can change. The differences between offspring and parents, which cumulatively lead to new species, are neither substantial nor accidental changes, for they are not differences in the same being.

²¹ See Chaberek, “Classical Metaphysics and Theistic Evolution,” 57–59.

²² Polis, “The Compatibility of Evolution and Classical Metaphysics,” 578.

²³ See Chaberek’s “Classical Metaphysics and Theistic Evolution,” 57–58, and *Aquinas and Evolution*, 52–53.

In sum, since the evolution of species is not the change of a being, the distinction between accidental and substantial changes is irrelevant.²⁴

As I explained above, the concepts do not change, but they describe the reality present in the things. This reality in the things is not reducible to the ensemble of accidents. The reality of species (natures) somehow exists in the individuals who share the same nature. This is what differentiates Aristotelian-Thomistic metaphysics from Plato (who postulated that species exist only in ideal world). Therefore, it is not possible for the accidents to change in an unlimited way until they create a new species. They may change only as long as matter remains proportional to the form. When matter loses proper disposition to the form the form departs and the being ceases to exist. On Polis's account natures are only *entia rationis* that are ideas in the mind. This is a formulation of nominalism that strays from classical metaphysics.

The Third Argument

My third argument²⁵ is based on Aquinas's statement:

A perfect thing participating in any nature, makes a likeness to itself, not by absolutely producing that nature, but by applying it to something else. For an individual man cannot be the cause of human nature absolutely, because he would then be the cause of himself; but he is the cause of what human nature is in this man begotten.²⁶

It follows that no individual of a given species produces that species. Moreover there is some higher power (the "power of species") that makes this thing belong to this species and another to another. If biological evolution were true, it would follow that an individual (or a

²⁴ Polis, "The Compatibility of Evolution and Classical Metaphysics," 578–579.

²⁵ See Chaberek, "Classical Metaphysics and Theistic Evolution," 60.

²⁶ *S.Th.*, I, 45, 5, ad 1. Cf. *S.c.G.*, II, 21 and *ibid.*, III, 65, 4. Available online—see the section *References* for details.

group) of one species at some point of its development begets an individual of another species. By this the individual would be the cause of the new species. Since, however, an individual is not the cause of its own species the more it cannot be a cause of another, new species. Thus biological macroevolution is impossible. This argument is a variant of the first argument. It boils down to saying that nothing can be the cause of itself, which would be the case if biological macroevolution were true.

In his response, Dr. Polis reaches for the well-known solution of many other evolutionists. He simply reduces macroevolution understood as the emergence of entirely new forms of life to microevolution understood as simply “change over time.” He says: “Evolution does not suggest that any being causes its own nature, only that descendants may differ from their forebears.”²⁷ This is not quite exact. If evolution was just about the fact that posterity differs from parents, there would be no debate whatsoever. Everyone knows (and it does not require a genius in biology to see) that posterity differs from parents and even between themselves. No, the problem is that the ancestors of one animal, let’s say a dinosaur, on evolutionary account are supposed to beget another animal, let’s say a horse or a cow. This has never been observed or proven and this is what creates metaphysical problems and the entire controversy. But this is also an example of how Dr. Polis follows the lines of evolutionists who cleverly or blatantly manipulate the definition of evolution whenever it does not fit their arguments.

The Fourth Argument

In my fourth argument I claimed that biological macroevolution is contrary to classical metaphysics because it denies two out of four

²⁷ Polis, “The Compatibility of Evolution and Classical Metaphysics,” 579.

Aristotelian causes.²⁸ On evolutionary accounts, every being is turning into something different from what it is thanks to the processes embedded in nature by the Creator. Think about it. If this was the case, the efficient cause, the one that “makes things” would be reduced to changes in matter, such as genetic mutations, environmental influences, natural selection and so forth. In any case the direct divine causation—which is, according to Aquinas, the only possible cause of new species²⁹—would be reduced to “underlying conditions” in matter. Matter is the material cause so, in a way, the efficient cause on evolutionary account is reduced to the material cause. These are “dispositions of matter” that lead to new species, as some theistic evolutionists explicitly claim.³⁰ Dr. Polis does not seem to fully understand what the formal cause is. The formal cause makes the thing what it is, it is the cause of the being to be itself. It is the form that makes the thing what it is. This is why typically the formal cause is identified with the form. In metaphysics every being strives to be what it is whereas on evolutionary accounts, everything is supposed to change into something else. Thus, let say, a flying reptile, instead of striving to remain what it is, is supposed to become a bird. So, the form that makes the thing what it is is supposed to be constantly replaced (over the generations) with a new form. In fact, if we fully adopt the premises of biological macroevolution, there are no species but only the connecting links and thus the formal cause is annihilated. Instead there is that tendency in nature (as imagined by theistic evolutionists) for everything to grow into higher levels of being. This is the overwhelming teleology supposedly imbedded or implanted

²⁸ See Chaberek, “Classical Metaphysics and Theistic Evolution,” 60–61.

²⁹ *Super Sent.*, lib. 2, d. 1, q. 1, a. 4, co.; *ibid.*, lib. 2, d. 18, q. 2, a. 2, co. Available online—see the section *References* for details.

³⁰ Charles De Koninck, “The Cosmos. The Philosophical Point of View,” in *The Writings of Charles De Koninck*, vol. 1, ed. & trans. R. McInerny (Notre Dame, Ind.: University of Notre Dame Press, 2008), 278–283.

in nature by God. On the classic metaphysical account, the final cause is the idea in divine intellect according to which the Creator produces given species. For example, a horse is created as a horse according to the idea of horse that God realized in nature in the form of the first horse. This idea is a final cause of creation that results in educing the form of a horse from matter (the formal cause). In contrast, according to the evolutionary account, the formal cause is replaced with the final cause, because every being is supposed to become something else, something higher, something new in the process of constant evolution. Thus we can say that the efficient cause is “reduced down” to material cause and the formal cause is “reduced up” to the final cause.

In his response Dr. Polis seems to take a short cut. He does not really provide any argument. He simply says that he disagrees and repeats the evolutionary account. The only fragment that bears some trace of an argument is this:

Evolution posits no unnatural activity. Instead, the activity of each being is the second actualization of its own form. The tendency to evolve new species does not occur in individuals, but in the response of populations to environmental challenges.³¹

The first two sentences are just, say so, unsupported statements. How does a being that changes into something else not tend to be anything other than it is? This claim makes little sense to me. (Mind that in the discussion about the origin of species we do not talk about the changes of individuals but species, so if evolution means that a reptile transforms into a bird, we do not mean a particular individual or a population but the species or secondary substance). But the last sentence again reveals some of the rhetoric well-known from evolutionary literature: If something does not work the way evolutionist want, the entire ensemble of causes is called upon for help. If an individual does not change,

³¹ Polis, “The Compatibility of Evolution and Classical Metaphysics,” 580.

then (the evolutionists say) it is not the individual but the population that changes. If sufficient cause is missing, then (the evolutionists say) it is not evolution but “God working through evolution.” This way one can dismiss any argument by bringing up vague or unproven or “gap-filler” explanations. Clearly something does not work, but there is that other something that explains it. But it is never explained to us what are exactly “those other things” and how they are supposed to resolve the problem. There is no answer whatsoever to my argument in Dr. Polis’s rejoinder.

The Fifth Argument

My fifth argument rests on the premise laid down by Aquinas:

We must say that the distinction and multitude of things come from the intention of the first agent, who is God. For He brought things into being in order that His goodness might be communicated to creatures, and be represented by them; and because His goodness could not be adequately represented by one creature alone, He produced many and diverse creatures.³²

And in another place:

It is part of the best agent to produce an effect which is best in its entirety; but this does not mean that He makes every part of the whole the best absolutely, but in proportion to the whole; in the case of an animal, for instance, its goodness would be taken away if every part of it had the dignity of an eye. Thus, therefore, God also made the universe to be best as a whole, according to the mode of a creature; whereas He did not make each single creature best, but one better than another.³³

It follows that God created different degrees of being (which includes different species) and this diverse and gradual reality is intended, wanted and loved by Him. Additionally, a similar kind of gradation is

³² *S.Th.*, I, 47, 1, co.

³³ *S.Th.*, I, 47, 2, co and ad 1. Cf. *S.Th.*, I, 65, 2, co.

found in individual creatures—their organs should differ in dignity, complexity, relevance to the basic life functions, etc. The problem is that the theistic evolutionary account of nature denies this principle of creation and proposes something directly opposite. On the evolutionary account, different species compete and struggle to adapt, they must become something else in order to survive, and finally the entire world of biology is supposed to reach ever higher levels of life and complexity. This vision of nature flatly contradicts the principle of gradation laid down by Aquinas. Species are not supposed to evolve, because they represent divine power and wisdom by their complementary existence at different levels of “perfection.”

In his response, my Adversary resorts to the same rhetorical strategy he did in the third argument. He says that evolution “does not suggest that an amphibian ever becomes a reptile. Rather some descendants of amphibians may be slightly more reptilian in form and some less.”³⁴ Who would believe that the entire controversy is about whether some species resemble some other species or not? This is not how I defined “the theory of evolution” in my paper and this is not how most biologists understand it. The entire point of the theory is to explain the origin of all species in natural terms. Therefore it is not just the “differences in posterity” that create the controversy. The theory of evolution that I discuss assumes much more than that, it postulates that one species, such as hippopotamus (or some ancient artiodactyl), changed into another species, such as whale (yes, this is what they believe). And this is the type of evolution that is metaphysically impossible for all of the reasons laid down in my paper. Again, there is no response whatsoever to my fifth argument in Dr. Polis’s rejoinder. He just restates some of the evolutionary claims without showing how they could be reconciled with the principles of classical metaphysics as presented by Aquinas.

³⁴ Polis, “The Compatibility of Evolution and Classical Metaphysics,” 580.

Dr. Polis has not debunk any of my arguments. Unfortunately, many of his otherwise interesting remarks miss the point, they do not invalidate my arguments simply because they tackle other issues. Still I would like to extend my gratitude to Dr. Polis for approaching my paper with attention and providing a response that is serious enough to write this rejoinder.



Metaphysics and Evolution: A Response to Dr. Dennis Polis

SUMMARY

This paper is a response to Dennis F. Polis's article "The Compatibility of Evolution and Classical Metaphysics" (2020), which offered a critique of the author's article "Classical Metaphysics and Theistic Evolution: Why Are They Incompatible?" (2019). In order to justify and maintain his objections to the compatibility of classical metaphysics and theistic evolution, the author concentrates on three problems: 1) the definition of evolution, 2) the Aristotelian-Thomistic understanding of substance, and 3) the clarification of why Dr. Polis's responses to his arguments fail.

KEYWORDS

Thomism, metaphysics, evolution, evolutionism, God, creation, form, matter, accident, substance, change.

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