

The Evolving Taxonomy of Progressive Creation

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Abstract. This essay is a critique of a version of progressive creation developed by Michael Chaberek, O. P. He holds that there are exceptions to evolutionary descent due to the supernatural production of “natural species,” taxa that allegedly do not have biological ancestry, are theologically identified with biblical kinds, and are metaphysically characterized by distinct substantial forms. Chaberek’s assertion that these natural species correspond “roughly” to the Linnaean taxa of biological families contradicts modern scientific conclusions regarding the continuity of evolutionary descent. To illustrate this conflict, I examine some of the extensive evidence for the evolutionary origins of families within the Feliformia sub-order. I conclude that Chaberek’s assertion of supernatural progressive creation is a God-of-the-gaps theology burdened by a defensive stance with respect to scientific progress.

Keywords: Catholicism and evolution, Michael Chaberek, natural species, God-of-the-gaps.

Introduction

Michael Chaberek’s perspective on the topic of evolution is usefully contrasted to that of Mariusz Tabaczek, O. P. Although both theologians are Dominican Catholics with roots in the Thomistic tradition, Tabaczek

has developed a model for theistic evolution that Chaberek rejects.¹ As I will discuss in more detail in a future essay, Tabaczek recommends philosophical allegiance to Aristotelian metaphysics as revised and applied by Aquinas, but he also develops an innovative theology of creation that allows him to constructively engage with evolutionary biology. Biblically based reservations about evolutionary science are well-known, but commitment to Thomistic metaphysics has also been a longstanding impediment. In an earlier essay, I noted that one of the primary weaknesses of recent efforts to fuse Thomistic metaphysics with evolutionary biology has been a lack of attention to how substantial forms function during evolutionary transitions (Hofmann 2020b). While Tabaczek makes a strong effort to productively break from this pattern, Chaberek takes a more reactionary stance both in his interpretation of scripture and in his rejection of the scientific consensus concerning universal common descent through evolution. Chaberek's alternative is a version of progressive creation, the idea that over an extended time period God brought into existence a unique set of species without ancestry. This is not creation *ex nihilo* because Chaberek thinks of these species as produced from pre-existing inanimate matter.

However, postulating their existence does conflict with scientific expectations that evolutionary history is an unbroken process of descent from biological ancestors. Although extensive lineages of direct descent are difficult to establish with high probability, reliance upon this limitation to assert that supernatural action must have taken place is an example of a God-of-the-gaps apologetics that is threatened by scientific progress. After discussing Chaberek's position in more detail, I use the evolution of the Feliformia suborder of Carnivora to illustrate the vulnerability of his version of progressive creation.

¹ Tabaczek and Chaberek recently wrote competing articles in *Roczniki Filozoficzne*, an exchange based upon Tabaczek's afterward for the Polish edition of Austriaco et al 2016. English translation of these essays in *Nova et Vetera* is forthcoming, as is Tabaczek's book, *Theistic Evolution: A Contemporary Aristotelian-Thomistic Perspective*.

1. Michael Chaberek and Progressive Creation

In his 2021 *Knowledge and Evolution*, Chaberek maintains the position he presented in earlier books, a combination of intelligent design theory (ID) and progressive creation bolstered by Aristotelian metaphysics.² He accepts evolutionary diversification, but only within kinds that are introduced by God without ancestry. Chaberek has recently said that he is not a Thomist, and his convictions about evolution appear to stem from his scriptural hermeneutics.³ He alleges that “no ultimate hermeneutical principle exists. Instead, there is the authority of the Church and supernatural wisdom allowing individuals to interpret the Bible properly” (Chaberek 2021b, 70). Nevertheless, he does offer a principle of his own.

If a given scriptural passage poses a difficulty in the context of science, then we need to determine to which question it is more properly directed. If it answers the question *from where?*, then its meaning should not be interpreted according to the scientific proposition, but if it answers the question *how?*, then the authority of science must be taken into account, as long as the scientific proposition can be rigorously demonstrated (Chaberek 2021b, 71).

Chaberek’s only justification for this mandate is his frequently repeated maxim that science cannot legitimately address questions about origins. It seems to be motivated by Chaberek’s belief that Genesis is to be read “literally and historically” (Chaberek 2021b, 197) and that it “teaches about creation of animals and plants according to their kinds” (Chaberek 2021b, 198).

As might be expected, these convictions make theistic evolution acceptable to Chaberek. He expresses his objection using terminology in which “ t_2 ” refers to theological knowledge about the material world.

² See Chaberek 2017 and Hofmann 2020b.

³ In a 2019 lecture Chaberek mentioned that “I’m not a Thomist myself, [...] that’s my disclaimer.” (<https://www.youtube.com/watch?v=Mo6ABjf9bZU>).

Naturalism by rejection may be stronger or weaker depending on how much of the truth t_2 is rejected. [...] First-grade naturalism is the rejection of the majority of the truth regarding the history of creation. [...] A good example of first-grade naturalism is the rejection of the special formation of the human body or the supernatural formation of species (Chaberek 2021b, 19).

While seldom citing any specific theologians, Chaberek claims that “theistic evolution extends the scientific method beyond its scope and falls into naturalism (specifically first-grade naturalism)” (Chaberek 2021b, 58). His examples indicate that he considers either denial of the special creation of humanity or of the supernatural production of some species to count as first-grade naturalism, that is, as a rejection of important theological truths about the material universe.⁴ This judgment is based upon his conviction that Genesis must be interpreted to assert the formation of the initial human body and the first instances of some other designated species directly from the dust of the earth without ancestry.

In his discussion of theistic evolution Chaberek distinguishes deistic, pantheistic and emanationist approaches but largely ignores the Thomistic perspective as such. He claims that “theistic evolutionists adopt biological macroevolution as something of a paradigm, rather than a conclusion from empirical studies” (Chaberek 2021b, 190). No examples are cited to support this dubious claim. Both macroevolution and common descent are conclusions drawn from empirical evidence and have become so well established that they are acknowledged as scientific facts (Hofmann and Weber 2003). Chaberek does come close to addressing Thomistic evolution when he describes how the apparently random nature of genetic mutation is sometimes incorporated into theistic evolution. “God influences matter in an invisible way so that from a biological perspective it looks like random mutation but theologically it is a work of God” (Chaberek 2021b, 195). Chaberek has no sympathy for this perspective.

⁴ In a 2022 article, Chaberek defined special creation in general as “supernatural divine work without the use of active secondary causes” (Chaberek and Carleial 2022, 250); in the instance of special creation of humans, he adds that it is the idea that “God transformed ‘non-living matter’ (clay, dust or slime of the earth) by infusion of the directly created human soul which became the substantial form of the body” (Chaberek and Carleial 2022, 253).

Apart from a complete lack of empirical evidence for this idea, the problem with this approach is that it melts two causes down to one: if one effect is produced by two causes simultaneously and in the same respect, these two causes must be identical; therefore, they must be one. [...] hence this interpretation of theistic evolution boils down to monism (Chaberek 2021b, 195).

Thomists such as Mariusz Tabaczek in fact do not hold that divine and instrumental causes act “in the same respect.” Unfortunately, instead of citing specific theologians⁵, Chaberek typically refers to “some proponents of theistic evolution” (Chaberek 2021b, 200), as when he alleges that theistic evolutionists routinely conflate progressive creation with young earth creationism. It would be useful to know who they are and where they make this conflation. Unfortunately, Chaberek also sometimes reifies the concept of theistic evolution, treating it as if it were an agent.

Theistic evolution derives its knowledge from the scientific theory (not evidence) and then looks for justification and connection with religion; the main question for theistic evolution is how to reinterpret the biblical message and Christian tradition in order to make them compatible with the story told by the majority of biologists (Chaberek 2021b, 201).

Theistic evolution is of course only a label for a theological perspective; it does not “derive” or “look for justification” for anything. Reification of the term into an agent allows Chaberek some rhetorical purchase but this is not conducive to fruitful dialogue with any actual theologians.

In the metaphysical development of his position, Chaberek repeats an argument he has made elsewhere that accumulated accidental changes cannot generate substantial change, a presumed prerequisite for significant evolutionary transition (Chaberek 2021a). He concludes that since mutation and selection only result in accidental changes, “biological macroevolution can’t happen” (Chaberek 2021b, 122). Mariusz Tabaczek has responded at length to this reasoning, but he is not mentioned in *Knowledge and Evolution*.

⁵ Chaberek does make one reference to Nicanor Austriaco, O.P. (Chaberek 2021b, 225).

Chaberek also superficially addresses several scientific topics. Criticisms of evolutionary mechanisms are repeated from intelligent design sources, especially Michael Behe, without mentioning that Behe does accept common descent. Chaberek's argument against the evolutionary significance of homologies is to simplistically attribute them to the designer's choice of an efficient design. He also repeats glib generalizations that there are few transitional fossil forms and that "species represented by the fossils remain virtually unchanged throughout millions of years of their existence" (Chaberek 2021b, 134). He resurrects another old argument concerning the incomplete nature of the fossil record; as more transitional forms are discovered, the resulting gaps in the record actually increase in number. So as the fossil data increase, supposedly "the more data is (sic) missing to corroborate the theory" (Chaberek 2021b, 104). Apparently, the only set of data that might be of concern to Chaberek would be a day-by-day paleontological record showing absolute continuity of evolutionary descent.

As he has done previously, Chaberek promotes ID as his preferred alternative to neo-Darwinian evolution. He acknowledges that ID does not itself rule out common descent and adds that "ID recognizes the limits of the neo-Darwinian mechanism and postulates a third factor – intelligence, that is, a power endowed with foresight, capable of acting according to a preconceived goal" (Chaberek 2021b, 146). Although no insight is provided for how this intelligence acts, Chaberek is undismayed. "After all, it is possible to think about intelligently designed structures in nature without asking philosophical and theological questions regarding the nature of the intelligent cause and how the design was introduced into biology" (Chaberek 2021b, 169). But if ID is to have any positive scientific content, then "how the design was introduced into biology" would be precisely the *scientific* question that should be answered but is not. Chaberek tries to turn this defect into a virtue. "In contrast, Darwinism, by the very fact of providing a mechanism, excludes supernatural causation and thus becomes a reductionist philosophy. Hence, the fact that ID does not provide a mechanism may actually make it more scientific than Darwinism" (Chaberek 2021b, 170). In point of fact, by relying upon a physical mech-

anism, Darwinian explanations in and of themselves simply contribute to the progress of science and are no more a “reductionist philosophy” than is a meteorological explanation of rainfall. Furthermore, Darwinian explanations, no matter how detailed, do not exclude supernatural causation. Chaberek complains that by accepting these explanations theistic evolutionists exclude “*direct supernatural causality*,” but this is hardly the same as excluding supernatural causation in general. Chaberek also sometimes misrepresents the idea of methodological naturalism, claiming that it is the assertion that all explanation must be in terms of natural causes (Chaberek 2021b, 172). For most philosophers, the principle is merely that *scientific* explanations should adhere to natural causes.

Having rejected theistic evolution, Chaberek turns to progressive creation, using a label that has been in frequent use since the early nineteenth century. In general, advocates of progressive creation assert that there are discrete moments in the history of life when supernatural activity transcends and interrupts the evolutionary processes acknowledged by scientific investigators. The most pertinent scientific issue arises from the supernaturally introduced species that Chaberek holds are not the result of evolutionary descent. He labels them “natural species,” but he shows only marginal willingness to consistently associate them with any precise scientific category.⁶ In 2017 he described natural species as “organisms that belong to one taxonomic group of family or genus” (Chaberek 2017, 21) and offered as examples “man, lion, dog, cat, elephant, lizard, snake, and so on” (Chaberek 2017, 59). In his 2021 book, the only significant change is that now the relevant biological taxon for a natural species is “roughly” the family.

It may be defined as a broad taxonomical category, corresponding roughly to our modern biological classification of “family.” [...] Natural species can also be defined on levels of knowledge other than the scientific (i.e., biological) one. In philosophy, natural species are living beings that share the same nature or substantial form. In theology, natural species can be identified with the biblical kinds mentioned in the book of Genesis. [...] The notion of natural

⁶ For the history of “natural species” in Catholic theology, see Hofmann 2020a.

species, whether considered in science, philosophy, or theology, always refers to the same physical reality. (Chaberek 2021b, 89).

Chaberek no longer refers to lions and cats as examples and his nomenclature now requires a reader to understand his references to “species” in a biological context to mean families such as Felidae. According to Chaberek, after the initial creation of the material universe, subsequent direct creative action is required for the origin of each natural species, a process that makes use of a passive receptivity on the part of pre-existing inanimate matter.

This means that all the so-called “higher animals” were created in the same manner as man – by supernatural formation from the ground combined with the infusion of the appropriate souls – rational for man and animal for animals (Chaberek 2021b, 211).

Chaberek insists that the receptacle of “dust” is to be understood literally as soil and cannot refer to pre-existing life forms. “Genesis teaches that man’s body was formed from the *dust of the earth*, which clearly indicates that inanimate matter was used to produce the human body by direct action on God’s part” (Chaberek 2021b, 255). He holds that natural species of “higher animals” were also formed in this manner and subsequently propagate within their kind. Although Chaberek complains that the “God-of-the-gaps” charge has been brought to bear upon ID, progressive creation is a more appropriate target. By invoking divine formation of new natural species, Chaberek interjects supernatural action into situations where scientific explanation is presently incomplete, the paradigmatic God-of-the-gaps scenario. Here he diverges from earlier Catholic polyphyletic evolutionists such as Eric Wasmann who held that determination of ancestry was first and foremost an empirical issue (Hofmann 2020a).

The most straightforward scientific response to Chaberek’s progressive creation would be to identify a counterexample, an ancestral taxon for a descendant family or set of families. One complication is that this exercise would include reliance upon problematic Linnaean nomenclature,

the traditional hierarchical categories of Kingdom, Class, Order, Family, Genus and Species. Due to modern cladistic analysis, there is widespread insistence that all recognized taxa be clades, that is, that they be monophyletic in the sense that they include all the descendants of a common ancestor. Classification using categories such as genera, families, and larger taxa has become increasingly irrelevant compared to cladistic establishment of patterns of shared novel characters (synapomorphies) and sister-group relationships. Although in their magisterial *Classification of Mammals Above the Species Level*, Malcolm McKenna and Susan Bell used 25 ranked categories to classify mammals above the species level, they admitted that “Perhaps, however, our ultimate goal should be to get rid of rank names altogether” (McKenna and Bell 1997, 23). The continuity of evolutionary change is more accurately captured by a cladogram’s unlimited capacity for sub-division according to characters than it is by the cruder structure imposed by a limited set of Linnaean categories. Consequently, Chaberek’s choice of families as the biological representatives of his natural species relies upon a category that is doubly problematic. On the one hand, most systematists require taxonomic definitions to include reference to common ancestors, a requirement that rules out families without ancestry; on the other hand, Linnaean categories are often ignored altogether in favor of increasingly fine-grained groups based upon shared novel characters. Any postulated special creation of biological taxa necessarily posits a serious disruption in established phylogenetic patterns. The evolution of the numerous families of the Carnivora sub-order Feliformia provides an illustrative example.

2. Feliformia

Since the 1970s, Carnivora has been classified as a mammalian order with two sub-orders: Caniformia (dog-like carnivores) and Feliformia (cat-like carnivores).⁷ Feliformia is distinguished by a two-chambered auditory bulla bone structure usually divided by a bilaminar septum. The earli-

⁷ One of the most distinctive diagnostic characters that separates Carnivora from other mammals is a pair of carnassial cutting teeth on both sides of the jaw.

est Carnivoramorpha fossils date to approximately 62 million years ago (MYA); molecular data taken from extant species point to a common ancestor for Caniformia and Feliformia between 54 and 60 million years ago, although research continues on the precision of that date. Extant Feliformia fall into seven families: Prionodontidae (the two Asiatic linsang species), Nandiniidae (1 African palm civet genus), Felidae (42 cat-like species), Viverridae (35 civet and genet species), Hyaenidae (4 hyena species), Herpestidae (33 mongoose species), and Eupleridae (8 Malagasy species).⁸

Recent empirical discoveries and terminological revisions that have clarified the number and content of Feliformia families testify to the complexity of their origins. In 1982, John Flynn and Henry Galiano redefined the Aeluroidea, a large taxon within Feliformia often referred to as Feloidea, to include some extinct taxa as well as three extant families: Hyaenidae, Felidae and Viverridae. By 1993 Herpestidae was recognized as a fourth extant family, and in 2005 Philippe Gaubert and his colleagues argued that several taxa previously located within Viverridae should also be recognized as separate families: Nandiniidae, Prionodontidae, and Eupleridae (Gaubert et al 2005, 865). In 2010 Géraldine Veron published one of the first phylogenies showing relationships among all seven families (Veron 2010), and Eduardo Eizirik and his colleagues provided a molecularly based time-calibrated phylogeny (Eizirik et al 2010). The divergence of Feliformia from Caniformia was set at 59.2 MYA followed by the internal split with Nandiniidae at 44.5 MYA. In agreement with earlier findings, major further diversification was confirmed for a period including the Eocene/Oligocene boundary. The combination of Felidae and Prionodontidae broke off at 38.6 MYA and they diverged from each other at 33.3 MYA. The Viverridae diverged from the Hyaenidae, Herpestidae and Eupleridae at 28.6 MYA, and Hyaenidae split from Herpestidae and Eupleridae at 32.2 MY with the latter two families diverging from each other at 25.5 MYA. All of these dates are subject to revision and recent studies have in fact proposed more recent divergent times (Hassanin et al 2021).

Fossil confirmation of molecularly based phylogenies has been impeded by the incomplete nature of the fossil record. In general, although there

⁸ See, for example, Veron 2010.

may be good evidence that a fossil lineage is ancestral to an extant taxon, it is possible that another unknown lineage was actually ancestral and the fossils in question belong to a sister taxon to that lineage. Another persistent problem is convergent evolution; similar characters may have evolved independently in taxa that are not closely related. For example, Robert Hunt did extensive research on the variable structure of the petrosal bone and the auditory bulla protecting the Aeluroidea inner ear cavity and noted that *Paleoprionodon* (33–28 MYA) had characters representative of those expected for hypothetical ancestors of the Viverridae family (Hunt 2001, 21). Although Hunt acknowledged the possible parallel evolution of the malleus-incus auditory complex in multiple lineages, he noted that the bulla structures in each of four extant Feliformia families (Felidae, Viverridae, Hyaenidae, and Herpestidae) are also found in antecedent specimens from the fossil record: *Paleoprionodon*, *Proailurus lemanensis*, *Herpestes paleoserengensis*, and *Percrocuta primordialis* (Hunt 2001). Hunt and Richard Tedford proposed that the bulla structure in Oligocene aeluroids was derived from Early Cenozoic Viverravids,⁹ but they also warned that relevant fossils are too rare to justify making this hypothesis more precise (Hunt and Tedford 1993, 65). Although inconclusive, the auditory bulla data supplement other fossil evidence that points to potential Feliformia ancestors among Viverravidae families such as Didymictidae (Rothwell 2003, 48).

The fossil record is much richer in the late Eocene and early Oligocene (41–30 MYA) and offers interesting correlations with the molecular data. John Flynn and Gina Wesley-Hunt have reviewed the fossil evidence for viable Feliformia ancestors during this period of extensive diversification: *Palaeoprionodon*, *Haplogale*, *Stenoplesictis*, *Stenogale*, and *Proailurus* (Flynn and Wesley-Hunt 2005, 192). Detailed relationships among these taxa are still undetermined, but they flourished during a time of extreme climate variability that in Eurasia included the extensive faunal turno-

⁹ The extinct clade Viverravidae should not be confused with Viverridae, one of the extant families of Feliformia. Based upon 60 MYA fossils, Flynn and Wesley-Hunt placed Viverravidae within Carnivoramorpha, a more inclusive clade than Carnivora (Flynn and Wesley-Hunt 2005, 178).

ver known as the “Grande Coupure” near the boundary between Eocene and Oligocene at 33.9 MYA.¹⁰ According to Stéphane Peigné, *Proailurus* “can be considered one of the oldest Felidae” (Peigné 1999, 126), and Lars Werdelin and his colleagues agree that *Proailurus* is a likely ancestor of extant Felidae (Werdelin et al 2010, 63). They also argue that the eleven species presently ascribed to *Pseudaelurus* probably include ancestors of two sub-families of Felidae, the conical toothed Felinae and the saber toothed Machairodontinae. Bearing in mind the entire time span since the earliest Carnivoramorphia fossils 62 MYA, the gradual and complicated origins of the seven Feliformia families simply represent one transitional period within a much longer evolutionary history.

The diversification of Feliformia of course did not stop with the evolution of independent families. For example, Felidae went through a major period of diversification between 23 and 15 MYA, and a series of subsequent divergences resulted in at least 40 extant species and many others that have gone extinct. At 10 to 20 MYA, *Styriofelis* is a probable ancestor of the extant Felinae and *Machairodus pseudailuroides* is a likely transitional form for the Machairodontinae (Werdelin et al 2010, 74).

Even this greatly abbreviated summary of Feliformia research indicates that it is a rapidly developing work-in-progress. One clear message is that there is nothing about the taxonomic level of family that singles it out as a distinctive threshold. Although Chaberek’s postulate that “natural species” were specially produced without ancestry is motivated by his interpretation of scripture, the choice of families as the relevant taxonomic category is problematically arbitrary. The mere identification of the seven extant Feliformia families only stabilized around 2010 and debate continues over the proper placement of many extinct and extant genera. For example, it is still not clear whether the genus *Leptoplesictis* belongs to Herpestidae or to Viverridae (Morales and Pickford 2021). Concerning the members of the Eupleridae family, Gaubert warned that “their significant morphological heterogeneity, once relationships among viverrid-like Malagasy lineages are clarified, might justify a split into several

¹⁰ The Grande Coupure was part of an 8-million-year period of extensive extinction and diversification in Eurasia (Solé et al 2022, 748).

family level taxa” (Gaubert et al 2005, 879). Furthermore, the multitude of unranked clades documented by working scientists often are so subtly differentiated by just a few synapomorphies that the Linnaean categories are of relatively little consequence. As Wyss and Flynn commented, “we are generally indifferent to formal taxonomic ranks. We make little attempt to reconcile traditional rank-related suffixes of most previously recognized names with the topology of our preferred phylogeny” (Wyss and Flynn 1993, 35).

With the discovery of new fossil evidence and the establishment of more accurate molecular dates, the complex continuity of evolutionary change becomes more and more evident. In 2019 Jorge Morales identified *Izmirictis cani* as a transitional form between early Feliformia and Lophocyonidae, an extinct taxon only recognized as a Feliformia sub-family in 1987 (Morales et al 2019). Also in 2019, Manuel Salesa argued that a species that had previously been assigned to *Styriofelis* should be reclassified as *Leptofelis vallesiensis* and is a transitional form in the Felinae lineage. (Salesa et al 2019, 124–125). While it is always possible to emphasize the incomplete status of research, ongoing progress saddles the postulate of special creation events with all the disadvantages of an insecure God-of-the-gaps apologetics.

Conclusion

In contrast to theistic evolutionists such as Mariusz Tabaczek, Michael Chaberek adopts a version of progressive creation. There are clear disadvantages to his choice of families or any other Linnaean rank as “natural species” that are alleged to be exceptions to the evolutionary process of descent with modification. As character-based phylogenies get increasingly fine-grained, Linnaean categories become more and more irrelevant and there is no evidence of a marked discontinuity at any particular phylogenetic juncture. To postulate exceptions due to supernatural action is to adopt a God-of-the-gaps theology that is burdened by a defensive stance with respect to scientific progress.

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