

Intentionality and Immateriality

Thomas Aquinas's Universality Arguments for the
Natural Immateriality of the Human Intellect

John Gaius Antturi

University of Helsinki

Master's Programme in Philosophy

Master's Thesis in Theoretical Philosophy

Supervisor: Prof. José Filipe Pereira da Silva

Tiivistelmä

Tiedekunta: Valtiotieteellinen

Koulutusohjelma: Filosofian maisteriohjelma

Opintosuunta: Teoreettinen filosofia

Tekijä: John Gaius Antturi

Työn nimi: Intentionality and Immateriality – Thomas Aquinas’s universality arguments for the natural immateriality of the human intellect

Työn laji: Maisterintutkielma

Kuukausi ja vuosi: Maaliskuu 2022

Sivumäärä: 70

Avainsanat: keskiajan filosofia, Tuomas Akvinolainen, ymmärtäminen, universaalisuus, yleiskäsitteet mentaalinen toiminta, mentaaliset objektit, sielu, kuolemattomuus, moodit (abstrakti), intentionaalisuus, materialismi, abstraktit objektit, abstraktisuus, aristotelismi

Ohjaaja tai ohjaajat: José Filipe Pereira da Silva

Säilytyspaikka: Keskustakampuksen kirjasto

Muita tietoja:

Tiivistelmä: In this work, I argue that there is a non-trivial historical-theoretical context in which a sound, deductive argument for the immateriality of the human intellect can be given entirely based on Thomas Aquinas’s philosophical framework. Aquinas presents several arguments for the immateriality of the human intellect. His preferred arguments for this conclusion are sometimes known as the two universality arguments, because they are based on the universal aspects of human intellectual cognition. According to the argument from the universal scope of intellectual cognition, the intellect must be immaterial because it is capable of knowing the natures or essences of all material substances, which nothing material could do. According to the argument from the universal mode of human intellectual cognition, the intellect must be immaterial because nothing material could cognize its objects in the abstract, universal mode of the intellect.

These two arguments have recently received critical scholarly attention. The scope argument is considered unsuccessful by nearly all of Aquinas’s recent commentators, whereas the mode argument has been frequently defended in the literature. However, the mode argument has also been criticized for an allegedly unjustified inference known as the “content fallacy”: just because something represents universally and thus immaterially, it does not follow that it is ontologically immaterial itself, unless further argumentation is provided.

Several replies have been given to the “content fallacy” objection, but these leave the matter inconclusive at best in my opinion. I think the content fallacy can be overcome, but this requires taking into consideration Aquinas’s views on how the intellect actively causes or abstracts the cognitive representations of the essences it cognizes. The resulting argument, which I call the causal universality argument, is nowhere found in Aquinas’s works in a dialectically satisfying form. However, it is an argument entirely based on Aquinas’s theoretical framework. Thus, even if it is an argument Aquinas never intended to make, it is an argument he could have coherently given without adding anything new to his philosophy.

Demonstrating the immateriality of the human intellect is important to Aquinas for several reasons. For example, it is a part of Aquinas’s larger project of trying to philosophically establish the incorruptibility and immortality of the human soul, which makes the resurrection of the human being at least a coherent possibility from a philosophical point of view. If the causal universality argument is sound relative to its proper theoretical context as I argue, then Aquinas has a good basis on which to argue for these further claims.

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Abbreviations

The following abbreviations are used for Aquinas's original works. Translations are mine unless otherwise indicated.

<i>CT</i>	<i>Compendium theologiae</i>
<i>DEE</i>	<i>De ente et essentia</i>
<i>DPN</i>	<i>De principiis naturae</i>
<i>DU</i>	<i>De unitate intellectus contra Averroeuistas</i>
<i>In DA</i>	<i>Sententia libri De anima</i>
<i>In DSS</i>	<i>Sententia libri De sensu et sensato</i>
<i>In DT</i>	<i>Expositio super librum Boethii De trinitate</i>
<i>In Meta.</i>	<i>In duodecim libros Metaphysicorum Aristotelis expositio</i>
<i>In Phys.</i>	<i>In VIII libros Physicorum</i>
<i>In Sent.</i>	<i>Scriptum super libros Sententiarum magistri Petri Lombardi</i>
<i>QDA</i>	<i>Quaestiones disputatae de anima</i>
<i>QDSC</i>	<i>Quaestio disputata de spiritualibus creaturis</i>
<i>QDV</i>	<i>Quaestiones disputatae de veritate</i>
<i>QQ</i>	<i>Questiones quodlibetales</i>
<i>SCG</i>	<i>Summa contra Gentiles</i>
<i>ST</i>	<i>Summa theologiae</i>

1. Introduction

1.1 The aim of this work

The primary aim of this work is to demonstrate that there is a non-trivial historical-theoretical context in which a sound, deductive argument for the immateriality of the human intellect¹ can be given entirely based on Thomas Aquinas's philosophical framework. This is in keeping with his view, expressed in the *Summa Contra Gentiles* (II.49.1), that the immateriality of any intellectual substance can be demonstrated.² Aquinas's preferred arguments for this conclusion are sometimes known as the two *universality arguments*, because they are based on the universal aspects of human intellectual cognition.³ Demonstrating the immateriality of the human intellect is important to Aquinas for several reasons. To mention just one: it is a part of Aquinas's larger project of trying to philosophically establish the incorruptibility and immortality of the human soul, which makes the resurrection of the human being at least a coherent possibility from a philosophical point of view.

The *argument from the universal scope of human intellectual cognition* or the *scope argument* (SA) is a universality argument derived more or less directly from Aristotle and his

¹ Roughly, the intellect is a capacity of the human soul for abstract cognition. Aquinas uses the terms "mind" (*mens*) and "intellect" (*intellectus*) synonymously (see e.g. *ST* Ia.64.1 co, 75.2 co), so the concept of the mind is a narrower one for him than for modern philosophers, for whom it typically also includes the capacity to perceive. Thus, "Aquinas' philosophy of mind" would be a misnomer for Aquinas's overall theory of cognition. On the general differences between medieval theories of cognition and modern philosophy of mind, including the mind-body problem, see King 2007.

² For Aquinas and his contemporaries, a demonstration is a deductive argument in the form of a syllogism through which one arrives at scientific explanatory knowledge (see Longeway 2021: Sect. 1). For present purposes it suffices to say that any argument hoping to recapture Aquinas's reasoning for the immateriality of the intellect should be a deductive one, and not say, an inference to the best explanation.

³ Aquinas's other arguments for the same conclusion are usually considered either much weaker or simply variations of SA and MA (see Kretzmann 1999 for a critical discussion of the arguments of *SCG* II.49–51. See also Wood 2019: Ch. 5). However, there is one other argument worth mentioning. Briefly, it is based on the intellect's self-reflexivity, i.e. its capacity to know itself completely in one act, which is supposedly not possible for any material being. This argument, which also remains beyond the scope of my discussion, appears twice in Aquinas's works: first, in his commentary on Peter Lombard's *Sentences* alongside his universality arguments; second, in his commentary on the *Liber de causis*. Recently, a reconstruction of this argument has been positively appraised by Therese Cory (2013). See also Adam Wood's (2019: 214–223) discussion of the argument and of Cory's interpretation.

commentators. Briefly, according to SA, the intellect must be immaterial because nothing material would be capable of knowing the natures or essences⁴ of *all* material substances, and to know the essence of material things is the proper object of the intellect – the distinctive feature of the intellect as a cognitive power and of human beings as cognitive subjects. Almost all of Aquinas’s contemporary English-language commentators regard SA as unsuccessful, even in the context of Aquinas’s own theory of cognition. As far as I can tell, Gyula Klima (2001a, 2001b) and David P. Lang (2003) are the only recent commentators who have attempted to defend a reconstruction of it as an independent line of argument. I do not have much to add to the existing literature on SA, so I will keep my treatment of it brief in this work. I agree with Kendall Fisher (2017a) that the main issue with SA appears to be that it ignores Aquinas’s own distinction between the passive nature of the senses versus the active nature of the intellect. But more on that later.

The other universality argument, the *argument from the universal mode of human intellectual cognition* or the *mode argument* (MA) is an argument that appears in Aquinas’s works more frequently than any other argument for the immateriality of the intellect – even more frequently than SA. For Aquinas, the senses grasp only individuals, whereas only the intellect can grasp universals.⁵ Now according to MA, the intellect must be immaterial because nothing material could cognize its objects in the abstract, universal mode of the intellect. Recent commentators such as David Foster (1991), Gyula Klima (2001a, b; 2009), John Haldane (2006), Christian Bruegger (2008), Edward Feser (2013), James Madden (2013), Kendall Fisher (2017), Blaise Blain (2018) and Adam Wood (2019) consider MA promising at the very least and quite possibly sound. I agree that there is something to be said for MA. Its appeal (at least to me) is easiest to show with the following kinds of considerations given by Aquinas:

“[T]he intellect grasps the universal, which is virtually infinite in its scope, because it contains individuals which are potentially infinite.” (SCG II.49.6, trans. Anderson)

⁴ I treat “essence” and “nature” as interchangeable terms in this work.

⁵ Aquinas actually holds a stronger view: for him, the intellect, properly speaking, *only* cognizes universals, and not individuals. However, intellectual judgment also concerns individuals, as when we apply a definition to an individual. For Aquinas’s complex account of how this is possible, see South (1996). For present purposes, however, the weaker claim in the main text suffices: that the intellect *at least* cognizes universally, whereas the senses do not, is all that is needed for MA.

There really is something mysterious in the way that a human being – a frail, material animal (or a limited created being, as Aquinas might put it) – can put itself in touch with a potential infinity of things through a universal, truth-functional cognitive relation.⁶ When we grasp the essence of say, Didi the dog, it is her *dogness* that we grasp. For Aquinas, this dogness is something Didi shares with a potential infinity of dogs – it is *universal*.⁷ However, Aquinas vehemently denies that there are universals anywhere except in the intellect. The only dog essences in mind-independent reality are the ones found in individual material dogs. However, the intellect of a human being is able to see, in principle, what is common not only to all the individual dogs that the human being has cognized but all dogs everywhere and even merely possible dogs. In such an act, there does seem to be something that overcomes, not just our own animal limitations, but the limitations of the entire material world. Aquinas’s term for a universal intellectual representation required for the formation of concepts, the basic ingredient for all properly intellectual activity, if you will, is what he calls an *intelligible species*. That a species exists in the cognizer is the explanatory principle for a cognitive act but species are ordinarily “that by” (*id quo*) which we cognize and not the objects of cognition themselves, unless we reflect on our cognitive representations of things.⁸ Because the species is immaterial, Aquinas argues, therefore the intellect which receives it must be immaterial as well.

Joseph Novak (1987) and Robert Pasnau (1998, 2001, 2002), however, claim that MA suffers from a fatal flaw, known as the “content fallacy.” Just because something represents universally and thus immaterially, it does not follow that it is ontologically immaterial itself, unless further argumentation is provided by Aquinas. In Aquinas’s own terminology, it is the apparently fallacious inference he himself makes from a claim about the *intentional* immateriality of the intelligible species or the possible-intellect-in-act to a claim about its *natural* immateriality.⁹ Many of the above defenders of MA have responded to the content fallacy

⁶ In speaking this way, I do not suggest that cognition should be understood in terms of bridging a mind-word gap for Aquinas (see Cory 2020 for a criticism of this view). The metaphor of “putting in touch” should be understood as a mere placeholder for whatever it is we do when we cognize.

⁷ In a derivative sense, accidents such as *redness* also have universal essences

⁸ Rather, the proper objects of cognition in the case of the human intellect are the universal essences of things external to the human mind.

⁹ The intentional-natural distinction in Aquinas is difficult to define because I do not think the distinction is definable in general terms that apply to all cases univocally (in my view, Aquinas recognizes at least five types of intentional being and four types of natural being in the relevant sense. See 2.2). However, it is easy to give an example: a stone that exists mind-independently “out there” by itself exists naturally, or as Aquinas says it, “in natural being” (*in esse naturali*), or “according to natural being” (*secundum esse naturale*). The stone “has” natural

objection, but no reply has been successful in my opinion. While the main aim of this work is not to review this debate (because I believe that has been adequately done already), I will critique some of the most recent responses to Novak and Pasnau which have not yet been commented on as far as I know.¹⁰

If critics of both universality arguments are right, the arguments cannot be used independently, or together, to establish the conclusion that the intellect is immaterial even in Aquinas's theoretical context. It is simply something that must be *assumed* in Aquinas's metaphysical model of human cognition, in addition to all of the other features of the model.

However, I contend that once certain things about the theoretical context of the arguments are understood, at least one sound argument for the natural immateriality of the intellect can be extracted from Aquinas's model. I call this argument the *causal universality argument* (CA). Briefly, according to CA, the human intellect must be naturally immaterial because it is capable of causing intentionally universal and thus intentionally immaterial species, which no material capacity or power could do. While CA's soundness (if I am right) counts as a kind of victory for Aquinas's theory of cognition, the theoretical context in which CA is sound turns out to be quite a specific and controversial one, and keeping this in mind should curtail the careless employment of CA outside of that context.¹¹

Aquinas distinguishes between an active, distinctively human intellectual capacity, that "makes all things," i.e. abstracts a likeness of the universal essence of a given material substance, and a passive intellectual capacity capable of receiving that likeness and, in a way, becoming the thing cognized.¹² The distinction originates from Aristotle's *De Anima* III, and had spawned a millennium and a half's worth of commentaries and interpretive disagreements by Aquinas's time. Aquinas takes these two aspects of the individual human to be necessary because of the following reasons. Firstly, he accepts the principle that something only goes from potentiality to

being. This is in contrast to the way that the same stone can exist intentionally (or has intentional being, or *in esse intentionali*, or *secundum esse intentionale*), for example, in a cognitive subject, either in a sense power where it is represented as singular, or in an intellectual power where it is represented as universal.

¹⁰ Adam Wood's (2019) recent book-length treatment of the universality arguments is the most comprehensive review of all the replies to Novak and Pasnau. Wood criticizes the replies of Klima, Haldane, Feser, Bruegger, and others (see also O'Callaghan (2015) for a critique of Haldane (2006)). I agree with Wood that all of the replies so far leave the matter inconclusive at best. Wood also proposes his own solution, which I critique in 3.3.

¹¹ Trying to see how much the theoretical context in which CA is sound (assuming it is sound at all) can be expanded (in both a theoretical and historical sense) would be an interesting continuation of the present project.

¹² As Novak (1987) and Pasnau (1998, 2001, 2002a) argue, the qualification "in a way" makes all the difference.

actuality by means of something already in actuality. Secondly, the essences of material objects are only potentially but not actually intelligible for us. Therefore, we can only come to understand the essences of those objects if they are made actually intelligible by something already in actuality. As for how this happens, Aquinas says that the active intellectual capacity “illuminates” the *phantasms* (our sensory representations of singular material objects) so that it can abstract the intelligible species (the intellectual representation of an essence) from the phantasm by making what is potentially intelligible in the phantasm actually intelligible in the intelligible species. The active capacity is what Aquinas calls the *agent intellect* (*intellectus agens*), whereas the passive capacity is what he calls the *possible intellect* (*intellectus possibilis*). Aquinas takes these two aspects of the individual human soul necessary because of the principle that something only goes from potentiality to actuality by means of something already in actuality – and that the phantasm is not actually intelligible but intelligible in potentiality. Now, Aquinas explicitly presents SA and MA as arguments for the immateriality of the possible intellect,¹³ whereas I think Aquinas is actually entitled, in his theoretical context, to the conclusion that the agent intellect is immaterial (therefore, CA is an argument for that conclusion). Once the immateriality of the agent intellect is established, the immateriality of the possible intellect follows from its consubstantiality with the agent intellect, which gets precisely the result Aquinas wants for his larger project.

Still, to present an argument Aquinas nowhere explicitly presents understandably raises questions about what I am trying to accomplish. The orientation of my project is as much historical as it is problem-centered or thematic, because it concerns a problem (and proposes a solution) in a specific historical framework of philosophical thought. I do not present CA *merely* as a philosophical possibility but as a purely philosophical argumentative strategy available to Aquinas, considering his body of work as a whole, had he been pressed on the apparent mistakes contained in SA and MA. Aquinas’s philosophy as a whole can be attacked from a all kinds of directions, of course, but I take it that recent scholarly criticism of SA and MA (which, CA, by implication, has to avoid) consists of a more specific criticism, which judges these arguments unsatisfying even if we grant, for argument’s sake, the more general philosophical assumptions which Aquinas has in mind when he presents his universality arguments. My goal is to present CA as an argument that is sound if these general assumptions are granted, which commits me to

¹³ See, e.g. *In DA* III.7.681.

certain readings of Aquinas, which, in turn, obligates me to provide some kind of theoretical, textual and historical plausibility for reading Aquinas in that way.

This is especially important when it comes to presenting Aquinas's model of abstraction, which I argue is key to understanding his reasoning in the universality arguments. Of course, this must be done in a way that does not assume those features of the model which are currently subjected to methodical doubt. That is to say, I cannot assume that the human intellect is an immaterial power, but as far as I can see, I am free to assume other features of the model (such as the need for an *active* abstractive power and the types of being involved in cognition).¹⁴ I will have something to say for the plausibility and implausibility of those other features in the broader 13th century Scholastic context in which Aquinas writes, but my task is not to justify Aquinas's model as a whole. Instead, my goal is to show that the immateriality of the human intellect follows, without additional assumptions, from these other features of Aquinas's model of abstraction, which recent critics of either SA or MA would also accept for the sake of the argument.

1.2 Thomas de Aquino, OP

Thomas Aquinas (*Thomas de Aquino* (literally "Thomas of Aquino")) (c. 1225–1274) is perhaps the most famous philosopher of the later medieval period – or at least he is the most famous philosopher from that period to a 21st century philosophical audience. While Aquinas was a kind of celebrity in his own time, his intellectual dominance over his contemporaries as a philosopher or as a theologian has been greatly exaggerated in modern popular histories of medieval philosophy. Robert Pasnau (2014: 38), for instance, thinks that it would be more appropriate to think of Aquinas in relation to 13th century European philosophy in a way that is broadly similar way to way we tend to think of Descartes in relation to 17th century European philosophy – a formidable figure, no doubt, but controversial, and not one who attracted many followers among his contemporaries and immediate successors.¹⁵ Aquinas's unparalleled fame among 13th century thinkers is a more recent phenomenon, and is mostly due to the intellectual efforts that

¹⁴ And of course, those features of the model must not be assumed simply on the grounds that the intellect must be immaterial. See 5.1.

¹⁵ Apart from other Dominicans in Aquinas's case (Pasnau 2014: 38).

followed Pope Leo XIII's 1879 publication of the encyclical *Aeterni Patris*, in which he recommended the study of Aquinas's thought to all theologians and philosophers.

Thomas was born circa 1225 in Roccasecca, about halfway between Naples and Rome. In 1274 he died at the Abbey of Fossanova, located about an hour's drive away (for us) from his birthplace. Between those two events, he studied philosophy and theology at Naples, Cologne and Paris. He joined the Order of Preachers (*Ordo Praedicatorum*), better known as the Dominicans,¹⁶ at a young age and was famously mentored by another Dominican, Albert of Cologne (c. 1200–1280) – better known as Albert the Great (*Albertus Magnus*) – a philosopher-theologian, prelate, and posthumously a canonized saint. Aquinas was Regent Master of Theology at the University of Paris twice, and taught widely in the Papal States and elsewhere in Italy. His written works total 8.5–11.5 million words, depending on which works are considered authentic. He was canonized in 1323.¹⁷

Apart from general biographical facts, a few specific things about Aquinas's career are also worth mentioning, because they inform the context of the universality arguments. Aquinas was committed to the view that the intellect (and thus the human soul) is immaterial for both philosophical and religious reasons, but arguing for that conclusion on purely philosophical grounds does seem to have been a priority for him. There is a probable reason for this: in Aquinas's thirteenth century European intellectual milieu, materialism with regard to the human soul was unheard of as a living philosophical option.¹⁸ It is possible that the only philosophical contact to materialism that Aquinas had was of the remotely historical kind, and filtered through the writings of Aristotle.¹⁹ (See Wood 2019: 194–195)

However, several competing views on the nature of the human soul and its relation to the body were advanced by both philosophers and theologians at the University of Paris and

¹⁶ The Order of Preachers (OP), better known as the Dominicans, who have existed uninterruptedly to the present day, were a then newly founded mendicant (i.e. beggar) religious order founded by Saint Dominic in 1216. Dominic had been canonized already by the time Aquinas joined the Order (see Weisheipl 1983: 20–27).

¹⁷ This biographical mini-sketch is a distillation of the one provided by Torrell (1996). For the most recent updates on the authenticity of works of dubious provenance, see Porro 2016.

¹⁸ However, already in the first half of the 14th century, John Buridan held the view that the Aristotelian universality arguments are not conclusive. See 5.1.

¹⁹ Various pre-Socratic philosophers had proposed that *nous* must be constituted of whichever element they considered the most fundamental. In the *Summa Contra Gentiles* (II.49.12), Aquinas does also mention “an opinion which some have endeavored to introduce into the Christian faith by saying that the soul is the effigy of the body, like a body externally represented.” (Trans. Anderson) However, he does not provide any arguments given by supporters of this view.

elsewhere during the 13th century. One principal disagreement concerned the number of substantial forms a human being possesses. There were two main views. According to *pluralists* the human being has three souls: rational, sensitive and vegetative, where the higher soul supervenes on the lower soul but perfects it rather than corrupts it. According to the *unicity* thesis, the second main view, the number of substantial forms a being can possess is precisely one because this is what gives it being and unity (Silva 2012: 98). There were also efforts to combine *universal hylomorphism*²⁰ with both an unitary and pluralist view of the soul. Several competing views on the intellect specifically, and various ways of understanding the distinction between agent and possible intellect, which was sometimes confused by Augustine (354–430²¹) and Avicenna’s (Ibn-Sina, c. 970–1037²²) discussion of the two faces of the soul, as well as Augustine’s talk of the uncreated light as the sole source of certain knowledge. Many authors prior to Aquinas held the human soul to be a substance separate from the body. Aquinas on the other hand considers the human soul to be immersed in matter in this life because this is required for its being the coordinating principle of the operation of bodily organs. When the body is destroyed, however, the human soul becomes a substantial form that exists apart from matter (Dales 1995: 2–4).

Given that Aquinas’s theory of the soul is one of the aspects of his philosophy that earned him a controversial reputation among his contemporaries, it important to understand that following Aquinas into the proper context of his universality arguments is not to merely accept a certain amount of Aristotelian and Augustinian metaphysics and philosophy of nature, the official teachings of the 13th century Catholic Church, and the resultant “Scholastic” framework. Instead, one has to opt in to a far more specific vision of what a human being is, which entails the rejection of many competing theories (such as universal hylomorphism) that were more popular than Aquinas’s own views ever were in the 13th century - *emptor caveat!*

²⁰ Universal hylomorphism is the view that only God is immaterial strictly speaking and everything else consists of matter and form – even angels and the rational human soul. Although angels may be *incorporeal* and thus do not inhere in corporeal matter, according to the universal hylomorphist they do inhere in incorporeal or spiritual matter (Dales (1995: 1–12; Brower 2014: 195). Aquinas rejects universal hylomorphism. For him, a subsistent form such as an angel is marked by its independence from matter – it is immaterial. However, in the context of the universality arguments, for instance, Aquinas often speaks of the incorporeality rather than the immateriality of the intellect (e.g. in *ST Ia.75.2*) to avoid needless engagement with universal hylomorphism when making some other point (Brower 2014: 199). See also note 73 below.

²¹ Tornau (2020).

²² Gutas (2016).

2. The theoretical context of the universality arguments

2.1 Some features of Aquinas's ontological framework

2.1.1 Types of being

Aquinas's theory of cognition interacts with various other doctrines of his. By these I refer to claims deriving from Aquinas's ontological framework, his philosophy of nature (including the best empirical scientific knowledge available to him), his philosophical theology and philosophical angelology. This interaction works in both directions.

On the one hand, Aquinas's theory of the human soul adds a notable exception to his general metaphysical picture: humans are animals and thus material substances, yet, according to Aquinas, our substantial form becomes an incomplete immaterial substance when the body is destroyed. Likewise, we are the only kind of beings with vegetative, sensory and rational powers (other animals are not rational, and God and angels have no need of the first two types of powers).

On the other hand, Aquinas implicitly and explicitly relies on more fundamental claims regarding metaphysics (such as what categories and modes of being there are) and philosophy of nature in his theory of cognition (e.g. his theory of physical illumination, which is important especially for his analogies between illumination and intellectual understanding). Therefore, I will now attempt to lay out the bare minimum of Thomas's general theoretical framework for the purpose of making his theory of cognition and his universality arguments intelligible.

Let us begin with the fundamental types of being that Aquinas recognizes.²³ “Type of being” here stands for a notion inclusive of ontological categories or categories of being, as well as the notions of form and matter and, finally, what Aquinas calls *modes of being* (*modi entis*) or *modes of existence* (*modi essendi*). Aquinas – following the Aristotelian tradition – recognizes at least ten fundamental ontological categories: substance and the nine categories of accidents (quantity, quality, relation, action, passion, place, time, position, and habit) (Brower 2014: 206). God, however, does not fall into any of these categories for Aquinas, although he does speak of God as a substance in an analogous sense. Thus, strictly speaking, the category of substance should be divided into two fundamental categories: namely, God and *created* substances (ibid.: 47).

In a certain strict sense, God and created substances are all that fundamentally speaking exists for Aquinas, since accidents *inhering* in created substances are ontologically dependent on these substances, whereas the substances themselves do not ontologically depend on their accidents (ibid.: 3). Substances and their accidents together compose or constitute *accidental unities*, which are the familiar concrete things we encounter in everyday life, such as *that orange cat lying still asleep under the table*, and which go in and out of existence all the time even while the substance itself (in this case, the cat) survives as the *substratum*²⁴ of those accidental unities (ibid.: 11). This ontological fundamentality of substances has important consequences for what metaphysical explanation consists of for Aquinas. To name one: the actions of their powers and

²³ What follows in section 2.1.1 is to a large extent influenced by Jeffrey Brower’s (2014) reconstruction of some features of Aquinas’s ontology, as Aquinas presents them in his early treatises *De principiis naturae*, *De ente et essentia* and in the first book of *Sententia super Physicam*. To justify my choice of relying on Brower’s reconstruction: firstly, it is necessary to rely on a reconstruction, because “[a]ny presentation of Aquinas’s ontology must be a reconstruction, for Aquinas did not write a cohesive ontology or metaphysics,” as Bruno Niederbacher (2016: 109) has argued and, obviously, an independently justified reconstruction of Aquinas’s entire ontology is not possible within the confines of the present work. But why Brower’s reconstruction? Firstly, his choice of texts is instructive, since Aquinas sticks to the framework formulated in *DPN* throughout his career (Wood 2019: 8), and secondly, because the basic features as reconstructed by Brower seem uncontroversial enough in exegetical terms for present purposes. For criticisms of some details of Brower’s reconstruction, see e.g. Niederbacher 2016 and Cross 2016. In an attempt to remain as neutral as possible in matters of interpretation (unless I explicitly indicate otherwise), I have not included any features of Brower’s reconstruction deemed controversial, since nothing in my argument hinges on such differences as far as I can see.

²⁴ As Brower (2014: 38–39) argues, “substratum” should be applied to Aquinas’s ontology as a functional concept, since it is a role that can be occupied by what contemporary analytic metaphysicians typically call “stuff” (i.e. prime matter in the material world) as well as by what these philosophers call “things” (i.e. immaterial substances in the case of the immaterial world).

proper parts are more appropriately attributed to the whole substance, since substances are fundamental.²⁵

In another sense, however, created substances are ontologically dependent on something for their existence: namely, God, who creates and sustains everything else in existence (ibid.: 3–4). Now, whether substances depend ontologically on anything besides God for their existence depends on the type of substance. For Aquinas, angels are immaterial substances that require nothing besides God’s creative and sustaining activity to exist.²⁶ Besides this qualification, then, the composition of their substance is simple. However, knowledge possessed by an angel, for instance, takes the form of an accident in the knowing angel and thus, angelic substances together with their accidents compose accidental immaterial unities (ibid.: 10–14).

Unlike immaterial substances, material substances do depend on something else besides God, and to describe this dependence, the notions of *form* and *matter* must be introduced. For Aquinas, forms are actualities whereas matter in its broadest sense is the principle for any kind of potentiality. Now, whereas an immaterial substance just is a *subsisting* (i.e. an independently existing) *substantial form*, the substantial forms of material substances are “immersed in matter” (*materiae immersae*)²⁷ and cannot exist without matter (with the exception of the human soul, if Aquinas’s arguments are successful). Just as an accident and the substance in which it inheres constitute or compose a type of ontological complex (namely, an accidental unity), the substantial form of a material substance inheres in *prime matter* and these together constitute another type of ontological complex, namely a substance. In the material world, a substance is a *first-order complex* (since prime matter is the ultimate substratum of the material world), whereas an accidental unity is a *second-order complex* (since it is partially constituted by a first-order complex, i.e. a substance). In the immaterial world, in contrast, we find only first-order complexes, since the subsistent angelic substantial form requires no matter to exist,

²⁵ The intellective act of the human soul is an exception to this, as it is most appropriately predicated of the soul rather than the substance of which it is a part. See e.g. *ST* Ia.75.2 co.

²⁶ Several of Aquinas’s predecessors in the Aristotelian tradition had posited the necessity of so-called separate substances or intelligences, and Christian theologians likewise accepted the existence of immaterial angels on Scriptural grounds. Aquinas also argues that such creatures must necessarily exist (see Kretzmann 1999 for a critique). I will simply assume their existence for the purposes of my examining the universality arguments, since no critique of these arguments seems to be based on denying their existence (and such a critique might not be historically interesting in the first place), and because some critiques (e.g. Novak and Pasnau’s “content fallacy” objection) positively require the consideration of Aquinas’s views on divine and angelic cognition for setting up problems of consistency.

²⁷ See e.g. *SCG* II.68.8.

and is thus the ultimate substratum of the created immaterial world (ibid.: 14). Finally, God is simple in an absolute sense, requiring no metaphysical parts or any external agent to sustain Him in being. Properly speaking, God is not *a being* among other beings at all, but rather “Subsistent Being Itself,”²⁸ or the absolutely ultimate ground of all other being (Brower 2014: 3).

Apart from God, created substances, nine types of accidents, form and matter, Aquinas’s fundamental ontology also features the notion of modes of being, and the way that these modes relate to each other play a key role in his universality arguments. However, how precisely one should understand this notion in Aquinas is a controversial question, not leastly because in Latin the word *modus* simply means “way,” or “manner” and thus, it has not been clear to all commentators whether one should separate a properly metaphysical notion of a *mode* from Aquinas’s looser, everyday way of using *modus* (to signify the way that something is or acts, in a loose sense).²⁹

What is clear is that Aquinas introduces modes of being as an answer to the Parmenidian challenge of dividing being while maintaining that it is one.³⁰ Aquinas offers the ten categories themselves to be examples of categorical modes of existing. In addition, he recognizes a predicable division of being according to the various genera and species of things, and thirdly, general modes of being that apply to each and every being. These are expressed by the so-called medieval transcendentals (“one”, “true”, “good”) (*QDV* 1.1, see also Tomarchio 2001, 589). In another context (e.g. *In Meta* 4.2), however, Aquinas offers a four-fold division of modes of existing: modes which accompany no real being, but exist only in the mind (negations and privations), modes which accompany an admixture of real being and no being (generations and corruptions), modes of being conferring a weak existence (qualities, quantities, properties), and modes of being that confer a solid existence (substances) (Tomarchio 2001, 589). Most importantly for present purposes, in the context of his theory of cognition, Aquinas contrasts the intentional mode of being (*esse intentionale*) of representations *qua* representations with the natural mode of being (*esse naturale*) that is had by the external things actually cognized.³¹ A proper study of modes in Aquinas would be a book-length project, so I will satisfy myself with a

²⁸ See e.g. *SCG* III.19.3., *ST* Ia.4.2 co., *QDSC* 1 co.

²⁹ See Tomarchio 1998, 1999, 2001 for the view that Aquinas’s notion of *mode* is a properly metaphysical one. For the view that Aquinas does not have a properly developed theory of modes, see e.g. Cross 2016.

³⁰ See e.g. *In Phys.* 1.4.1.

³¹ See e.g. *ST* Ia56.2 ad 3 and what I say in 2.2 below.

bottom-up approach tailored to the present need: while remaining agnostic about Aquinas's general theory of modes (and whether he even has one), the best way to illuminate the relevance of the modes of being to the present project is to simply see what role they play in this theory of cognition, which I will elaborate on from 2.2 onwards.

2.1.2 Types of change

Aquinas recognizes two types of change. There is corruptive/generative change in which at least one substance goes out of existence and at least one new substance comes into existence, and then there is accidental change in which a pre-existing substance acquires/loses an accident but remains the same substance before/after (Brower 2014: 57–68). In order to make sense of change, Aquinas not only employs the notions of form and matter but also the closely related notions of *act* and *potency*. These are terms he of course inherits from the Aristotelian tradition.

In *Physics* I.8, in order to solve certain paradoxes about the nature of change and permanence, Aristotle relies on this division of being into *actual being* or *being-in-act*, and *potential being* or *being-in-potency*.³² Parmenides, for example, had denied the reality of change, because it seemed to lead to a contradiction. For Parmenides, change always consists in the coming-into-being of something that was not before, such as an *f*. But an *f* cannot come into being from something that is not-*f*, because then it would come from nothing. Neither can *f* come into being from something that is already *f*, because that would not be change. Therefore, there is no change.

This solution of denying the reality of change has a heavy price, because Parmenides (at least as Aristotle presents him) then has to explain away the apparent reality of change as a sensory aspect of reality that is fundamentally divorced from how things are according to reason. Thus, reason and the senses operate in entirely different realms, and it becomes difficult to explain how our rational capacities are nevertheless employed in the sensory realm.

Aristotle's solution is to say that an *f* comes into being from something that is actually not-*f* but potentially *f*, because although being is one as Parmenides claims, it is nevertheless divided into actual being and potential being. Thus, he is able to coherently explain the apparent

³² This line of reasoning is further elaborated in *Metaphysics* Δ7 and Θ.

reality of change, but in a way that does not divorce the deliverances of the senses and of reason. Whatever the ultimate merits of Aristotle's solution are, Aquinas accepts it and widely employs the resultant principle, i.e. that act and potency are two fundamental aspects of any being that has, or participates in, *both change and permanence*. Prime matter, as a kind of limiting case of the pure principle of change, lacks all actuality (Brower 2014: 113–119). God, on the other hand, being completely unchanging, necessary, and the absolutely fundamental foundation of being itself, is purely actual, and lacking any kind of potency for further actualization.

Besides these two special cases, then, genuine understanding regarding any substance *x*, must take into account both *x*'s ability to change and to remain the same (and the extent of those abilities). A way of doing this is by identifying different ways and degrees in which *x* is potentially something, say potentially *f*; and actually something, say actually *h*. Following Aristotle, Aquinas refers to the substantial form of a substance *x* as its *first actuality*.³³ This first actuality is the most significant determining principle for what kinds of change and permanence the substance can exhibit (and under what conditions), while remaining that very same (numerically identical) substance. Accidental forms, in contrast, are actualities that a substance can receive or lose without thereby ceasing to exist as the numerically same substance.

A living being, i.e. a living substance, is the paradigm of a genuine substance for Aquinas.³⁴ The first actuality of a living substance is associated with a special technical term, namely “soul” (*anima*). The term “soul” (*anima*), thus, primarily, for Aquinas, refers to the first actuality of a potentially living body.³⁵ In contrast to the substantial forms of non-living beings, the substantial form of a living thing, the soul, has the powers or capacities of nutrition and growth (and it has those simply in virtue of being a living being). Powers in general are either active capacities to bring about some kind of change or passive capacities to undergo some kind

³³ By *second actuality*, in contrast, Aquinas refers to the actualization or operation of a capacity made possible by the first actuality. *In Sent.* I.7.1.1.2.: “[...] Inter essentiam igitur et habentem essentiam non cadit aliqua potentia media quantum ad actum ipsius essentiae in habentem, qui est esse; sed ipsa essentia dat esse habenti: et iste actus est quasi actus primus. Egreditur etiam ab essentia alius actus, qui est etiam actus habentis essentiam sicut agentis, et essentiae sicut principii agendi: et iste est actus secundus, et dicitur operatio: et inter essentiam et talem operationem cadit virtus media differens ab utroque, in creaturis etiam realiter, in Deo ratione tantum; et talis actus est generare; et ideo, secundum modum intelligendi, natura non est principium ipsius nisi mediante potentia.”

³⁴ Although Aquinas also claims a mind-independent status for the substantial forms of non-living material beings, the interpretation of his doctrine regarding those is controversial. See Pasnau (2002a) and Stump (2003) for different sides of the debate.

³⁵ Aquinas follows Aristotle in defining “living body” as “organic body,” which means a body constituted by bodily organs. See e.g. *In DA* I.230–234.

of change. Since these powers of nutrition and growth mark the general (i.e. literally pertaining to the real definition of the genus) difference between living and non-living nature, and since their existence is ontologically dependent on the existence of substance with those powers,³⁶ the type of soul that has those powers deserves its own name: the *vegetative soul*. Some living substances, and only some living substances, namely animals, have the powers of the *sensitive soul*, and a further subset of those, rational animals, also have the powers of the *rational soul*.

These sensitive and rational substances are the proper topic of Aquinas's theory of cognition. That is to say: sensitive and rational substances count as *cognitive substances* or *cognitive subjects* in virtue of a claimed *de re* dependence (an equivalence) between there being cognition, and there being some sensory or rational power-in-act. The account, as presented so far, already eliminates the possibility of there being, in principle, a non-biological yet material cognitive subject, such as a sufficiently advanced digital computer, unlike Pasnau (1997) suggests.³⁷

2.1.3 Types of causation

Following the Aristotelian tradition, Aquinas recognizes four types of causes: formal, efficient, material and final, where the material and formal are intrinsic to the thing because they are parts constituting the thing, whereas the efficient and final causes are extrinsic because they are outside the thing (*DPN* 3.42–51; see also Pasnau and Shields 2016: 26–28). These causes are not in competition with each other – rather, they are all explanatory in different ways for Aquinas and by means of them anything can be accounted for. For instance, the efficient or agent cause of a bronze statue is the artisan, whereas the bronze is its material cause, its shape the formal cause and the purpose for which it exists the final cause (*DPN* 4.1–5).

³⁶ Powers or capacities don't float around freely in Aquinas's metaphysical framework – they are always accidents that inhere in a substance, and the substantial form of that substance determines which powers the substance has or can have, in principle (see Brower 2014: 3).

³⁷ Pasnau (1997) claims that either we take seriously the idea that the passive capacity to receive forms intentionally (or rather this passive capacity actualized) is Aquinas's criterion of a cognition, or alternatively we say that Aquinas has no genuinely explanatory criterion of cognition. As far as I can see, the outcome of this issue has no immediate impact on the soundness of the universality arguments, because these arguments rely on a distinction between two types of cognition (sensing and intellection) rather than the distinction between cognition and non-cognition.

Much could be said about Aquinas's views on causation, but one his general principles regarding causation is of special interest in the context of the universality arguments, namely, the principle that that "every agent makes what is similar to itself" ("*omne agens agit sibi simile*").³⁸ According to Cory (2015b), an important proximate source for this view is Averroes (Ibn-Rushd) (1126–1198³⁹) for whom the principle is ambiguous in an important way: "It could mean that the *agit sibi simile* cause somehow shares *its numerically same form* with its effect, or that it activates a *duplicate form* in the effect, i.e., a form that is "like" or the "same in kind" as that of the cause." (Ibid.: 18–19) An example of the former would be fire giving the very same form of heat it has to a thing that it heats. In such cases, the natural mode of being of the cause is likewise given to the patient, and the patient thus becomes a *natural likeness* of the cause. An example of the latter is the way that a red wall can cause my eye to receive the form of redness. In such cases, since my eye does not become literally red, it is not the numerically same form of redness that inheres in the wall, but merely its *intentional likeness*. To explain what this means, I will next apply the general framework sketched here to Aquinas theory of cognition.

2.2 Aquinas's theory of cognition: cognition as a type of change

"Cognition" (*cognitio, cognoscere*) is often taken to be the most general term Aquinas employs for what contemporary philosophers might call *information processing* (see e.g. Foster 1991: 427n35, Pasnau 1997: 12, Stump 2003: 252, Klima 2011: 7–17, Wood 2019: 152).⁴⁰ Although this assumption may not be quite so innocent,⁴¹ it is a useful heuristic, and whatever "cognition" turns out to be for Aquinas, it is, in any case, a reception of a form. Now, following common sense, Aquinas does not think that seeing-Socrates or thinking-Socrates is a numerically different

³⁸ The precise phrase occurs 28 times in Aquinas's works according to the *Index Thomisticus*. For prominent examples see, *In Sent.* II.14.1.2 arg. 3.; *SCG* II.20.3; *ST* Ia.3.3 arg. 2.

³⁹ Ben-Ahmed & Pasnau 2021.

⁴⁰ Although the common meaning of the Latin verb *cognoscere* is approximately "to know," the term has a technical meaning in Aquinas's usage, because it is distinguished from knowing by that fact that cognition can be false, for example, "when the intellect attributes the definition of one thing to some other thing—for instance, if it should attribute the definition of a circle to a man. Hence, the definition of one thing is false of another thing." (*ST* Ia.17.3 co, trans. Freddoso. See also Pasnau 1997: 12).

⁴¹ See Cory 2015b: 59, 2017, 2020 for discussion of the ways in which familiar metaphors may lead us astray in interpreting Aquinas's theory of cognition.

substance than heavily-sleeping-Socrates. Thus, cognition is a case of *accidental* (and not substantial) form reception.

The accidental form in its role as an intentional likeness of an extramental object is usually called a *species* to distinguish it from forms when they are discussed in non-cognitive and non-representational contexts. Since Aquinas characterizes animal, human, angelic and even divine cognition in terms of such likenesses, it should be clear that given the radically different natures of the aforementioned kinds of cognizers, we cannot assume such intentional likenesses to constitute an ontologically unified class of beings. Rather, the various ways in which other ontological distinctions “cut across” this class of intentional likenesses marks out their differences, as I will shortly explain.

This picture is further complicated by the fact that a certain type of intentional likeness, a species *in medio*, does not have to inhere in cognitive subject at all.⁴² In the material world, such species are continuously propagated by all sensible objects in suitable conditions (i.e. when there is sufficient light, an appropriate medium such as air, and so on). The species can then travel through the medium and be received by a sense organ of an animal cognizer. The internal senses (common sense, memory, imagination and the cogitative power) combine the various *sensible species* (visual, auditory, olfactory, etc) received by the outer senses to form a *phantasm* (Aquinas’s term for an inner sensory representation), which represents a particular material cognized object (Cory 2015a: 619). So far, the cognitive process described is roughly similar for humans and other (complex) animal cognizers, and no immaterial intellectual cognition is involved (*ibid.*, 610).

At this point of the story, some interpretive controversies arise. For Aquinas often characterizes the reception of a species in the following way:

“A body (*corpus* [i.e. a material substance]) receives forms according to natural and material being (*secundum esse naturale et materiale*)... But sense and intellect receive the forms of things spiritually and immaterially according to a certain [kind of] intentional being (*spiritualiter et immaterialiter secundum esse quoddam intentionale*)” (*InDSS* 18.204-10).

⁴² Pace Pasnau (1997), according to whose reading any substance informed by such a likeness is a cognizer for Aquinas, in some minimal sense.

As I have mentioned, Aquinas's ontology recognizes both material and immaterial beings, where the latter are distinguished from the former by their lack of dependence on matter for their existence. Superficially, this might seem like a negative characterization of immateriality, but the opposite is true. Such dependence is a matter of degree, and inversely correlated with how powerful the being in question is. The more powerful a being is, the "more formal" or more immaterial it is.⁴³ Since God is infinitely more powerful than any creature and depends on nothing, he qualifies as the most immaterial being (with the qualification that God is not really *a* being at all). Among creatures, angels are the most powerful and thus the most immaterial, since they depend on matter in no way. Although humans as embodied beings do depend on matter, human souls can also exist apart from matter, if Aquinas is right, and are thus immaterial as well.

Surprisingly, even hierarchically "lower" beings such as animals enjoy their share of immateriality. This is because they are sensory cognizers, and are thus able to receive the forms of the things they cognize "spiritually and immaterially according to a certain [kind of] intentional being," as Aquinas says above. However, their substantial forms are not subsistent because, unlike the human soul, their operation depends entirely on the body and are thus destroyed when their body is destroyed.⁴⁴ The interpretive controversy then concerns the precise sense in which sensory cognition should be considered immaterial, if it is also an entirely bodily affair.⁴⁵ Thankfully, this controversy need not be entirely resolved for the purposes of the universality arguments, because Aquinas further distinguishes the kind of immateriality that requires an intellect operating independently from matter, from the kind of immateriality that does not:

"For this reason, we observe, a nature capable of knowing is found in things in proportion to their degree of immateriality. Plants and things inferior to plants can receive nothing in an immaterial way. Accordingly, they are entirely lacking in the power of knowing, as is clear from *De Anima* II. A sense, however, can receive species *without matter although still under material conditions (sine materia sed tamen cum conditionibus materialibus)*; but the intellect receives its species *entirely purified of material conditions (a conditionibus materialibus depuratas)*. (*QDV* 2.2 co, mod. trans. Mulligan, emphases mine)

⁴³ *ST* I-II.9.5; see also Cory 2015a: 638.

⁴⁴ *ST* Ia.75.3 co.

⁴⁵ See Wood 2019: Ch. 4, for a summary of the debate.

Therefore, even if one takes Aquinas's talk about the immateriality of sensing at face value, the resultant immaterialism might be called "benign" (from the point of view of a materialist), compared to the "malignant" immaterialism which results from accepting that the human soul is subsistent due its independent operation.⁴⁶ However, there is a further issue. In this passage Aquinas speaks of sensing as the reception of species "without matter although still under *material conditions*." If something is immaterial, how can it be "under material conditions"? Furthermore, in the passage quoted immediately before this one, Aquinas links material being to natural being, and contrasts it with immaterial being, which is linked to spiritual and intentional being. How to make sense of such varying terminology?

Following Pasnau (1997: 31), I believe the best way to make sense of the relations that these different modes of being have in Aquinas's cognition theory is to look at his theory of divine and angelic cognition, since those forms of cognition are so far removed from the peculiarities of human cognition that they can be only understood through the most general principles of cognition, which Aquinas is thus required to discuss, and which likewise demand that he clarify his terminology.

The most illuminating passage occurs in the first part of *Summa theologiae* where Aquinas discusses the following problem: how can one angel cognize another? According to an objection, this is not possible through a species, because a species representing the substantial form of one angel to another would itself be an immaterial substantial form.⁴⁷ If, say, Michael, in cognizing Gabriel, then possessed the substantial form of Gabriel, how would he remain Michael and not become Gabriel? How can Michael have two substantial forms simultaneously? Human intellectual cognition is also the reception of the substantial forms of material things, because the human intellect cognizes universal essences, whereas the senses cognize only individuals.⁴⁸ In the human case, Aquinas can solve this difficulty by saying that the intellect receives the

⁴⁶ I borrow the terms "benign immaterialism" and "malignant immaterialism" from John O'Callaghan (2015: 61), who introduces them as alternative ways of interpreting MA as Aquinas presents it in *ST* Ia.75.5. Even immersed forms are immaterial in the sense that they are not matter, although they are immersed in matter. This is "benign immaterialism" because such forms cannot survive without matter, so such a human soul would be destroyed when the body is destroyed, precluding the possibility of a resurrection of the numerically same human being.

⁴⁷ Since matter is the principle of individuation (for individual substances sharing the formally identical substantial form), and angels have no matter whatsoever, there can be no such principle of individuation for angels. Instead, the substantial form is the only thing individuating an individual angel from other angels. Thus, every distinct, individual angel is of a specifically different essential kind, and for one angel to know another is for the knowing angel to know the other's essence (Pasnau 1997: 37–38).

⁴⁸ Such a distinction breaks down in angelic and divine cognition (see Cory 2018).

intelligible species of, say, *dog* “entirely purified of material conditions” (see passage above), which distinguishes it from both the dog essences that exist naturally and materially only in actual dogs as well from the sensible species received “without matter but still under material conditions.” However, since an angelic form is already immaterial, there are no material conditions from which to purify it, and thus, the same qualification will not work.

Aquinas replies by clarifying that natural being is not always linked to material being, and neither is intentional being always linked to immaterial and spiritual being (except in the loose, “benign” sense described above):

“One angel has cognition of another through an intelligible species which exists in his own intellect and which differs from the angel whose likeness it is—*not in the way that immaterial being differs from material being, but rather in the way that intentional being differs from natural being*. For an angel is himself a form that subsists in natural being, whereas the intelligible species of him that exists in the intellect of another angel is not a subsistent form, but has only intelligible being there—just as the form of a color has natural being in a wall, but only intentional being in the medium that conveys it [to the eye].” (*ST* Ia.56.2 ad 3, mod. trans. Freddoso, emphases mine)

Since an angel can have both natural being and immaterial being, the natural-intentional distinction⁴⁹ and the material-immaterial distinction turn out to be *orthogonal*, with both distinctions “cutting across” one another (see Pasnau 1997: 38). The result is that Aquinas’s theory of cognition features (at least) four overlapping modes of being, which can be represented with the following diagram (Figure 1):

⁴⁹ That is, the difference between how the form exists in the extramental thing and the form as it exists in the cognitive power that represents the thing, without making the recipient to be like it: like the form of color in the colored material object and the species of color in the eye.

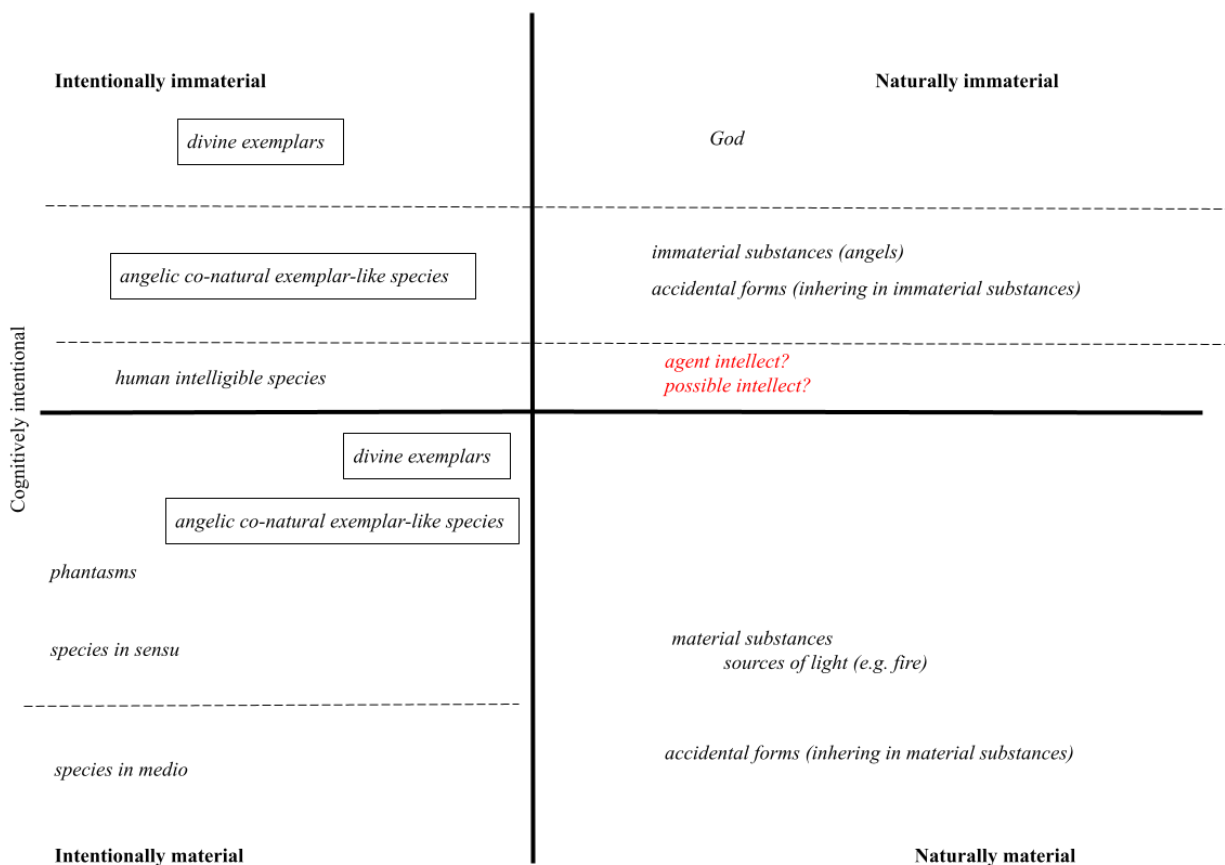


Figure 1: The part of Aquinas's ontology most relevant to his universality arguments can be represented with these two dimensions involving distinctions between five kinds of intentional being, four kinds of natural being, three kinds of material being and three kinds of immaterial being. The classification results simply from applying the orthogonality thesis to Aquinas's basic ontology and his stricter and looser senses of immateriality and materiality in cognitive contexts. Please note, however, that a two-dimensional figure cannot accommodate the addition of a third distinction between singular being and universal being, which would require a three-dimensional model of a cube divided into eight smaller cubes of three overlapping distinctions between two contrasting modes of being: universal/singular, material/immaterial, natural/intentional. Some of the smaller cubes would be voids of conceptual impossibility: there can be no kind of naturally material or naturally immaterial universals, because, for Aquinas, universals can only exist intentionally (see Brower and Brower-Toland 2008: 210). Neither are there intentionally material universals, because intentionally material forms represent *cum conditionibus materialibus*, i.e. the individuating material conditions of the individual.

In the upper right corner we find *naturally immaterial* beings that have both natural and immaterial being: namely, immaterial substances and accidents inhering in those substances. God belongs in this diagram only by analogy. He is, after all, not just a substance among substances. The fact that He is placed in the category of natural and immaterial reflects His absolute independence from other things (see 2.1.1). In the lower right corner we find *naturally material* beings that have both natural and material being: namely material substances and accidents inhering in them. In the lower left corner are *intentionally material* beings that have both intentional being and material being: namely species existing *in medio*, species existing in the sense organs, and phantasms. This reflects the fact that such beings exist “without matter,” as Aquinas says, “although under material conditions.” They are representations of the sensible qualities of individual material beings. Finally, in the upper left corner are *intentionally immaterial* beings that have both intentional and immaterial being. The human intelligible species, representing universal essences, is found there.⁵⁰

As for divine cognition: since God creates everything, He must know everything. A given aspect of His simple nature, which is represented in both the universal natures of created things as well as concrete individual creatures, is simultaneously the principle of God’s knowing both individual things and their universal natures. Thus, the diagram should not be thought to represent God as having a separate intentionally immaterial exemplar for His universal knowledge of, say, dogs, and other intentionally material exemplars of all individuals dogs. Finally, angels are created by God with all the knowledge they possess of other beings, and thus these angelic co-natural species are likenesses of divine exemplars, and the same caveat applies to them (see Cory 2018: 423–427).

⁵⁰ My suggestion then, for making sense of Aquinas’s stricter and looser ways of using these terms is this: in the strictest sense, “material” and “natural” refer only to beings in the lower right corner. For example, in *SCG* II.98.13 Aquinas contrasts the mode of being of immaterial substances with the natural being of material substances. However, in the passage cited earlier (*ST* 56.2 ad 3) Aquinas clearly states that angels have natural being themselves. We can make perfect sense of the *SCG* passage, if it is read in light of this fact, as corresponding to a stricter and incomplete sense of “natural being.” Aquinas’s loosest use of “immaterial being” then corresponds to this strict and incomplete sense of “natural being,” since beings in all the other three corners can be considered immaterial in some sense, if only beings in the lower right corner have material and natural being (this is how Aquinas speaks in *In DSS* 18.204–210 cited above). This way of interpreting Aquinas’s varying use of these terms preserves the coherence of his views, whereas insisting on the impossibility of the overlap of natural being and immaterial being would seem to leave us incapable of making sense of the *ST* passage.

2.3 Aquinas's theory of cognition: abstraction

2.3.1 The need for abstraction

So far, I have only recounted how human cognition works up to the point where the inner senses create a phantasm. How does such a phantasm, which represents only the sensible qualities of an individual object, result in cognition of universal essences, the proper objects of the human intellect? To understand this, we must look at human cognition not only as a type of change, but also as exhibiting different types of causation.

Aquinas divides causal agents into two types: sufficient agents can bring about or cause an effect without the intervention of another agent, whereas insufficient agents cannot. Patients are likewise divided into two types: one kind co-operates with the agent, whereas the other type does not.⁵¹ Once again taking his cue from Aristotle, Aquinas considers the operation of the outer senses to be a passive affair. External things relate to the outer senses as sufficient agents, so once a sensible species is received in, say, the eye (and assuming that the body is in the appropriate state of readiness, etc.), the power of sight is actualized (*ibid.*)⁵². External things likewise relate to the inner senses as sufficient agents, but require the co-operation of these senses:

“[T]he imagination forms for itself likenesses of things that the senses have never perceived, although it forms them out of things that the senses have perceived by putting them together and taking them apart. From gold and mountains we have seen, for instance, we imagine golden mountains we have never seen.”
(*QQ* 8.2.1 co., trans. Davies and Nevitt)

So, a phantasm that is intentionally *f* need not be the likeness of any one individual agent that is naturally *f*. To cause an intentional likeness of *f*, it is sufficient that the powers of the agents acting together somehow (combining, mixing or otherwise interacting) have the intentionalizing powers of something that is naturally *f*.⁵³

⁵¹ *QQ* 8.2.1 co.

⁵² *Ibid.*

⁵³ One could also acquire a phantasm of a golden mountain if humanity pooled its resources and created a naturally material mountain of gold that we could be affected by. This implies that some things that we have never seen can actually come about this way: first in imagination (*esse intentionale*), then in the external world (*esse naturale*).

Finally, external things (i.e. immaterial substances) relate to the intellect only as insufficient agents, because the proper object of the human intellect are the essences of things, and the essences of material substances are only potentially and not actually intelligible to us:

“[M]aterial things are intelligible only because we make them intelligible; they are merely potentially intelligible and are made actually intelligible by the light of the agent intellect... But immaterial things are intelligible in themselves. Hence, although less known to us, they are better known in the order of nature.”
(*QDV* 2.2 co, trans. Mulligan)

If, *per impossibile*, the essence of material substances were actually intelligible for material cognitive powers, then each material substance would know its own essence as God and angels know themselves. Essences would also then be like the sensible qualities of material objects: it is Aquinas’s mature view that colors are actually visible even without light, and light is only required for the color object to be able to affect the eye. If the essences of material things would be similar, then merely it would be as easy to know their essence as it is to see them, when there is light. This cannot be so, because we know from experience how difficult it can be to know the real essences of things (assuming that we can know them at all). Now, another point of interest in this passage points to Aquinas’s account of how we *do* know the essences, namely “by the light of the agent intellect.” As mentioned in 1.1, the agent intellect is a power of the human soul which actualizes the potential intelligibility of the phantasms by “illuminating” them and by abstracting the intelligible species, which informs the possible intellect. But how does it do so?

2.3.2 The “extraction model” reading

The “extraction model” reading of Aquinas’s theory of abstraction deserves to be called a kind of standard reading due to the number of notable commentators (Peter Geach (1957), Anthony Kenny (1993), Norman Kretzmann (1993), Robert Pasnau (2002), and Eleonore Stump (2003)) who have held it. According to this group of views, the psychological operation of abstraction

Indeed, basically any kind of not entirely accidental technological innovation that concerns the material world seems to be like this.

somehow (details vary) “extracts” or “strips away” the essence of the cognized object from the phantasm, but this view has some serious problems.

Firstly, the phantasm only contains information about the accidents of the cognized thing (its size, shape, color, movement, sound, smell, etc.), so how can knowledge about the essences of things be transmitted to the agent intellect through the phantasm? (Cory (2015a: 612) refers to this as the “transmission problem,” see also Pasnau 2002: 317).

Secondly, even if there is essential information concealed in the phantasm, how does the agent intellect know what to extract from it as essential and what to put aside as inessential? This account seems to require that the agent intellect has to have prior knowledge about what information is essential and what is not, if it is to act as a “sorting mechanism” or “extractor” of essential information. Therefore, the account seems completely non-explanatory (Cory (2015: 612) refers to this as “a criteriological problem”, see also Pasnau (2002: 317)).

Moreover, the whole process seems like a psychologically unrealistic, even naïve theory of how we come to know the real natures of things. Even if one accepts, with Aristotle and Aquinas, the controversial claim that there are biological natural kinds, it is, or would be hard to know the essence of, say, the specific kind *horse*, or the generic kinds *fish*, or *whale*, as the rich history of the biological sciences shows. Yet, somehow, according to the “extraction model” reading of Aquinas, the agent intellect is able to just grasp the essence of a horse upon possessing a horse phantasm. It is no wonder, as Pasnau (2002) complains, that the whole extraction model account seems like a non-explanation, or even like an appeal to magic (ibid.: 318).

2.3.3 The “active principle model” reading

In contrast, Therese Cory (2015a) argues that Aquinas’s agent intellect is not a content sorting mechanism at all, but merely something that makes the potentially intelligible “content” of the phantasm actually intelligible. According to Cory, Aquinas uses “abstraction” (*abstractio*, *abstrahere*) in at least three closely related meanings, which his commentators sometimes conflate:

Abstraction_{ai} - “the agent intellect’s activity of generating intelligible species via phantasms, which is the necessary condition not only for one’s initial intellectual acquaintance with “horse,” but also for any further development in one’s understanding of horses;”

Abstraction_c - “the human mode of cognizing essences without being able to grasp what individuates them;”

Abstraction_o - “an intellectual operation in which the intellect deliberately draws distinctions in the process of refining its indistinct cognition.” (Ibid.: 628)

As should be clear, *abstraction_{ai}* is the activity that lies at the foundation of human intellectual cognition for Aquinas, whereas *abstraction_c* is better characterized as a result of this activity. Cory invites us to consider, as an example, how this process might work in the case of a human being who has never seen a horse before and who now perceives Marengo, Napoleon’s gray stallion who is fearless in battle and capable of neighing. Assuming that all the appropriate environmental and bodily conditions are met, the agent intellect of this human cognizer could generate, together with the phantasm, the intelligible species: *a kind of thing with four legs and a mane that is gray, fearless in battle, and capable of neighing* which is an intentional likeness of Marengo’s horse essence. This is all that *abstraction_{ai}* is, a mere departicularization of the content of the phantasm, and not a determination of this content, for the phantasm itself determines the content (Cory 2015a: 626). *Abstraction_{ai}* only produces an *indistinct* and *confused* grasp of what the real definition of a horse is,⁵⁴ and subsequent observations and reflection on those observations as well as one’s background knowledge can help rule out various things as parts of Marengo’s essence (for example, judging Marengo to belong to the genus *animal* because he seems to breathe, move itself, etc.; or observing a horse of another color and then intellectually judging it as essentially the same as Marengo, and then concluding that horses are not essentially of any particular color).

⁵⁴ As Aquinas says: “Just as the confusion of colors causes indeterminacy and confusion in the act of the power of sight, so too the confusion of the phantasms causes a certain confusion in the act of the intellectual power; which is why children at the beginning have confused cognition, and afterwards through the passage of time they cognize each thing distinctly.” (*In Sent.* II.20.2.2, trans. Cory 2015a: 635–636)

Aquinas thus recognizes intellectual cognition and grasping of essences to be a very incremental and tentative process, where *abstraction_{ai}* plays an active, necessary but limited role, because it is dependent on the intentionally material and particular phantasm for the content of the intelligible species. Somewhat misleadingly, Aquinas also speaks of a “first intellectual operation”,⁵⁵ which might sound like *abstraction_{ai}*, but in fact refers to a specific type of *abstraction_o*, namely the *abstraction_o* of a whole from its parts, in which the parts of the whole that are not parts of its essence are left out, but this requires *abstraction_{ai}* already to have occurred, since the intellect has an indistinct intelligible species on which this “first intellectual operation” is performed.

With these distinctions in mind, we can proceed to a quick analysis of what goes wrong in most readings of Aquinas according to Cory. When what Aquinas says about *abstraction_{ai}* is understood to apply to *abstraction_o*, the process does seem obscure, non-explanatory and even magical. If *abstraction_{ai}* is not assumed to have occurred already, how could the intellect engage in *abstraction_o*? Ignoring this distinction between *abstraction_{ai}* and *abstraction_o* is, according to Cory, one of the main mistakes of the proponents of the extraction model reading. According to their reading of Aquinas, the agent intellect must somehow extract an essence from the phantasm, but this seems to be impossible due to the transmission and criteriological problems. Cory’s reading avoids these problems because *abstraction_{ai}* does not separate the essential from the accidental. Rather, the “content” of the phantasm is immaterialized⁵⁶ and thus universalized to represent the object as a member of a *kind* (e.g. “a kind of thing that is gray, has four legs, etc.”).

Cory argues that the key textual evidence for her interpretation has been hidden “in plain sight” (ibid.: 607) in Aquinas’s characterization of the agent intellect as an “intellectual light.” This is seen by the aforementioned commentators as merely metaphorical, whereas Cory considers it to be a precise technical analogy adapted from Avicenna (Ibn-Sina) (and from Averroes (ibid.: 608; see also 2015b).⁵⁷ This technical analogy enables Cory’s active principle

⁵⁵ E.g. in *In DT* 5.3; as cited in Cory 2015a: 629.

⁵⁶ In the context of the universality arguments one must add the qualification that it *intentionally* immaterializes to avoid circularity.

⁵⁷ Cory (2015a) does not provide a precise definition of the technical vs merely metaphorical distinction, but my own interpretation of this difference is that, at least in this case, the “intellectual light” being a precise technical term means that we are allowed to import, from an analogous physical model of illumination: 1) certain formal aspects of the physical model, 2) at a certain level of generality, 3) while maintaining the univocal meaning (at the level of

model to provide a non-circular explanation for how the intelligible species is formed. Seeing an illuminated material object requires one purely active causal principle (a source of visible light), one partially active and partially passive principle (an object illuminated by that light) and at least one purely passive, receptive principle (the medium, and the power of sight).

Likewise, according to Aquinas and Averroes, intellectual cognition of the essence of a material object requires one active causal principle (the agent intellect, the “intellectual light”), a partially active and partially passive principle (the phantasm illuminated by the agent intellect) and one passive, receptive principle (the possible intellect) (Cory 2015b). Like with sight, the object whose essence is cognized is the causal principle which determines the content of what is cognized. One comes to understand the essence of *horse* primarily by cognizing horses, not cats. The passive principle, in the case of intellectual cognition, is the possible intellect, which is capable of receiving an intentional “likeness” (*similitudo*) of the cognized object’s essence. This likeness is the intelligible species. Now, to complete the picture, an active principle is required. If the material object itself primarily explains *what* is cognized, this purely active principle, like light, is the explanation for why *anything at all* is cognized.⁵⁸

Cory’s “active principle model” reading seems to solve an important problem for Aquinas’s theory of cognition. However, in her treatment Cory deliberately assumes the immateriality of the intellect to focus on the coherence and explanatory power of Aquinas’s model, and she draws no distinction between intentional and natural immateriality. From here on, however, I will not assume the natural immateriality of the intelligible species but only its intentional immateriality (i.e. the fact that it represents the object of cognition as a universal and thus “purified of material conditions”). Thus, according to my characterization, the agent intellect *intentionally immaterializes* and thus *intentionally universalizes* the species. The job of the universality arguments, then, is to explain how the natural immateriality of the intellect

generality specified) of the theoretical terms involved (namely, “active principle”). With a merely metaphorical analogy, one does not necessarily have any determinate answers to how to fill in the blanks with respect to 1 and 2, and will thus not be able to specify the precise sense of the analogy. This is, at any rate, how I see the relevant difference between metaphorical and technical terms in the context of Cory’s active principle model reading.

⁵⁸ Of course, *what* we see also depends on how our environment is illuminated (e.g. in a room with only red lights, everything looks red), but the analogy can accommodate this fact, for Aquinas distinguishes between different types of intellectual lights which allow one to see different things (the “natural light” (*lumen naturale*) of the human agent intellect being the weakest of all lights, cannot independently grasp certain truths about God, for instance, and require the help of a “supernatural light” to be understood by us.) (see, e.g. *SCG* II.154.4).

(which underpins the claim that the human soul subsists) follows from the intentional immateriality of the intelligible species.

3. Aquinas's universality arguments

3.1 On the arguments in general

The two universality arguments appear in many of Aquinas's works. For instance, Aquinas's commentary on Peter Lombard's *Sentences* (*Scriptum super libros Sententiarum*) contains both of the universality arguments as well as a third argument for the immateriality of the human intellect.⁵⁹ *Summa contra Gentiles* features several arguments for the immateriality of the intellect and several variants of MA especially.⁶⁰ However, the most prominent location of the universality arguments in Aquinas is probably in question 75 of the first part of *Summa theologiae*. Aquinas begins what is known as his *Treatise on Human Nature*, i.e. questions 75–102 of the first part, with an inquiry into the metaphysical constitution of human beings. In the previous questions (2–74), Thomas has been concerned mostly with discussing the existence, nature, and knowledge of God, firstly, and of angels, secondly. He now intends to step down one ladder on the ontological hierarchy and establish that human beings are a substance composite of soul and body. What follows in the seven articles comprising question 75 are a set of arguments with which Aquinas attempts to reject some competing views: that human beings are merely corporeal substances like non-human animals, but also the view that we are complete, separate spiritual substances like angels. The conclusion of these arguments is that while the human soul is what Aristotle calls the first actuality of a potentially living body (just as the individual substantial forms of non-human animals are the first actualities of potentially living bodies), the human soul is also a subsistent (i.e. non-inhering) form (75.2), not composed of form and matter (75.5), and a kind of incomplete immaterial substance in its own right. The two arguments

⁵⁹ See *In Sent.* II.19.1.1 co. The third argument remains beyond the scope of my discussion. Briefly, it is based on the intellect's self-reflexivity, i.e. its capacity to know itself completely in one act, which is supposedly not possible for any material being. Recently, a reconstruction of this argument has been positively appraised by Cory (2013). See also Wood's (2019: 214–223) discussion of the argument and of Cory's interpretation.

⁶⁰ See note 3 above.

appearing in 75.2 and 75.5 have become known as Aquinas's universality arguments for the immateriality of the human intellect, because they appeal to the *universal scope* (article 2) and *universal mode* (article 5) of human intellectual cognition in an attempt to prove the immateriality of the human soul of which the intellect is a power.

3.2 The scope argument (SA)

There is no controversy about the origins of Aquinas's universality arguments. SA is clearly adapted from *De Anima*, Book III, where Aristotle attempts to justify his claim that *voũç* cannot be a material form, i.e. the form of a bodily organ:

“Therefore, since everything is a possible object of thought, mind in order, as Anaxagoras says, to dominate, that is, to know, must be pure from all admixture; for the co-presence of what is alien to its nature is a hindrance and a block: it follows that it can have no nature of its own, other than that of having a certain capacity. Thus that in the soul which is called thought (by thought I mean that whereby the soul thinks and judges) is, before it thinks, not actually any real thing. For this reason it cannot reasonably be regarded as blended with the body: if so, it would acquire some quality, e.g. warmth or cold, or even have an organ like the sensitive faculty: as it is, it has none. It was a good idea to call the soul ‘the place of forms’, though this description holds only of the thinking soul, and even this is the forms only potentially, not actually.” (*De Anima* III.4, 429a18–429a28, trans. Smith 1984, 52)

Let us compare this passage to *ST* Ia.75.2:

“It is necessary to say that the principle of intellectual operation, which we call the soul of a human being is a nonbodily and subsistent principle. For it is clear that through the intellect a human being can cognize the natures of all bodies. But that which can cognize certain things must have none of those things in its own nature, because that which exists in it naturally would impede its cognition of other things. In this way we see that a sick person's tongue, infected with a jaundiced and bitter humor, cannot perceive anything sweet; rather, all things seem bitter to that person. Therefore if the intellectual principle were to contain within itself the nature of any body, it could not cognize all bodies. But every body has some determinate nature. Therefore it is impossible for the intellectual principle to be a body.

It is likewise impossible for it to operate through a bodily organ, because the determinate nature even of that bodily organ would prevent the cognition of all bodies. Analogously, a determinate color not

just in the pupil, but even in a glass vase, makes liquid poured into that vase seem to be of the same color.”
 (trans Pasnau 2002: 5–6)

Two outstanding features of these passages are of special interest. Firstly, Aquinas’s reasoning in this passage closely resembles Aristotle’s reasoning in the previous passage: having a determinate nature of any material thing would somehow impede, block or hinder the (possible) intellect in its attempt to know the natures of all material things. Aquinas specifies that the difficulty somehow lies in knowing the *natures* of bodies, whereas Aristotle speaks of knowledge simpliciter. This qualification by Aquinas takes into account what Aristotle says almost immediately after the *De Anima* passage cited above, where Aristotle speaks of the difference between knowing, for example, flesh and knowing what flesh is.⁶¹ But Aquinas does not yet elaborate in this passage why knowing the nature of x or knowing what x is must be “a nonbodily and subsistent principle” unlike simply knowing x.

At any rate, the argument is bound to raise many questions both due to its inferential structure, which is less than clear, as well as the choice of examples concerning the tongue and the pupil. Some interpreters have regarded the principle at work to be a very general Aristotelian one: “Whatever is in potency to receiving something must lack that to which it is in potency.” (Wood 2019: 206) Or, more plainly: “one cannot become what one already is actually, but only what one is potentially.” (Haldane 2006: 49) So, the intellect cannot *already* possess any form f of a material thing, because otherwise it would not be in potency to receive f and thus could not know f. Thus, it is without any material form, i.e. immaterial.

However, this interpretation leads one to immediate problems: intellectual cognition is the reception of forms not naturally, but intentionally (and without material conditions), for Socrates does not become naturally catlike when he intellectually cognizes the essence *catness* (otherwise he would lose his humanity and literally become a cat). With this in mind, we can ask: for the intellect to receive f intentionally, does it have to lack f intentionally or naturally? If we pick the first option, the intellect could still have a naturally material nature f, for it would only have to lack f intentionally, and thus the argument would fail to establish its conclusion. If we pick the second option, we would have the desired conclusion, but now questions about the truth of the principle arise. Why does the intellect have to lack f naturally in order to receive f

⁶¹ *De Anima* III.4, 429b10–429b16.

intentionally? Aquinas's examples do not seem to help here. Supposing that my eyes were filled, not with a transparent but a red aqueous humor, everything would look red to me. I would not be able to see other colors, but I would not be hindered from perceiving red. Thus, the principle seems not only unjustified but false. (see Fisher 2017: 57).⁶² This has led some commentators, such as David Foster (1991) to interpret SA as an argument dependent on MA, because the relevant difference between senses and intellect is that the former cognize individual things as individuals whereas the latter cognizes their universal essences or natures. However, Aquinas nowhere indicates such a dependence, but rather always presents SA as an independent argument (Wood 2019: 211). If Foster is right, however, then SA is not only superfluous, but it will also inherit the issues of MA (discussed below).

A more promising interpretation of SA is given by Kendall Fisher (2017) who refers to its key principle as the *cognitive-potency principle*:

“the eye must lack a specific color so that it can see *other colors*. Rather than being unable to receive what is already possessed, the receiver cannot properly receive anything else. So it is not the analytic notion of what it means to receive, but the notion of impediment at work in Aquinas' cognitive-potency principle.” (Ibid.: 57, emphasis mine)

This certainly helps make sense of the eye example, because it seems true that the pupil must lack a determinate color naturally, so that I can receive other colors intentionally.

But why must we then extend the principle to intellectual cognition? David P. Lang (2003) argues persuasively that the principle is a general one for Aquinas, and meant to apply, not only across the board, but especially as we move up the ontological hierarchy of things. Unfortunately, Fisher (2017) presents an even stronger counter-argument against applying the principle to intellection, based on Aquinas's view that (neither intentionally nor naturally) material things can move the possible intellect without the intervention of the agent intellect, because material natures are only potentially and not actually intelligible to us (see 2.3.1 above). Therefore, even if the possible intellect had a material nature, such a nature would not impede its cognition of other natures, because the intellect could only know this material nature by the same means it knows other material natures, i.e. by abstracting the intelligible species from a

⁶² The example of the tongue fares even worse, because even a healthy tongue has its own fleshy taste in *esse naturale*, and yet this does not impede it from tasting that very same taste (or any other) in *esse intentionale*.

phantasm. The possible intellect would thus not be “stuck” cognizing its own material nature, since its nature would be only potentially and not actually intelligible to itself.⁶³ Therefore, even if Lang is right in holding that Aquinas intends to, and perhaps even has good reason for applying the principle to the intellect, this leads to a contradiction of Aquinas’s own views on the passivity of the senses and the activity of the intellect (ibid.: 65–66).

Finally, Gyula Klima (2001a, b) has offered a creative interpretation of SA that may be immune to all of the worries stated so far. The basic idea is to generate a variation of Russell’s paradox via SA: given that the intellect can know the natures of all material things, if its operations were realized by naturally material forms existing in a hypothetically material intellect (e.g. neural firing patterns), then some of those naturally material forms would have to represent themselves, and such forms would be their own principle of cognition, i.e. they would be self-cognizing. We would thus have the set of all and only those material forms that cognize themselves and the set of all and only those forms that do not. Let us call the latter set *S*. Given that we can cognize *S*, there would have to be a form *S** representing *S*. Now, is *S** a member of *S*? If it is, then *S* also includes a self-cognizing form, which contradicts the stipulated definition of *S* as the set of all and only non-self-cognizing forms. But if *S** is not a member of *S*, then it is non-self-cognizing, and *S* does not include all non-self-cognizing forms, which also contradicts its stipulated definition. Thus, if the intellect really can cognize the natures of all material things, it cannot be material on pains of contradiction (Klima 2001a: 19–24, see also Wood 2019: 213).

However interesting and perhaps even ingenious Klima’s reconstruction is, it is not an argument that Aquinas could have formulated with only the conceptual resources of his own philosophical framework, since this would have required centuries’ worth of advances in logic. Additionally, Wood (2019) criticizes Klima’s reconstruction for two reasons. Firstly, SA relies on a parallel between sensing and intellection, but Klima’s argument cannot apply to the senses, since we cannot sense sets. Secondly, “according to Klima’s reasoning, whatever enables us to cognize forms within a certain range cannot itself be within that range. It would seem then that whatever enables the cognition of intelligible *species* could not itself *be* an intelligible species. This again seems like a conclusion Thomas could not accept.” (Ibid.: 213)

⁶³ This claim is entirely independent of any claims about the immateriality of the intellect.

In conclusion, I am not aware of any successful formulation of SA, at least not one that can be coherently attributed to Aquinas or directly derived from the philosophical resources available to him.

3.3 The mode argument (MA)

MA is also without a doubt drawn from *De Anima* III, although there is no single passage in which Aristotle presents the argument as Thomas formulates it.⁶⁴ As mentioned, a prominent instance of MA can be found in the *Treatise on Human Nature* in the *Summa theologiae*:

“... [W]hatever is received in a thing is received in it according to the mode of the receiver. So each thing is such that there is cognition of it insofar as its form exists in the one who has cognition of it. But an intellectual soul has cognition of an entity in that entity’s nature taken absolutely speaking; for instance, it has cognition of a rock insofar as the rock is a rock taken absolutely speaking. Therefore, it is the form of a rock taken absolutely speaking, i.e., according to its proper formal notion, that exists in the intellectual soul. Thus, an intellectual soul is a form absolutely speaking and not something composed of matter and form. For if an intellectual soul were composed of matter and form, then the forms of the things would be received in it as individuals, and so the soul would know them only as singulars, just as happens in the case of the sentient powers, which receive the forms of things in a corporeal organ. For matter is a principle of individuation for forms. Therefore, it follows that an intellectual soul, along with every intellectual substance that has cognition of forms taken absolutely, lacks a composition of form and matter.” (*ST* Ia.75.5 co, trans. Freddoso)

The structure of the argument seems clear enough. Still, it is useful to formalize it to see where the alleged “content fallacy” occurs. The following reconstruction, provided by Wood (2019), is apt for this task:

“(MA1) Whatever is received into something else is received into it according to the mode of the recipient.

(MA2) A given thing is cognized in the way that its form is [received into] a cognizer.

(MA3) Matter is the principle of individuation of forms.

(MA4) Intellectual cognition grasps things in an absolute, non-individual way.

⁶⁴ Foster (1991) argues that SA and MA represent two converging lines of thought in Aristotle, although Aquinas presents them as separate arguments.

(MA5) So intellectual cognition grasps things apart from matter (from MA3 and MA4).

(MA6) So intellectual cognition receives the forms of things apart from matter (from MA2 and MA5).

(MA7) Therefore, anything capable of intellectual cognition lacks matter, at least with respect to whatever part of it receives the forms by which it cognizes intellectually (from MA1 and MA6)” (Ibid., 224)

MA1 is the statement of a general metaphysical principle sometimes known as the *modus principle*. Very roughly, the idea is that a thing’s mode of existence delimits the ways it can be affected by external causal agents or determined by anything external to their being. According to John Tomarchio (1999), who has conducted a most thorough investigation of the principle in Aquinas, “[t]he axiom is generally accepted among scholastics. The editors of Leonine’s newly published *Quaestiones disputatae de quolibet* even call it an *adagium tritissimum* – a hackneyed saying, as it were.” (ibid., 250, 266 n6, n7; see also Tomarchio 1998, 2001) Thus, for the sake of the argument, we can accept it as an axiom as part of the theoretical context.⁶⁵

MA2 is merely an application of the *modus principle* to cognition, and MA3 can be accepted as an axiom derived from Aquinas’s ontological framework. MA4 is an uncontroversial fact about human cognition. We really are able to think about things in a universal mode or an “absolute, non-individual way.” MA5 follows from MA3 and MA4, and MA6 follows from MA2 and MA5. Finally, MA7 follows from MA1 and MA6. The argument therefore seems deductively valid and derived from premises acceptable in the argument’s context.

However, MA6 seems to be ambiguous between two readings: does intellectual cognition receive the forms of things apart from matter (and without material conditions) *secundum esse naturale* or *secundum esse intentionale*, i.e. is the intelligible species received by the possible intentionally immaterial or naturally immaterial? Aquinas’s answer would no doubt be: “both.”

To see why, let us again consider the idea (see Chapter 2.2) that cognition for Aquinas can be (at least heuristically) characterized as information processing. Let us consider the following illustrative example: when a ray of light hits a red wall, information about the surface’s qualities is *encoded* in the light which is reflected from the surface.⁶⁶ If this light is intercepted

⁶⁵ What precisely the principle means for Aquinas, however, is a matter of controversy, with some commentators considering it a vague or unimportant general principle, whereas Tomarchio (1998, 1999, 2001) sees it as a very precise and important one in Aquinas’s thought. At any rate, this controversy can be ignored, since it does not impact the soundness of MA as far as I can see.

⁶⁶ We might say that the wall’s surface’s reflective qualities cause it to absorb some wave-lengths of light more than other wave-lengths and this is why information about the surface’s qualities is encoded in the remaining light, which

by the eye of a cognizer equipped with the right kind of visual apparatus, the cognizer can *decode* the information about the wall's surface's qualities, which results in the cognizer seeing red. Now, the red color *qua* sensible certainly exists only intentionally, and not naturally as it does in the wall, since neither air nor eye turn red when receiving the sensible species. However, for Aquinas, the light that carries the information about the qualities of the wall through the air and into the eye does exist naturally and not intentionally. For this view he has compelling and obvious reasons:

“Some have claimed that light (*lumen*) in the air does not have natural being in the way that the color in a wall does, but that it instead has intentional being in the way that the likeness (*similitudo*) of a color in the air does. However, this cannot be the case, and for two reasons. First, light (*lumen*) denominates the air, since the air becomes luminous in actuality (*luminosus in actu*). By contrast, color does not denominate the air, since the air is not said to be colored. Second, light has an effect in nature, since through the sun's rays bodies become warm. Intentions, on the other hand, do not cause natural transmutations.” (*ST Ia.67.3 co*, mod. trans. Freddoso)

Now, should we take this to mean that, for Aquinas, there are actually two separate forms in the air: 1) a naturally material form (the medium illuminated by the light) and 2) an intentionally material form (the color)? No. Rather, in a certain sense, the naturally existing illuminated medium *just is* the intentionally existing information about the wall's qualities. Gyula Klima (2001a: 21–22) offers a similar example: when one is burning a song on a CD, one creates tiny pits formed onto the CD in *esse naturale*, while simultaneously encoding information about the song in *esse intentionale*, which a CD player can then decode. Thus, there is nothing objectionably mysterious about this dual existence of forms: the one and the same form – the literal shape of the CD – is simultaneously a naturally material accident informing a piece of polycarbonate plastic *and* an intentionally material species of the song.⁶⁷ These considerations lead to the following picture (Figure 2):

is reflected from the surface. Of course, I am not implying that Aquinas knew anything about the wave-like nature of light. The following point does not rely on this detail, which is only added for heuristic value.

⁶⁷ To put the point even more generally, it is easy to see that virtually anything in the material world carries information about something else, and this information can in principle be accessed by an appropriately equipped cognizer, so virtually everything can be regarded as information about something else. Aquinas's criteria for what it means to exist intentionally (without specification) is therefore incredibly liberal (see Klima 2013).

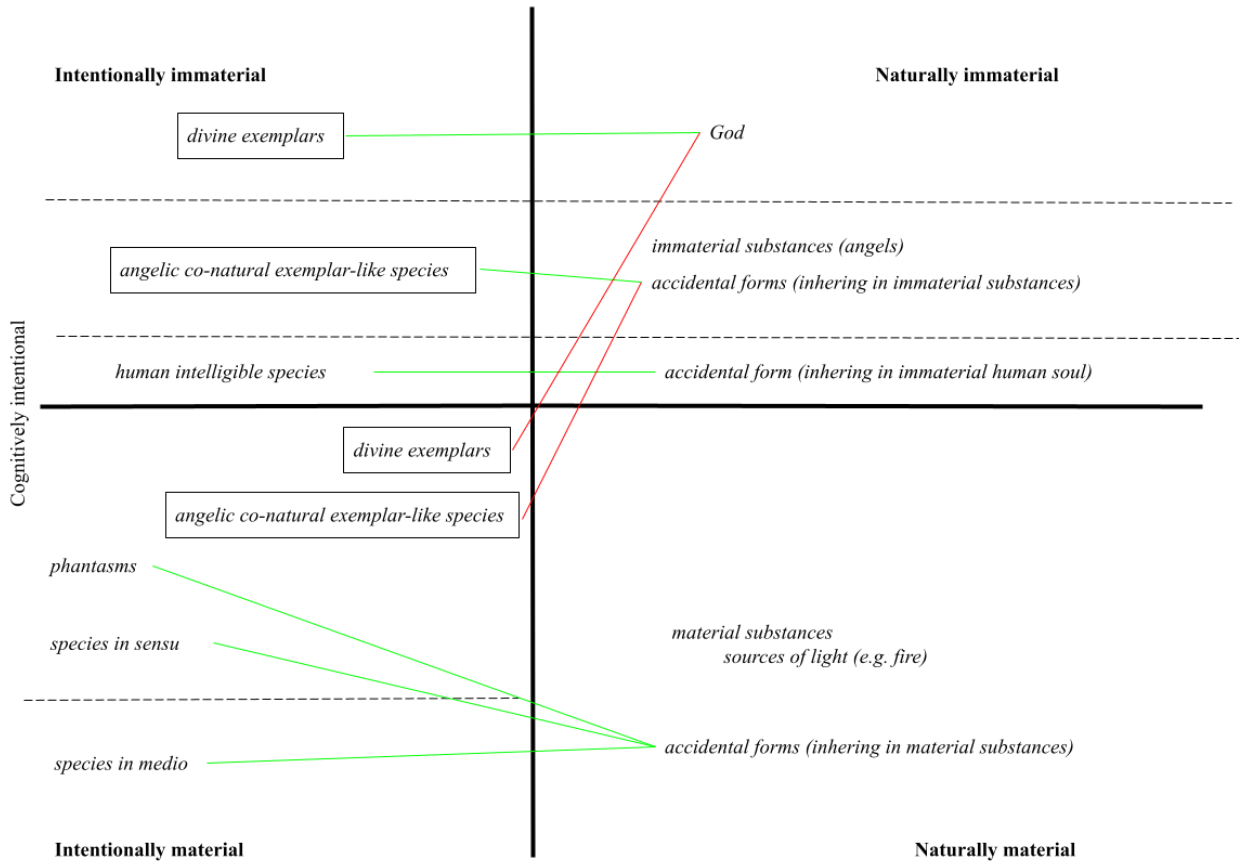


Figure 2: This diagram portrays the dual existence of the species as simultaneously an intentionally existing form and a naturally existing form. The green horizontal lines denote cases of this dual existence that are non-problematic for MA. The red diagonal lines denote problematic cases that make the issue of the content fallacy an internal problem (and not just a skeptical counter-hypothesis) for MA.

As we can see, the idea that seems to underpin Aquinas's reasoning in MA is that any intentionally immaterial species must exist simultaneously as a naturally immaterial accident of a naturally immaterial substance, just as any intentionally material species must exist simultaneously as a naturally material accident. Therefore, since the possible intellect receives such species, it must simultaneously receive naturally immaterial accidents, which can only inhere in an immaterial substance. Thus, the possible intellect must be naturally immaterial.

After all, *how could* a naturally material accident simultaneously be an intentionally immaterial species?

Indeed, such a thing would seem to be a mystery, for naturally material substances and their accidents do not seem suited to be in the kind of “one over many” relationship to a potential infinity of beings. By being a right triangle, this naturally material triangle does not equally well represent equilateral triangles (at least not Euclidean ones), and by being a bronze statue, that naturally material statue does not represent marble statues equally well. The same seems to apply to any naturally material substance, structure, process, state or other being in general.

However, the intelligible species is itself an individual thing, as is the human intellect for that matter, at least according to Aquinas. Is it also not mysterious how *any individual* (material or immaterial) thing could stand in such a “one over many” -relation to a potential infinity of things? If intentional immateriality implies natural immateriality, why does intentional universality not imply “natural universality”? That is, how can there be individual intellects at all rather than one separate, universal Intellect shared by all humans, as Averroes famously maintains? (See e.g. Davidson 1992: 295)

Clearly, then, the key principle cannot be “if a species is intentionally f, then it must be naturally f,” unless Aquinas is a self-deceiving crypto-Averroist. What is more, Aquinas seems to be painfully aware of the dangers of this kind of reasoning. For instance, according to a certain theological tradition Aquinas opposes, God is necessarily ignorant of lower beings. In particular, He cannot cognize material beings (although he may cause them), because He is immaterial, and nothing material can exist in an immaterial God. To this, Aquinas replies:

“A thing is cognized in keeping with the way it is *represented* in the one cognizing, not in keeping with the way it *exists* in the one cognizing. For a likeness existing in a cognitive faculty is a principle for cognizing a thing not in keeping with the *existence* it has in the cognitive power, but in keeping with the *relation* it has to the thing cognized. Hence it is that the thing is cognized not according to the mode in which the thing’s likeness has *existence* in the one cognizing, but according to the mode in which the likeness existing in intellect is *representative* of the thing.” (*QDV* 2.5 ad 17, trans. and emphases by Pasnau (1998: 307))

This seems to be not a qualification of the principle “if a species is intentionally f, then it must be naturally f” but a rejection of it, for Aquinas seems to be plainly arguing that a species need *not* be naturally f just because it is intentionally f (in Figure 2 above, this is represented by the red

diagonal lines connecting intentionally material species to naturally immaterial accidents). But this leaves him in an awkward-looking situation with regard to MA, since MA seems to hinge on making an inference of this type. This logical leap from the intentional characteristics of a thing to its intrinsic characteristics is what Joseph Novak (1987) criticizes in MA, and what Robert Pasnau (1998) refers to as the “content fallacy.”⁶⁸ A crude example of the content fallacy, given by Pasnau, would be inferring that Bob’s thought is red from the fact that Bob is thinking of a red car. But how is it any better to argue that intellectual thought must be immaterial just because immaterial thought is of things that are immaterial? (Ibid.: 293-294)

Of course, the fact that Aquinas so clearly rejects this kind of reasoning in the above *QDV* passage should put us on our guard against hastily attributing the fallacy to him, but as Pasnau points out, MA is not the only context in which Aquinas seems to commit the apparent fallacy. Aquinas is not only keen on arguing that the intelligible species must be naturally immaterial because it is intentionally universal and thus intentionally immaterial, but vice versa: intellection must be only of universals because it is naturally immaterial (ibid.). Let us call this the *immateriality argument for the universal mode of human intellection* (IA), a kind of counterpart of MA (but see below why this relationship is not entirely symmetrical).⁶⁹ Whereas the discovery of the (alleged) content fallacy in MA may be quite recent,⁷⁰ Aquinas’s contemporaries did notice the issue with regard to IA. Pasnau cites the Franciscan theologian Matthew of Aquasparta (c. 1237–1302) as an example:

“Something singular is understood through a species that exists within intellect. In a way this species stays material; in a way it is made immaterial. It stays material because it represents and leads to a cognition of the whole matter-form compound. It is made immaterial because it is abstracted from the external object and has no existence in matter.” (*Questiones de cognitione* 4.5, trans. Pasnau 1998: 305–306)

Here Aquasparta claims that even abstractive human intellection (as opposed to divine or angelic intellection that does not require abstraction) can have an intentionally material singular as its

⁶⁸ In addition to Novak, Pasnau (1998) also cites Zenon Pylyshyn (1981) for an alternative characterization of the fallacy (although Pylyshyn does not attribute this fallacy to Aquinas). For Pylyshyn, the fallacy is a “scope slip,” by which “image of object X with property P” is read as “(image of object X) with property P,” instead of the correct “image of (object X with property P).” (Pasnau 1998: 294)

⁶⁹ In fact, most of Pasnau 1998 is not focused on the content fallacy in the context of MA, but rather in the context of IA.

⁷⁰ I am not aware of anyone prior to Novak (1987) raising the issue with regard to MA.

proper object, as long as the species representing that material singular is simultaneously a naturally immaterial accident, so that it can inhere in a (supposedly) naturally immaterial intellect. Although I think Aquinas has an adequate reply to such an opinion, I do not think he can give it on representational grounds alone. Rather, an appeal to causal considerations is required (this is the main point of the next chapter and this entire work, really). At any rate, MA does not require the assumption that *all* human intellectual cognition is universal. Rather, it is enough that *some* human intellectual cognition universal, so Aquinas does not have to defend IA in order to secure the natural immateriality of the intellect.

Next, I will consider some replies that recent defenders of MA have given to Novak and Pasnau's objection. Unlike my own suggestion (in Chapter 4), these replies *are* based on representational grounds alone, and this is why they do not save MA in my opinion.⁷¹

3.4 Some attempts to overcome the “content fallacy” objection

Too many replies have been given to Novak and Pasnau to adequately cover here, so I will only focus on three of the most recent replies (Fisher 2017, Blain 2018, Wood 2019), which have not yet been discussed in the literature as far as I am aware.⁷²

Kendall Fisher (2017: 71–72 n 76) has given a reply aimed at Novak's rather than Pasnau's formulation of the objection. Novak, like Pasnau, charges Aquinas with a fallacious inference from the nature of the intentional objects of cognition to the nature of cognition itself, but his critique misses a part of the picture, which I think Fisher is correct to point out. As Novak sees it, Aquinas equivocates between the intentional reception of forms and the immaterial reception of forms. As I mentioned in 2.2.1, it is true that Aquinas often does use terms like “spiritual being” and “immaterial being” loosely to refer to intentional being. However, as I also mentioned in 2.2, Aquinas further divides the intentional reception of forms into intentionally material (*forma sine materia sed tamen cum conditionibus materialibus*) and intentionally

⁷¹ With the exception of Blain (2018), who does appeal to the intelligible species's role as a principle of cognition. However, I do not think even this reply is successful (see below).

⁷² Critiquing all the replies would also be a redundant repetition of something Adam Wood (2019) has already adequately done, in my opinion, in his book-length treatment of Aquinas's arguments for the immateriality of the intellect. For his excellent review and critique of most replies given to Novak and Pasnau, see *ibid.*: 223–239.

immaterial (*forma sine materia et a conditionibus materialibus depurata*) form reception, a distinction Novak seems to ignore.⁷³

Fisher's reply then consists in pointing out that MA is not based on the equivocation Novak thinks it is, since Aquinas argues for the immateriality of the intellect, not on the basis of intentional form reception *simpliciter*, but on the basis of intentionally *immaterial* (or *incorporeal*⁷⁴) form reception:

“*Species* must be entirely free from corporeal conditions in addition to existing *intentionally* in order to be intelligible. As I understand the argument, Aquinas argues that the species must be incorporeal, not just *intentional*, and on these grounds, the intellect must also be incorporeal.” (Fisher 2017a: 72 n 76)

Unfortunately, I do not think taking this distinction into account does the trick, because the same problem arises regardless. Why can an intentionally immaterial species not simultaneously be a naturally material accident inhering in a naturally material knower? To insist that no naturally material accident can have the right kind of representational capabilities is not a sufficient reply, as I argue above in 3.2. Furthermore, Pasnau's (1998) formulation of the objection does not seem to include a similar conflation of intentionally material and intentionally immaterial forms, so this reply would not work against his formulation.

Another reply, this time to Pasnau, has been given by Blaise Blain (2018), who argues:

“[K]nowing consists in the union of the knower with the thing known, such that the knower in a certain way becomes what is known. Thus, in the act of knowing some nature N, knowing N is being N. Consequently, to know N in a universal way is to be N in a universal way. Now since as I have already noted, existing universally implies existing immaterially, the very act of the intellect must be immaterial. But since “the mode of operating of each thing follows upon its mode of being,” the intelligible species

⁷³ For further instances of this distinction in Aquinas, see e.g. *In Sent.*, lib. 1 d. 38 q. 1 a. 2 co., lib. 2 d. 3 q. 3 a. 3 arg. 2., lib. 4 d. 44 q. 3 a. 3 qc. 2 ad 3.; *SCG* I.47.3, II.73.9, II.82.12, II.100.4; *ST* Ia.55.2 ad 2, Ia.79.3, Ia.84.2; *QDV* 2.2, 2.5 ad 2, 2.6 co.; *QDA* 3 ad 7, 4 co., 5 co., 14 co.; *QDSC* 10 ad 4; *QQ* 8.1.3 co.; *CT* 1.28 co., 1.79 co., *In DA* 2.5.6.

⁷⁴ According to Jeffrey Brower (2014: 199), Aquinas often prefers to use the term “incorporeal” over “immaterial” in order to avoid unnecessarily engaging with the doctrine of universal hylomorphism, which reserves the term “immaterial” only for God and characterizes even angels, who are incorporeal, as possessing “spiritual matter.” Another reason for preferring this terminology, given by Cory (2020), is that all forms are immaterial for Aquinas in the sense that they are not the matter of the matter-form compound. Although I will continue to speak of immateriality throughout this work, it is incorporeality that the universality arguments are strictly speaking meant to prove, but as far as I can see, there is no danger of confusion in the present context.

which is the principle of the act of knowing must itself have the same mode of being as the act of which it is the principle. Consequently, the species which serve as principles of intellectual acts must be immaterial, in order to produce immaterial acts.” (Ibid.: 84–85).

In my mind, the key qualification here is that the knower “in a certain way” becomes what is known. Even if I contemplate the universal essence of *appleness* and my intellect becomes, in a way, apple-like, you cannot make applesauce of my thoughts. As I see it, this is the whole point of the intentional-natural distinction, a distinction that Blain does not seem to take into account. If I know N in a universal way and therefore *am* N in a universal way, does it mean that my intellect is intentionally or naturally universal? Clearly the former is what we want (otherwise there are no singular human intellects but one naturally universal Intellect, as I mentioned). But if this is so, then we have only established the intentional immateriality of the intelligible species (which we already assumed *ex hypothesi*), but not its natural immateriality.

The third and most recent reply comes from Adam Wood (2019), who suggests reconceiving Aquinas’s talk of the universal mode of cognition as the ability to *determinately* cognize an object as an F instead of a G (ibid.: 239-254). Wood borrows considerations from various sources in support of the soundness of this kind of reasoning. In particular, Wood sees an argument known as the *Kripke-Ross Argument (KRA)*⁷⁵ as providing reasons for thinking that the content fallacy objection can be avoided.

Unfortunately, Wood, who otherwise offers the most comprehensive and rigorous treatment of MA to date, does not formalize the argument he offers as a reconstruction of MA, nor does he build the connection between KRA and MA as clearly as he might. I offer two possible readings of Wood’s suggestion: the first makes MA superfluous by assuming the soundness of KRA, while the second will not work due to an important difference between KRA and MA. But first I must provide a minimal summary of what KRA is. James Francis Ross (2008) presents the core of the argument in the following way:

“[O]ur thinking, in a single case, can be of a definite abstract form (e.g., $N \times N = N^2$), and not indeterminate among impossible equally most particular forms [...] No physical process can be that

⁷⁵ KRA is based on Saul Kripke’s unpublished critique of functionalism and the argument put forward by James Francis Ross (1992, 2008). Ross combines Kripke’s considerations concerning the indeterminacy of the physical with consideration concerning the determinate formal structure of certain cognitive acts. KRA is clearly inspired by Aristotelian-style universality arguments, which Ross acknowledges (1992: 136 n 3). For an extensive and excellent treatment of KRA, see Antonio Ramos-Díaz’s (2018) dissertation as well as Ramos-Díaz 2022.

definite in its form in a single case. Adding physical instances even to infinity will not exclude impossible equally most particular forms (cf. Saul Kripke's "plus/quus" examples). So, no physical process can exclude impossible functions from being equally well (or badly) satisfied [...] Thus, no physical process can be the whole of such thinking. The same holds for functions among physical states..." (Ross 2008: 116)

The argument can be summarized even more concisely:

- "A. Logical-mathematical activity is formally determinate.
- B. No physical process or mechanism is formally determinate.
- C. Ergo, logical-mathematical activity is not (entirely) a physical Process." (Ramos-Díaz 2022: 221)

The first thing to note about this argument is that Ross's use of "form" in KRA differs from the notion of form as it is generally used in Aristotelian contexts, and indeed how I have been using it so far when discussing the intentional reception of forms in Aquinas's theory of cognition. In KRA, the "definite abstract form" of thought refers to its *formal structure* as opposed to its *intentional content*, as Ramos-Díaz (2018: 15) clarifies in his treatment of Ross. Adapting Kathrin Koslicki's (2008: 235–236) general notion of a structure, Ramos-Díaz (2018: 5) characterizes this notion of formal structure as "that which remains or is held invariable through admissible permutations or transformations of its variable component." For example, when a cognizer is squaring, the formal structure of her thought ($N \times N = N^2$) remains invariable no matter which numbers she is squaring, i.e. no matter what the content of her thought is.

The reason Ross thinks that no physical process, state or structure could ever be of such a determinate form has to do with Kripke's unpublished critique of functionalism, which is hinted at in a footnote of his better-known work on Wittgenstein's rule-following paradox (Kripke 1982: 35-37 n 24).⁷⁶ Kripke's problem for functionalism⁷⁷ can be described in the following way: a purely physical object (PO), such as a machine calculator, can be interpreted as realizing a mathematical object (MO). However, suppose that PO malfunctions. What is to stop us from

⁷⁶ Fortunately, Kripke has allowed limited distribution of the unpublished manuscript "Lessons on Functionalism and Automata," as well as recordings of lectures where he presents the argument (see Buechner 2011, Burgess 2016, and Díaz 2018 for discussions of these materials).

⁷⁷ And indeed a problem for any materialist/physicalist theory of cognition that distinguishes between concrete physical structures and the abstract structures that the former represent.

saying that PO was actually realizing MO*, a different mathematical object, and that it is not actually malfunctioning but doing precisely what it is supposed to be doing? In practice, we might consult the designer of PO and ask whether PO was supposed be realizing MO or MO*. But this seems to relativize which mathematical object PO realizes to the designer's intention. Which object is it really, i.e. independently of anyone's intentions, beliefs or desires, realizing? According to Kripke, there is no fact of the matter. The lesson Ramos-Díaz (2018, 91) takes from this is that while purely physical objects such as computers can obviously be said to perform physical computations, physical computation itself is not *intrinsically determinate* but only *extrinsically determinate*, i.e. relative to someone's intentions.

Much more could be said about Kripke's argument, but let us suppose that it succeeds. Could it not be turned against Ross's claim that our thoughts are of such a determinate form? Perhaps we are also purely physical objects like the machine calculator who can only simulate or approximate such pure forms? Perhaps Ross's claim about what we do when we engage in formal thinking is a mere idealization itself? Ross anticipates such an objection and offers six replies.

Since it is not my purpose to defend KRA but to merely clarify what it is, I will only briefly mention one of these replies, namely, that the notions of simulation, approximation and idealization are parasitical of and intelligible only in light of something that is simulated, approximated or idealized (in this case: determinate formal understanding). If there was no such thing as determinate formal understanding, we would not be able to entertain the notion that we are only simulating or approximating something, because we could not understand what that "something" is (Ross 2008: 122, see also Díaz 2018: 145-147).

KRA surely raises many questions about the nature of formal understanding.⁷⁸ But more importantly for present purposes, how is it supposed to help MA? Here, Wood is not as clear as he could be. Ross asks us to consider determinate cognition as something we (but nothing purely

⁷⁸ For the record: I am highly sympathetic to KRA and think Ross 1992 is one of the most underrated papers in 20th century philosophy of mind (Pasnau 2002: 411 is also sympathetic). KRA is also clearly superior to any argument that can be extracted from only Aquinas's framework, including CA, because KRA does much more with much less. It only requires one to be mildly sympathetic to a vaguely Aristotelian way of speaking about structures/forms (e.g. Koslicki 2008), and its premises are very difficult to deny if one does not stalemate by refusing to acknowledge the meaningfulness of the terminology. Still, KRA owes its pedigree to Aristotle and Aristotelians like Aquinas, so even if there is no successful Aristotelian or Thomistic universality argument, the considerations put forward by his ilk seem to have directly influenced and inspired Ross to come up with something better, so even in the worst case, the universality arguments are not totally worthless.

material) can *do*, i.e. as an *exercise of a capacity*. With MA, Aquinas on the other hand, asks us to pay attention to the *intentional* “*content*” of intellectual cognition. Wood’s (2019: 239-240) suggestion is that Aquinas’s point in talking about the reception of forms without matter and is that this form (the intelligible species) received by the intellect has intentional “content” determinately of, say, Fs and not Gs. For example, when I see triangles, form triangle phantasms, and my agent intellect abstracts the intelligible species *triangularity*, it is determinately triangularity and not, say, rectangularity, that the species represents (intentionally material species and phantasms can only approximate such pure geometrical forms and are thus not determinate in the same sense).⁷⁹ Of course, I can be mistaken about what the essential features of a triangle are. For example, I may not know of non-Euclidean triangles, and therefore will mistakenly think that the sum of the angles of a triangle is always fixed just like the fact that it has three sides. However, the point is that my concept determinately has *that* content and not something else. Formally, my reconstruction of Wood’s argument looks like this:

W1. The human intellect cognizes objects determinately as members of kinds.

W2. Nothing material can cognize objects determinately as members of kinds.

W3. The human intellect is not material.

My quarrel with this argument is not with W1. Indeed, Wood goes on at length to explain how the argument given above can be unearthed by combining MA with other things Aquinas says about the indeterminacy of material objects *qua* material (Wood 2019: 243–254). However, W2 seems to be based on ignoring the difference between KRA and MA. KRA concerns the formal determinacy of intellectual cognition (i.e. intellectual cognition as something we do in a determinate way), while MA, on Wood’s reading, concerns semantic or intentional determinacy (i.e. intellectual cognition as something that has determinate content). This is a difference between the invariable (formal) and variable (semantic/intentional) aspects of intellectual cognition.

To illustrate the difference between these two notions, let us consider the difference between merely thinking about or contemplating some formal rule, such as conjunction, and

⁷⁹ This point has been raised by several of Aquinas’s commentators regardless of its application to the present problem. See e.g. Bittle 1951 and Feser 2013, who draws interesting parallels between Aquinas and Descartes’ thinking on this matter.

actually engaging in the activity of conjoining. In the former case, the determinate content of thought is the formal rule itself. In the latter case, the determinate content is whatever is being conjoined (e.g. propositions p and q), whereas the formal rule, conjunction, is the formal aspect of the thought (see Díaz 2018: 15).

KRA makes no claims about the immateriality of intellectual cognition based on its semantic determinacy. Unlike MA, it is an argument entirely based on the determinacy of the formal aspect of thinking (and the formal indeterminacy of all physical processes). This is how KRA, but not MA, avoids the content fallacy. Now, perhaps it is not invalid to argue that, since intellectual cognition is formally determinate, and therefore naturally immaterial, its intentional/semantic determinacy is also a mark of its independence from matter. However, such reasoning makes MA superfluous, since the natural immateriality of the intellect is already assumed to be proven by KRA.

If, on the other hand, KRA is taken as a model for reconstructing MA in a way that avoids the content fallacy, then I don't see how Wood's proposal is meant to work. KRA is immune to the content fallacy precisely because it is not based on considerations about the content of intellectual cognition but on the claim that the formal aspect of intellectual cognition is determinate in a way that nothing material can be. Thus, W2 remains unjustified, unless something further can be said for this proposal. However, I think there is much to be said for Wood's idea that the intentional universality and intentional determinacy of intellectual cognition are necessarily connected, but I will return to that in 5.1.

4. The causal universality argument (CA)

If SA and MA appear unsalvageable, is there any hope for a successful universality argument? Aquinas presents SA and MA in a theoretical context that initially seems advantageous and promising. All other types of intellectual cognizers, God and the angels, are naturally immaterial, so it seems reasonable to hope that some argument can be given for why the human intellect must be naturally immaterial as well. However, it is because a proper theory of cognition must coherently account for divine and angelic knowledge that a distinction between intentional being (vs natural being) and immaterial being (vs material being) is required (as I argue in 2.2).

Because of this possibility of a form existing simultaneously as 1) a naturally immaterial accident and 2) either an intentional material *or* intentional immaterial species, Aquinas seems to allow a “mismatch” between the intentional and the natural, and therefore there does not seem to be a compelling reason to reject the hypothesis that the fully actualized human capacity for intellectual cognition could only be intentionally immaterial while being naturally material.

I argue that this is because all attempts to salvage SA and MA so far have focused exclusively on the ontological status of the intelligible species, or the passive power of the possible intellect to become the intentional likeness of a universal nature, but not on the active power of the agent intellect to actualize those universal and intelligible intentions in partnership with the partially passive and partially active power of the phantasm, which provides the determinate “content” of a potentially intelligible nature capable of being shared by a potential infinity of things.⁸⁰

In my view, the right way to argue is not “the intelligible species is naturally immaterial because it is intentionally immaterial” but rather “whatever *causes* the intelligible species to be intentionally immaterial must be naturally immaterial.” In other words, whereas other suggestions I am aware of hinge on the details of Aquinas’s understanding of intellectual cognitive representation alone (which is understandable, because MA is an argument based on considerations regarding the how the intellect represents universals), mine combines these representational considerations with Aquinas’s views on causation which also forms a part of the theoretical basis for his theory of cognition. Therefore, the solution is entirely based on Aquinas’s own philosophical thought, although he nowhere explicitly presents this argument, which I call the *causal universality argument* (CA):

CA1: Since a human cognizer can receive an actually intelligible species in the possible intellect, some power must actualize the potential intelligibility of the phantasm from which the intelligible species is abstracted

CA2: Whatever actualizes the intelligibility of the intelligible species is that which intentionally immaterializes it. (Because human intelligible species are intentionally universal, they must be intentionally immaterial)

⁸⁰ Even Blain’s (2018) suggestion, which appeals to the intelligible species’ role as the principle of the act of intellectual cognition, is ultimately an appeal to the passive and representational aspects of intellectual cognition.

CA3: Whatever intentionally immaterializes the intelligible species must be naturally immaterial

CA4: Whatever intentionally immaterializes the intelligible species is nothing outside the intellect, and it cannot be the possible intellect itself, so it must be the agent intellect.

CA5: The agent intellect is naturally immaterial. (From CA1, CA2, CA3, CA4)

The idea behind this argument can be illustrated by the following diagram (Figure 3):

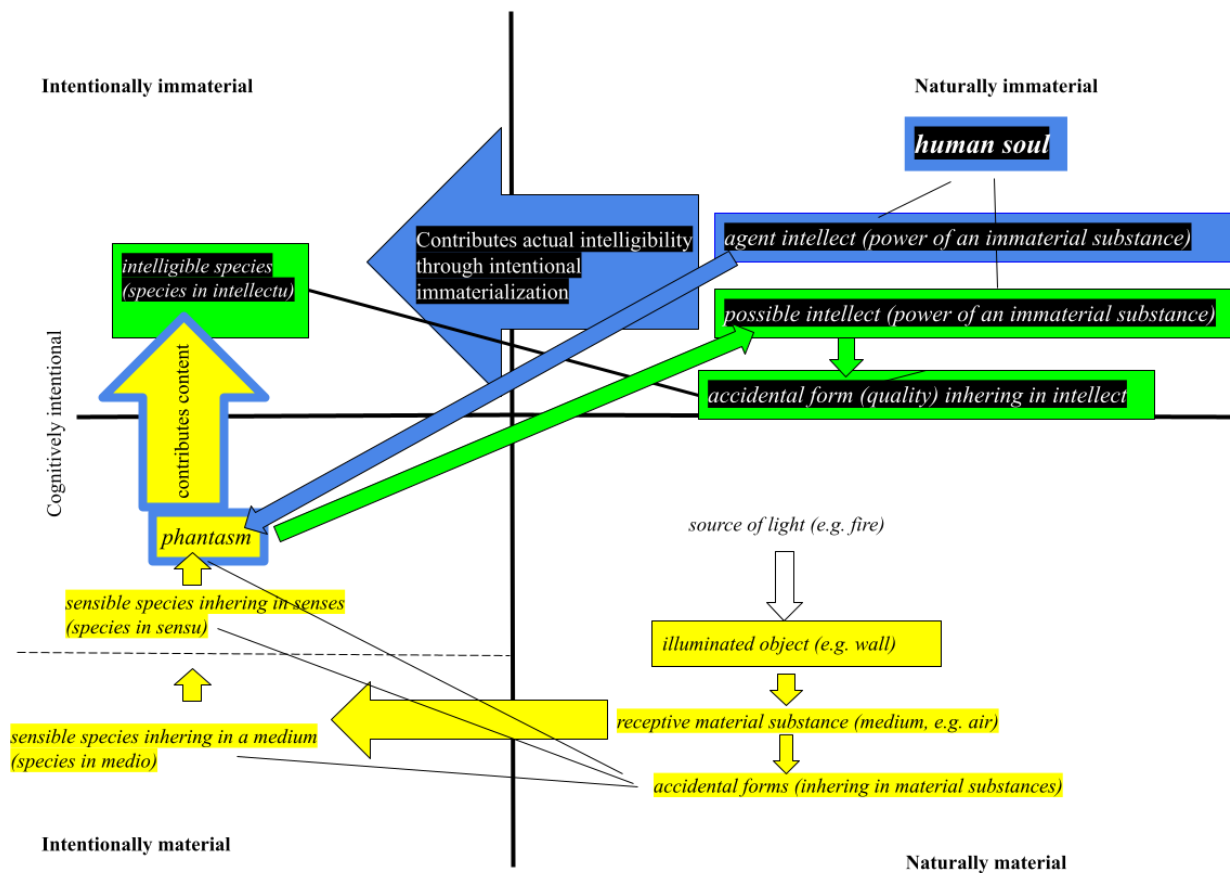


Figure 3: The arrows and yellow color indicate the causal origins of the potentially intelligible “content” of the intentionally immaterial intelligible species in a naturally material light source and illuminated object. The blue color indicates the need for an active intentionally immaterializing, naturally immaterial power to contribute actual

intelligibility. The interaction of that power and the phantasm results in an intentionally immaterial species with actually intelligible determinate “content,” indicated by the green color.

Now follows the justification of the premises: CA1 begins with taking for granted the fact that we are actually able to receive an intelligible species in the possible intellect. However, the essences of naturally material things are not actually but only potentially intelligible to us. Likewise, the phantasm created by our inner senses is only potentially intelligible as a universal essence, because it represents whatever it represents as a singular thing and not as universal, and is therefore not alone capable of actualizing the intellect’s power to cognize universal essences. However, since we actually do cognize universal essences, we must assume that *some* power is responsible for actualizing the potential intelligibility of the phantasm. Therefore, we must accept CA1.

Now, taking for granted that there is a power that actualizes the potential intelligibility of the phantasm, which results in the actually intelligible species that represents a universal essence, there must be a power that intentionally universalizes the “content” of the phantasm. Because there are no intentionally material universals, intentional universalization requires intentional immaterialization.⁸¹ If we accept this, then we accept CA2.

Now, the key premise of CA is CA3: whatever intentionally immaterializes the intelligible species must be naturally immaterial. The justifiability of this premise (relative to the theoretical context of Aquinas’s universality arguments) is probably the least obvious among the four premises of CA, and this premise is the one that trades most on Aquinas’s analogy between physical illumination and intellection (see 2.3.3 above). Let us begin with the fact that, although a color existing naturally and materially is actually visible according to Aquinas’s mature view (see Cory 2015b), a naturally colored material object cannot emit a sensible species unless light acts upon it. Only then can the colored object act on the eye. However, the colored object is only a secondary “quasi-instrumental” agent of this act (see Cory 2015b: 38). Although the objects we are surrounded by determine (for their own part) *what* we see, the primary agent, light, determines *that* we see *at all*. Therefore, properly speaking, light is the active causal principle of

⁸¹ As I mentioned in 3.2, one does not have to think, as Aquinas thinks, that all human intellectual cognition is of universals for MA to work. The same applies to CA: it is enough to accept that *some* human intellectual cognition is of universals. This allows us to deduce that *some* of the intelligible species we receive are intentionally universal and thus intentionally immaterial. Thus, even if, for some reason, Aquinas’s claim about the proper objects of human intellectual cognition had to be weakened, the argument would go through.

vision, at least insofar as vision is passive: although it is we who see, we cannot help but see *something* if there is enough light, an appropriate medium (e.g. air), our eyes are open, our body is functioning normally, and so on (cf. Fisher 2017a: 64–65).

In the *Summa theologiae*, Aquinas offers a principled reason for considering intellection analogous with light in the relevant sense required for CA. The text is worth quoting at length due to its crucial importance for the argument:

“There are two ways in which it is proper (*convenit*) for a name to be predicated: (a) in accord with the name’s first imposition and (b) in accord with the usage of the name. This is clear in the case of the name ‘see’ (*visio*), which was first imposed to signify the act of the sense of sight. But then, because of the dignity and certitude of this sense, the name ‘see’, in accord with the usage of speakers, was extended to all cognition on the part of the other senses (for we say, “See how it tastes” or “See how it smells” or “See how hot it is”), and, further, even to the intellect’s cognition—this according to Matthew 5:8 (“Happy are the clean of heart, for they shall see God”). Something similar should be said about the name ‘light’ (*lux*). For it was first instituted to signify that which effects manifestation in the case of the sense of sight, and then afterwards it was extended to signify *everything that effects manifestation (manifestatio) in the case of any kind of cognition whatsoever*. Therefore, if the name ‘light’ (*lumen*) is taken according to its first imposition, then it is predicated metaphorically in the case of spiritual things, as Ambrose claims. However, if it is taken according to the way it is extended in the usage of speakers to *any kind of manifestation*, then it is properly predicated in the case of spiritual things.” (*ST Ia.67.1 co*, mod. trans. Freddoso, emphases mine)

In characteristic fashion, Thomas’s reasoning takes the form of drawing a distinction, which can straightforwardly be adapted to the present context: when one compares an intentionally immaterializing light to a physical light, this is merely metaphorical insofar as *what* these two different powers manifestate, and *how* they manifestate, differ. But insofar as both do manifestate something, i.e. make something clearly available for cognizing, the meaning is univocal. Light (the active principle) makes colors available to sight (the passive principle), whereas the intentionally immaterializing intellectual power (the active power) makes an actually intelligible universal nature (represented *qua* potentially intelligible in the phantasm) available to the possible intellect (the passive principle).

Now, as discussed in 3.3, Aquinas has compelling reasons for holding that light has natural being: because light has natural being, it can make air actually luminous and thus act on the eye. Light also causes material transmutations unlike things that only have intentional being.

Therefore, in the case of sensing, it seems to be true that for any intentionally material species to exist, something naturally material must have caused it. Since we have established the validity of comparing light to intellection univocally, insofar as both are understood as the active principle that makes something available for cognizing, the most straightforward way to secure CA3 would then be to simply generalize this principle (let us call it the *naturality principle* (NP)) as:

NP: *If the recipient becomes intentionally f, then the agent that caused it must be naturally f.*

We could then apply this general principle straightforwardly to intellection to get:

NP_i: *If the recipient (i.e. possible intellect) becomes intentionally immaterial, then the agent that caused (intentionally immaterialized) it must be naturally immaterial.*

Accepting NP_i would certainly entitle us to accept CA3 (“whatever intentionally immaterializes the intelligible species must be naturally immaterial”) since it is really nothing but a more detailed restatement of it. NP seems to initially fit well into Aquinas’s theoretical framework. Based on what has been said so far, it does seem that we can make no sense of the idea that an intentionally existing being, such as a sensible or intelligible species, could come into existence or exist in any way on its own, unless it has some causal origin in a naturally existing agent (barring divine intervention) of which it is an intentional likeness. There simply is no mysterious, independent realm of the intentional for Aquinas, in which such beings could arise spontaneously.⁸² So, if there is a species, there must be some naturally existing agent, of which the species is a likeness, responsible for its existence.

However, NP also seems to be too strong, since we must take into account the ability of the imagination to combine the likenesses of say, gold and mountain, to create the phantasm golden mountain (see 2.3.1 above). In such a case, there is no one naturally existing thing that is a golden mountain, yet there is an intentionally existing phantasm of a golden mountain. Therefore, NP does not seem like a principle Aquinas could consistently subscribe to.

⁸² Nor does it seem possible to postulate an infinite causal chain of intentionally immaterial beings causing each other, because the existence of such a series would be just as inexplicable as the independent existence of one intentionally existing being.

A second, more difficult problem concerning the intelligible species emerges when we consider the fact that the intelligible species is intentionally universal, but not caused by any naturally universal agent (e.g. a separate universal Intellect) according to Aquinas. This also violates NP. I will address the problems in reverse order because solving the latter, more difficult problem will help us also see how the first problem is solved. My solution is to qualify the principle thus:

NP*: *If a species is intentionally f, then the agent(s) that caused it must be naturally f, either individually or through their powers collectively.*

To explain why I think NP* captures the deeper causal principle underpinning Aquinas's universality arguments and this theory of abstraction, I will borrow from James Kintz (2019) the idea that a useful way to think of the causal interaction of the phantasm and the intentionally immaterializing power in Aquinas's model is through the notion of *partner powers*, since both agents make a causal contribution toward creating the likeness of something universal.⁸³

Now, I take the notion of universality to have primarily two aspects in the present context:

- 1) a "one over many" -relationship to a potential infinity of things (self-evident),
- 2) immateriality (because the notion of a material universal is incoherent).

According to NP*, the requirement is then that the causal agents which cause an intelligible species to have these characteristics of universality in *esse intentionale* must themselves have these characteristics in *esse naturale*, *but neither of them individually have to have both characteristics.*

⁸³ Kintz (2019: 14) derives this view from Anna Marmodoro's (2014) reading of Aristotle's theory of abstraction. As for Kintz's views on Aquinas's abstraction theory in general: Kintz sides with Cory against the extraction model reading but criticizes some aspects of her reading. Although Kintz offers an interesting discussion, I have omitted it from the present work, because Kintz (2019: 9 n 6) himself seems to admit that Cory may also be read in a way that he does not object to, and I agree with him on this: there does not seem to be any difficulty in thinking of the two powers as partner powers, as Kintz's does, and simultaneously recognizing, as Cory does, that for Aquinas, the two powers form an ordered pair (primary and secondary agent). Kintz and Cory's readings thus seem perfectly complementary to me.

In order to fulfill this condition, the intentionally immaterializing power provides “one half” of universality to the intelligible species, namely intentional immateriality, and only on the condition that it is naturally immaterial, per NP*. The phantasm contributes “the other half” of universality, namely a potentially intelligible universal essence capable of being shared by a potential infinity of things.

When it comes to the phantasm, we must remember Aquinas’s view that external agents (light and the material substances in our external environment) relate to the imagination as sufficient agents (although the co-operation of the inner senses is also required).⁸⁴ Thus, strictly speaking, the potentially intelligible universal essence capable of being shared by a potential infinity of things is really contributed by the external material substance itself (although it is already intentionalized before even reaching the eye, when the primary agent, light, acts on it, and creates a species *in medio*). Thus, the intentionally material mode of representation of the phantasm is made possible by the naturally material substances acting on the senses. Therefore, there turn out to be two conditions for having intentional universality “for free” (i.e. without Averroistic consequences), and without violating NP*:

- 1) the species that is intentionally immaterialized is the intentional likeness of a naturally material *singular* agent (since it represents that agent’s essence which, although it only exists naturally in concrete individuals, is capable of being shared by a potential infinity of things, and thus has the right kind of “one over many” -relation)
- 2) the species that is intentionally immaterialized is the intentional likeness of a naturally immaterial *singular* agent (since it represents the essence purified from individuating material conditions, i.e. immaterially).

Only the combination of 1) a naturally material agent (with the co-operation of the inner senses) and 2) a naturally immaterial agent gets us the right result while simultaneously respecting NP*, because only these two types of singular agents have the appropriate causal powers collectively to create an intentionally universal species. Even multiple naturally material agents acting collectively could not secure the second condition without violating NP*, since none of them

⁸⁴ *QQ* 8.2.1 co, as discussed in 2.3.1.

have any immateriality to contribute, and thus one aspect of the intentional universality of the intelligible species (its intentional immateriality) would be left unexplained per NP*.⁸⁵

This solution avoids the Averroistic consequences of the naïve NP and simultaneously grants us CA3: the second condition can be fulfilled only by a naturally immaterial power, so we now know that *some naturally immaterial power* is involved in abstracting the intelligible species. As for the problem of the golden mountain, it can be solved straightforwardly by applying the same reasoning: although there is no golden mountain in *esse naturale*, there must be some gold and some mountain in *esse naturale* in which the phantasm of a golden mountain has a causal origin. Thus, NP* is not violated by that example either.

Once CA3 is secured, we have already bypassed the content fallacy objection. If I am right, we have successfully proceeded from claims about the intentional immateriality of the intelligible species to a claim about the natural immateriality of the agent that intentionally immaterializes it without fallacious inferences, *ad hoc* moves, or adding anything new to Aquinas's philosophical framework. But we have not yet identified that power with any power of the human soul. At this stage, CA becomes an argument by elimination. There are only four types of possible candidates for the job of a naturally immaterial power (or a substance with that power) to intentionally immaterialize: 1) a separate universal Intellect shared by all human beings, 2) God, 3) an angel, 4) the human intellect itself. If we are allowed to eliminate the first three, then we are entitled to CA4.

Aquinas's polemic against Option 1 is of course one of the most famous moments in 13th century philosophy, but an adequate treatment of the topic is outside the bounds of this work.⁸⁶ I will only mention one of the arguments Aquinas uses against the position, the famous "*this man understands*" argument. He argues that if Option 1 were correct, we could not say that

"this individual man understands; for we would never raise a question about the intellect unless we understood; and when we do raise a question about the intellect, we do not ask about any other principle than that by which we understand." (*DU* III.62, trans. Zedler (1968: 49))

⁸⁵ I take it that immateriality is irreducible in the sense that no combination of several material things (e.g. several phantasms) could create it.

⁸⁶ For discussions of the controversy and Aquinas's uncharacteristically polemical work *On the Unity of the Intellect Against the Averroists* (*De unitate intellectus contra Averroistas*), see e.g. Zedler 1968: 1–20, Mahoney 1974, 1982; Dales 1995, Bryson 2007, Marenbon 2007.

Whatever we think about the adequacy of this or the many other arguments Aquinas offers against the view that all human beings share one universal Intellect (sometimes known as *monopsychism*), I take it that critics of Aquinas's universality arguments (e.g. Novak (1987) and Pasnau (1998)), or other potential scholarly critics, are willing to give Aquinas the premise that it really is the individual human being (or human soul) that thinks and understands, and thus it is something we can accept as part of the proper context of the arguments. Thus, we can reject Option 1.

Options 2 and 3 correspond to versions of what is loosely called *divine illumination theory*, which Pasnau (2020: Sec. 1) refers to as “the oldest and most influential alternative to naturalism in the areas of mind and knowledge.” Although divine illumination does have an impressive philosophical pedigree, the version of it under consideration would have the same consequence for Aquinas as monopsychism, i.e. if God or an angel were the active principle of abstractive intellectual cognition, then it would be God or the angel who thinks and not the individual human being (or soul).⁸⁷ Therefore, Options 2 and 3 can also be rejected in the present context, which leaves us to conclude that the naturally immaterial power we are looking for is nothing external or extrinsic to the human intellect. This power cannot be the possible intellect, since it would be incoherent to say that the same power is active and passive in the same act of abstraction and in the same respect. Therefore, the active naturally immaterial causal principle of abstraction must be some other power of the human intellect, and that power is what Aquinas calls the agent intellect.

⁸⁷ According to Pasnau (2020: Section 5), Aquinas subscribes to a weak variant of divine illumination theory. Whether this is a correct interpretation or not, this weak variant of divine illumination does not compete with Aquinas's model of abstraction (and I am not aware of anyone claiming otherwise) and therefore does not threaten the soundness of CA.

5. Conclusion

5.1 Dialectical issues

If CA is sound in the context I have presented it, I suppose the next question will be about how I have presented the context. I suspect a critical reader may have started to wonder whether I might be engaging in the following kind of sophistry: by defining the theoretical context how I want, I get to squeeze out the “inevitable” conclusion I want. I wish to assure my reader that if that is what I am doing, it is out of ignorance rather than a deliberate wish to distort any facts about the debates that surround Aquinas’s universality arguments.

It is my sincere understanding of the state of those debates (and especially the debate concerning the “content fallacy”) that all participants in the debates are ready to give Aquinas as elaborate a theory of cognition as he wants, as long as 1) the natural immateriality of the intellect is not among the assumptions included in the premises of the arguments which are meant to establish that very fact, and 2) that theory of cognition is coherent and genuinely explanatory, at least with regard to those features that must be assumed to secure the desired conclusion.

The second requirement reflects the fact that an argument for the immateriality of the intellect that requires appealing to an incoherent set of premises or an explanatorily worthless theory of cognition is a worthless argument. I take abstraction at least to be a relevant causal model that must be coherent and of explanatory value for CA to not rely on an incoherent or worthless theory. I will say something about that in 5.2.

As for the first requirement, circularity could occur in several ways: firstly, an assumption I have given could simply be straightforwardly question-begging, i.e. assuming my own view to be correct. At this point, I will leave that for the reader to judge. Another way would be if I assumed some feature x of Aquinas’s model of human intellectual cognition in the premises of CA, and the only reason that Aquinas insists that x be part of the model would be because the human intellect must be immaterial. At least two features might be pointed out as candidates for being x : 1) the necessarily universal mode of human intellectual cognition, and 2) the necessarily singular mode of sense cognition, which explains the need for an active, abstractive intentionally universalizing intellectual power.

To 1): I am not sure if it would be question-begging, in this context, to assume that the human intellect only cognizes universals, but in any case this is not an assumption I insist on. In the context of the universality arguments it suffices to accept that *some* intellectual cognition is like that.

To 2): it seems that the connection between intentional immateriality and intentional universality is motivated by other considerations than the immateriality of the intellect.⁸⁸ Still, one might wonder if Aquinas's insistence on the insufficiency of a sense power to cognize universally is question-begging. In fact, John Buridan would bring up precisely this point in the first half of the 14th century, in his *Questiones De Anima* (3.3): a thirsty horse does not desire this water or that water but water in general (see Pluta 2002 and Wood 2019: 239). Why, therefore, insist that animals with only a sensitive naturally material soul cannot cognize universals? If such animals could do that, then human beings might be such animals as well, since the ability to cognize universally is the supposed difference between the intellect and senses.

Although I critique Adam Wood's (2019: 239–254) suggestion for overcoming the content fallacy in 3.4, I think he hits the right mark with his characterization of Aquinas's understanding of the universal mode of cognition as necessarily intentionally/semantically determinate.⁸⁹ Let us consider the difference between an image or phantasm of a circle and an

⁸⁸ Intentional universality requires intentional immateriality because an intentionally material universal would represent the object of cognition as simultaneously singular and universal in the same respect, which would seem to result in an obliteration of the whole singular-universal distinction. When I look at a cup, I can of course cognize it *as* singular or *as* universal depending on how I want to consider it, and perhaps I can even do both at the same time, but these are still distinct aspects of the cognitive act. An intentionally material universal would represent in the way that denied the distinctness of these aspects and Aquinas's qualification "*sed tamen cum conditionibus materialibus*" would become meaningless. If a critical reader of mine insisted on disagreeing with me on this, I would at least have shown that CA is sound in a *non-trivial* context, since having to take the disagreement to such a fundamental level shows that Aquinas would have good reasons to consider CA sound in his context.

⁸⁹ The is danger of confusing this with another diametrically opposed sense of determinacy used by Cory (2015a): the human intelligible species in *indeterminate* insofar as it is not determined to represent any one individual, whereas the phantasm is determinate because it represents one individual rather than another and is thus "determined" to represent it. However, if we combine Cory's sense of determinacy with Wood's sense, we must also say that while the phantasm is "determined" (in a loose sense) to one individual rather than another (in contrast to the precise negative sense in which a human intelligible species is not determined to represent one individual rather than another), the phantasm still represents that individual vaguely to some extent. Firstly, because reality is far too complex for our limited sense powers to adequately cognize in all its complexity, and secondly, because any image or other sensory representation is indeterminate (in a precise sense) with regard to what it is a universal of. For instance, an image of a red circle does not determinately represent only either of its universal aspects, *circularity* or *redness*, whereas the concept of *circularity* or *redness*, which we can intellectually cognize (with), represents only

intelligible species (or a concept, if you will) of a circle. Any image (mental or otherwise) is vague and inexact to some extent since there are no perfect circles in nature nor in our mental images. The intelligible species or concept or definition of a circle (or any intellectually cognized circle) is perfectly circular however (because that is what our idea of a circle is). While being vague, an image of a circle is simultaneously of a particular kind of circle: red, black-and-white, bluish-greenish-orangish, or however vague you like. It is still a particular kind of circle, not equally well representative of all circles as the concept of a circle is. Therefore, the intelligible species of a circle has “nobler” qualities compared to an image or phantasm: it can be both more general (its universal aspect) and more precise (its determinate aspect) simultaneously. Because of the nobler qualities of the intelligible species, it is fit for being the kind of thing involved in universal judgments, discursive reasoning, mathematical thinking and so on.⁹⁰ This, I think, motivates the explanatory gap between the senses and the intellect sufficiently, so that we can say that Aquinas has at least some kind of principled reasons for insisting on the need for an *active* abstractive power to intervene for the “content” of the phantasm to become universalized in the intelligible species.⁹¹

5.2 Interpretive issues

When Robert Pasnau (1998) brought the “content fallacy” to the attention of a wider audience, he wrote: “I hope someone will find such a premise [i.e. a premise that will explain why Aquinas isn’t committing the “content fallacy”] and acquit Aquinas of all charges. But I have been unable to find any such premise or premises.” (Ibid.: 194, bracketed words are mine) Ten years later, in a 2008 addendum, he wrote: “When I published this paper, I expected there to be someone out there who could show me how to defend Aquinas against this seemingly

what it is a concept of. And thirdly, neither does the image represent *circularity* perfectly, because there are no perfect circles in material reality (except perhaps if spacetime points are actually fundamental, as David Lewis (1986: 76) holds, and at least one set of set of spacetime points equidistant from a some point constitutes some real being).

⁹⁰ See e.g. *DEE* 3.91–99.

⁹¹ See Feser 2013 for an extensive discussion on the differences between concepts and images and for some parallels between Aquinas, the Thomistic commentary tradition and Descartes. Also see Kintz 2019: 14–15 on why an *active* intellectual power is required.

devastating objection. It was when I realized there was no one out there who could do this that my philosophical adolescence was over.” (Ibid.)

Whether I have successfully defended Aquinas against the content fallacy objection depends on whether Aquinas’s reasoning in the universality arguments is based not only on representational but also on causal considerations. However, even if Aquinas argues purely on representational considerations, and never did intend to make the kind of causal universality argument (CA) I suggest, it is an argument that Aquinas *could have made coherently* without adding anything new to his philosophy, although presenting it in a dialectically satisfying form requires one to draw premises from various aspects of his framework.

I have presented CA as a deductive argument to remain in keeping with Aquinas’s view that the immateriality of any intellectual substance can be demonstrated. Therefore, I believe CA stands or falls depending on the truth of all its individual premises and the validity of the deductive inferences employed. The justification I have provided for each of the premises is derived from what I sincerely take to be mostly uncontroversial readings of various aspects of Aquinas’s general ontological framework, his philosophical theology, his philosophical angelology, as well as his theory of cognition.

However, two very specific interpretive theses are crucial for my treatment of the universality arguments, and these readings, although they might be controversial, should not be so in my opinion. The first reading concerns the specific way I present the overlap of various modes of being (natural, intentional, material, immaterial, singular, universal) in Aquinas’s cognition theory. I have adopted the general idea of this reading from Pasnau’s (1997) *orthogonality thesis*:

“[T]he problem is how the intelligible species of an angel differs from the angel itself. Aquinas explains that when one apprehends the essence of an angel one receives a species that exists intentionally, not naturally. But that species, the intentionally existing form of the angel, is plainly no less physical than the naturally existing form of the angel (i.e., the angel itself). What this shows, Aquinas points out, is that *the intentional-natural distinction is orthogonal to the physical-nonphysical distinction.*” (Ibid.: 38, emphases mine)

Pasnau then goes on to quote the same passage (*ST* Ia.56.2 ad 3) that I quoted in 2.2 to make the same point that I have made. To my mind, Aquinas’s view in the text could not be clearer: angels

themselves have both natural and immaterial being, whereas the intelligible species of the angel has only intentionally immaterial being *qua* representing form. However, *qua* accident inhering in a substance, it is a naturally immaterial form. Therefore, Aquinas's modes of being have the overlapping nature I describe in 2.2. However, there are further controversies regarding Aquinas's theory of cognitive representation that I have not addressed. For example, it is not entirely clear what cognitive representation *is* for Aquinas (see Brower and Brower-Toland 2008 for a review of the debate) or whether he has a unified notion of cognition in the first place.⁹² In any case, I have attempted to treat SA, MA and CA in a way that is neutral between the many interpretive controversies surrounding Aquinas's cognition theory and philosophy in general. If I have favored one interpretation over another – or gone against all of them somehow – and I have not been transparent about it, I have not done so deliberately.

The second interpretive thesis someone might consider controversial but is crucial to the soundness of CA especially, can be found in Therese Cory's (2015a, b) "active principle model" reading of Aquinas's abstraction theory. The "active principle model" stands in contrast to the more usual "extraction model" reading, which has serious problems that make Aquinas's abstraction theory look incoherent and non-explanatory. As I have argued in 2.3.3, the "active principle model" solves the theoretical problems of the "extraction model" and makes better sense of Aquinas's characterization of the agent intellect as an "intellectual light." It is therefore the superior interpretation on both systematic and textual grounds.⁹³ I have nothing substantive to add to those considerations.

In conclusion, then, I hope to have argued adequately for the following thesis: Aquinas's metaphysical model of cognition contains a sound (relative to Aquinas's own theoretical context) deductive universality argument for the natural immateriality of the agent intellect. Aquinas is, in this theoretical context, entitled to the conclusion that the human soul, to which the activity of the agent intellect is most appropriately attributed, is naturally immaterial, and thus a subsistent naturally immaterial (incomplete) substance in its own right. In his theoretical context, then,

⁹² See Cory 2018 for the view that different intellectual cognizers are so radically different for Aquinas that their modes of cognition cannot be compared univocally. See also Cory 2020 for a re-evaluation and re-division of many of the debates regarding Aquinas's cognition theory.

⁹³ I also employ aspects of James Kintz's (2019) reading of Aquinas's abstraction theory (namely, that the agent intellect and phantasm should be thought of as having partner powers that successfully explain the characteristics of the intentionally universal and immaterial species), but I believe his account and Cory's are compatible, as Kintz (2019: 9 n 6) himself seems to admit despite criticizing (his reading of) some aspects of Cory's view. See note 83.

Aquinas has a good basis on which to argue for the further claim that the soul is incorruptible, which grounds the yet further claim that the numerically same human being can be resurrected *post mortem*. But all of this requires further elaboration and argumentation that lies outside the bounds of my discussion.⁹⁴

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