



EMBODIED VS. NON-EMBODIED MODES OF KNOWING IN AQUINAS: DIFFERENT UNIVERSALS, DIFFERENT INTELLIGIBLE SPECIES, DIFFERENT INTELLECTS

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What does it mean to be an *embodied thinker of abstract concepts*? Does embodiment shape the character and quality of our understanding of universals such as “dog” and “beauty,” and would a non-embodied mind understand such concepts differently? I examine these questions through the lens of Thomas Aquinas’s remarks on the differences between embodied (human) intellects and non-embodied (angelic) intellects. In Aquinas, I argue, the difference between embodied and non-embodied intellection of extramental realities is rooted in the fact that embodied and non-embodied intellects grasp different kinds of universals by means of different kinds of intelligible species (intellectual likenesses), which elicit in them different “modes” of understanding. By spelling out what exactly it means to be an embodied knower, on Aquinas’s account, I argue, we can also shed new light on his mysterious claim that the embodied intellect “turns to phantasms” — the imagination’s likenesses of individuals — in its acts of understanding.

One of the interesting questions, for theories that ascribe to us some sort of immaterial part (a soul or mind), concerns the extent to which being an *embodied* mind has distinctive repercussions on our conscious life. Some features of our conscious life seem distinctively bodily, e.g., the feeling of being oriented in space and the awareness of the relative position of one’s body parts (proprioception). But apart from proprioception, the way forward is not so clear, as the following two puzzles illustrate. On the one hand, assuming that an immaterial mind should be capable of *at least some* mental activities that are independent from physiological structures, one might wonder whether these activities, in us, are *just the same kind* as those of non-embodied minds — or whether there is something unique about the immaterial activities of an embodied mind. On the other hand, where our mental activities seem linked in some way to a physiological structure, one might wonder how essential those structures are for rendering the kinds of experiences we have. Is it *in principle possible* to have the experience



“hearing Beethoven’s Ninth” without the relevant physiological apparatus of eardrum, auditory nerve, brainstem, auditory cortex? For instance: If a non-embodied mind had been present for the opening night of Beethoven’s Ninth (setting aside concerns about how a non-embodied mind gains entrance to an auditorium!), it is not obvious whether it would have (i) the experience that we call “hearing Beethoven’s Ninth,” or (ii) a different kind of experience of musical sounds, or (iii) no experience of musical sounds at all.

These two puzzles are just two ways into the same problem: What difference does *embodiment* make to the qualitative feel and content of human experience? In this study, I intend to unpack how this problem is handled by the medieval thinker Thomas Aquinas. Aquinas often uses angelic cognition as a counterpoint in discussing human cognition (and vice versa), producing especially sharp and revealing contrasts between embodied vs. non-embodied conscious experience. On his view, our conscious life is a whole constituted by the activities of multiple mental powers. Embodied minds have—and non-embodied minds lack—many kinds of essentially bodily mental activities, i.e., sensory and imaginative activities. Where we have kinship with angels, however, is in the non-bodily activity of intellect (let us call it “knowing”), which accounts for our ability to think about universals such as “dog” or “beauty,” and to grasp things as instances of some common kind, e.g., as a dog or as beautiful.¹ But Aquinas resists the implication that our intellectual knowing is basically an angelic activity mixed in with bodily sensory activities, arguing instead that there is something distinctive about embodied knowing.²

But distinctive in what way? The usual answer in the Aquinas scholarship is to point to something that amounts to a merely *quantitative* difference: Embodied knowing is characterized by its discursivity (use of propositions and arguments), which is the result of *how little* we are able to grasp intellectually in a single act. Thus angelic intellects intuit whole swathes of reality at once, while we must put the picture together piecemeal by constructing propositions and arguments.³ On this standard

¹There is also an accompanying non-bodily power of will, but I am only focusing on cognitive powers here.

²Indeed, it is crucial to Aquinas’s campaign to secure a unified human substance, that human souls and angels be *different kinds* of intellectual forms. ST I 75.7, I 88.2 ad 3; see also *In III Sent.* d.23 1.2 ad 2; I 88.2 ad 3. So it is not surprising that he would also think that their mental activity must be different in kind. In referencing and citing the works of Aquinas, I have used the Leonine edition for all the works cited here, except where unavailable, i.e., for *Scriptum super libros sententiarum magistri Petri Lombardi, Quaestiones disputatae de potentia, In duodecim libros Metaphysicorum Aristotelis expositio, Super Librum de causis expositio, and In librum Beati Dionysii De divinis nominibus expositio* (see the reference list for those editions). All translations from Latin are my own. Abbreviations of commonly cited works: ST = *Summa theologiae*; SCG = *Summa contra gentiles*; *In Sent.* = *Commentary on the Sentences*; DV = *Quaestiones disputatae de veritate*; CT = *Compendium theologiae*; DSS = *De substantiis separatis*; QDDA = *Quaestiones disputatae de anima*.

³For an example in print, see Pégahaire, *Intellectus et ratio*, 31–71 and 85–102. The difference is due to the “weakness” of our intellectual light, compared to the “fullness” of the angelic

reading of Aquinas, embodied and non-embodied intellects are engaging in the *same activity* ϕ -ing, differing only in their “skill level”: Embodied intellects are deficient ϕ -ers while non-embodied intellects are skilled ϕ -ers, in the manner of an apprentice and a master silversmith crafting the same kind of vase, one with many slow, imperfect movements and the other with fewer, more accurate movements.⁴

But this narrative has persistently glossed over a more substantive and illuminating difference between embodied and non-embodied knowing. This study aims to show that for Aquinas, embodied and non-embodied knowing are *different kinds or modes of cognition altogether*—like ϕ -ing and ψ -ing—because the *distinctive causal genealogy* of embodied vs. non-embodied intellectual acts *results in experiences that have fundamentally different structures*. For medieval thinkers, universals come in different kinds, and embodied vs. non-embodied knowing are the different modes of cognition that correspond to different kinds of universal. As a result, the activity of an embodied intellect is fundamentally incomplete without the concurrent activity of imagination—which sheds new light on why Aquinas describes embodied knowing as a mode of knowing “by turning to phantasms.”

As I will show, then, that although embodied and non-embodied knowing do have certain features in common that warrant their both being called “intellective” at some generic level of abstraction, we should think of them as different kinds of knowing, in the manner that knowing in general is different from, e.g., hearing or seeing.⁵ Or to put it in the closest contemporary terms (merely as a useful heuristic and without suggesting

intellectual light. ST I 58.3 is typical; see also I 55.2c, I 58.4–5. The process is described extensively in Kretzmann, “Infallibility, Error, and Ignorance,” 185–193; Pégahaire, *Intellectus et ratio* also remains a useful treatment. Another difference that Aquinas sometimes mentions also seems to indicate the defectiveness of embodied cognition: namely, our intellects are intermittently active, whereas angels are always actually understanding. The reason is that the human intellect is by nature a potency for intelligible form and must therefore be activated, whereas “in angels there is no potency bare of act,” because angels are innately formed by all the intelligible likenesses of natural beings; see ST I 53.1 ad 3; see also I 55.2, I 54.4, I 58.1, and I 84.3 ad 1.

⁴For this reason, Bazán has recently criticized Aquinas for tending “to undervalue human nature by unfairly comparing it to hypothetical superior realities,” and proposed that scholars should avoid these comparisons (“On Angels,” 80). But recent research has shown quite the opposite, i.e., that the full scope of medieval philosophical thought requires scholars to engage with medieval angelology, where crucial thought-experiments for medieval philosophy of mind take place. See Nani-Suarez, *Connaissance et langage*; Perler, “Thought Experiments,” 143–153, as well as the other essays in the same volume; and the essays in Hoffmann, *Companion to Angels*.

⁵Aquinas has distinctive ways of dividing genus-species relationships which affect the analysis here. For the precise way in which angelic intellection and human intellection fall into a common genus, see Cory, “Is Anything in the Intellect That Was Not First in Sense?,” 126–136. Note that I am not denying that Aquinas differentiates human knowers from angels in terms of the quantitative “scope of a single act” criterion. My point is just that this criterion is the one that he uses more broadly to set up a hierarchy of perfection among intellectual entities (differentiating not only human knowers from angels, but one angel from another), and does not constitute the fundamental difference between embodied and non-embodied knowing.

that Aquinas subscribes to the underlying framework): These are not instances of the same kind of mental state with different contents. Rather, they are two different kinds of mental states altogether. Certainly I am not denying that embodied knowing ranks as a less perfect kind of intellectual activity for Aquinas. Aquinas's ontology allows for a ranking of perfection among kinds, so that, e.g., horses are a more perfect kind of animal than oysters. My contentions here are just that although our knowing is an immaterial act, it has a *distinctively embodied mode*, and that the embodied mode of knowing is distinguished by the kind of universal it grasps. From that distinctive character it follows that embodied knowing is a less perfect mode of knowing than other modes. (Similarly, there is something distinctive of horseness and something distinctive of oysterness, from which follow their different positions on the scale of animal perfection.)

This study, then, is mainly concerned with Aquinas's answer to the first puzzle mentioned above: Whether our embodiment leaves a distinctive mark on *all* our cognitive experience, including any immaterial cognitive activities, or whether our immaterial activities could just as well occur in a non-embodied mind. In the first two sections, I will explore Aquinas's theory of multiple kinds of universal, and show why different kinds of universal are grasped by different kinds of mind. The third section appeals to the unique features of abstracted universals to explain why embodied knowing necessarily "turns to phantasms" (and what such turning means). The fourth section sketches the contribution that embodiment makes in "what is it like" for us to know.

But in the course of the investigation, we will also get some clues as to Aquinas's position vis-à-vis the second puzzle, i.e., whether non-embodied (angelic) minds can have anything like our experience of hearing music or feeling the warmth of a fire. And so the fifth section considers this issue briefly. Note that throughout, by "knowing," I mean "knowing extramental realities," since self-knowing or knowing God introduce further complications that unnecessarily muddy the waters.

1. *The Origin of the Species? Creative, Emanated, and Abstracted*

In order to cognize anything, a cognitive power must be "formed" in the right way: Aquinas calls the forms of sense and intellect "species," and the forms of imagination "phantasms." Now one of the founding principles of Aquinas's cognition theory is that cognition requires likeness. In order to cognize *x*, the cognitive power's form must be a likeness of *x*: An intellect must become treeish—acquire a treeish form, i.e., the intelligible species "tree"—in order to cognize trees.⁶

Now the notion of "likeness" operative here is not a narrow psychological notion of representation, but a broader metaphysical notion rooted in Aquinas's broader theory of causation, according to which "every agent

⁶E.g., ST I 12.2; DV 1.1.

makes something like itself" (*omne agens agit sibi simile*).⁷ Agents have the active powers they have in virtue of what they are, and their actions are the expressions of their being: An agent can only give what it has, and conversely, there is no likeness without a causal history to back it up. What agents *do* is induce in the patient a form like their own. In some cases, as when hot water heats spaghetti, the form induced in the patient is of the same kind as the agent's form (physical heat). But forms can be alike without being of the same kind: Aquinas distinguishes between a fire igniting a tree (making the wood take on the same kind of form as the agent's), vs. a fire heating iron until it is red hot (making the iron merely "fiery").⁸ Similarly, the intellect can be immaterially horsified without becoming a real material horse, and God's creatures reflect the divine essence without being themselves divine.⁹ (Note that technically, "likeness" or *similitudo* describes the relation of one form to another form,¹⁰ but Aquinas more loosely transfers the name "likeness" to the forms themselves that are in the likeness relation; it is in that sense that he calls the intelligible species a "likeness" of extramental natures.)

So in claiming that cognition requires the likeness of cognizer and cognized, Aquinas is committed to the view that cognition requires some sort of causal story that accounts for the relevant likeness. The causal relationship is normally direct, and might go either way. On the one hand, the object might be the cause that makes the cognizer like itself (e.g., very roughly, a horse horsifies my intellect, enabling me to know what a horse is). In that case, the cognizer is *like the object*. On the other hand, the cognizer might be the cause that makes the object like itself (e.g., very roughly, Frank Lloyd Wright has a house-idea which he expresses as Fallingwater). In that case, the object is *like the cognizer*. Either way, likeness in one direction or the other is necessary for cognition.¹¹ (This schematic poses special problems for angelic knowing, as we'll see in a moment.)

As a result, for Aquinas, the causal history of a given case of cognitive likeness is extremely important. In a localized way, the causes that make us intellectually "like" themselves constrain our intellectual activity: My intellect cannot be treeish (enabling me to know trees directly) if no tree has ever acted on my cognitive powers. But as we will see, Aquinas goes a step further to hold that different kinds of knower-known causal relationships

⁷See, e.g., *In Metaph.* VII 8, where Aquinas also accommodates the obvious exceptions to this principle by noting that it applies only to primary, *per se* causation (and not, e.g., to instrumental causes or causes related to their effect only accidentally).

⁸*Compendium theologiae* I 68.

⁹*In IV Sent.* d.44 3.1 ad qc.3, ad 2; SCG I 29; ST I 4.3 ad 4.

¹⁰*In Metaph.* V 17.

¹¹ST I 14.5–8, I 15.1–3, I 44.4 ad 2; *In II Sent.* d.3 3.1 ad 2, DV 2.3; SCG IV 11. Note that objects can also be known indirectly when their *effects* act directly on the cognizer. The intellect, thus assimilated to the *effect*, can then reason to the cause, as when I surmise a predator's presence when observing the agitation of a flock of birds.

result not only in differences in what is included in the act of knowing, but also in *how that knowing is internally structured*, so to speak.

For what follows, it will be important to understand how these principles are applied in specific cases. So let us briefly spell out how the theory works for the three kinds of intellectual knowing that Aquinas identifies: our embodied knowing, angels' non-embodied knowing, and God's non-embodied knowing.

In the case of embodied knowing, intellectual likeness is caused by a physical object assimilating the intellect to itself. An apple's color, texture, and smell affect our physical, living sense-organs, causing sensory likenesses that in turn affect the internal senses, culminating in a refined internal likeness, called a "phantasm," of a particular apple in the imagination. Now the phantasm is a bodily form (of the brain) and hence cannot act on the immaterial intellect by itself. It receives a boost in causal power, however, from the soul's immaterial intellectual light (the agent intellect), so as to cause an immaterial likeness of itself, universal 'apple,' in the possible intellect. Aquinas calls this causation of immaterial likeness "abstraction," and he calls the intellect's resulting abstracted likeness to "apple" an "intelligible species." This abstracted intelligible form makes the embodied intellect be like "apple" in a universal way, without indexing to any particular apple. (The reason for this departicularization, as I've argued extensively elsewhere, is *not* that the intellect actively separates common features from particular features, as is typical for abstractionist theories; rather, the loss of particularization is rather an incidental effect of the causal process whereby material things cause immaterial likenesses in intellects.)¹²

Because physical entities can act only on other physical entities, the mediation of the external and internal corporeal senses is essential to abstractive cognition. And thus only an embodied intellect can cognize by *abstractive likeness*:

Abstractive likeness: *Int* knows *x* by abstractive likeness if and only the form whereby *Int* knows *x* is caused by *x* acting through sense and imagination (through the power of the agent intellect).

Since only a material thing can act on sense, evidently only a material thing can cause an abstractive likeness. An abstracted species' "direction of causal dependence" thus faces toward the physical world, orienting the embodied intellect toward phantasms and ultimately toward physical individuals—and it properly tends toward a certain mode of use, as will become clear in §3 in discussing Aquinas's "turn to phantasms."

With respect to non-embodied intellects, however, a difficulty arises. According to Aquinas's general theory of causation, entities on a "lower

¹²This paragraph summarizes the interpretation of abstraction defended in Cory, "Rethinking Abstractionism."

rung” of the ladder of being cannot act on entities on a “higher rung.”¹³ The reason is that in moving up the ladder of being, a thing’s agency becomes more powerful, and its potential to be affected decreases. At any given level, the degree of agency and potency are coordinated such that entities on the same level can affect each other “horizontally.” Hence acting “downwards” is unproblematic: The agent is more powerful, and the patient more susceptible, than is strictly necessary. Conversely, acting “upwards” (including physical bodies acting on immaterial intellectual powers) is impossible: The lower agent is not powerful enough relative to the lesser susceptibility of the patient. For embodied minds, the difficulty is overcome precisely by embodiment and the causal power of the agent intellect: Human bodies are susceptible to the agency of other bodies, allowing apples to act on us in the first place; from there, sense and imagination serve as refining intermediaries that make the received physical apple-form apt to be abstracted by the immaterial agent intellect. But angels and God lack any apparatus for being affected by an apple, so apples cannot cause either God’s or angels’ thoughts about apples.¹⁴ Moreover, for Aquinas, angelic intellects are arrayed along a scale of increasing intellectual agency in such a way that there is only one angel at each “level.” So it is also impossible for lower angelic intellects to induce intelligible likenesses in higher angelic intellects.¹⁵ And since God is pure actuality, nothing at all can act on God’s intellect.

Nevertheless, Aquinas follows a long tradition of Greek and Arabic thought according to which non-embodied minds *must* know what is below them: It is unacceptable to construe minds as increasingly ignorant of reality the more powerful they are. So he needs a different way of establishing knower-known likeness, in order to allow for “knowing downwards.” For Aquinas, the problem is, in a way, easier to solve with respect to God than angels, because God has a causal relationship with everything that is lower than himself. So (since every agent makes its patient like itself), all creatures are like God, and this likeness is sufficient for God to know creatures without being causally affected by them.¹⁶ In other

¹³ST I 79.5 ad 1; I 84.6c and ad 2; SCG I 65, III 84. For puzzles about human and angelic cognition generated by this principle, see ST I 84.6.

¹⁴See ST I 55.2 ad 2.

¹⁵ST I 106.3 (and see I 106.1 on what it means for one angel to enlighten another). The situation with inter-angelic knowledge is somewhat more complicated than this summary might suggest. Aquinas admits in I 56.2 that since angels all belong to the same intellectual genus, any angel can know any other “by its essence,” i.e., by the natural likeness that one angel has to the other (though it is unclear whether Aquinas thinks this would be sufficient for being acquainted with the other angel as an individual). Aquinas also allows that any angel can disclose its thoughts to any other other regardless of hierarchical order, but since this angelic “speech” merely removes the obstacle to knowledge and apparently does not involve any causal action of the “speaker” on the “listener’s” intellect (I 107.1, ad 1; 107.2), it does not violate the principle that the lower cannot act on the higher.

¹⁶See ST I 14–15; and *In I Sent.* d.36; DV 2.1–5 and 3.1–3; SCG I 45–55, with discussion in Doolan, *Aquinas on the Divine Ideas*; Wippel, *Thomas Aquinas on the Divine Ideas*. On the divine likeness in creation, see ST I 93.

words, the likeness whereby God knows creatures is of the second kind mentioned above, caused by *the knower* who brings into existence objects like himself or herself. In these cases, the form whereby *Int* causes and thereby knows *x* is called an “exemplar.” So let us call this kind of likeness “exemplar likeness”:

Exemplar likeness: *Int* knows *x* by exemplar likeness if and only the form whereby *Int* knows *x* is the form whereby *Int* brings *x* into existence.

For Aquinas, God’s idea of *x* is an exemplar of *x* only if it is *actually used* to bring *x* into existence. God does not create everything that he could create but knows the full extent of his power to create. Thus for Aquinas, some of God’s ideas—those of non-created possibles—are not properly “exemplars.”¹⁷

Aquinas draws an analogy between God’s exemplar knowledge of creatures and the human artist’s exemplar knowledge of his own products. For instance, inasmuch as Fallingwater is the realization of Frank Lloyd Wright’s architectural idea, Wright can enjoy practical knowledge of Fallingwater even in the absence of any corresponding sensory experience, without visiting the site at all. Still, there is an important difference between God’s exemplar knowledge and human practical knowledge. God’s exemplar knowledge extends to individuals in their concrete existence, whereas Wright’s practical knowledge of Fallingwater does not (what exactly this means, we shall see in §2). Moreover, human artistic ideas are themselves the result of recombining and rearranging images and abstracted species acquired through sensory experience. Thus although our ideas, like God’s, can be patterns for new artificial forms, human exemplar knowledge operates within a broader framework of abstractive likeness, dependent on sensory experience.

It is important to keep in mind that because likeness tracks causal dependence, exemplar likeness runs in the opposite “direction” from abstractive likeness. Although Aquinas allows that in our ordinary speech we frequently speak of God’s Ideas as “likenesses” of creatures, strictly speaking it is *creatures* who are “like” the divine essence. Creatures are the realizations of the “divine Ideas”—which are nothing other than the divine essence itself, considered in different ways as the exemplar that different creatures are like. And thus God knows all creatures not insofar as he is like them, but insofar as *they* are like *him*, existing as likenesses of himself, which he causes.¹⁸

This direction of likeness does not affect the *occurrence* of knowing: As long as knower and known have *some* relationship of likeness in either

¹⁷See ST I 15.3. On exemplar causation, see Doolan, *Aquinas on the Divine Ideas*, 1–43.

¹⁸See SCG I 29. Despite this technical precision, Aquinas elsewhere does not hesitate to describe the divine essence imprecisely as the “likeness of” creatures, e.g., ST I 15.2 ad 1.

direction, knowing can occur. But as we'll see shortly, the direction of likeness does matter a great deal to the *way the resulting knowing is structured*.

In any case, the notion of exemplar likeness is of no help to angels, i.e., non-embodied created intellects. Aquinas breaks with many of his ancient sources in denying that angels are creators or even intermediaries of God's creative act.¹⁹ So how can angels know what is below them, if they are neither acted upon by what is below them (so, no abstractive likeness), nor produce what is below them (so, no exemplar likeness)? Aquinas gets around these constraints by attributing to angels a derivative kind of likeness: God causes in them intelligible species that are like his own exemplar knowledge of the entire existing created order:

There is in God the likeness of all things both with respect to form and with respect to matter, insofar as there preexists in him as in the cause everything that is found in things. And for the same reason the species of angelic intellects, which are certain derivative likenesses from the divine essence, are the likenesses of things not only with respect to form but also with respect to matter.²⁰

Although Aquinas describes species as "flowing"²¹ into or "impressed" on the angelic intellect,²² he is not suggesting that God bestows them as a supernatural gift on angelic intellects that would otherwise know nothing but themselves. Rather, for Aquinas, *it belongs to the nature of a created non-embodied intellect to reflect the divine Ideas in "intelligible being," parallel to creatures' reflecting the divine Ideas in their "natural being."*²³ Indeed, Aquinas meticulously distinguishes this natural knowledge from angels' supernatural knowledge of created beings in the beatific vision.²⁴

So we could perhaps think of non-embodied intellects precisely as the created images, in the order of being, of the divine intellect *qua* creative principle. As such, their nature requires that their intellects be innately formed with the likenesses of the divine Ideas, i.e., the exemplars whereby God creates and knows whatever he creates.²⁵

In short, then, the angelic intellect's likeness to other creatures is caused neither by the other creature itself, nor by the knower—but by the divine intellect. We can call this *exemplar-like likeness*.²⁶

¹⁹As he tells us in DV 8.8.

²⁰ST I 57.2 ad 2. See also I 55.2 ad 1; I 56.2; I 89.4; QDDA 20 ad 8; and *In II Sent.* d.3 3.3. Often Aquinas merely says that angelic species are had by participating in God the Creator (ST I 57.2 ad 2; *Super Librum De causis* 10; DSS 14; SCG II 100). On angelic cognition see Goris, "Angelic Knowledge," 149–186; Nani-Suarez, *Connaissance et langage*, 17–76.

²¹*Efluxum* (ST I 55.2 and 56.2; QDDA 20).

²²*Impressa, indita* (ST I 56.2; *indita* is also applied to natural inclinations, I 60.1 ad 2 and 3).

²³ST I 56.2c; ST I 56.3c; ST I 55.2; SCG II 46; QDDA 18 and 20. "L'ange est aussi le miroir intelligible de l'ensemble de l'univers créé" (Nani-Suarez, *Connaissance et langage*, 166).

²⁴See, e.g., ST I 57.5.

²⁵ST I 57.2c and ad 3; SCG II 100; DV 8.8 and 8.14 ad 11.

²⁶See DV 8.8 ad 1.

Exemplar-like likeness: *Int* knows *x* by a exemplar-like likeness if and only if the form whereby *Int* knows *x* is caused by the form that is *x*'s exemplar likeness.

We can call the intelligible forms or species whereby angels know, caused as imprints of God's own knowledge, "exemplar-like species." These species, Aquinas explains, conform an angelic intellect to *all* other creatures—not only to physical creatures, but also other angels.²⁷ Moreover, just as God's exemplar likeness only includes what he *actually* creates, not the infinity of possibles that he could create, so too the second-hand exemplar likeness in angels is a likeness only to what actually exists.²⁸

It is worth emphasizing that exemplar-like likenesses have a peculiar status: not only are they "likenesses of [created] things," but they are also (as one might expect given Aquinas's theory of causation) "participated likenesses of the divine essence"²⁹ and "exceedingly like the ideal reasons existing in the divine mind."³⁰ While one might at first suppose that a likeness of a divine Idea would have to be dramatically different from a likeness of an apple, on Aquinas's view the two roles are not actually in competition. Some angel's exemplar-like species is like apples *in virtue of being like the divine Idea "Apple,"* of which apples are the likeness. Aquinas puts it even more precisely: What angels have is "a likeness of the whole thing inasmuch as it is brought forth by God in an exemplary way."³¹ So it is not just the case that exemplar-like species "apple" and physical apples are like each other because they are each like some common cause (in the manner of two daughters who look like each other to the extent to which they each resemble their mother). Rather, by exemplar-like species, angels are assimilated to apples *under a certain aspect*, i.e., they grasp apples *precisely as* expressions of a preeminent Idea "Apple." (Similarly, one might

²⁷ST I 56.2, and see note 15 above. Interestingly, Aquinas hold that an angel's innate exemplar-like species assimilate it to *all* existing creatures, which would seem to include also angels higher than itself. So although there is no principled reason preventing a higher angel from causing its likeness in the lower angel, it seems that this causation would be superfluous for securing the lower angel's acquaintance with the higher angel. Nevertheless, Aquinas suggests that higher angels do act on lower angels—but not to acquaint the lower angels with themselves, but rather to educate the lower angel concerning what the higher angel sees in a more comprehensive and unified way (ST I 106.1–4).

²⁸Angelic species are likenessness of the "factive forms" (creative likenesses or exemplars) in God (see DV 8.8 and 8.11), and hence know only the "things" (i.e., existing things; see DV 8.12). God alone can know all the possibles that are in his power (ST I 14.5, 9, 12). Angelic species thus apparently track perfectly the state of the created universe as it changes (see DV 8.15 ad 4; ST I 56.2 ad 4).

²⁹ST I 89.4. The Latin here has *participatae similitudines illius divinae essentiae*, and I think there should be no hesitation in reading the genitive as modifying *similitudines*, not *participatae*. When Aquinas wants to describe *A* as that in which *B* participates, he uses adverbs ("participates from/in *A*," *de, ab, ex, in*) or the accusative (participates *A*), never the genitive. In contrast, the genitive is a perfectly normal way of identifying *A* as that "of which" *B* is a likeness.

³⁰*In II Sent.* d.3 3.3; see also DV 8.8 and SCG II 100.

³¹*In II Sent.* d. 3. 3.3 ad 1; see also *In II Sent.* d.3 3.1 ad 2; DV 8.11.

approach Homer's *Iliad* as translated into English by Alexander Pope.) We will see in the next section why this is important.

2. Different Species, Different Universals

This distinction between abstracted species and exemplar-like species is, I contend, central to Aquinas's account of what is distinctive of embodied knowing, as opposed to non-embodied knowing. According to Aquinas, actions are distinguished in kind according to the kind of form that enables the agent to produce such an action. So the act of understanding performed in virtue of an abstracted species is *different in kind* from the act performed in virtue of an exemplar-like species.³² But one might suppose that this difference in kind cannot really be very significant. After all, the difference between the two kinds of intelligible species is simply grounded in the direction of the causal act that produces the likeness that makes knowing possible. In one case, the likeness is caused in the knower by physical objects; in the other, it is caused in physical things by the knower (the Creator). As long as the intellect and object are ultimately united by a likeness relation, why should the *cause* of that likeness matter?

The reason, fundamentally, is that for Aquinas, the cause of an intelligible likeness affects what the intellect is able to understand in virtue of that likeness.³³ Now as readers of Aquinas are aware, he identifies an important difference between embodied human knowing and angelic or Divine knowing: namely, non-embodied intellects are able to grasp material particulars, whereas our embodied intellects cannot (we can only imagine particulars, but not apprehend them intellectually). Aquinas explains that the degree and extent of any effect's likeness to its cause varies in accord with the efficacy of a cause's power to assimilate an effect to itself. When a material object (e.g., Fido) causes its likeness "dog" in my intellect through the phantasm "Fido" acting in the power of the agent intellect, something is lost in translation: The phantasm's restriction to representing "this dog Fido" fails to be communicated to the abstracted species "dog" in the process. The resulting abstracted species is the likeness only of what Fido is, not of Fido in his particularity as *this, existing here and now*. So an abstracted species can only be a likeness to the essences of material particulars, never to those particulars *qua* particular.³⁴ (This is why the embodied mode of knowing is, for Aquinas, an objectively less

³²QDDA 7 ad 1; *In IV Sent.* d.50 1.2 ad 4. This claim seems to conflict with ST I 89.6 ad 2, which argues that embodied and disembodied souls use abstracted species in different ways, because "diversus modus intelligendi non provenit ex diversa virtute specierum, sed ex diverso statu animae intelligentis." But there Aquinas is not denying that kinds of species differentiate kinds of intellection. The point is merely that although the abstracted species naturally provokes a certain kind of intellection ("by turning to phantasms" — see §2 below), nonetheless when disembodiment prevents the conditions for such intellection from being met, the soul can still use abstracted species in a truncated way.

³³See especially SCG I 65.

³⁴ST I 86.1; but note ad 3, emphasizing that the intellect is not in itself incapable of grasping singulars. Rather, the obstacle for us is that *physical singulars* cannot be grasped

perfect *kind* of knowing than a non-embodied mode, although this lesser degree of perfection is not what most fundamentally defines embodied knowing as a distinct kind of knowing.)

In contrast, God causes a creature in its entirety—form, matter, and existence—and continues to conserve the creature in being at every moment of its existence. Hence the creature's likeness to the divine intellect goes "all the way down," so to speak, to the creature's metaphysical foundation. Thus God's exemplar knowledge extends not only to dog-nature, but to Fido and Spot in all their concrete existing-here-and-now singularity. And the same, therefore, is true of non-embodied intellects' exemplar-like species. Hence God's knowledge by exemplar likeness (and therefore angels' knowledge by exemplar-like likeness) goes farther than human artists' exemplar knowledge of their artistic products. Frank Lloyd Wright's exemplar knowledge of Fallingwater causes, and hence extends to, merely the *artificial form* of Fallingwater, and not the matter that constitutes Fallingwater as *this here and now*. So if Wright were to know Fallingwater by practical knowledge from his sickbed, without ever going to see the structure, he would know it merely as "a house of a certain type." In contrast, God and angels grasp Fallingwater *as it is in itself, existing here and now*, with the same immediacy and presence that characterizes our sensory experience of Fallingwater.³⁵

From this distinction, it is tempting to conclude that the difference between knowing by abstracted species vs. exemplar-like species is simply a matter of a quantitative difference in the "scope" of each kind of species. As it seems, abstracted species extend to dog-nature, whereas exemplar-like species extend to dog-nature *plus* the individuating features of individual dogs. Aquinas even seems to suggest as much when he says: "Angels cognize singulars by universal forms, which are, nevertheless, likenesses of things both with respect to universal principles and principles of individuation."³⁶

But such remarks create a misleading impression. In reality, I contend, Aquinas's exemplar-like species are not more comprehensive than abstracted species in some *merely additive sense*. Rather, we ought to think of the difference between these two kinds of species in terms of *apprehending different kinds of universals*. (There is no room here to explore the relationship between the universal that is understood and the intelligible species.³⁷ By "apprehending a universal" I simply mean to refer to a certain kind of cognitive experience without asserting anything about its structure or about the ontology of universals.) Throughout his writings,

through abstracted species. On the "lossy" character of abstractive likeness, see Cory, "Re-thinking Abstractionism," 623–627.

³⁵As summarized succinctly in ST I 14.11.

³⁶For this additive interpretation, see Pégahaire, *Intellectus et ratio*, 55–52; Goris, "Angelic Knowledge," 160.

³⁷See *De ente et essentia* 2.

Aquinas associates abstracted and exemplar-like species with different kinds of universals, in line with a widespread medieval notion of the “threefold universal.”³⁸ His clearest statement on this point appears in the early commentary on the *Sentences*, though the distinction appears also in the *Summa theologiae*:

What is universal is threefold: There is a certain [universal] in the thing, namely, its nature, which exists in particulars, although it is not in them with respect to actual universality. There is also a certain universal which is received from the thing (*a re*) by abstraction, and this is posterior to the thing; and the forms of angels are not universals in that sense. In addition, there is a certain universal that is [directed] toward the thing (*ad rem*), and which is prior to the thing itself, like the form of a house in the mind of the builder; and in this way there are universal forms of things existing in the angelic mind—not as though they themselves were operative, but that they are like operative [forms], as when someone has an operative knowledge [only] theoretically.³⁹

“Universal” in the first sense refers to something *in actual dogs*, i.e., the nature or essence that constitutes this individual as a dog rather than anything else, and which is a real metaphysical part of Fido. Note that properly speaking, for Aquinas, universality (unity with respect to many) is a property of conceptual reality—which is why he adds that the nature in dogs is only a potential universal.⁴⁰

But our business here is with the second and third senses of “universal,” and it is significant for our purposes that Aquinas distinguishes them as different *kinds* of universals. The “universal” in the second sense—i.e., the universal “posterior to the particular” and “received from abstraction”—is what is grasped by means of an abstracted intelligible species: namely, *the essence “dog” conceived without restriction to that particular*.⁴¹ Let us call this an “abstracted universal.”

The “universal” in the third sense—the universal “prior to the particular”—is what is known by angels through their exemplar-like species: namely, *“Dog” as a preeminent causal principle that all individual dogs imitate*. Let us call the latter an “exemplar universal.”⁴²

³⁸Nani-Suarez thus is right to map the difference between angelic and human intelligible species onto different universals: “Cette universalité [des espèces angéliques] n’a peu ou rien à voir avec le concept universel de l’objet que la connaissance humaine abstrait du sensible” (*Connaissance et langage*, 33n3); but her account of the difference, in terms of “totality,” “purity,” “clarity,” and “transparency,” does not escape the impression of mere quantitative difference (*Connaissance et langage*, 30–33). For the medieval doctrine of the “threefold universal,” see Alain De Libera, *Métaphysique et noétique*, 211–264.

³⁹*In II Sent.* d.3 3.2 ad 1; compare *ST I* 55.3 ad 1; *I* 85.3 ad 1.

⁴⁰The common nature that all dogs share exists in each dog as fully individuated (*De ente et essentia* 2; *In I Sent.* d.19 5.1), so he sometimes calls it a potential ‘universal’ (QDDA 3 ad 7).

⁴¹*ST I* 85.1 ad 1.

⁴²Contra Nani-Suarez (*Connaissance et langage*, 30), it seems to me that the general notion of the *universale ad rem* in Aquinas encompasses both the divine Ideas and to angelic species, just as it does in Albertus Magnus (*De Libera, La querelle*, 245–262).

“Knowing the exemplar universal ‘Dog’” refers to the cognitive experience that an angel has when it exercises the exemplar-like species that is a likeness of the divine Idea “Dog” (or *one* of the possible cognitive experiences facilitated by that species—an angel also uses the same species to consider just Fido as an expression of the exemplar universal “Dog,” as we’ll see in a moment). I should note that caution is warranted here, since one might think that in knowing the exemplar universal “Dog,” the angel is simply cognizing the divine Idea “Dog.” Indeed, normally, for Aquinas, to cognize *A* by a likeness directly caused by *A* would be to cognize *A* directly, in a manner analogous to sensory vision. And recall that exemplar-like species are likenesses of creaturely realities only *in virtue of* being likenesses of the divine Ideas. But cognition of God is a special case, since no created likeness to God (including exemplar-like species) can adequately assimilate the creature to the divine essence. So even though the angel’s exemplar-like species are directly caused by God’s exemplar Ideas, these species cannot enable the angel to “see” the divine essence (or the Ideas, which are identical to the divine essence).⁴³ What angels grasp by their innate species, then, is something that is *like* a divine Idea; or to put it another way, their experience of “Dog” is a lesser participation in the divine Idea “Dog” itself, which falls short of direct vision.⁴⁴

So what does Aquinas mean when he says that abstracted and exemplar universals—that which is understood by intellects formed, respectively, by abstracted vs. exemplar-like species—are *different kinds of universals*? It is hard to articulate the difference between them, due (Aquinas might say) to our lack of experience with exemplar universals, which we understand only by comparison to the abstracted universals with which we are familiar. And the temptation is to distinguish them into quantitatively more

⁴³On how angels know God naturally, see ST I 56.3. Note that in ST I 58.6–7, he distinguishes the kind of natural knowledge of creatures under consideration here (which he calls “evening knowledge”) from a supernatural, beatific knowledge of creatures “by the *rationes* of things existing in the Word” (“morning knowledge”); I am grateful to an anonymous reviewer for encouraging me to consider this distinction. In the ST texts, Aquinas describes the angels’ “morning knowledge” of apples as the knowledge of apples that angels have through beholding the divine essence as causal principle of apples. (The difference between morning and evening knowledge is put somewhat differently in the earlier *In II Sent.* d.12 1.3 and DV 8.16–17.)

⁴⁴I am not suggesting that all natural angelic knowing is a *thinking about God*, but rather, that natural angelic knowing is precisely the sort of cognitive experience that an intellect has when it is assimilated *to God* by creaturely forms proportionate to its own nature. Consider Aquinas’s remarks about how angels know God through their natural powers (ST I 56.3). By their own natural powers, he says, angels cognize God by a likeness, i.e., the likeness their own nature bears to him. So in knowing God through their own likeness to him, angels do not “see” the divine essence. But neither is their knowing wholly indirect, in the manner of a viewer who sees something reflected in some *third-party* entity such as a mirror. An angel’s natural knowledge of God is therefore structured in a vision-like way, but is not properly a “seeing” of the divine essence. What Aquinas is describing here is, perhaps, a kind of cognition that falls short of direct vision, but which remains experiential in some sense. One could, I think, plausibly apply the same line of analysis to the situation at hand: namely, when an angel grasps the exemplar universal “Dog,” this is not a direct vision of the divine Idea “Dog,” but a lesser, darkened creaturely approximation of the divine Idea “Dog.”

complete and less complete versions of something univocally universal. But instead, I suggest, we should regard the difference between them as a difference between *two kinds of one-to-many relationships*, or *two modes of universality*.

In other words, my contention is that the crucial distinction here is not merely quantitative, as though an abstracted universal would only include generic “dog” while an exemplar universal would include “dog” + “Fido” + “Spot,” etc. Rather, the difference has to do with the internal structure of the universal—and hence what it means to be a universal, a one-to-many—in the first place. Abstracted vs. exemplar universals relate to the relevant particulars as one-to-many in different ways. An abstracted universal is one-to-many in the sense of being indeterminate with respect to, or in potency to, many determinate entities: It is *indifferently applicable to a set of particulars*. “Dog” as abstracted universal—what we grasp by means of an abstracted species—is the nature that exists in a dog, understood as indifferent to this or that particular dog.⁴⁵ Universality, for the abstracted universal, is therefore a logical property of the conceptualization of common natures that really exist determinately in this or that individual.

Or to put it another way: The intelligible species “dog” represents universally “insofar as it is the likeness of all and leads to the cognition of all insofar as they are [dogs],” applying a uniform account “to all individuals outside the soul” that have this metaphysical part or essence.⁴⁶ In contrast, “Dog” as exemplar universal, i.e., what is conceived through an exemplar-like species, is a “one” that is the *cause of being*—the entire being—of many.⁴⁷ Exemplar “Dog” is the *intensive perfection of dogness, which causes each individual dog as its likeness, and whose being and causal power cannot be adequately expressed by any individual dogs or even by all of them taken together*. Indeed, as it is in itself (a divine Idea), exemplar “Dog” just is the divine essence, “the perfect likeness of all things,” considered as imitated by existing dogs⁴⁸—or speaking more properly, *they are like it*. Considered in this light, exemplar “Dog” is like a Platonic Form (as Aquinas explicitly

⁴⁵ST I 85.2 ad 2.

⁴⁶*De ente et essentia* 2; and *In I Sent.* d.23 1.1, which similarly emphasizes that names for essences refer to something of the individual: either “humanity” referring to a part of Socrates and prescinding from individuality, or “human being” referring to the whole of Socrates but without determination to Socrates. Again, in *In De divinis nominibus* 5.1, Aquinas says that in species and genera such as “man” and “animal,” “comprehenduntur universalia principia in actu, singularia autem in potentia: homo enim dicitur qui habet humanitatem, absque praecisione individualium principiorum.” Universals of this sort are “less determinate” (*minus determinata*, *In Post. An.* 2.16, n. 6) or “in some way contracted,” i.e., bound to what is less than the singular (*quodammodo contractae*, *De subst. sep.* 16). For us to know universally is to know generically, remaining in potency to what is more specific (ST I 85.3, where he traces this potency to the fact that our intellectual knowledge originates in the senses, and that our intellect “proceeds from potency to act”; see also *In Physicorum* I 1 and *In Physicorum* VII 6; *In Meteorologicorum* I 1.1; *In Posteriorum analyticorum* I 38, n. 7).

⁴⁷See DV 2.3 ad 8.

⁴⁸ST I 84.2 ad 3; I 15.1 ad 3.

states⁴⁹), serving as the cause of all dogs as its likenesses in “natural being,” as well as the cause of exemplar-like intelligible species in non-embodied intellects as its likenesses “in intelligible being.”⁵⁰ So angels, whose intellects are naturally formed by exemplar-like species, understand individual dogs precisely as the likenesses of this preeminent cause “Dog.”

The exemplar universal “Dog” that angels grasp by exemplar-like species, then, is not a generic concept that applies indifferently to particulars. It represents neither dog-nature as a metaphysical part of a dog, nor dogness-plus-the-individuating-characteristics-of-all-dogs, nor the set of all dogs. Rather, what angels grasp is the “perfection” of dogness existing more eminently (*eminentius*) or more truly (*verius*) or more excellently (*secundum modum excellentem*) than it does in dogs.⁵¹ Or to put it another way, the angelic concept of universal “Dog” is a concept of Dog-as-preeminent-standard, or Dog as the total cause of all dogs in their individual existence. Consequently, this sort of universal “Dog” does not abstract from, but preeminently includes, the concrete singular reality of every real individual dog that imitates it. There is no reality in Fido that is not more eminently in “Dog” as its cause. Thus for Aquinas, it is precisely because angels are assimilated to the exemplar universal “Dog,” which unifies the perfection of every real dog, that angels apprehend individual dogs “as they subsist in their own natures” individually and materially:

Things are in angelic cognition in just the same way as they flow from God so that they subsist in their own natures. For it is clear that from God, there flows into things not only that which pertains to the universal nature, but also the principles of individuation, and therefore he is the cause of the whole substance of the thing, both respect to its matter and its form. And according to his causing, so too he knows, for his knowledge is the cause of the thing as was said above. Therefore just as God is the likeness of all things by his essence, whereby he causes all things, and by [his essence] he causes everything not only with respect to universal natures but also with respect to their singularity, so too by the species impressed in them by God, angels cognize things not only according to their universal nature but also according to their singularity, insofar as [those species] are certain multiplied representations of that unified and simple essence.⁵²

⁴⁹ST I 84.5; SCG I 54. Elsewhere Aquinas rejects the Platonic doctrine of Forms, but only when taking Forms as creative principles distinct from God, e.g., Proclus’s “gods” (SCG I 51–52, *Super Librum de causis* 10 and DSS 14).

⁵⁰As Doolan points out, Aquinas holds that Fido’s causal principle is God’s Idea of the individual, “Fido”; and Doolan further concludes, on the basis of ST I 15.3 ad 4, that Fido’s causal principle is *not* some more general Idea “Dog” (*Aquinas on the Divine Ideas*, 124–133). Nevertheless, I would suggest that Aquinas’s remarks in that text could equally be taken as implying that the Idea “Dog,” *qua* causal principle of Fido, is identical to the Idea “Fido” (since what God creates is always this or that dog, not dogness as such). This would be consistent with Aquinas’s insistence that for angels, reflecting God, universal knowledge includes knowledge of particulars (ST I 55.2)

⁵¹DV 4.6; ST I 14.6; DSS 16; *Quaestiones disputatae de potentia* 7.7 ad 5.

⁵²ST I 57.2.

So the contrast between the kinds of knowing enabled by abstractive vs. exemplar species can be put as follows (although the quantifying language of “richer, poorer,” or “more, less” must be understood merely metaphorically). The abstracted universal “dog” is “intensionally poorer” than any particular dog. The dog-nature as conceived through an abstracted species is only part of the reality that is Fido, i.e., “dog” is merely “what Fido is.” As we saw above, this partiality is imposed by the causal history of abstracted universals: The phantasms are unable to communicate to an abstracted species their own representational restriction to this individual Fido. Hence there is more to Fido than an abstracted intelligible species can capture. In contrast, the exemplar universal “Dog” is ontologically and intensionally “richer” than any given particular dog that imitates it. What angels apprehend when they grasp “Dog” is something that is ontologically “more real” than the dogs that imitate it, inasmuch as uncreated being “is” to a greater degree than created being; Aquinas insists that the nature of dogness is “more truly” in its exemplar cause than it is in dogs themselves.⁵³ Indeed, neither Fido nor Spot nor all actual dogs could exhaust the ways in which dogs can be like the exemplar universal “Dog,” and the exemplar includes all of them as its real expressions. By analogy: Abstracted universal “dog” is related to Fido and Spot as the concept “color” is related to the determinate colors blue and green. But the exemplar universal “Dog” is related to various dogs as white light is related to blue light and green light, inasmuch as at least phenomenologically, white light appears to be some *one thing from which* blue and green light proceed, which is other than, and not a part of, either of them. (In reality, white light is of course a mixture of all light wavelengths, so in that respect the analogy falls short.)

We can thus see that angelic knowing and our embodied knowing, for Aquinas, are *fundamentally different in structure*. It is not as though angelic knowing consists in grasping an abstracted universal (“dog” abstracted from the existence of real dogs) *plus* a lot of existing dogs. Rather, non-embodied minds have a wholly different mode of access to reality. We experience reality from the bottom-up: Abstract universal knowing is something *added* to our conscious experience of real things. Our grasp of this or that dog or bird as a real existing thing is separable from our grasp of “dog” or “bird” in the abstract. But non-embodied minds experience reality from the top-down; their experience of universality is of a *supereminently existing perfection* as it is expressed in existing things, and of those things as expressions of that preeminent perfection. “Knowing

⁵³See DV 4.4, where Aquinas emphasizes that the truth of a thing is more perfectly found in God than in the thing itself, although a *predicate*, e.g., “dog,” is more properly applied to the thing than to its exemplar (this is consistent with his distinction between abstracted and emanated universals, since predication is a feature of human knowing and hence the predicate “dog” expresses an abstracted universal). On the ways in which Aquinas allows that divine Ideas are “more real” than the creatures that imitate them and comparison with Plato, see Doolan, “Aquinas on Divine Ideas and the Really Real,” 1059–1091.

the exemplar ‘Dog’ is not opposed to knowing Fido—it is the *means* of knowing Fido. The way that angels apprehend Fido is precisely *as a material realization or imitation of exemplar “Dog.”* That is why non-embodied and embodied knowing is different in kind.

To illustrate the difference with the case of sick Fido:⁵⁴ A human veterinarian, with her knowledge of an abstracted universal “dog,” would know what dog health should be and what kinds of physiological failures dogs are liable to suffer. But in order to treat Fido, she needs to use her senses to obtain information about his particular, sensorily accessible, physical states, and apply her abstract knowledge of dog-health to Fido to produce an educated guess of what is wrong with Fido and what might cure him. For the veterinarian’s embodied mind, universal knowledge comes apart from the concrete existence of real dogs, and this knowledge can only be applied by *reconnecting* it with these existing things. In contrast, an angelic veterinarian who knows the exemplar “Dog” begins with the existing *source* of the existence of lesser, dependent dogs: the “one” from which the “many” dogs are, as it were, unpacked. The angel’s knowledge does not have to be applied to the world of existents, because it is *already* a knowledge of what exists: In grasping the exemplar universal “Dog,” the angelic veterinarian already immediately grasps Fido as a created expression of that preeminent reality, and Fido’s sickness, and the appropriate cure—not as additional bits of information alongside Fido’s dogness, but from the top down, unfolded from what is preeminently in the exemplar “Dog.”

This distinction in Aquinas between abstracted vs. exemplar universals resurrects a classical distinction between forms that are posterior to and abstracted from sensory experience, and those that are prior to and the causes of things.⁵⁵ Moreover, the difference in how abstracted vs. exemplar universals relate to particulars turns out to be merely another way of considering Aquinas’s view that the one-way likeness relation between intellect and object runs in different directions for embodied vs. non-embodied cognition, as described earlier. Individual dogs are a likeness of, and hence lesser than and derivative of, exemplar universal “Dog”—whereas the abstracted universal “dog” is a likeness of, and hence lesser than and derivative of, *individual dogs*. Abstracted “dogness” or “dog” is the conceptualization of something real in Fido, a predicate applicable to Fido and others of his ilk in virtue of their sharing a common nature—whereas exemplar “Dog” is the cause of and standard for Fido in his whole being.⁵⁶ The abstracted universal is thus a “principle of cognition only,” in contrast to exemplar universals or divine Ideas, which are,

⁵⁴With thanks to a referee for suggesting this illustration.

⁵⁵See Helmig, *Forms and Concepts*, 208–221; De Libera, *La querelle*, 103–124, 182–185, and 245–262 (curiously overlooking Aquinas’s acceptance of this doctrine). For this distinction in Aquinas’s teacher Albertus Magnus, see Krause and Anzulewicz, “Albert der Große”; De Libera, “Albert le Grand,” 89–119.

⁵⁶On the predicability of the *universale post rem*, see De Libera, “Albert le Grand,” 109.

like the Platonic Forms, principles both of cognition and of being (*principium essendi*).⁵⁷

3. Turn to Phantasms: The Embodied Intellect's Partnership with Imagination

We can now see that the significance of there being two different causes of intellectual assimilation (God causing exemplar-like species that are like the divine Ideas, vs. physical objects causing abstracted species that are like the nature of a dog), is that these causes produce different kinds of universal knowledge. By exemplar-like species, a non-embodied intellect apprehends the exemplar universal "Dog," and in doing so apprehends Fido as a unique if limited expression of this ontologically richer idea. By abstracted species, an embodied intellect apprehends *something of* Fido, the essence that constitutes him as a dog, and that he shares with other dogs. These are differently-structured intellectual experiences, different kinds of mental states.

The effect of embodiment on the human experience of understanding now begins to come clear. Our intellectual grasp of Fido is limited to his membership in a certain kind. If we attempt to consider what it is to be a dog, apart from our experiences of existing dogs, we seem to be trying to grasp something abstract, thinner, more uncertain, and less real than the dogs encountered in sense experience—precisely because an embodied understanding grasps "dog" as an *abstraction from* what really exists.⁵⁸ Universality, as we experience it, ultimately consists in no more than a concept's indifferent applicability to many individuals, because it falls short of capturing their complete being.

With all this in mind, it is now possible to give a new rationale for Aquinas's much-discussed claim that embodied knowers can know only by "turning to phantasms." Interpreters have disagreed about how strictly this requirement holds, and what phenomenon he has in mind. He is taken, variously, (1) to be asserting, as a brute psychological fact, that all our thinking is accompanied by mental picturing,⁵⁹ or (2) more loosely to be describing some sort of pedagogical role of images in our abstract thinking: e.g., that concrete illustrations are useful (but not necessary) in helping us to grasp abstract concepts,⁶⁰ or that our intellects are naturally "oriented" toward imagination.⁶¹

⁵⁷ST I 85.3 ad 1 and ad 4; I 15.1. Aquinas also sometimes calls abstracted universals "universal forms" and the divine Ideas "universal causes" (DV 2.4 ad 7), though these terms also have other usages.

⁵⁸*De spiritualibus creaturis* 9 ad 6, reporting the Aristotelian position that Aquinas accepts. The view is reflected in ST I 85.3 ad 4; as well as I 85.1 ad 1; I 85.2 ad 2.

⁵⁹Loneragan, 'Verbum': *Word and Idea in Aquinas*, 160; and Kenny, *Aquinas on Mind*, 93–99.

⁶⁰Pasnau, *Thomas Aquinas on Human Nature*, 289–295. For Pasnau, the "turn" refers to the experience of coming up with examples and pictures in the process of trying to understand an abstract concept.

⁶¹Kretzmann, "Philosophy of Mind," 142; Klubertanz, "St. Thomas and the Knowledge of the Singular," 148–150.

Elsewhere I argued that Aquinas's account of "turning to phantasms" is *in part* a claim about the embodied intellect's natural orientation to imagination, but that the implications for occurrent abstract thinking remained to be made clear.⁶² I now want to spell out those implications, and my proposal is as follows: For Aquinas, our abstract thinking necessarily includes an imaginative component—but not for psychological or pedagogical reasons, as though the embodied mind needs a constant stream of illustrations in its attempt to digest abstract concepts. Rather, the reason is that the *kind* of abstract thinking that we do (given the kind of universals we know) cannot fully assimilate us to real things without being completed by an imaginative component. In other words, embodiment not only *determines what we know by abstracted species*, but also *shapes the way in which we exercise abstracted species* and understand abstracted universals.⁶³ The way in which abstracted species ought properly to be exercised in an intellectual act—indeed, the only way they can be exercised by an embodied intellect—is what Aquinas calls "understanding by turning to phantasms." So embodied knowing is fundamentally an imagistic mode of knowing (taking "imagistic" broadly to indicate a variety of sensory content, not merely visual content), in the sense that it essentially has an imaginative component. It is not a complete mode of cognition in itself which *also happens to be accompanied* by phantasms.

Let us see how this works. The much-discussed ST I 84.7c tells us why the embodied intellect must cognize by turning to phantasms:

The proper object of the human intellect that is conjoined to a body is the quiddity or nature existing in corporeal matter. . . . But it belongs to such a nature (*de ratione autem huius naturae est*) to exist in some individual, which does not lack corporeal matter. For instance, it belongs to the nature of stone to be in some individual stone (*de ratione naturae lapidis est quod sit in hoc lapide⁶⁴*), and to the nature of horse to be in an individual horse, and so forth. Thus the nature of stone, or of any material thing, cannot be cognized completely and truly unless it is cognized as existing in a particular (*ut in particulari existens*). But we apprehend the particular exclusively by sense and imagination. And therefore if the intellect is to understand its proper object, it must turn itself toward phantasms, so that it may behold the universal nature existing in the particular. If the proper object of our intellect were separate forms, or if the natures of sensible things subsisted apart from particulars as the Platonists thought, then our intellect would not always have to turn itself toward phantasms in understanding.

⁶²Cory, "What Is an Intellectual 'Turn'?", 129–162.

⁶³This distinction between what we know (in virtue of the species) and how we know it (in virtue of the mode of the act) is made clearly in ST I 89.6c.

⁶⁴Obviously Aquinas does not mean that stoneness essentially belongs to this specific individual stone, e.g., the Hope Diamond, or there could only be one stone, the Hope Diamond (see *De ente et essentia* 3). Rather, as my translation attempts to clarify, the quiddities of material entities necessarily exist in *some* individual.

It is significant that Aquinas justifies the “turn to phantasms” by underscoring *the insufficiency of our intellectual assimilation to reality by means of an abstracted species*. What we understand when we grasp abstracted “dog” is the “whatness” or “quiddity” (*quidditas*) that makes Fido be a dog. The quiddity “dog” properly exists only in individual physical dogs and derivatively in embodied knowers. (In contrast, the exemplar universal “Dog” that angels contemplate, properly exists independently from, and prior to, dogs).

As a result, fascinatingly, it turns out that “individualized physical being” is not accidental to “the quiddity of dogs” in the same way that, say, to “belonging to Mrs. Smith” is. It is possible to be a dog without belonging to Mrs. Smith, whereas nothing can *be a dog* unless it is individual and physical.⁶⁵ Consequently, as Aquinas here concludes, the quiddity “dog” that we understand by abstraction cannot be “completely and truly” cognized unless it is cognized *as existing in a materially individuated way in some individual dog*. The “as” (*ut* or *prout*) is significant, since for Aquinas, to grasp something “as existing” is to have experiential access to that thing, analogous to visiting Mont-Saint-Michel in person instead of merely reading about it in a guidebook.⁶⁶ So the point is that a “complete and true” cognition of the quiddity of material dogs requires a direct experiential assimilation to some real dog in which that quiddity really, physically, individually exists (or at least some dog imagined as existing in this way). But such direct assimilation to an individually existing dog is exactly what an abstracted species cannot deliver, for reasons already discussed.

As a result, the abstracted intelligible species turns out, astonishingly, to be inadequate to the task of perfectly assimilating the embodied intellect to its own proper object, the quiddity of material beings.⁶⁷ Such quiddities can be cognized as they are in reality only by cognizing “the quiddity as it is in an individual.” So our “complete and true” assimilation to dog-essence in its real being must be completed by an embodied power that is capable of assimilating to individuals: namely, the imagination. Thus when I cognize “the quiddity as it is in an individual,” my intellect provides the assimilation to the quiddity “dog,” which is cognized “as it is in an individual” only because the imagination provides the assimilation to an individual, physical Fido, by means of the phantasm that is Fido’s

⁶⁵Indeed, Aquinas’s criticism of Plato’s doctrine of Forms is precisely for holding—as Aquinas thinks—that the *natures of physical things* (what we grasp by abstraction) subsist separately from those things, as though individuality and materiality were merely accidental to such natures. This criticism does not exclude a doctrine of divine Ideas, because these are not subsistent versions of abstracted universals, but rather the preeminent causes of physical, individualized dogs. See Doolan, “Aquinas on Divine Ideas and the Really Real,” 1076, discussing DV 4.6, ad 2 s.c.; and Owens, “Thomistic Common Nature,” 211–215.

⁶⁶See ST I 57.2.

⁶⁷ST I 84.7c.

likeness.⁶⁸ The “turn to phantasms,” then, is precisely the activation of an abstracted species in a cognition composed of intellectual and imaginative acts, cooperating in a broader “complete and true cognition of the quiddity of a material entity as it exists” (and note Aquinas’s use of the generic term *cognoscere* instead of *intelligere*, as though to underscore that a “complete and true cognition of the quiddity” cannot be exclusively intellectual).

As a result, we can see that for Aquinas, “to cognize by turning to phantasms” is to use an abstracted species as part of a cooperative activity performed by intellect and imagination together. In this composite activity, the human knower apprehends the quiddity of material entities as existing in some corporeal individual (“the essence of this entity”), with intellect responsible for the quiddity (“the essence of . . .”) and imagination supplying the corporeal individual existence of that quiddity in some object of experience (“ . . . this entity”).⁶⁹ So the turn to phantasms is partly a “cognitive orientation”⁷⁰ in the sense that abstracted species intrinsically refer to existing individuals present to the senses and/or imagination.⁷¹ But orientation does not tell the whole story: The orientation is cashed out in the conjoint activity of intellect and imagination directing the knower’s attention to the quiddities of material things as they exist in an individual, physical way as this or that material individual—jointly grasping such quiddities in the only way in which they can exist. This imagistic knowing, the joint intellectual-imaginative “knowing by turning to phantasms,” is precisely the embodied mode of knowing.

4. What Is It Like To Be an Embodied Knower?

We can now put together a relatively complete picture of how embodiment affects “what it is like” for us to cognize. The essential features of an embodied-type cognition are all traceable to the *intrinsically downward-referring and incomplete character of the kind of universal that is grasped through abstraction from sensory experience*. An abstracted species is congenitally incomplete in assimilating us to real beings. And this incompleteness is remedied by the corporeal power of imagination, which fills in the determinate likenesses to which the intellect is indifferent: “Dog” is the essence of *Fido*. Thus the human knower can only be assimilated to the whole *Fido* by means of imagination and intellect together—the imagination assimilated to *Fido* as this individual existing here and now, and the intellect assimilated to *Fido* as belonging to a certain kind.⁷² Acting

⁶⁸See ST I 85.1c.

⁶⁹Klubertanz explicates our “indirect” cognition of singulars in just this way, but curiously without any association with the turn to phantasms; “Knowledge of the Singular,” 160–161.

⁷⁰Kretzmann, “Philosophy of Mind,” 142; compare Pasnau’s opposing view, *Aquinas on Human Nature*, 289–295.

⁷¹I analyze this reference in terms of Neoplatonic concepts of “likeness,” in “What Is an Intellectual ‘Turn’?”

⁷²ST I-II 4.5; SCG II 60.

together, these cooperative cognitive powers enable the human being to become cognitively assimilated to Fido *as this dog existing here and now*.

To put it another way, we not only first encounter essences individualized as the particulars of sense experience, but also properly understand essences as *what makes those particulars be what they are*. And that is why Aquinas insists that “the human intellect cannot grasp bare intelligible truth [as angels do], for it is connatural to it to understand by turning to phantasms.”⁷³ He does not mean that embodied knowers cannot have genuine thoughts about “dog.” Nor does he mean that embodied knowers must compulsively pair every thought about abstract “dog” with a corresponding image of some concrete dog, while angels are free to exercise *the same concept* without the baggage of phantasms. Rather, he means that *what we grasp when we think by means of the abstracted species “dog”* is ontologically incomplete and indeed not even fully comprehensible, apart from a physical individual. In short, embodied knowing is of its very nature an insight *about* physical individuals: the quiddity of a material individual, the essence of a dog, “what it is to be” a dog, the “whatness” of “this.”⁷⁴

The embodied intellect’s cooperation with and completion by physical mental processes explains why it is accidentally subject to duration and distance, despite the fact that in itself, the intellect does not fall under the categories of place and time.⁷⁵ My intellect is not “in” my brain except accidentally, insofar as it cooperates with my imagination located in my brain. Similarly, although the intellection of “dog” itself takes up no time at all, I can be said to be “thinking about dogs for a long time” because my dog-directed intellectual acts are completed by imaginative acts that do have duration.

5. The Concertgoing Angel?

In the introduction, I mentioned a second puzzle that one might raise in evaluating how embodiment shapes conscious experience: namely, whether the experiences that are linked, in us, to physiological structures are possible *only* for embodied minds. The puzzle can be considered in light of the thought-experiment of a concertgoing angel: Would it have (i) the experience that we call “hearing Beethoven’s Ninth,” or (ii) a different kind of experience of musical sounds, or (iii) no experience of musical sounds at all? Given what has just been said, it seems clear that Aquinas would have to deny (i). Experiences differ in kind, as we have seen, according to the different kinds of cognitive powers. Angels are purely intellectual; so they cannot have the kind of experience that is proper to

⁷³ST I 111.1.

⁷⁴Aquinas holds that disembodied souls can also use previously-abstracted species despite lacking imagination (ST I 89.6). His view seems to be, then, that using the abstracted species necessarily elicits the completing act in the imagination *unless impeded* by the absence of a properly disposed imagination—not that abstractive species can *never* be used without imagination.

⁷⁵ST I 85.4 ad 1; I 85.5 ad 2; I-II 113.7 ad 5; SCG II 96; *In De memoria et reminiscencia* 2.

sense. To put it another way: Since angelic knowing differs in kind from embodied knowing, which differs in kind from sensation, and since angels have no kind of experience other than knowing, angelic mental states must differ in kind from sensation.

Such observations might seem to suggest that Aquinas will have to defend (iii). Indeed, although our focus so far has been on the Aquinas scholarship's tendency to define our embodied intellectual activity in terms of deficiency, if one instead considered non-embodied vs. embodied *conscious experience as a whole*, then one might just as well have come to the opposite conclusion: It looks as though angels must be the ones who are deficient cognizers, since they lack all the bodily cognitive powers that are responsible for so much of the richness of our mental life in Aquinas's theory of cognition. When we try to imagine "what it is like" to cognize as an angel, from our embodied perspective, we must strip away familiar experiences like "hearing Beethoven's Ninth" or "feeling the warmth of a fire." In the end, very little mental life seems to be left, and what there is seems to be excessively remote, abstract, and theoretical. When Aquinas insists that angels cognize particulars such as this symphony performance *intellectually* rather than *sensorially*, it is easy to conclude that their "experience" of Beethoven's Ninth consists in a comprehensive knowledge of all true propositions about it, as though the angel were a recluse who preferred to stay at home extensively reading about Beethoven's Ninth instead of hearing the performance. (Something of this worry appears in some contemporary critiques of Aquinas's account of God's knowledge of particulars.⁷⁶)

But Aquinas rejects (iii): He insists that non-embodied created intellects have all the concreteness and immediacy to a present singular that humans can attain only by sensing that singular.⁷⁷ Aquinas's characterizations of exemplar vs. abstracted universals, above, helps explain why. A purely intellectual mode of experience might seem thin and inadequate only if we project on angels the "thinness" or "abstractness" of our own abstractive understanding, which prescind from the existence of the reality. For embodied minds, it is one thing to know everything about Beethoven's Ninth—and another thing altogether to *hear the performance*. It is one thing to understand what fire is, or what warmth is, or (propositionally) that the fire is warm—and another thing altogether to *feel this fire's warmth, to see, hear, and touch what the fire is like*. So in conceptualizing pure non-embodied intellection, prescind from the sensory-imaginative aspects of our own embodied cognition, it seems that what must be left is radically truncated: an unfinished grasp of "the essence of—". But that truncated insight, demanding completion by the imagination, is proper to an embodied mode of intellectual experience. This is not how angels intellectually experience reality.

⁷⁶See, e.g., Wolterstorff, "Suffering Love," 127–133.

⁷⁷ST I 57.2.

So it seems to me that the view that Aquinas would embrace is (ii): The exemplar universals that angels apprehend do provide an *experience* of particulars such as this particular symphony performance. But their experience must be of another order from our own, since they experience particulars “top-down” as the expressions of a universal exemplar. Assuming that there is some divine exemplar “Music” for the compositions and performances that God causes to exist in our world through human musicians as secondary causes, our concertgoing angel (and indeed any angel) would have *something like* our experience of “hearing Beethoven’s Ninth”—except that the experience would be something other than “hearing.” Again, an angel on a campground would not merely cognize propositionally that this fire is burning at such-and-such a temperature, but would directly and concretely apprehend the warmth of this campfire in an experience analogous to sensory feeling.

The rationale lies in Aquinas’s theory of exemplar universals: The exemplar universal apprehended by non-embodied created intellects is *not an incompletely-apprehended quiddity of a material thing* in the manner of our abstracted universals. Rather, it is a created reflection of the divine Idea “Music” or “Fire,” something ontologically complete in itself, which is not *indifferent to particulars*, but is the *preeminent cause of the entire being of all musical instantiations or fires*, of which particular instances are expressions, down to the very core of their being. Thus an angelic intellectual experience encompasses what fire *is* and what this particular created fire is *like*—not in the manner of two different pieces of information, but as dimensions of a single experience of the being of fire.

Since we do not have experiences of this sort, but approach reality in a different mode through the collaboration of intellect and imagination/sense, it is impossible for us to grasp exactly what this angelic mode of intellectual experiencing is like. The best we can do, perhaps, is to suggest speculatively two ways in which an angelic “what it is like” must differ from ours, given Aquinas’s distinctions between embodied and non-embodied knowing. First, Aquinas notes that because they lack sense and imagination, angels do not encounter material particulars *as potentially intelligible and hence needing to be made intelligible*,⁷⁸ because particulars are already actually intelligible through the divine exemplars that angels grasp. Angels do not experience material particulars, in short, *as lacking intelligibility*. It is, perhaps, therefore not too much of a stretch to conclude thence that angels, on Aquinas’s account, simply do not experience reality at all in terms of the familiar tension between “what seems to the senses” vs. “what is known to the intellect”—a tension unavoidable for embodied knowers and which gives rise to the faint suspicion of the treacheries of sensory appearance that has haunted philosophy since Parmenides.

Second, Aquinas’s account of non-embodied cognition seems clearly to deny to angels and disembodied souls something essential to our

⁷⁸ST I 54.4.

embodied experience of physical objects: namely, the experience of “what it is like to sense,” the “phenomenal feel” of the sense organ’s being altered in perception. Given what we have seen about exemplar universals in Aquinas, it seems that in apprehending the fire’s warmth, an angel would grasp “what hot fire is like,” but not “what it is like to sense heat.” In other words, the angelic experience of the fire would lack our familiar feeling of skin warming up as one approaches the fire; and the concertgoing angel’s experience of a symphony performance would lack the feeling of being shaken by waves of orchestral sound. (Indeed, Aquinas rejects a Patristic idea that the torment of the damned by physical fire consists in an intellectual pain of being burned, for, he argues, only a physical change in the flesh could “introduce” the pain of being burned.⁷⁹) It seems, then, that on his view, the *phenomenal feel of being sensibly affected by a physical object* is intellectually irreproducible.

6. Conclusion

Embodied-type intellection, then, is defined by its causal origin from and orientation toward physical individuals. Our embodied “mode of understanding” (*modus intelligendi*) is “by abstracting from and turning to phantasms,” whereas non-embodied intellects understand “by turning to intelligible things,”⁸⁰ i.e., the divine exemplars. Abstracted species, caused by physical individuals through imagination, assimilate the intellect to “the quiddity of material things,” whose universality (in the sense of indifference to many particulars) leaves our assimilation to reality incomplete without the contribution of the imagination. In other words, the embodied way of grasping essences is to grasp what is indeterminate to particulars, with reference to some particular: Dogness is the essence of a particular, “what it is to be *that* kind of being.” To put it another way, the human being not only *is* a hylomorphic being, but also *knows* quasi-hylomorphically, assimilated by multiple cognitive powers to the *whole of the real Fido* as an individual existent of a certain kind.

Our existence as intellectual organisms with our “hybrid” manner of knowing opens up an interesting possibility in the created order. Abstractive intellection, unique to embodied intellects, is the only kind of intellection that allows material objects to exercise agency vis-à-vis intellects, causing an abstracted likeness of themselves in us with the assistance of the agent intellect. Our intellects thus provide the opportunity for material objects to take on this noble role as co-agents of intellectual insight.

I would like to conclude by highlighting an unresolved puzzle in Aquinas’s account of embodied knowing. The human existence with which we are familiar is an embodied existence, and so our questions about the peculiarly human way of knowing tend to be questions about

⁷⁹QDDA 21.

⁸⁰See, e.g., ST I 85.5 ad 2; I 118.3c. For *modus intelligendi*, see I 57.2 ad 1; I 85.3 ad 4; I 89.1.

knowing in this embodied state. Consequently, it is easy to assume that Aquinas's claims about our *embodied*, abstractive knowing are claims about how a *human intellect* must operate. But I have deliberately avoided making claims about the "human mode of knowing," because it is not the case that Aquinas thinks the human intellect can only cognize abstractively by its nature. The disembodied human soul after death, for instance, becomes de facto a "separated substance," and as we have seen, the nature of separated substances is to reflect the Divine Ideas. So the disembodied human soul now instantly acquires exemplar-like species and understands by those species in the manner of an angel—and Aquinas stresses that the reception of such species is *natural to the human intellect in that disembodied state*.⁸¹

So it looks as though the two kinds of knowing that I have been describing should not be characterized as *the acts of two different kinds of intellects*, i.e., the human and the angelic, but rather as *the acts of intellects that stand in a certain relation (or not) to matter*, i.e., the embodied and the non-embodied.⁸² But that characterization raises unsettling anthropological questions. If the human intellect is naturally capable of either mode of intellection, why do we not receive exemplar species right now in an embodied state? Aquinas seems to suggest that the very state of embodiment *itself* restricts us to an abstractive mode of cognition. "It is impossible for our intellect, in the present state of life in which it is conjoined to a passible body, to understand anything actually except by turning itself to phantasms."⁸³ But if corporeality itself is the culprit, then embodiment seems to place us at a cognitive disadvantage by cutting us off from a "more eminent" mode of intellection, contrary to Aquinas's assertion that embodiment is for the good of the human intellect. And in any case, why should embodiment *prevent* us from receiving species that our intellect is naturally capable of receiving? The situation is complicated by Aquinas's tendency to insist that even the supernatural action of higher intellects on the embodied human knower conforms to this restriction—with a few curious exceptions that seem to follow no obvious pattern. Resolution of these difficulties, however, must be left for a later inquiry.⁸⁴

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⁸¹See ST Ia 89.1.

⁸²Disembodied souls can use their previously-acquired abstracted species, but in an incomplete way, since once separated from the brain, they no longer turn to phantasms. See ST Ia 89.5–6.

⁸³ST Ia 84.7: "[I]mpossibile est intellectum nostrum, secundum praesentis vitae statum, quo passibili corpori coniungitur, aliquid intelligere in actu, nisi convertendo se ad phantasmata."

⁸⁴Thanks go to the Alexander von Humboldt Foundation for supporting the research for this paper at the the Universität Würzburg, as well as to Greg Doolan and Jeff Hause for critiques that assisted me greatly in refining the interpretation, and to Joshua Lim and Philip Neri Reese for assistance preparing the manuscript.

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