

Evolution, Original Sin, and the Fall

with Helen De Cruz and Johan De Smedt, "Introduction to the Symposium on Evolution, Original Sin, and the Fall"; Paul A. Macdonald, Jr., "In Defense of Aquinas's Adam: Original Justice, the Fall, and Evolution"; Julie Loveland Swanstrom, "Aquinas on Sin, Essence, and Change: Applying the Reasoning on Women to Evolution in Aquinas"; Hans Madueme, "The Theological Problem with Evolution"; Austin M. Freeman, "The Author of the Epic: Tolkien, Evolution, and God's Story"; and Jack Mulder, Jr., "Original Sin, Racism, and Epistemologies of Ignorance."

AQUINAS ON SIN, ESSENCE, AND CHANGE: APPLYING THE REASONING ON WOMEN TO EVOLUTION IN AQUINAS

by Julie Loveland Swanstrom 

Abstract. Aberrations and variations within kinds of creatures required explanation to Western medievals, who took the Genesis creation narratives together with Aristotelian species to imply that change was limited to within species; consequently, species were presumed static. Medieval philosophers often explained variation—including "new" kinds like mules—as due to problems in procreation/gestation (following Aristotle) or by sin. I argue that Aquinas's explanation of variation in women, people with disabilities, and mules suggests that Aquinas cannot be taken to entirely reject the possibility of new kinds, and parallels in his explanation of the existence of women and the possible existence of new kinds provides warrant for a re-evaluation of his understanding of the notion of the natures or essences shared by kinds. Sin—individual or original—is an inadequate explanation for variation, and the argumentative parallels between Aquinas's treatment of women and mules challenge presumptions about what medievals mean by "static kinds" at all, revealing space for evolutionary thought.

Keywords: Thomas Aquinas; evolution; nature; original sin

Biological difference in Western theology and philosophy was often explained in terms of adherence to a thing's nature before Darwinian evolutionary thought. For medievals, puzzling cases exist where the entities do not fully or perfectly conform to their nature. In Thomistic thought,

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Aquinas's reasoning about nature nonconformity shares connections to original sin and evolution that can elucidate and correct contemporary applications of Aquinas's thought to evolution. Understanding human nature as static must be amended to include a range of powers; some modern writers presume the notion of essential natures implies a nature that is participated in the same by each member of the kind (Koons and Gage 2011, 83; Conway Zirkle 1959, 640–41). Other writers suggest that Aquinas leaves no room for God to act in the odd causal case that would be involved with evolution (Chaberek 2019, 67). Exploring three of these cases where a creature's adherence to its nature is less than ideal or unusual can help us see patterns in Aquinas's reasoning that could then be applied more broadly to navigating evolutionary thought such as whether natures preclude evolution or whether change is due to sin.

The pre-Darwinian essence/nature understanding of how individuals are member of kinds is supposedly an impediment to Aquinas's philosophy being compatible with evolutionary theory, but this objection misunderstands essential nature as exemplified in women, people with disabilities, and mules (Thomas Aquinas [1270–1271] 1971, VIII L3:C 1727). The variety of instantiated members of a kind—before and after original sin—when coupled with Aquinas's discussion of the possible production of new kinds suggests a way to connect Aquinas's thought with evolutionary theory without defaulting to original sin as the explanation for variation or change. The similarity in causal explanations of the variety of instantiation within kinds in the case of women and the possibility of the production of distinct kinds suggest the navigability of some of these difficulties.

BACKGROUND: AQUINAS ON ESSENCE AND ORIGINAL SIN

When Aquinas was writing, both similarity and difference were explained by conformity to one's nature, which Aquinas also calls "species." By Aquinas's time, Aristotle's "species" were understood to be fixed and distinct types of creatures, which seems incompatible with evolutionary thought. Biological species (the reality of which—like all universals—was debated by medievals) were determined by adherence to a set of traits rather than by descent; these traits were a part of the very makeup of the creature. Though this implies that such traits must be universal within a species, some members of subpopulations of species were singled out as poorly conforming because they lacked or poorly exhibited some key traits; for Aquinas, both women and people with disabilities poorly exhibit some human traits (discussed below). This lack of conformity is a puzzle in need of explanation in order to avoid impugning God's governance of creation and orderliness in creating. Because sin—specifically the original sin

brought about by Adam and Eve—can possibly be used to explain the lack of conformity, both essence and original sin deserve additional attention.

Essentialism is often defined as essences being natures or capacities of individuals, and the essences of individuals are used to demark kinds of things and the causal relations those things have (Denis Walsh 2006, 427). Ernst Mayr defined essentialism as fixed ideas underlying variety in nature (1976, 26–29; Walsh 2006, 427–31; Richard Richards 2009, 174–76; Elliott Sober 1980, 360–62). Despite significant disputes over whether Aristotle’s classification of species is indicative of real essences in existing things, whether species are taxonomic designations, or whether species are classificatory in terms of phenotypes, explicating Aquinas’s understanding is slightly more straightforward. Aquinas distinguishes the study of being from the study of logic, and he specifies that essence is the real definition of a thing (Aquinas [1252–1256] 1976a., 2, 5). Beings have composite essence: since beings are composed of matter and form, it is the composite of the matter and form together that is a thing’s essence (Aquinas [1252–1256] 1976a., 2, 3; Duan Dezhi 2007, 574). Neither matter alone nor form alone can provide the real definition of a thing, and thus the definition of essence depends upon a thing’s constituent parts. Aquinas distinguishes between specific essences such as humanity and particular essences such as Socrates, and matter accounts for the particularity of essence (Aquinas [1252–1256] 1976a., 2, 5, and 13; Dezhi 2007, 576–77). If essences/species are set, they cannot evolve.

Original sin impacts humanity significantly for Aquinas. In the prelapsarian state, humans can will, do good, love God the most, and avoid sin. Humans were inclined to virtue, and original justice allowed the proper order (Aquinas [1265–1273] 1888, Ia.IIae 109.2 resp., 85.1 resp.; Richard Cross 2017, 324). After the fall, original justice was lost for the whole of humankind, which causes a loss of a natural inclination for virtue but not a loss of the “necessary accidents” that are “caused by the principles of nature;” powers of the soul that belong to the soul, like the intellect and will, are undiminished, but bodily powers become defective (Aquinas [1265–1273] 1888, I.100.1 resp.; Cross 2017, 326; see Aquinas [1265–1273] 1888, I 77.5 resp.; [1265–1273] 1888, I 87.1 resp.; [1265–1273] 1888, II.II.15.1 resp.; [1265–1273] 1888, I.23.7.ad 3). The loss of original justice involves the loss of a strong will, causing disruption, deprivation, and dysfunction due to the loss of the “subjection of the will to God” and the loss of “proper ordering of the soul” (Brook 2018, 726). A weakening of the will ensues; death becomes possible, and humans experience “subservience to concupiscence” (Brook 2018, 726–27). However, original sin does not cause badness to be a part of human nature (Angus Brook 2018, 726; Aquinas [1261–1263] 1961, IV 50). Humans are impacted by original sin, but human nature remains.

AQUINAS ON WOMEN: A VARIETY OF HUMANS

To understand whether the breadth of humanity is due to sin, the case of women is quite instructive. When Aquinas discusses women, he follows and endorses Aristotle's description of women as malformed or occasioned men (Aquinas [1265–1273] 1888, I.92.1 ad 1; Michael Nolan 1994, 157–58).¹ Aquinas says that women are “deficient and misbegotten,” but his distinction between the primary and secondary intention of nature shows the limits of these descriptors (Nolan 1994, 158–60). “Nature, through being unable to preserve being in one thing, preserves it in another which is engendered of the other's corruption. And when nature is unable to bring a thing to greater perfection it brings it to a lesser; thus when it cannot produce a male it produces a female which is “a misbegotten male” (De gener. Animal. Ii. 3)” ([1265–1273] 1888, Supp. 52.1. ad 2). This deficiency does not make women inhuman; women are not monsters—they are simply not men, which was the expected product of semen (Aquinas [1265–1273] 1888, I.92; Supp. 81). Differentiation is a matter of degree of perfection, which leads to an eventual consideration of women in heaven.

Their difference has a purpose that is sanctioned by God. “As regards human nature in general, women is not misbegotten, but is included in nature's intention as ordered to the work of generation. Now the general intention of nature depends on God, who is the universal Author of nature. And therefore, in instituting nature, God produced not only men but also women” (Aquinas [1265–1273] 1888, I.92.1 ad 1; see also Nolan 1994, 161). The differentiation of sexes is a crucial part of humanity because men and women are and must be distinct from one another for generation to occur. Men and women, though, are not so distinct as to constitute different species (Allen 1985, 389). The differentiation between men and women is a part of God's order in nature (Aquinas [1261–1263] 1961, IV.88.§3; Nolan 1994, 161).

Differentiation must be explained. Aristotle's notion is that male and female differ not in substance but in matter, and sperm undergoing modification makes one male or female (Aquinas [1270–1272] 1971, X L 11: C 2134). Aquinas's answer varies a bit from Aristotle's. Men and women cannot differ formally or specifically. Aquinas says that, despite semen intending to produce its (male) likeness, “the generation of women is due to a debilitation of the active virtue, or due to some material indisposition, or even is due to some external change/influence, such as a south wind, which is moist, as is said in the book *On the Generation of Animals* (Aristotle, iv, 2)” (I.92.1 ad 1). Note that the generation of women in the Edenic state is *not* “from a defect of active force or by inept matter” (Aquinas [1265–1273] 1888, I.99.2.ad 2). In *De Veritate*, Aquinas says the generation of women has to be due to some celestial cause, which

explains the unexpected variation from the likeness to the male (5.9. ad 9). “The feminine sex is an accident in the order of nature insofar as, at least, it is not the natural causality of the particular agent;” but it is unlike monsters (which are unintentionally produced), making a female an “accidental male[;]” nevertheless she is from the intention of the universal nature, which is due to the power of a heavenly body, as Avicenna says” (Aquinas, *De Veritate* 5.9. ad 9). Nonetheless, Aquinas insists that God made the initial woman directly without intermediaries (Aquinas [1265–1273] 1888, I.92.4 resp.). Women occur “sometimes due to extrinsic accidental cause (see Aristotle, *De Animal. Histor.* Vi, 19)—northern wind makes males, southern wind makes females; sometimes by impression of the soul of parents which impacts body of child; sometimes even the will of the parent” (Aquinas [1265–1273] 1888, I.99.2.ad2; Aquinas [1265–1273] 1888, I.92.1, esp. 1). Most importantly, however, is that Aquinas still insists that women are a part of God’s plan, and that women being distinct from men is not something that is the result of the Fall; diversity predates sin (Allen 1985, 393).

Neither the existence of women nor the subjugation of women to men is the result of the Fall, but women are nevertheless not equal to men (Aquinas [1265–1273] 1888, I.96.3 resp.). Nolan emphasizes that women are a part of God’s plan and disputes the notion of women’s defectiveness in Aquinas, but Aquinas does firmly commit to an internal hierarchy between these different modes of humanity (Nolan 1994, 163–64). Aquinas explains that “woman is subject to man by [subjection of a superior to an inferior for the inferior’s good] because in man, the discretion of reason predominates” (Aquinas [1265–1273] 1888, I.92.1 ad 2). The specific inferiority of women relates to a deficiency in reason. When addressing whether this deficiency is the result of sin, Aquinas asserts that though subjection can be due to sin, subjection can also be civil, wherein the superior uses subjects for the subject’s own good; this second sort of subjection predates sin and applies to women (Aquinas [1265–1273] 1888, sup. 39.1). In *Summa Contra Gentiles*, Aquinas says that human females cannot take care of the upbringing of offspring by themselves because a human life has needs that require more than one parent (III 122.6). He then calls woman inadequate to teach children because women lack experience living by reason and controlling passions (Aquinas [1261–1263] 1961, III 122.8). Woman needs man for the sake of governance, more perfect reasoning, and stronger powers/virtue; according to Aquinas, children need a father for their more developed reason (Aquinas [1261–1263] 1961, III 122.8, 123.3, and 123.5). Women’s testimony is less trustworthy because of a defect in their reason (Aquinas [1265–1273] 1888, II.II. 70.3). He also discusses how women lack sufficient strength of mind to resist “concupiscence” (Aquinas [1265–1273] 1888, IIa.IIae 149.4). Women have weak temperament and as such cannot commit resolutely to what

is right, following their passions instead (Aquinas [1265–1273] 1888, IIa.IIae. 156.1.ad 1). Women are not able to take orders—be priests—because women are “in the state of subjection” even before sin (Aquinas [1265–1273] 1888, sup. 39.1). Women are indeed inferior to men for Aquinas.

Given the lesser status of women, a natural question is whether women, with all their defects, will be in heaven as women or will be transformed into men. Aquinas insists that women will be resurrected *as women* instead of being transformed into men in heaven, which affirms their humanity even in a situation where procreation is not at issue (Aquinas [1265–1273] 1888, sup. 81.3 resp., ad 1, 2, 3). Despite procreation being the reason for their particular configuration, women remain women in heaven, which serves to emphasize that, despite some deficiencies, women are fully human and fully intended by God. Women are distinct from men and yet human, showing diversity in the type.

AQUINAS ON PEOPLE WITH DISABILITIES: A VARIETY OF HUMANS

Women show diversity in humanity before sin, but in at least some cases when Aquinas discusses the deficiencies in women, he compares them to people with intellectual disabilities ([1261–1263] 1961, III.122, 123). Aquinas asserts that original sin is largely to blame for the prevalence of physical and mental disabilities (Aquinas [1265–1273] 1888, I.48.5; Cross 2017, 320). Any differences that can be teased out between Aquinas’s discussion of women and people with physical or mental disabilities will be instructive about variety in humanity and the extent to which such variety is due to sin and can be applied to the case of possible new species production.

The sorts of differences Aquinas highlights when he brings up people who today would fall under the heading of people with disabilities can vary by context. One has already been introduced: people with mental disabilities. Such individuals do not have the same rational capacities as a person lacking that disability, particularly when compared to a man (Aquinas [1256] 1970., 5.9 ad 9).

How these differences arise is instructive. According to Richard Cross’s analysis of Aquinas’s discussion of bodily infirmities, Aquinas distinguishes between two types of bodily defects, those impacting a thing’s teleology, and those not (Cross 2017, 320). Of the things that do negatively impact the teleology of a thing, such impediments can be universal rather than particular, or they can variously impact the “degree of teleological failure involved” (Cross 2017, 321). Universal impediments impact all; they are “negative body affections” including hunger and cognitive or behavioral dysfunction (Cross 2017, 320, discussing Aquinas [1265–1273] 1888, III.14.1.c.). These sorts of impediments can apply to any person

and are a regular part of life. Some impediments, though, have a variety of “degree of teleological failure involved.” These can either destroy one’s “principle of life,” or not. Those that do not destroy the principle of life either destroy the “natural principle of activity” or not. Those things that negatively impact the principle of life are mortal sins, and those that do not destroy the principle of life or the natural principle of activity are venial sins (Cross 2017, 321).

These two types of bodily defects are at least partially rooted in sin. Aquinas addresses different categories of defects. Moral defects including ignorance, tendency toward evil, and difficulty doing good are incredibly serious because they impede one’s ability to perform human function. Other defects like leprosy or epilepsy, among others, are occasionally due to one’s own actions, like eating the wrong foods; sometimes, such defects are due to “a defect in the formative power” (Aquinas [1265–1273] 1888, III.14.4 resp.; [1265–1273] 1888, 1.48.5 resp.). These defects are not universal. The final set of defects, which is held in common among all human beings, includes death, hunger, thirst, and other similar and widespread defects. These defects are losses relative to the ideal human nature, and they are largely because of the fall. Death is something that all humans face not merely because of how matter works—it decays—but also because of the original justice lost in the fall (Aquinas [1265–1273] 1888, Ia.IIae 81.2 resp. and 100.1 resp.). Just as pardon is to sin, healing is to sickness; some sins are pardonable, and some sicknesses are curable (Cross 2017, 321; Aquinas [1269–1272] 1982., 7.1 resp.; Aquinas [1265–1273] 1888, I.II.72.5). Cross says that, for Aquinas, “physical impairments are not like [women]” because disability provides no necessary good (2017, 323). Disability involves the absence of powers for the *telos* of humanity, and individuals would, according to Aquinas, be better without the impairment (Cross 2017, 323–24; Aquinas [1265–1273] 1888, I.II.109.2 resp.). These teleological failures must be possible, as they contribute to the range of perfection in the world (Aquinas [1265–1273] 1888, Ia.48.2 resp.; Cross 2017, 323). The possibility being actualized, however, does not help humans reach their end.

Despite women being in heaven as women, it seems like Aquinas presumes that those disabilities will be removed from people in heaven. Aquinas comments on 1 Corinthians 15:52, saying that there will be no deafness, blindness, or other defects in heaven (Aquinas 1953a, XIV.2; Berkman 2013, 93). Everyone will be fully transformed and perfected. Further, Aquinas is clear that mental impediments do not stand in the way of baptism (Aquinas [1265–1273] 1888, III.68.12 resp., ad 2). Coupled with the way Aquinas discusses how the gifts of the Holy Spirit “render the human mind amenable to the motion of the Holy Ghost: which will be especially realized in heaven,” Aquinas speaks as though God will perfect any deficiency (Aquinas [1265–1273] 1888, Ia.IIae.68.6 resp.). Aquinas says

that God can supply wisdom to those who need it, and those with intellectual disabilities may (Aquinas [1265–1273] 1888, *Ia.IIae.45.2* resp.). So, the people who had disabilities will be in heaven, but their disabilities will not. Although people with disabilities exhibit a variety of instantiation of humanity, this variety is not sustained indefinitely.

AQUINAS ON MULES: AN EXAMPLE OF NEW VARIETY IN ANIMALS

Aquinas discusses changes and variations in relation to sin's degradation, but even "new" types like mules are degraded as well. However, like with Aquinas's discussion of women, Aquinas still asserts that the production of creatures like mules is a part of God's plan. To the objection that says because new things are produced after the six days are completed—things including individuals and new species—God's work does not end on the sixth day, Aquinas replies that God's activity in the first six days constitutes a "perfection that is according to which a thing is substantially perfect" in the manner of a "form of the whole" with complete parts (Aquinas [1265–1273] 1888, *Ia.73.1* obj. 3 and resp.). Regarding the additional individuals and species, Aquinas says individual creatures generated after the end of the six days of God's work "existed in the first of their kind." *If* any new species appear, they "existed beforehand in various active powers." Animals, including any new species, "are produced by putrefaction by the power which the stars and elements received at the beginning" (Aquinas [1265–1273] 1888, *Ia.73.1* ad 3).

So, new species would either arise out of the existing kinds or else they are produced by the influence of celestial powers. The case of mules is instructive. "Individuals belonging to different species"—a donkey and a horse—can be bred to produce a mule. Horses and donkeys were produced by God during the six days, so what horses and donkeys produce together arises out of existing kinds (Aquinas [1265–1273] 1888, *Ia.73.1* ad 3; Zirkle 1959, 640).² In other instances of the production of new species, these new species would be subject to causal influences also created by God—any putrefaction that occurs by the powers of the stars or elements constitutes putrefaction distally caused by God. Putrefaction addresses matter's inability to withstand every form of influence.

APPLICATION OF AQUINAS'S DISCUSSION OF VARIETY TO EVOLUTION

So, now we have three cases where there is variety in a species—women and people with disabilities have diminished capabilities to fulfill their human function the same way abled men fulfill their function, and mules are a new kind of creature than the ones God created directly during the first six days. These different cases, and their similarities and differences, suggest

that Aquinas's notion of essences does not preclude evolution, and it also does not depend upon sin to explain diversity and variation within natures and the production of new natures. New kinds (if they exist) are either (1) like women—*increase diversity while following God's plan to do so*, or (2) like people with disabilities—*increase diversity, which fits with God's plan, but is due to sin*. Aquinas's discussion of new species arising is more like his discussion of the diversity in humanity found in women rather than diversity found in humanity due to disability, which suggests changes to understandings of what Aquinas means by "nature."

Consider the causal similarities. Interestingly, Aquinas refers to the causal powers of the stars when discussing the influences resulting in female fetuses and when discussing new species possibly arising. He does so because an appeal to the heavens gives purpose to the change undergone in women, making that change intentional rather than accidental (as accidental cause would make women monsters). Similarly, by addressing some celestial cause of potential new species, Aquinas is showing how such new species would fit within the order ordained by God. The case of people with disabilities is different, with Aquinas discussing disability in terms of a failure of formative power, which makes disability not intentional, unlike women and hypothetical new species, making option (2) less plausible.

Further, new species and women both promote teleology. Aquinas discusses how God could make new species, and adding new species would increase goodness by discrete quantity (Aquinas [1252-1256] 1929a, dist 44, I, 2, co.; Mariusz Tabaczek 2015, 335–36). In the case of women, Aquinas is clear that women fulfill part of the teleological function of humanity; in the case of (potential) new species, a fair question is whether those species fit with God's plan as well. Here, Aquinas says yes—their existence would be explained by the causal powers of God. At least some new species (if they exist) come from the powers God has provided in the kinds that God directly created. Any new kinds are kinds that God has indirectly created ([1252–1256] 1929a, dist 44, I, 2, co.; Tabaczek 2015, 334–35). Although God may not directly create disability, Aquinas says that the variety accorded by the possibility of teleological failure fundamentally contributes to the goodness in the universe. Note the difference here: women and new species seem to help fulfill teleological function while disability does not, which makes option (2) even less plausible.

An objection might be this: Aquinas says that something more perfect cannot come from something less perfect (Aquinas [1265–1273] 1888, I.II.63.3 resp.; [1265–1273] 1888 I.4.2.resp.; [1265–1273] 1888 II.II.32.3 obj 1; [1261–1263] 1961, II.21 no 9; [1261–1263] 1961, II 15 no 4; [1261–1263] 1961, II.6 no 4; Tabaczek 2015, 330). Accordingly, any new creature must be "worse" than the creature from which it comes. Although putrefaction sounds like creatures created this way must be lesser, putrefaction is the preferred explanation for odd causal

explanations in the medieval period, so this causal explanation does not help settle our question. Women and people with disabilities develop because of some extrinsic cause. Nonetheless, both women and new species would expand the diversity of God's creatures without making reaching their end more difficult (disability increases this difficulty). Unfortunately, women and people with disabilities are described as "worse;" however, if women are lesser but specifically meet the purposes of God, then it is possible that new species could too.³ Further, this complaint misses something important about Darwinian evolution by natural selection—evolution is simply change, and "survival of the fittest" means that the entity most uniquely suited to its environment survives. The variety birthed through the evolutionary process is not a constant march forward. The metaphysical notion of "higher" does not mean more complex and "lower" does not mean less complex (Tabaczek 2015, 330). Additionally, Aquinas is clear that any new species would come through God's power, and God can make what God wants from what God wills (or nothing at all!). Because of God's role in creating being, any route toward that entity's becoming involves God, and Aquinas says the variety in women and potential new species brings goodness ([1252–1256] 1929a, dist 44, I, 2, co.).

Perhaps an objection is that a third option exists—a new creature is monstrous. New kinds might be option (3) like monsters—accidental, unintentional mutations resulting in unique creatures. Aquinas discusses monstrosities as entities developed due to some extrinsic cause: "matter participating more or less perfectly in the form" explains variation (Aquinas [1270–1272] 1971, VIII L3:C 1727:.) However, new species would be a *kind*, but monsters are individual mutations. Crossing option (3) off the list of ways to describe new species seems plausible, as did removing option (2). Instead, (1) seems like the best explanation because of Aquinas's discussion of God's involvement in producing potential new species and God's creation of women. The parallels between how Aquinas discusses women and possible new species suggest that Aquinas' thought can cohere with the production of new species by increasing diversity through divine action, and the divine action makes them not monstrous. Although failure to conform to one's form due to the damage of sin can account for disability, it does not capture the entirety of Aquinas's approach to variation, which, in the case of women and potential new species, increase goodness by promoting teleological function.

Natures, then, are not entirely static for Aquinas. They include great breadth, and Aquinas realistically acknowledges the sorts of change he knows occur. Accordingly, Koons and Gage's approach that implies static natures is incorrect, as is Chaberek's assertion that God has nothing to do in potential evolution (Koons and Gage 2011, 83; Chaberek 2019, 67). Neither of these assertions fit with the cases of women, people with disabilities, and mules. Any discussion of Aquinas's account of essences in the

context of evolution must account for the variety of instantiation within those ascribed that essence and God's role in producing variety.

The parallels between the cases of women and mules suggest that the way in which Aquinas is an essentialist needs review. If essentialism involves the commitment to "there being some property which all and only the members of that species possess," and makes a "perfectly respectable claim about the existence of hidden structures which unite diverse individuals into natural kinds," then it is difficult to understand how Aquinas's analysis of humans, which do not instantiate the same set or properties by Aquinas's analysis, fits with essentialism (Sober 1980, 353, 355). Perhaps, like with Aristotle, essences are primarily definitional rather than taxonomic. Aquinas endorses something that seems to fit with Mayr's notion of essentialism of a definitional variety (Walsh 2006, 427–31). The variety of humanity—and the possible variety within other creatures as well—suggests that the structures need not be instantiated as entailed with constitutive essences (Wilkins 2015, 404). Essences also seem not to be diagnostic because of the variety of shared properties. Instead, essences seem definitional, giving necessary and sufficient defining properties (Wilkins 2015, 404).

Given the influence of Aristotle (and Neoplatonism), showing that Aristotle's essentialism can be understood definitionally (as can Neoplatonic essences) bolsters this case. Wilkins asserts that Aristotle's essences are about "words, not objects," which means that Aristotle's essentialism is not biological/taxic, meaning it is not the "type of scientific essentialism in which essentialistic metaphysics prohibit evolution because taxic kinds have bridgeless gaps between them" (Wilkins 2015, 395, 399). Walsh argues that Aristotle had a classificatory but not taxonomic evolutionary schema despite animals having goal-oriented dispositions; essentialism is an explanatory doctrine, but natures can change over time (2006, 427–31). As James Franklin argues, Aristotle's theory of species (natural kinds) did allow for variation, and Aristotle's theory is not dependent on discrete species: species are discrete as *logical* not *metaphysical* divisions (1986, 245–47, 250).⁴ The scale of being in Neoplatonism was gradual and not essentialistic (Wilkins 2015, 407). Regarding Aquinas, when we explored his notion of essence, he discusses them in terms of definitions. Additionally, Aquinas follows Aristotle in saying that "matter participating more or less perfectly in the form" can explain variation (Franklin 1986, 250, see Aquinas [1270–1272] 1971, 1727). The way that Aquinas discusses the variety in expression of the traits of humanity suggests that Aquinas's approach to essence may be best understood as definitional.

The nontaxonomic essence can work with Aquinas's approach, and since God makes each individual's being, that action can be understood to apply to an entity's species as well. Essentialism and evolution are not *prima facie* incompatible. Prominent philosopher Elliott Sober denies that

essentialism is necessarily incompatible with evolutionary theory (Sober 2009, 310). To be clear, Darwinian evolution “undermines essentialist interpretations of species and higher taxa” for Sober, though nontaxonomic theoretical categories could still be understood as essences and maintain consistency with evolutionary theory (Sober 2009, 310). A definitional essentialism allows for the variety seen in women and even mules. If so, Aquinas’s essentialism would be elastic enough to incorporate the evolution of previously nonexistent types as well because natures are neither static nor narrow in this definitional reading.

The way Aquinas discusses the diversity of humanity in women holds parallels with Aquinas’s discussion of possible new species. Both cases utilize similar causal explanations—external influence, celestial influence, existing in conformity with God’s plan—that do not entail sin as a part of the justification for those causal explanations, unlike with the case of disability. Fundamentally, the breadth of humanity suggests re-thinking how Aquinas uses essences, specifically whether Aquinas uses essences definitionally rather than taxonomically. If essences are nontaxonomic, then perhaps Aquinas’s discussion of essences can indeed fit with an evolutionary framework.

NOTES

1. Despite the (now understood to be) misogynistic and ableist things Aquinas says, his reasoning here can help address causal questions and is therefore worth exploring—but exploration does not imply endorsement.

2. Chaberek asserts that the use of the conditional here means that Aquinas is not endorsing the introduction of new species and that mules do not properly count as new species because they grow out of existing species—they are merely “new variants.” As a part of a natural process, the production of mules, new variants, or biological species “is not the point of controversy.” However, I examine how Aquinas describes these causal processes and how they are relevant to answering the question of whether one can be an essentialist of Aquinas’s stripe and also possibly endorse evolution. See Chaberek (2019, 67, footnote 28).

3. Aquinas asserts that people with disabilities are not necessary for fulfilling some function, so they are not listed here.

4. See Aristotle (1984c, 588b4-14); Aristotle (1984a, 681a10-15); and Aristotle (1984d, H 3 1043b33-1044a11).

ACKNOWLEDGMENT

The author is grateful to the Augustana Research/Artist Fund from Augustana University for the grant that helped support this work.

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