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Classical Metaphysics and Theistic Evolution: Why Are They Incompatible?

Many Thomists and classically-minded philosophers of our times realize that the evolutionary thinking that dominates contemporary academia generates multiple problems for Christian faith. In response, they try to show how Darwinian thinking trespasses the limits of scientific theories, or how the natural sciences should be enriched by final and formal causality.¹ Most of these scholars are also aware of the destructive influence of the evolutionary paradigm on philosophical ethics in general and Christian morality in particular. The line of division between the atheistic evolutionists² and theists of our times is usually drawn (by both parties) along just two big issues: (a) the role of chance in nature—what chance events can accomplish and how it relates to divine providence, and (b) the limits of science versus metaphysics, ethics, and theology.

The general agreement among atheists regarding the first issue is that the interplay of chance and necessity produced all that we see in nature. Atheists concede that an adequate explanation of the origin of species is a combined working of chance events, such as random genetic mutations, and necessity (laws of nature), such as natural selection.

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¹ One recent publication very representative of this trend is *God and Evolution? Science Meets Faith* by G. M. Verschuuren (Boston, Mass.: Pauline Books and Media, 2012).

² Hereafter, in this paper, referred to simply as atheists.



The theistic response to this claim may be summarized as follows: Evolution may be true, but chance and necessity alone cannot account for all the changes we see in nature. Theists usually do not challenge the idea of universal common ancestry and transformation of species. Instead, they say that evolution must be somehow guided, started or assisted by God. How it happens is a matter of numerous studies, yet the broad agreement among theists is that evolution *per se* can be reconciled with Christian philosophy, theology and the Bible.

Regarding the second issue, atheists tend to say that science is an objective description of material reality which is the only reality that exists. Even if some things seem inexplicable today, like miracles, it is just a matter of time before science finds a natural explanation, because scientific method is unlimited. In response, theists generally call for keeping science in its proper place. Different theists have different opinions as to where the limits of science are. Most of them agree that God, the invisible realm (heaven, hell, spirits) and human consciousness (the soul) transcend the proper object of natural science. Regarding the natural history of the universe, Christian theists agree that science cannot explain the very origin of matter and energy because they were created out of nothing directly by God. However, most theists allow science to explain the origin of different parts of the universe including the origin of life. Thus, theists usually say that scientific theories, like neo-Darwinism, should not be extrapolated to the invisible realm (God, the angels, the human soul), but they can accurately explain the origin of life and species. Theists also say that Darwinism is valid in the animal kingdom, but it should not be extrapolated to human behaviors. The struggle for life and the survival of the fittest are possibly the driving forces of biological development, but when it comes to human morality, these two cease to work and we should appeal to the higher principles originating in the human will.

In this article we would like to propose that the line of controversy between theists and atheists of our times has been set in the wrong place. This regards both issues—the role of chance in nature and the limits of science. Hence, the goal of this paper is to indicate a few essential problems with the “Darwinian metaphysics.” Indeed, the problems of Darwinism have their source not so much in stretching the Darwinian theory beyond biology (to ethics and philosophy), but in the very fact that the Darwinian biological theory assumes a mistaken metaphysics (philosophy) and a false theory of nature. As we will argue, the Christian response to the “omnipotent chance” of atheists should not be “guided chance” of generic theism, but rather the direct divine causality of Christianity. However, before we enter the debate, we need to clarify the crucial terms so that a small mistake at the beginning does not turn into a great confusion at the end.³

Definitions of Terms

Evolution

By evolution we understand *biological macroevolution*, that is the idea that all living beings come from a single ancestor via natural generation. Three things need to be highlighted in this definition. Firstly, evolution stands for macroevolution, which means that we are talking about changes going beyond biological species. Typically the limits of microevolution are on the level of taxonomical genus or family. Hence, macroevolution concerns the emergence of new families, phyla, kingdoms and ultimately all forms of life that exist and ever existed on earth. Secondly, macroevolution is a natural process, which means that it does not transcend the powers and laws of nature and does not require any supernatural activity of God (or angels) to take place. Thirdly, our

³ Cf. Thomas Aquinas, *De Ente et Essentia*, Proemium.

definition of biological macroevolution does not include any mechanism that would explain *how* the biological changes happen. The common stance among evolutionists is that biological macroevolution is driven by the neo-Darwinian mechanism of random (genetic) mutations and natural selection. But other mechanisms have been proposed as well.⁴ Our definition does not necessitate any of them and for this reason the scientific debate about the efficacy of an evolutionary mechanism is irrelevant for the argument in this paper.

Biological macroevolution is a theory of origins that has a scientific,⁵ a philosophical and a theological layer. On the scientific level, biological macroevolution boils down to a mechanism of evolutionary changes because out of many ideas covered by the word *evolution* only the biological mechanism can possibly be tested and explained by science. The grand claims about universal common ancestry and transformation of species strictly speaking are not scientific. They have been incorporated into biology, though they constitute more like a paradigm or a perspective for biological investigation than a conclusion from experiments. Hence, on the philosophical level, biological macroevolution boils down to those two grand claims: (a) all life comes from one living being and (b) species can be transformed into another species by accidental changes occurring in generation. On the theological level, biological macroevolution is the idea that God used the evolutionary process to bring about all forms of life. Biological macroevolution is, therefore, a secondary cause of creation. This idea is called *theistic evo-*

⁴ For example, M. Ryland points at not less than eight mechanisms of biological macroevolution present in contemporary biology. *Idem*, "What is Intelligent Design Theory?" *Second Spring* 15 (2011): 46–57.

⁵ The words *science* and *scientific* here are used in the modern sense of natural science. We do not mean by this that theology and philosophy are not sciences in the medieval sense of the word. For the sake of communicability, we choose to use the word in its modern meaning. From the fact that philosophy and theology are not sciences in the modern sense it does not follow that they are not valuable cognitive disciplines, or that they do not provide true knowledge.

lution. Simply put, theistic evolution is a theological concept saying that God used evolution to create species.

Any concept that excludes the existence of God (or His operation in the universe) would be incompatible with Christian metaphysics by definition. Our goal, therefore, is not to discuss the compatibility of materialistic or atheistic evolution with classical metaphysics. The impossibility of reconciling Christianity with materialism or atheism should be taken for granted. Instead, we will focus on *theistic evolution* alone, that is, the idea that God somehow started the biological process of macroevolution, and since then has always guided or accompanied it.

Species

Since the 19th century, a number of evolutionists has tried to dismantle the notion of species. Darwin himself claimed that “No line of demarcation can be drawn between species.”⁶ This was a necessary step to introduce the idea of transformation of species. After all, if species exist as natural kinds, they are permanent elements of the universe, whereas the changing element is what characterizes species, not species themselves. In fact, the only way to challenge the stability of species is to deny their very existence. Yet, if species did not exist, there would be no reason to write books on their origin, including the main work by Darwin, *The Origin of Species*. Darwin got caught in a paradox—to introduce evolution he had to deny the stability or the real existence of species, but to claim that he found the explanation to the origin of species he had to reintroduce the notion of species after destroying it at the first step. For this reason Darwin actually accepts the existence of species, even though he believes that species are impossible to define. The

⁶ C. Darwin, *The Origin of Species* (London: John Murray, 1859), 485. Darwin also claimed: “There is no infallible criterion by which to distinguish species and well-marked varieties [*ibid.*, 57] . . . No one can draw any clear distinction between individual differences and slight varieties; or between more plainly marked varieties and sub-species, and species [*ibid.*, 470].”

same difficulty returns in all macroevolutionary thinking—evolutionists are forced to challenge the idea of species while they need to silently assume their existence. This approach stems from the very impossibility of talking about nature (and any reality for that matter) without having abstract notions that are derived from unchangeable elements of the universe. To believe in macroevolution one needs to adopt nominalism.

Since classical metaphysics is not nominalistic, an objective and permanent definition of species is possible. In fact, species, just like evolution, can be defined according to the three levels of knowledge: science, philosophy and theology. In science, there is an idea of biological species.⁷ This, however, is not the understanding of species relevant in the debate over origins. The theory of biological macroevolution refers to the origin of new families and higher taxonomical levels. Hence, in the debate about origins we understand species as genera or families according to classical taxonomy. Traditionally they were called natural species, such as dog, cat, horse, elephant, etc. Accordingly, we can set apart microevolution from macroevolution—the first allows an emergence of new varieties, races or biological species, while the second maintains that new natural species and the higher taxonomical groups originate thanks to natural processes operating in the biosphere. Theologically, natural species have similar meaning to the Biblical “kinds” (Hebr. *l’emino*) mentioned in Genesis. Philosophically, natural species are those forms of life that possess the same substantial form. In philosophy we can also distinguish a logical understanding of species. In this sense, species is just a category projected by a mind on a group of objects. Usually, logical species are defined as a term relative to a

⁷ According to the now commonly recognized definition of Ernst Mayr, a biological species signifies all populations in which specimens are prospectively able to interbreed in a natural environment and produce fertile offspring. *Idem*, *Systematics and the Origin of Species from the Viewpoint of a Zoologist* (New York, N.Y.: Columbia University Press, 1942).

broader category of genus. Skeptics who claim that species do not exist have only logical species in mind. They do not speak, however, about the metaphysical species.

The Question to Be Answered

We defined *evolution* as biological macroevolution and *species* as natural species. We did this according to the three levels of human knowledge. Biological macroevolution raises its own questions at each of the three levels. On the scientific level, for example, the following are relevant: Can the combination of random genetic mutations and natural selection (as well as genetic drift and possibly other factors) explain the origin of new functional organs, new body plans, and ultimately all species? Is it possible to extrapolate the microevolutionary changes observed *in vivo* and *in vitro* to the macroevolutionary changes that cannot be observed due to the shortage of time available for scientific investigation? These and a number of similar questions have been raised among biologists since the very beginning of Darwinian theory and recently even more seriously by biologists supporting intelligent design.

On the theological level there are questions such as the problem of compatibility between theistic evolution and the Genesis account of creation (interpreted in accordance with the Catholic tradition) or the problem of the human origin—whether the first human was created immediately from the slime of the earth as the Bible, all Tradition and Church documents have it,⁸ or perhaps God used “living matter” to create the first man (as theistic evolution holds). As we already noticed,

⁸ For extensive evidence justifying this claim, see M. Chaberek, *Catholicism and Evolution: A History from Darwin to Pope Francis* (Kettering, Ohio: Angelico Press, 2015).

neither theological nor scientific problems of biological macroevolution are of interest for us.

Our goal is to address evolution on the level of philosophy, in particular, classical metaphysics. By classical metaphysics we understand the Aristotelian-Thomistic stream of Western philosophy. It is characterized by moderate realism as the epistemological position and a number of ontological principles such as the division of being into form and matter, substance and accidents, act and potency. In this paper we assume knowledge of classical metaphysics on the part of the reader, so in most cases we will refer to the principles without explaining them.

The question we address, therefore, may be formulated like this: Is evolution (biological macroevolution) possible in light of classical metaphysics? This one general question breaks down to a few more particular: Can the process of generation be the efficient cause of creating new natural species? Is transformation of species (natural species) possible due to an accumulation of accidental changes over time? Is Aquinas's positive teaching on the origin of species (natural species) compatible with theistic evolution?

Evolution and Metaphysics

An answer to these questions may be given in two ways. The first is by showing that theistic evolution contradicts classical metaphysics. This is the explicit answer which we will present in *Part A*. The other way is to show the positive teaching of Aquinas regarding the origin of species which also excludes theistic evolution not explicitly, but implicitly, or *a fortiori*.⁹ This will be presented in *Part B*.

⁹ Every thesis may be rejected in two ways. For example, the sentence "Peter is going to the cinema tonight" is denied explicitly by saying "Peter is not going to the cinema tonight." In the second way, the sentence is denied by saying "Peter is working home tonight;" this also excludes Peter's trip to the cinema, though not explicitly but implicitly or *a fortiori*.

We need to notice that the positive doctrine on the origin of species (i.e., how species came about) cannot be known by natural investigations, neither in natural science (biology) nor metaphysics. This stems from the fact that natural reason by its own power cannot reach supernaturally revealed truths. Things like the nature of God, the origins of the universe and the crucial salvific events in human history are unattainable to human natural cognition.

To understand this limitation better, let us refer to a few examples. By natural reason man can know that there is one God, and that He is the first cause of everything.¹⁰ But without divine revelation we cannot know that God is Trinity. We can know from archeology and history that two thousand years ago there was Bethlehem, Jerusalem and King Herod. But we cannot know that the Virgin Mary conceived a child without knowing a husband. In fact, there is massive scientific evidence that virgins do not give birth. Yet, Christians believe in the virginal conception of Jesus based on divine revelation, even against science. The same applies to Christ's resurrection and other miracles. There are many natural theories presented by atheists on behalf of science to explain away miracles and the resurrection, yet Christians believe in those events even against scientific theories.

Similarly, we cannot know scientifically (or philosophically) that the universe is not eternal. But special divine revelation teaches us that the universe had a temporal beginning by God. The truths regarding the formation of the universe, including the origin of species, belong to the same category. The origins cannot be known by natural investigations, and this is precisely why God revealed them in the Book of Genesis. And this is why when presenting the positive doctrine of Aquinas re-

¹⁰ "The Holy Mother Church holds and teaches that God, the beginning and end of all things, can be known with certitude by the natural light of human reason from created things." The Dogmatic Constitution of the Vatican Council I *Dei Filius*, available online (see the section: References).

garding the origin of species (*Part B*), we need to transit from strict metaphysics (the level of philosophy) to historical theology.

Part A

There are five reasons why metaphysics excludes theistic evolution. The first is that no effect can exceed the power of its cause. In other words, the perfection of the cause cannot be lesser than the perfection of the effect.¹¹ In theistic evolution the natural process of generation is supposed to create new natures of living beings. This confuses generation with creation. Generation can pass on design, perfectness and the form that already exist, but cannot create any of them. This problem can be also formulated with regard to the opposition between act and potency. No potency can turn into act without previous act. But every distinct nature, as well as every level of life, actualizes new potencies of matter. For example, birds actualize the ability of flying and animals have sensory life which is not present in plants. To bring about these kinds of novelties the power of generation does not suffice because it does not have foresight and lacks the ability of designing. Generation can pass design on. This happens when, for example, posterity inherits the actualizations of its parents, but generation cannot create new design.¹² Hence, the combined working of material causes is not sufficient to produce new species. New natures must come from a high-

¹¹ Aquinas adopts this basic principle of being and reasoning many times in different contexts. Cf. *S.Th.* I, 44, 2, ad 2: "Every imperfect thing is caused by one perfect;" *ScG* III, 69, 15: "The perfection of the effect demonstrates the perfection of the cause, for a greater power brings about a more perfect effect;" *S.Th.* I, 45, 8, 2: "The effect is not more powerful than its cause."

¹² A good example of how it works is actually derived from the textbook examples of *evidence for evolution*. The dark and the light peppered moths are present in the population before as well as after industrial melanism takes place. Finches have various sizes of beaks throughout wet as well as dry seasons. Neither of the examples illustrates an appearance of any biological novelty. Instead, there is only a change in the proportions of individuals possessing a given trait but all of the traits exist unchangeably in the population.

er principle which is an intellect capable of producing new forms in matter.

The second reason theistic evolution is impossible stems from the division of being into substance and accidents. Substance refers to what a thing is, accidents account for the qualities of substance—what it has or what it is like. Every natural species is a separate nature or substance. According to theistic evolution, one nature can be transformed into another nature thanks to chance and necessary events occurring in subsequent generations. But all of these changes—whether random mutations, natural selection, environmental influence, selective pressure, genetic drift and such, are accidental—they affect the quality of a substance but not the very nature or a species of a thing. Hence, no matter how long evolution works—how many generations accumulate random changes due to natural selection—it will never produce a new species. In short, accidental change cannot produce substantial change. There are, however, two errors made by philosophers who reject this argument.

The first error stems from confusion between the *substantial* and the *individual* form. Someone can say, “If I destroy a substance, I make a substantial change that is caused by accident.” For example, when one kills a chicken, the act of killing is an accidental change, but it results in the substantial change—the substance of a chicken has been annihilated. Apparently, accidental change may result in substantial change. But in this example, killing a chicken annihilates the substantial form only as much as it exists in this particular chicken which is nothing but an individual form. The substance of a chicken as such (“chickeness”) is neither destroyed nor anyhow affected. And even if all chickens in the world were destroyed, there still exists the idea of a chicken in the divine intellect which is not affected by accidental change. The problem with macroevolution is even greater, because the accidental change needs not only to destroy an existing substance, but also to create an

entirely new one. But in our example no new substance is created. Chicken meat as a separate species or a substance existed even before this particular chicken was killed. Thus, no accidental change generates a new substance.

The second error thrives on the misunderstanding of what a substance is. If we take salt and dissolve it in water, we create a new substance—salt solution. But adding salt to water is an accidental change. And there are many examples of this kind when accidental changes produce new substance (e.g., wine production, or even water turning into ice or steam owing to the change of temperature, which is merely an accidental change). Apparently, therefore, new substances may be created via accidental changes. In these cases, however, we are not talking about *true substances*, but merely elements, compounds or artifacts. Substance is something that is the most specified, most self-contained, constitutes unity in the highest degree, and simply the most *is*. For this reason the only true substance is God. Everything else is substance only to some degree corresponding to the degree of participation in the divine substance. Hence, among the created things we can speak about the hierarchy of substances. The highest are the angels. Among material beings (composites of form and matter) the highest substance is man, followed by animals, plants, compounds and elements. In fact, elements and compounds should not even be called substances—they are what they are, that is, merely elements and compounds. Artifacts (the products of human ingenuity) are at the level of elements and compounds, because they are merely combinations of parts which themselves are combinations of elements and compounds. For this reason an accidental change may bring about new elements and compounds, but not new substances. Indeed, any philosophy or concept that denies this principle must end up in denying the real existence of species understood as *true substances*, separate natures or natural species. Hence, any such concept including theistic evolution ends up in metaphysical reductionism

called nominalism. This greatly differs from moderate realism constituting the foundation of the Aristotelian-Thomistic approach.

It is worth noting that in the older philosophical reflection the idea of the hierarchy of substances matched the mistaken conviction about spontaneous generation or even spontaneous emergence of new species from putrefaction.¹³ Older philosophers allowed spontaneous generation of the so-called lower animals, because they knew nothing about their internal complexity. They thought that lower animals do not constitute perfect natures. Within the same lines of thinking Darwin and his first followers assumed that the difference between “living matter” in the form of primitive organisms and “dead matter” is just the difference of organization that can be easily bridged by the natural powers operating in nature. Since then, however, it has been discovered that nothing like “simple life” exists. Spontaneous generation has been abandoned and today’s knowledge about living organisms shows an impassable ontological chasm between life and non-life.

But spontaneous generation does not help to reconcile the older philosophy of nature with theistic evolution. The idea of spontaneous generation boils down to saying that some organisms are generated from living parents and some from putrefaction. It does not tell us anything about the origin of their species. Moreover, even the idea of spontaneous generation of new species is limited to the lower animals only.¹⁴ Hence, there is no room for spontaneous popping into existence of all species. Spontaneous generation does not make room for universal common ancestry or transformation of species. Therefore, even this outdated science does not help to see theistic evolution in philosophy of nature let alone metaphysics.

¹³ *S.Th.* I, 73, 1, ad 3.

¹⁴ See footnote 27.

The third reason is that according to classical metaphysics no perfect being is the cause of its own nature. Aquinas says:

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.¹⁵

In the same way an individual cat cannot be the cause of cat nature, an individual horse of a horse nature, etc. Aquinas refers to the example of man, because human is the most perfect among the composite beings. Since generation of an individual is not the cause of its nature, much less can it produce a new nature—another species. Otherwise one being would be the cause of itself, which classical metaphysics rejects.

The fourth reason is that theistic evolution reduces the four Aristotelian causes to just two. In the evolutionary scenario new species are supposed to appear owing to the power of generation combined with random changes in matter. Hence, in theistic evolution the efficient cause is reduced *down* to material cause. In contrast, according to classical metaphysics (and classic Christian doctrine), the efficient cause of new species is the divine intellect on whose order alone matter is obediently transformed into new substances. The formal cause is the one that makes the thing be what it is. Dog is a dog thanks to the formal cause which is its form, that is, the form of a dog. In theistic evolution, however, every living being tends to be something else and thus it does not embody its own nature: an amphibian tends to become a reptile, a reptile tends to become a bird or a mammal. Hence formal cause is reduced *up* to final cause. Indeed, theistic evolution is not deprived of

¹⁵ *S.Th.* I, 45, 5, ad 1. Cf. *ScG* II, 21, *ScG* III, 65, 4.

finality, because God somehow guides the evolutionary process. Yet, this overwhelming finality that makes everything tend to the ultimate *Omega* swallows up formal causality. In effect, theistic evolution cannot explain being, because it does not have the two out of the four causes necessary for metaphysical explanation of a composite. In contrast, Aquinas explains that there is a twofold perfection of natural things.¹⁶ The first is the substantial perfection, which was accomplished during the six days of creation. In the work of creation things acquired the completeness according to their natures. The second perfection is acquired by operation, and this refers to the ultimate end of things. For example, man became man in the work of creation, but man is saved through cooperation with grace and achieves the ultimate goal after this life on the way of his operation. Similarly species of living beings achieved their substantial perfection in the work of creation (such as that a cat was made a cat and an ape was made an ape), but their second perfection and goal is to serve humans and nature which they achieve by operation after creation was completed. Theistic evolution conflates these two types of perfection and is thus different from classical metaphysics.

The fifth reason is that according to classical metaphysics nature consists of parts that fit each other and work for the perfection of the whole. Different parts display different degrees of perfection, but they

¹⁶ “The perfection of a thing is twofold, the first perfection and the second perfection. The ‘first’ perfection is that according to which a thing is substantially perfect, and this perfection is the form of the whole; which form results from the whole having its parts complete. But the ‘second’ perfection is the end, which is either an operation, as the end of the harpist is to play the harp; or something that is attained by an operation, as the end of the builder is the house that he makes by building. But the first perfection is the cause of the second, because the form is the principle of operation. Now the final perfection, which is the end of the whole universe, is the perfect beatitude of the Saints at the consummation of the world; and the first perfection is the completeness of the universe at its first founding, and this is what is ascribed to the seventh day.” *S.Th.* I, 73, 1, co. Cf. *Super Sent.* II, 15, 3, 1, co.

are perfect with regard to their particular natures. Thus, an amphibian is perfect as an amphibian and changing it into a reptile does not make it more perfect, but rather diminishes the perfectness of the simultaneous existence of amphibians and reptiles. Similarly, a dinosaur does not become more perfect by transforming into a bird and an ape does not become more perfect by changing it into a human. Each nature is perfect on its own terms and cannot become *more perfect* and remain what it is. It is neither desired nor possible for a less perfect thing to become more perfect because then the totality of perfection would be diminished. Aquinas explains:

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.¹⁷ . . . 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.¹⁸

Hence, the intention of God is not to bring all things to greater perfection by an evolutionary process. Instead, all things are to remain on different levels of perfection in order to reveal divine goodness in a more complete way. According to theistic evolution, however, the order of perfection among living beings is in a constant state of flux, by which particular beings acquire more and more perfection in the strug-

¹⁷ *S.Th.* I, 47, 1, co.

¹⁸ *S.Th.* I, 47, 2, co, and ad 1. Cf. *S.Th.* I, 65, 2, co.

gle for life and the survival of the fittest. Thus the supposed increase of perfection in each particular being diminishes the order and beauty of the totality of nature. And this is not what God intends and what classical metaphysics accepts.

Part B

By now we have shown why classical metaphysics excludes the possibility of theistic evolution. But the question of how species emerged remains open. As we noticed above, the positive answer to this question must be theological. There is, however, a connection between the theological explanation of the origin of species and the metaphysical principles which render theistic evolution impossible. Aquinas explains this connection in two places in his *Commentary to Sentences*. In one of them he says:

According to the 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.¹⁹

In another place Aquinas is more explicit regarding what the *first hypostases* are:

[These are those things that require] 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

¹⁹ “Secundum fidem non potest poni aliquid esse causa alterius post Deum, nisi per viam motus et generationis; et ideo omnium eorum quae per generationem non inceperunt, oportet Deum immediatam causam ponere, ut sunt Angeli, animae, substantiae caelorum, et materialium elementorum, et primae hypostases in omnibus speciebus.” *Super Sent.* II, 18, 2, 2, co.

first man, the first lion and other of this kind, because man cannot be generated otherwise but from man.²⁰

Let us now reconstruct Aquinas's argument. First, he confirms that there are just two ways of emergence of things: one is by creation and another is by a change, that is, generation or alteration (mutation). Creation is not a change, because before a thing is created there is nothing to change. Creation presupposes nothingness, whereas a change presupposes the existence of a thing which is changed. Creation begins being in an absolute way and cannot be performed by any being but God.²¹ Hence, creation is always a direct act of God.²² Claiming otherwise would fall into heresy, because it would ultimately mean that there is another being besides God that is not created. This is why Thomas says that we need to maintain the creation of those things that cannot emerge by change according to faith (*secundum fidem*).

Many things in the universe come about by change—either by generation, like when a lion generates another lion, or by alteration (mutation), like when a new statue is made by shaping marble or a nest is built by a bird putting twigs together. Yet, there are other things that cannot be produced by change. Thomas provides a complete list of those things, which includes the first hypostases of living beings.²³ He

²⁰ *Super. Sent.* II, 1, 1, 4, co.

²¹ Creation is not just making matter or form, but “creation is the production of a thing in its entire substance [Creatio est productio alicuius rei secundum totam suam substantiam].” *S.Th.* I, 65, 3, co. Cf. *S.Th.* I, 45, 4, ad 3.

²² “The action which is creation is the one that does not rest upon an action of any precedent cause. And this kind of action belongs only to the first cause, because any action of a secondary cause rests upon the action of the first cause. Hence, as much as the first cause cannot communicate to any creature being a first cause, similarly it cannot communicate to it to create.” *Super Sent.* II, 1, 1, 3, co.

²³ Thomas's use of the word *hypostasis* (instead of *form*, *nature* or *substance*) enables us to avoid two mistaken interpretations. According to the first one, Aquinas speaks about the form alone and not a whole being. Evolution could work on living beings transforming matter over generations and once in a while God would create immediately a new form. In this scenario, evolution would create the visible species and God

gives an example of a lion and a man, two instances of the so-called perfect species. Other examples would include a dog, an ape, a snake, etc. Since created being can only work by way of change, it is impossible that any created being would produce those things. The first hypostases must have been produced immediately by God, which excludes any secondary causes, such as evolution.

It is important to realize that Aquinas here advocates the metaphysical (not theological) necessity of creation, that is, immediate production of the first individuals in each species. This stems from healthy philosophical reasoning (*sana philosophia*), not the Biblical message alone. Consequently, this teaching is independent from any particular interpretation of Genesis. For example, Aristotle who did not know the Biblical message, believed in the eternal existence of species along with the eternal universe. Philosophically, species are either created or exist eternally because no created power can produce them. Christian faith narrows down the two philosophical options (creation vs. eternal existence) by establishing the creation of species. This faith is independently confirmed by the paleontological evidence showing that species are not eternal.

After having presented Aquinas's philosophical doctrine regarding the origin of species, we need to refer to his theology. Thomas teaches that there are three stages of the universe. First is the creation out of nothing (*ex nihilo*) that begins time, the spiritual and the material

would create the invisible form. This error is denied by the fact that the word *hypostasis* refers not to a form alone, but the composition of matter and form. The other wrong interpretation is that God created species as such, but not individuals of given species. Then individuals would have an evolutionary origin (would be generated) and only after they are generated they fall into a category of independently created species. This error is excluded by the fact that hypostasis is an individual being, not a species (which could be a case if Thomas used the word *substance* or *nature*). The first of these two erroneous interpretations can be found in: Michael J. Bolin, "And Man Became a Living Being: The Genesis of Substantial Form," A lecture delivered at Wyoming Catholic College (Oct. 25, 2013), available online (see the section: References).

realms. The second stage is the divine work of formation described in Genesis as the six days. The formation of the universe Aquinas divides into two parts: (a) the work of distinction (*opus distinctionis*) to which he attributes the creation of planets and plants on earth, and (b) the work of adornment (*opus ornatus*) in which earth is adorned with distinct creatures, like animals. The last act of adornment is the creation of man.²⁴ After creation is completed on the sixth day no new natures can appear anymore. The universe has passed on to the third stage consisting of the ordinary operation of nature and the history of salvation.

Now, the important message for our topic is that Aquinas understands the formation of the universe as the direct and supernatural work of God that adds new things to the totality of creatures which could not be produced by any secondary causes. Thus, the work of formation belongs to God alone:

In the first production of corporeal creatures no transmutation from potentiality to act can have taken place, and accordingly, the corporeal forms that bodies had when first produced came *immediately* from God, whose bidding alone matter obeys, as its own proper cause. To signify this, Moses prefaces each work with the words, “God said, Let this thing be,” or “that,” to denote the formation of all things by the Word of God, from Whom, according to Augustine, is “all form and fitness and concord of parts.”²⁵

And similarly about the origin of the first human body:

The first formation of the human body could not be by the instrumentality of any created power, but was immediately from

²⁴ The explicit distinction between first creation and the formation of the universe can be found in two places: *De Potentia* 3, 18, 12, and ad 11. In his commentary on Peter Lombard’s *Sentences*, Aquinas defends the necessity of the work of adornment that succeeds the work of creation (*opus creationis*)—*Super Sent.* II, 13, 1, 1, co. On the work of distinction, see *Super Sent.* II, 14, 1, 5. Creation preceding distinction and adornment is without any preceding matter (potency): *Super Sent.* II, 17, 2, 2, ad 3.

²⁵ *S.Th.* I, 65, 4, co.

God. . . . God, though He is absolutely immaterial, can alone by His own power produce matter by creation: wherefore He alone can produce a form in matter, without the aid of any preceding material form. For this reason the angels cannot transform a body except by making use of something in the nature of a seed. . . . Therefore as no pre-existing body has been formed whereby another body of the same species could be generated, the first human body was of necessity made immediately by God.²⁶

This teaching of Aquinas poses several difficulties for theistic evolution. First, it is clear that according to Thomas, God created many different things immediately by His direct act—specifically new species of living beings. This contradicts the main tenet of theistic evolution that God created directly only first being (the universe) and then He used secondary causes such as evolutionary processes to form species. Second, creation has been completed once for all with the creation of man.²⁷ But in theistic evolution new species can constantly appear as long as the evolutionary processes work in nature.²⁸ Third, we learn from the first quoted fragment how Aquinas understands the words from the Genesis account of creation “Let there be.” For him they signify the immediate exercising of divine power working on matter.²⁹ This

²⁶ *S.Th.* I, 91, 2, co.

²⁷ “Something can be added every day to the perfection of the universe, as to the number of individuals, but not as to the number of species.” *S.Th.* I, 118, 3, ad 2. Cf. *Super Sent.* II, 15, 3, 1, co, and *S.Th.* I, 73, 1, co.

²⁸ Sometimes Thomistic evolutionists quote *S.Th.* I, 73, 1, ad 3, to show that Aquinas speaks about new species emerging naturally after creation was completed. But in that particular fragment Thomas speaks only in a conditional way (if any new species appear) and he gives an example of a mule, which is not a natural species, but only a combination of a horse and a donkey remaining within the horse family. But the appearance of new variants and even biological species due to natural causes after the work of creation was completed is not the point of controversy. It is neither excluded by classical metaphysics nor the Bible.

²⁹ Aquinas says: “In the first works nature was instituted and for this reason it was necessary that those works were effected *directly* by the *supernatural* principle. But

obviously excludes any secondary causes, such as generation, genetic mutations, natural selection, or even the active help of angels.

A Response to Three Arguments

Having presented the metaphysical reasons why biological macroevolution is impossible and after explaining the origin of species according to Aquinas, we now move on to answer three arguments presented by the proponents of theistic evolution. The first two are aimed at reconciling macroevolution with metaphysics and the third is aimed at explaining away Aquinas's (and the traditional Christian) understanding of the origin of species. Of course, these are not all arguments in this debate, but the limited space of the paper does not allow us to respond to more of them.³⁰

God Uses Chance

Even though there are different mechanisms of evolution, virtually all of them speak about random events as the source of novelty necessary for biological progress.³¹ For example, the most commonly adopted, the neo-Darwinian mechanism, consists of random genetic mutations and natural selection. Mutations, according to biologists, are unguided and unpredictable. This core claim of neo-Darwinism poses a difficulty for theistic evolution. For if genetic mutations are completely random and natural selection is just a necessity (a law) of nature, it follows that everything that we find in the biological realm is a product of the combined workings of chance and necessity. This starkly contrasts

afterwards, when nature is established it can achieve its proper effects through the natural operation." *Super Sent.* II, 20, 1, 1, ad 4.

³⁰ In the paper "Thomas Aquinas and Theistic Evolution" (available online, see the section: References), I respond to the total of twelve arguments by theistic evolutionists against Aquinas's understanding of the origin of species.

³¹ Cf. Ryland, "What is Intelligent Design Theory?" 48.

with the Christian teaching about the universe being a product of divine intellect. Species must be somehow planned and intended by God. Thus, theistic evolution encounters a difficulty—an incompatibility between, on the one hand, the Christian belief in creation according to the divine will and plan, and, on the other, the biological claims about the complete randomness of evolutionary processes. The answer to this problem, as presented by a great number of Christian scholars, is that God guides the unguided process. In other words, while natural mutations are biologically random, they are non-random from the theological perspective, because God somehow works in nature on a deeper (*theological*) level.

Thomists who support theistic evolution find this solution in the Thomistic concept of divine providence. Aquinas indeed teaches that in nature some events are planned (non-random), but there are also truly random events—things that happen by chance. Nevertheless, those chance events do not evade divine providence. God is omnipotent and omniscient and uses chance events to bring to completion His intended goals. Hence, whether an event is chance or planned it always falls under divine providence.³² We can even say that God works through random events as much as He works through those manifestly planned. Theistic evolutionists believe that this explains how evolution can be random and at the same time guided by God.³³ There are, however, a few reasons to doubt that Thomas would agree with the Thomists.

³² *S.Th.* I, 103, 7, ad 2 and 3.

³³ This idea has been proposed recently by many Thomists. Among them: M. George, “On Attempts to Salvage Paley’s Argument from Design,” in *Science, Philosophy, Theology*, ed. J. O’Callaghan (South Bend, Ind.: St. Augustine’s Press, 2002), available online (see the section: References); *idem*, “What Would Thomas Aquinas Say about Intelligent Design?” *New Blackfriars* 94, no. 1054 (Nov., 2013): 676–700; N. P. G. Austriaco, J. Brent, Th. Davenport, J. B. Ku, *Thomistic Evolution: A Catholic Approach to Understanding Evolution in the Light of Faith* (Tacoma, Wash.: Cluny Media, 2016), 83–101, 200; M. Dodds, *Unlocking Divine Action* (Washington, DC: The Catholic University of America Press, 2012), 221; S. M. Barr, “Chance, by Design,” *First*

First, Thomas says (as mentioned above) that the origin of species belongs to the work of supernatural formation which was finished once and for all with the creation of man. After divine supernatural activity was accomplished, God chose to change the mode of operation in the universe. He does not create new things (new natures) anymore, but works through ordinary and extraordinary providence. Thomists take one mode of divine operation (providence) and project it onto the formation of the universe, which is clearly not the case with Aquinas (and Christian tradition altogether). The argument, therefore, stems from the confusion introduced between the order of providence and the order of creation. As a consequence, the proponents of this argument end up in an entirely systematic approach to the question of origins. They assume that God operates in essentially one mode throughout the whole history of the universe. They dismiss the *history of creation*, which is recounted in Genesis and independently supported by scientific evidence from cosmology and paleontology. The Biblical narrative becomes irrelevant—in fact, it does not matter what the Bible teaches, because the knowledge about the origin of species comes from scientific theory (note *the theory*, not *scientific evidence*). If the Bible contradicts the theory, it is just a matter of a *proper reading* of the text. But this is not how Aquinas sees the problem. For him, the Bible tells not only *that* species were created, but also *how* it happened. When Thomas speaks about the origins in his “sed contras,” he repeatedly confirms the sufficiency of the authority of Scripture (*Sufficit auctoritas Scripturae*).³⁴ His certitude comes from the very fact that origins cannot be known otherwise than by revelation. Natural science cannot explain the

Things (Dec., 2012): 25–30; W. Newton, “A Case of Mistaken Identity: Aquinas’s Fifth Way and Arguments of Intelligent Design,” *New Blackfriars* 95, no. 1059 (Sept., 2014): 569–578. The same argument has been proposed by theologians from the International Theological Commission in *Communion and Stewardship: Human Persons Created in the Image of God*, no. 69 (July 23, 2004), available online (see the section: References).

³⁴ *S.Th.* I, 69–72.

origin of nature, just as physics cannot explain the origin of physics, chemistry cannot explain the origin of chemistry, and biology cannot explain the origin of biology. Thomists are right that random genetic mutations do not evade divine providence. They are also right that natural selection and random variation change the living beings over time. But they are not right when they assume that the same process accounts for the emergence of species.

Interestingly enough, the idea of God using secondary causes in creation was not strange to Aquinas himself. He found it in the philosophical system of Avicenna. Yet, he decisively rejects it:

It happens, that something participates in the proper action of another, not by its own power, but instrumentally, inasmuch as it acts by the power of another; as air can heat and ignite by the power of fire. And so some have supposed that although creation is the proper act of the universal cause, still some inferior cause acting by the power of the first cause, can create. . . . [And thus Avicenna and the Master say] that God can communicate to a creature the power of creating, so that the latter can create ministerially, not by its own power. But such a thing cannot be, because the secondary instrumental cause does not participate in the action of the superior cause, except inasmuch as by something proper to itself it acts dispositively to the effect of the principal agent. If therefore it effects nothing, according to what is proper to itself, it is used to no purpose; nor would there be any need of certain instruments for certain actions. Thus we see that a saw, in cutting wood, which it does by the property of its own form, produces the form of a bench, which is the proper effect of the principal agent. Now the proper effect of God creating is what is presupposed to all other effects, and that is absolute being. Hence nothing else can act dispositively and instrumentally to this effect, since creation is not from anything presupposed, which can be disposed by the action of the instrumental agent. So

therefore it is impossible for any creature to create, either by its own power or instrumentally—that is, ministerially.³⁵

In reply to Avicenna’s claim that the distinction of things into different species is due to secondary causes, Thomas writes:

This cannot stand . . . because, according to this opinion, the universality of things would not proceed from the intention of the first agent, but from the concurrence of many active causes; and such an effect we can describe only as being produced by chance. Therefore, the perfection of the universe, which consists of the diversity of things, would thus be a thing of chance, which is impossible.³⁶

We see that Aquinas excludes both secondary causes and chance as a possible factor in the first production of things. He is even more explicit when it comes to the origin of species:

Those things whose distinction from one another is derived from their forms [and these are different natural species—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.³⁷

Again, healthy metaphysical reasoning (*sana philosophia*) brings Aquinas to the conclusion that species cannot be produced by chance even though chance events affect individuals. Thus, a cat may generate a white cat, or a deaf cat due to accidental genetic mutation. The

³⁵ *S.Th.* I, 45, 5, co.

³⁶ *S.Th.* I, 47, 1, co.

³⁷ *ScG* II, 39, 3. In another place Aquinas rejects the general evolutionary idea that random events play a role in the origin of the universe: “That God acts for an end can also be evident from the fact that the universe is not the result of chance, but is ordered to a good” (*ScG* II, 23, 6).

amount of possible chance differences in posterity is virtually infinite. However, those differences in individuals cannot account for the emergence of a new species. A new substantial form must be induced directly by God.

There Are Only Four Substances

Apparently some Thomistic proponents of theistic evolution are aware of the problem described above, namely, that accidental change cannot bring about substantial change. To overcome this serious difficulty rendering macroevolution impossible they reduce the number of *real* species or substances. Consequently, in order to save the metaphysical possibility of biological macroevolution they (similarly to Darwin) challenge the very notion of species. For example, Charles De Koninck believes that: “The ensemble of beings constituting nature is divided into four species: men, animals, plants, and the inorganic. . . . These four species are the only ones philosophically definable. The canine species is not a species in the philosophical sense.”³⁸

Different authors propose different numbers of *true* species.³⁹ Nevertheless, their common point is to reduce them to just a few. Fol-

³⁸ Ch. De Koninck, “The Cosmos. The Philosophical Point of View,” in *The Writings of Charles De Koninck*, vol. 1, ed. and trans. R. McInerny (Notre Dame, Ind.: University of Notre Dame Press, 2008), 258.

³⁹ For example, N. Luyten suggests that the only distinct and definable essence among living beings is human. Thus, in his view there would be three essences: inanimate, animate and human (see *idem*, “Philosophical Implications of Evolution,” *The New Scholasticism* 25, no. 3 [July, 1951]: 303–304). M. J. Adler, even though skeptical of macroevolution, defends the idea that there are only five irreducible species: man, animal, plant, mixture and element (see his *Problems for Thomists: The Problem of Species* [New York: Sheed & Ward, 1940]). According to the Polish Thomist, M. A. Krapiec, supernatural creative acts must have taken place at least in the transitions between inanimate and animate matter, then between vegetative and sensory life, and then between sensory and intellectual life (see M. A. Krapiec, *Wprowadzenie do filozofii* [An Introduction to Philosophy] [Lublin: RW KUL, 1996], 256–265). E. Feser defends macroevolution by claiming that “every species is essentially just a variation on the same basic genetic material.” If this were the case, there would be only one species

lowing the De Koninck's opinion, an evolutionist can agree that an accumulation of accidental changes over time will never produce a new species. However, since there are only four species, everything within them can be produced by evolution. Once the vegetative life is present, all plants are like variation within the plant species. Once an animal is present, all animals are just variants of animal species. In this way the direct action of God is not needed to create different species within the plant and animal kingdoms. Instead, evolution (accidental changes) can do the job.

As much as the reduction of species to just four (alternatively one, three or five) may seem attractive for those who strive to save biological macroevolution, yet it is far from Aristotelian-Thomistic metaphysics. Moreover, it is also far from what the evolutionary theories of origins actually postulate. In De Koninck's scenario, for example, God would need to produce supernaturally inanimate beings, then the first plants, first animals, and first humans. The *physical continuity* of the whole evolutionary story would be interrupted at least three times. And this is already unacceptable to epistemological naturalism which underlies all evolutionary theories of origins such as neo-Darwinism. *Species reductionism*, therefore, does not resolve the conflict between classical metaphysics and biological macroevolution. It only makes it less apparent. At the same time it sets apart *species reductionists* from classical metaphysics.

Interestingly, the attempts to reduce the number of substances were not unheard of in Aquinas's times. Avicenna, for one, maintained that no body acts on its own, but rather God acts directly in each change. In order to save his idea of causality, Avicenna assumed that

of living beings, namely the one containing the genetic material. For Feser, this is also evidence that in evolution lower cause does not produce higher effect (see E. Feser, *Scholastic Metaphysics: A Contemporary Introduction* [Piscataway, N.J.: Transaction Books, 2014], 158).

all material beings constitute one substance. But Thomas disagrees and says that Avicbron's assumption "would make an end of generation and corruption, and many other absurdities would follow." Thomas also says that this idea is "frivolous" and "manifestly fallacious."⁴⁰

It is obvious that neither Aristotle nor Aquinas consider all plants, or all animals, one substance. After all, their entire metaphysical project was aimed at explaining how it is possible that, while every individual being around us changes, something remains unchanged. Aristotle discovered the divisions between form and matter, and between substance and accidents, and originally used them to reconcile Heraclitus (for whom, being is changeable) with Parmenides (for whom, being is unchangeable). The Aristotelian concept of species explains why lion begets lion and nothing else, and only man begets man (and nothing else), even though one man differs from another man and one lion differs from another lion, and each of lions and men changes over the entire time of their existence. Thomas says that reducing all bodies to one substance leads to many absurdities. Saying that all bodies constitute three or four substances is only slightly "less frivolous," and still many absurdities follow, for example, that the difference between an elephant and a snake is only accidental, or that a reptile may change into a bird through natural generation, or that all animals constitute one family literally speaking (are connected by a long chain of natural generations). Unfortunately, many Thomists in their struggle to reconcile biological macroevolution with metaphysics *nolens volens* give in to the absurdities that Aristotle and Aquinas would never allow.

Classical Metaphysics Has Been Overturned by Modern Science

It happens that Thomistic proponents of theistic evolution encounter an insurmountable obstacle in Aquinas to defend biological

⁴⁰ *De pot.* 3, 7, co.

macroevolution. This, however, does not turn them away from believing in macroevolution.⁴¹ A careful reader cannot avoid an impression that an incoherency harms their argument. First, they advocate the actuality of Thomistic principles and try to reconcile them with—what they call—*modern science*. But when they apply the same Thomistic principles to the origin of species, they propose that the principles are not actual anymore and have to be modified in the light of *modern science*. By advocating this, Thomistic evolutionists confuse two things: (a) scientific data, on the one hand, and (b) a theory presented in science, which is intended to explain the data, on the other. Consequently, they want Aquinas’s principles to be compatible with the theory, even though the compatibility with the data is enough to defend the principles.

Scientific data tell us that species appeared subsequently over immense periods of time, and remained essentially unchanged during the whole period of their existence (*stasis*). Aquinas believes that plant and animal species appeared during the two stages of the formation of the universe—the work of distinction and the work of adornment. But he does not define how long these stages lasted. Even if he believed in a short age of the universe (six natural days for creation events) this teaching is not essential to his doctrine.⁴² Moreover, this teaching (the

⁴¹ For example, according to M. George, modern evidence shows that the emergence of species occurs thanks to natural causes rather than through “direct divine intervention.” But, according to her, Aquinas should not be blamed for that “ignorance that elicited his categorical rejection of Empedocles.” See George, “What Would Thomas Aquinas Say about Intelligent Design?” 690–691. B. Ashley acknowledges that Aquinas excludes secondary causation in creation and (in this respect) he explicitly distances himself from Aquinas’s doctrine. He also believes that Aquinas’s (and classical) metaphysics is static and therefore does not make room for evolution. Only after it is redefined in historical categories, it embraces the true evolutionary concept of nature. See B. Ashley, “Causality and Evolution,” *The Thomist* 36, no. 2 (April, 1972): 228–230.

⁴² Aquinas distinguishes between two types of truths present in the Bible. The first are the truths essential to the faith and these cannot be modified by a Biblical interpretation. The other are the truths accidental to the faith. There can be a disagreement about them

short age of the universe) is irrelevant to the question regarding the origin of species—one thing is *how* species emerged (whether by evolution or by creation) and another is *when* it happened. The latter question is not the object of controversy that is of concern to us here. But modern scientific data modified only the latter issue, namely the time-scale of the creation events. Modern data do not contradict Aquinas's essential teaching about the supernatural origin and the direct creation of species. Hence, Aquinas's teaching does not contradict any data, although it does contradict the theory of biological macroevolution. It is, therefore, possible that not *Aquinas's metaphysics*, but rather *Darwin's theory* has to be modified when a conflict is apparent.

In order to understand the fallacy of the argument *from modern science*, we need to refer to one more distinction. There are two types of questions we can ask about any physical object: (a) the first is *how* it works, how it is built, what its parts are, how old it is, etc., and (b) the second is *where* it comes from, what its origin is, how it started to exist. In short, the two questions are: *What is the thing?* and *Where does the thing come from?* If we look into the history of science, all theories and facts that rightly modified our understanding of nature address the first question.

For example, people believed that there is a fixed sphere of stars. But with the progress of science astronomy proved that stars are not fixed, but are distributed unevenly in space and rotate around different centers of gravity than the earth. People believed in a stationary cosmos—it turned out that the universe expands. People believed that the earth is in the center of the Solar System and sits stable—it turned out that neither is true. The list could be continued, but the common de-

even among the saints. The accidental truths include many historical details (*multa historalia*). In the contemporary context the category of historical details covers the question when species were created and how long each of them lasted. See *Super Sent.* II, 12, 1, 2, co, and *S.Th.* II-II, 1, 6, ad 1.

nominator of all theories of nature is that they modify our understanding of *how* things are built or work (e.g., geocentrism vs. heliocentrism), but not *where* things come from. Darwin, however, addressed the second question—he asked where species came from. It is even more apparent when we compare the title of his book with that of Copernicus's. Copernicus wrote the book *On the Revolutions of the Celestial Spheres*. He tried to explain how the planetary system is built and what the relative movements and positions of planets in this system are. The same is true about Kepler, Newton and all other founders of modern science—they tried to explain how things work. But Darwin wrote *The Origin of Species* by which he addressed a different question—the question of origins. The same word, *origin* (*genesis*), was used as the title of the first book of the Bible in the Septuagint. Darwin, therefore, proposed an alternative genesis. He asked about the origins and thus he violated the limits of scientific method. For science cannot address the question of origins.⁴³ And this is why he, as well as the entirety of modern biology, provides only the evidence of natural *changes of species* over time, but not the natural *origin of species*. As much as the former is scientifically provable (and no reasonable person questions it), the latter has never been proven and cannot be proven in principle. This is also the reason why biological evolution (whether based on the Darwinian mechanism or not) strictly speaking is not a scientific theory, but a

⁴³ A typical objection to this claim is that science actually explains things like the origin of stars or planetary systems. It is not quite clear whether scientific theories explain those phenomena, but even if so, these are not examples of the origin of new distinct natures. Similarly geology explains the origin of mountains and river beds, but these are not examples of distinct natures. Big Bang theory, on the other hand, speaks about the expansion of the universe from the first moment that can be addressed by science (singular point), but not from the very beginning. Thus, Big Bang theory is not a theory of origins in the sense we employ, but a theory of development of a thing that already exists.

metaphysical postulate, a paradigm of doing modern biology.⁴⁴ For the same reason, philosophers who question biological macroevolution making use of classical metaphysics do not commit any methodological error—biological macroevolution is as much philosophical as are the principles of metaphysics. The difference is that metaphysical principles are confirmed by common experience and common sense, whereas Darwinian postulates stray from both. And this is why when a conflict between these two philosophies arises, Thomists are not called to modify Aquinas’s metaphysics, but rather to show how it is actual in what it says about the origin of species, and how it disproves Darwinian postulates of universal common ancestry and transformation of species.



Classical Metaphysics and Theistic Evolution: Why Are They Incompatible?

SUMMARY

This paper explores the arguments against the compatibility of classical metaphysics (Aristotelian-Thomistic) and theistic evolution. It begins with presenting the line of division between theists and atheistic evolutionists regarding the origin of the universe. Next, it moves to definitions of the terms *evolution* and *species*. The core of the paper consists of the five reasons why theistic evolution is excluded by Thomistic metaphysics. Among these are the problem of sufficient cause, accidental changes generating substantial changes, the reduction of causality in theistic evolution and the problem of the order in the universe. This is followed by a presentation of the positive teaching of Aquinas on the origin of species. Finally, the article responds to the three common arguments put forward by theistic evolutionists who seek to either accommodate or dismiss classical metaphysics.

KEYWORDS

Thomism, Darwinism, classical metaphysics, theistic evolution, creation, evolution.

⁴⁴ Cf. Karl Popper, *Unended Quest: An Intellectual Autobiography* (London and New York: Routledge, 2005), 200.

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