Aquinas on Mental Representation: Concepts and Intentionality

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Let us say that a representation is an entity with intentional or semantic properties—that is, an entity having properties in virtue of which it is *of* or *about* one or more objects. Given this characterization, we can say that a mental representation is just a *mental* entity (or better, a mental state) with intentional or semantic properties.

The purpose of this essay is to explore certain aspects of Aquinas's account of mental representation.[1] Although there are a number

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1. For Aquinas's works, we rely on the editions in Busa 1980 and employ the following abbreviations:

DEE	*De ente et essentia*
DPN	*De principiis naturae*
In DA	*Sententia super De anima*
In DSS	*Sententia de sensu et sensato*
In Met.	*Sententia super Metaphysicam*

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of issues that might be considered in this connection, our focus will be on Aquinas's account of the intentionality or content of mental representations. In particular, we are interested in his answer to two questions, one general, one specific:

> *General question*: In virtue of what does a mental state possess intentionality at all (i.e., in virtue of what is it *of* or *about* anything at all)?
>
> *Specific question*: Assuming a mental state possesses intentionality, what determines its specific intentional content (i.e., in virtue of what is it about *certain* things rather than others—say, humans rather than cows)?

In exploring Aquinas's answer to these questions we will concentrate on his treatment of one particular class of mental representations, namely, those which he refers to as "intelligible species," but which nowadays might be classified simply as "concepts."[2] We recognize, of course, that Aquinas's complete account of mental representation and intentionality goes well beyond his account of concepts and his answers to the two foregoing questions about them.[3] Our purpose, however, is not to provide

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In Sent.	*Scriptum super libros Sententiarum*
QDP	*Quaestiones disputatae de potentia*
QDV	*Quaestiones disputatae de veritate*
Quod.	*Quaestiones quodlibetales*
SCG	*Summa contra gentiles*
ST	*Summa theologiae*

All translations are our own.

2. Aquinas's notion of intelligible species is roughly the same as the contemporary notion of a concept, especially insofar as the latter is taken to include mental representations that both (i) function as subpropositional units of thought (and hence can be combined to form propositional thoughts), and (ii) tend to have a content that is general (as opposed to singular) in nature. Since Aquinas thinks that intelligible species are the only such mental representations to have their intentionality nonderivatively, it will be convenient hereafter to speak as if they exhaust the class of concepts. Strictly speaking, however, this is an oversimplification. Aquinas actually recognizes two classes of mental representation that would qualify as concepts in the contemporary sense—intelligible species and another class for which he introduces the Latin term '*conceptus*'. For more on this further class of mental representation and the relationship of its members to intelligible species, see note 20 below.

3. A complete account of Aquinas's views on mental representation would require a thorough treatment of his views about intellectual cognition and its connection to sensory cognition. Although we touch on these views below (in sec. 1), we do so only for the purpose of isolating the topic of interest to us here. For detailed discussion of Aquinas's views of intellectual and sensory cognition, see Pasnau 1997 and Stump 2003.

his complete account, but rather to address this *one* important aspect of it. Indeed, as will become clear, we shall have our hands full with interpreting just this much of the account.

Aquinas devotes a great deal of attention to questions about intentionality in general, and the intentionality associated with concepts in particular. What is more, his views have been the subject of numerous scholarly studies. Yet for all this, even Aquinas's basic approach to intentionality remains deeply puzzling to most contemporary philosophers. For like medieval thinkers generally, his views about intentionality are bound up with a number of dark and difficult Aristotelian doctrines—including the "identity" of the knower and the known, hylomorphism, accidental change, sensible versus intelligible species, beings of reason, and abstraction. Moreover, because there is no consensus among commentators about how Aquinas (or, for that matter, Aristotle) understands these doctrines, a good deal of confusion remains about even the most fundamental elements of Aquinas's account—not to say about its relation to contemporary discussions of mind and mental content. Thus, although Aquinas's commentators often make bold claims about how his views can be used to resolve long-standing difficulties in contemporary philosophy of mind, our own view is that any such assessment is premature and must await further clarification of the views themselves.

Accordingly, our aim in this essay is to develop an interpretation that succeeds where (as it seems to us) others have failed—namely, in clarifying the precise nature of Aquinas's views and, thereby, providing a basis for understanding their significance from the point of view of contemporary discussions. With this aim in mind, the essay is divided into three parts. In the first and longest part of the essay (secs. 1–2), we demonstrate the need for a new interpretation of Aquinas's account of the intentionality of concepts. We begin by clarifying the Aristotelian context within which Aquinas develops his views and identifying the main textual considerations that must be taken into account by any adequate interpretation of them (sec. 1). We then turn to explaining why none of the standard interpretations on offer in the literature is capable of doing justice to these considerations (sec. 2).

In the second part of the essay (sec. 3), we develop our own positive interpretation of Aquinas's account. As will become clear, we think the standard alternatives all suffer from a common defect: namely, the assumption that Aquinas intends to *analyze* intentionality in terms of two further relations—namely, those of "sameness of form" and "intentional

possession." On our preferred interpretation, by contrast, Aquinas takes intentionality to be incapable of further analysis—that is to say, he takes it to be a *primitive* or *sui-generis* feature of concepts.

In the third and final part of the essay (sec. 4), we draw out the implications of our interpretation for Aquinas's position relative to contemporary debates in philosophy of mind. Our purpose here is not only to clarify the philosophical significance of Aquinas's views, but also to correct some persistent misunderstandings of them and their relation to contemporary views. Although Aquinas's account marks out a dialectically interesting (and perhaps even ultimately viable) position in philosophy of mind, we think that the advantages often claimed for it have been greatly exaggerated. Indeed, as we shall see, Aquinas's account faces just the sorts of challenges we'd expect from any theory committed to the irreducibility of intentionality.

1. Framework for Interpretation

Aquinas formulates his views about concepts and intentionality within a broadly Aristotelian framework—one that explains *all* forms of cognition as a type of change living beings undergo when they receive and process information about the world. In order to place Aquinas's views in their proper context, we begin with a brief sketch of the relevant Aristotelian framework (sec. 1.1). We then turn specifically to his discussion of concepts (sec. 1.2) and to the various ways it can be interpreted (sec. 1.3).

1.1. Cognition, Change, and Intentionality

Following Aristotle, Aquinas considers all forms of cognition as a certain kind of change. Because cognizers are not always *actually* cognizing the things that they *can* cognize, cognition is something that cognitive subjects undergo, something that requires their coming to be in a state in which they previously were not.[4] Like Aristotle, moreover, Aquinas thinks of change in general, and hence cognitive change in particular, in hylomorphic terms—that is, as a process by which some matter or subject (*hyle*) comes to possess some form or property (*morphe*) that it previously lacked. In short, Aquinas frames his views about cognition in

4. Strictly speaking, it is only *creaturely* cognition that Aquinas thinks of as involving change, since God is both omniscient (i.e., always cognizing the things he *can* cognize) and immutable (i.e., incapable of *undergoing* change).

terms of a broadly Aristotelian account of change, which we can represent schematically as follows:

> *Change*: Some matter (or subject) S comes to be F if and only if S receives the form (or property) of F-ness.[5]

Thus, just as a kettle comes to be hot when it acquires the form of heat, and a fertilized egg comes to be human when it acquires the form of humanity, so too Aquinas thinks cognition occurs when a subject comes to possess a certain form or property.

That Aquinas thinks cognition involves form reception is clear from his repeated remarks to this effect. To take just one instance:

> Every act of cognition is in accordance with some *form*, which is the source of cognition in the one cognizing. (*QDV* 10.4)[6]

Accordingly, cognition occurs when the form of the thing cognized is somehow *received by*—or comes to be *present in*—the cognizing subject. As he explains,

> An object is cognized insofar as its form is *in* the cognizer. (*ST* 1.75.5)

Now, as the examples of the kettle and fertilized egg suggest, Aquinas thinks that there are different kinds of change corresponding to the different kinds of form received. In the case of the kettle, the change involved is accidental because the form received is accidental—which is just to say that change here involves an already existing thing (the kettle) coming to possess a new contingent form or property (heat). In the case of the fertilized egg, by contrast, we have a substantial change since the form received is substantial. Unlike the former case, the change here involves a new substance or entity (a human being) coming to exist where something else previously existed (the fertilized egg). Aquinas's account of substantial change raises difficult questions, but fortunately we can ignore them here. For in line with common sense, Aquinas denies that cognition involves the destruction of the cognizer (or the production of any new substances), and hence classifies it as a type of *accidental* change. Indeed, he specifically locates the forms received in cognition in the Aristotelian category of Quality.[7]

5. As this statement of Aquinas's account of change is intended to make clear, he is a realist about matter and form (or subjects and properties). Both are required to explain change, and since the one (the matter or subject) can exist without the other (the form or property), they cannot be identical.

6. See also *SCG* 1.44, 47.

7. See, for example, *ST* 1–2.53.1; *SCG* 1.46; and *QDP* 9.5, where Aquinas characterizes these forms as habits, which are species of Quality.

Although Aquinas thinks of cognition on the model of ordinary accidental change, it should be clear that the sort of change it involves is distinctive. For it involves the production of *intentional* or *representational* states. That is to say, the forms received in cognition are such that when they are received by their subject, they make *other* things (namely, the objects they represent) to be present to the subject as well (though only intentionally).[8] In order to signal the distinctive nature of the forms received in cognition, Aquinas follows Aristotle in adopting a special terminology for talking about them. In particular, he refers to them as 'species'—a Latin term almost always left untranslated in the secondary literature, but which literally means *form* or *likeness* and is often used by Aquinas as a synonym for 'representation' (*repraesentatio*).[9] As Aquinas sees it, therefore, it is in virtue of the reception of species that cognition or representation occurs:

> Every cognition occurs through some *species* of the cognized thing in the cognizer. (*In Sent.* 1.36.2.3 sed contra)[10]

In order to bring out the distinctiveness of this account of cognition, as well as clarify its relationship to the general Thomistic account of change stated above, we can state it schematically as follows:

> *Cognition*: A cognizer C cognizes an object O if and only if C receives a species (i.e., a representation) of O.[11]

As this schema makes clear, there is a close connection between Aquinas's views about cognition, change, and intentionality: insofar as cognition involves the reception of forms, it qualifies as a type of change; and insofar as the forms received in cognition are species, they have intentionality. If we want to understand Aquinas's account of intentionality, therefore, we must identify his account of that in virtue of which species function as representations of their objects.[12]

8. In terminology more familiar to contemporary readers from Brentano, we might say that the possession of such forms brings about the "intentional *in*existence" of the objects they represent.

9. See Defarrari and Barry 1948, under the word 'species', for Aquinas's use of this term.

10. See also *ST* 1.14.2.

11. We shall follow Aquinas in speaking of such forms or qualities themselves as having the intentional or referential property of being *about* some object (or objects), at least when they are possessed in the right way—even though, on some interpretations we shall consider, it would be more natural to speak of *events* (involving the mind's possession of such qualities) as having the *aboutness* in question.

12. In what follows, we are concerned only with Aquinas's views about species insofar as they are received by particular cognizers. It should be noted, however, that

When Aquinas wants to single out the representational nature or intentionality of species, he typically does so by appealing to the notion of likeness (*similitudo*). Indeed, as he says at one point:

> To represent something [just] is to bear the likeness of that thing. (*QDV* 7.5 ad 2)

This sort of appeal pervades Aquinas's works and explains why he sometimes describes cognition in terms of the reception of a likeness (rather than a form or species):

> Every cognition occurs because a *likeness* of what is cognized is in the cognizer. (*SCG* 1.77)[13]

The tendency to characterize intentionality in terms of likeness lies at the bottom of the notorious Aristotelian-Thomistic doctrine of the "identity" of the knower and the known. For as Aquinas sees it, when a cognizer receives a likeness of some object, it thereby becomes "like" this object—or as he also puts it, it becomes "assimilated" to it. Thus, applying the point to cognition generally, he says:

> Every cognition occurs through the *assimilation* of the cognizer to the thing known. (*QDV* 8.5)

As the foregoing makes clear, "likeness" or "assimilation" is the central notion in Aquinas's account of intentionality. It is important to emphasize, however, that Aquinas takes the likeness (or assimilation) involved in cognition to be distinctive. For although he often speaks of ordinary change as involving the reception of a likeness—so that, for example, when a kettle becomes hot from sitting on the fire, it does so by virtue of acquiring a "likeness" of the fire—he repeatedly insists that this is *not* the sort of likeness involved in cognition.

> A likeness of one thing can be found in another in two ways: [i] in accordance with natural being (*quantum ad esse naturae*), as when the heat of a fire is found in something heated by the fire; or [ii] in

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Aquinas allows for the reception of species by nonliving beings, such as the air and other media, which are utterly incapable of cognition. In our opinion, this just goes to show that, for Aquinas, the mere possession of intentionality—though necessary and sufficient for cognition *in a cognizer*—is not necessary and sufficient for cognition *tout court*. For an alternative interpretation, one according to which mere intentionality (as defined below) is necessary and sufficient for cognition *tout court*, see Pasnau 1997, 31–60. For obvious reasons, we cannot here address complications associated with *species in medio*, including the question of what, if anything, in addition to intentionality is required for cognition on Aquinas's view.

13. See also *In DA* 1.4.20–22 and the passages referred to in sec. 2.3 below.

> accordance with cognition (*secundum cognitionem*), as when the likeness of fire is found in sight or touch. (*SCG* 2.46)[14]

Elsewhere Aquinas marks the same distinction by contrasting the different types of assimilation associated with these different types of likeness (namely, natural versus cognitive):

> One kind of assimilation occurs because of an agreement in nature (*secundum convenientiam in natura*) . . . but this kind is not required for knowledge. Another kind of assimilation occurs through information (*per informationem*), which kind is required for cognition—just as sight is assimilated to color, when the pupil is informed by its species. (*In Sent.* 1.34.3.1 ad 4)[15]

The same distinction lies behind Aquinas's oft-repeated remarks about the different ways in which forms are received in cases of ordinary versus cognitive change. In cases of ordinary change, Aquinas says, the relevant forms are received by their subjects *naturally* or according to *natural existence* (*esse naturale*). By contrast, in cases of cognition, he claims that they are received *intentionally* or according to *intentional existence* (*esse intentionale*). Indeed, Aquinas will even speak of objects themselves as having different modes of existence: *material existence* in nature and *immaterial* or *intentional existence* in cognizers.[16] Although these ways of speaking will, no doubt, strike many as odd, the need for them is perfectly understandable. What Aquinas means to be calling our attention to is the fact that ordinary form reception is neither necessary nor sufficient for representation (after all, a person can both become hot without cognizing heat and cognize or represent heat without becoming hot). As Aquinas recognizes, therefore, if we are going to appeal to likeness in order to single out the representational nature of cognition, it must be a distinctive sort of likeness—let us call it "intentional likeness."

In light of the foregoing, we can summarize what we have seen of Aquinas's account of representation schematically as follows:

> *Representation*: A form or property, F-ness, is a representation (i.e., a species) of an object O if and only if F-ness is an intentional likeness of O.

14. See also *ST* 1.85.8 ad 3.
15. See also *QDV* 2.3 ad 9.
16. See *In DA* 2.12 and *In DSS* 18.204–10 for clear examples of these different ways of speaking, as well as the suggestion that, in ordinary change, forms are received *materially*, whereas in cognition they are received *immaterially* or *spiritually*. As Pasnau 1997 (esp. 31–46) rightly insists, however, we must be on guard against thinking that Aquinas uses 'material' and 'immaterial' (or 'spiritual') in our senses of these terms.

What all of this makes clear, of course, is that any adequate interpretation of Aquinas's account of intentionality must elucidate the distinctive notion of likeness on which it rests.

1.2. Intentionality and Concepts

So far, we have been speaking about cognition and intentionality in general. But, as we indicated at the outset, our focus in this essay is on Aquinas's views about the intentionality associated with just one type of representation—namely, concepts (or *intelligible* species). In order to justify this narrowing of focus, as well as to locate Aquinas's views about concepts within his broader views about cognition and intentionality, we need to say something about the different types of cognitive or intentional states he recognizes.

As Aquinas sees it, there are two (and only two) types of cognition, sensory and intellectual.[17] Sensory cognition is the type characteristic of certain material substances—namely, living beings or animals, which paradigmatically possess the five senses (sight, smell, hearing, etc.), the five corresponding external sensory organs (eyes, nose, ears, etc.), and certain internal sense faculties located in the brain (imagination, memory, etc.). Sensory cognition begins, on Aquinas's account, when an animal (or better, one of its sensory organs) receives a "sensible species"—that is, a form or representation of something that can be sensed (color, taste, odor, etc.).[18] Because the reception of such species involves a change or alteration in physical organs of the body and because such organs are acted on by particular material objects, Aquinas holds that the content of sensory representations is likewise particular. Indeed, in the case of material substances such as ourselves, it is only in virtue of sensory cognition that we are capable of representing singular things such as this individual human being or this individual horse.

17. Aquinas provides an elaborate account of the various mechanisms and processes by which sensible species are received and processed by the sense organs and then transmitted, via a process of abstraction, to the intellect in the form of intelligible species. For a detailed account of these processes, see, for example, Stump 2003, 244–76.

18. Aquinas's full account of sensory cognition appeals, not only to sensible species, but also to a further type of form or quality, which he refers to as 'phantasms' (*phantasmata*). Aquinas's views about phantasms and their role in sensory cognition are both perplexing and controversial (see the discussion in Frede 2001; Kenny 1993; Pasnau 2002; and Stump 2003). But since they are not directly relevant for our purposes, we can set them aside here.

Intellectual cognition, by contrast, is the type of cognition characteristic of immaterial substances—namely, God and the angels. It occurs when such a being (or better, its mind or intellect) receives an "intelligible species"—that is, a form or representation of something that can be intellectually cognized.[19] Unlike sensory cognition, Aquinas thinks that intellectual cognition essentially involves immaterial processes and that its species or representations are received in an immaterial subject (the intellect or rational soul).[20] For the same reason, Aquinas also thinks that intellectual cognition can be general or universal (rather than singular) in content. Indeed, in the case of human beings, who are the only material substances capable of intellectual cognition, he thinks intelligible species can be only universal in content. Thus, just as it is only via sensation and sensible species that we cognize *this* particular human (say, Socrates) rather than *that* one (say, Plato), so too it is only via intellectual cognition and intelligible species that we can represent both (Socrates and Plato) *as human* (see *ST* 1.12.4).

Because it would be impossible adequately to treat Aquinas's full account of intentionality in a single essay, we shall hereafter set all questions about sensory representations (i.e., sensible species) to one side and focus instead only on his account of intellectual representations or concepts (i.e., intelligible species). In order to make this focus more perspicuous, it will once again be useful to have before us a schematic statement of Aquinas's views:

> *Concepts*: A form or property, F-ness, is a concept (i.e., an intelligible species) of an object O if and only if F-ness is an intentional likeness of O and it is present in an immaterial mind (or intellect).

19. Here again, speaking of literal *form reception* in the case of God is misleading since he is incapable of undergoing change. See note 4 above.

20. As in the case of sensory cognition and phantasms, Aquinas's full account of intellectual cognition appeals not only to intelligible species, but also to a further mental act, which he variously refers to as the 'understood intention' (*intentio intellecta*), 'internal word' (*verbum interius*), or 'concept' (*conceptus*). (See *Quod.* 4.11; *SCG* 1.53.443; *QDV* 4.1; *QDP* 9.5; and *ST* 1.27.1 ad 2, 27.3, 34.1, 34. 3.) Like his views about phantasms, Aquinas's views about the precise nature and function of this further mental act—including whether it is even an intentional state—is a matter of debate among commentators. (See, for example, Pannacio 1992; Pasnau 1997, 254–71; Schmidt 1966, 103–14; and Stump 2003, 266–68.) But here again, we can set this aspect of Aquinas's views aside since our focus is only on questions about intentionality, and Aquinas thinks all mental reference or intentionality ultimately traces to the mind's possession of intelligible species.

As this schema serves to remind us, the chief difficulty for interpreting Aquinas's account of the intentionality of concepts concerns the notion of intentional likeness.

1.3. Interpretive Options

With regard to Aquinas's account of intentionality, there would appear to be two main interpretive options: either we take the notion of intentional likeness as primitive or we take it to be something that can be analyzed in terms of other, more basic (though perhaps still intentional) phenomena. For the sake of convenience, let us refer to these two types of interpretation as "nonreductive" and "reductive interpretations," respectively.[21]

The secondary literature on Aquinas's theory of intentionality is vast and complex, and we cannot hope to do justice to all of its intricacies here. Even so, we think it is fair to say that the standard interpretations are all of the reductive variety. Indeed, the standard interpretations all take Aquinas as providing an analysis of intentional likeness in terms of *two* further notions—namely, (i) "sameness of form" and (ii) "intentional possession." Nor are the reasons for this far to seek.

At various places in his work, Aquinas suggests that likeness in general must be understood in terms of sameness of form. Consider, for example, the following passage from the *Summa Theologiae* (1.4.3):

> Since likeness has to do with the agreement or sharing of form, there are as many types of likeness as there are ways of sharing a form.[22]

Elsewhere, Aquinas connects this general point about likeness directly with cognition (and hence with what we have been calling "intentional likeness"):

> Every cognition occurs through assimilation [or likeness]. But a likeness between any two things occurs because of an agreement in form. (*QDV* 8.8)

Passages such as these strongly suggest that intentional likeness should be analyzed at least partly in terms of some sort of sameness—namely, sameness of form. Indeed, what such passages seem to require is that the

21. Given what we've seen of Aquinas's views about the mind, it should go without saying that our use of the term 'reductive' in this context is not meant to connote any form of materialism or eliminativism. Indeed, as we have suggested in the main text, this label is not even intended to rule out the possibility that intentional likeness can be analyzed in terms of features that are themselves irreducibly intentional.

22. See also *In Met.* 10.4.2006–12.

forms received in cognition are the very same forms as those possessed by the object cognized.

Of course, even those commentators who accept the straightforward reading of these passages typically recognize that a complete analysis of intentional likeness must involve something more than mere sameness of form. For if intentional likeness involved nothing more than sameness of form, Aquinas would be left with a very crude theory of cognition, according to which cognizers must *literally* become like their objects in order to cognize them (so that, for example, a cognizer would have to become hot in order to think of heat).[23] But Aquinas explicitly rejects any such theory, both for the case of sensory cognition as well as for the case of intellectual cognition.[24] Indeed, as we have already seen, he claims that, in cognition, cognizers have their objects present to them only *intentionally* (as opposed to *naturally*). In fact, it is this latter way of speaking that has led commentators to suppose that Aquinas's complete analysis of intentional likeness involves not only sameness of form, but also a special type of form (or property) possession—"intentional possession" as it is sometimes called.

Despite the prima facie evidence favoring such an analysis of intentional likeness, we believe no form of reductive interpretation can ultimately do justice to Aquinas's texts. On the contrary, we think that when Aquinas speaks of mental representations or concepts as

23. It is sometimes suggested that Aristotelians, including Aristotle himself, really endorsed such a crude theory (see Sorabji 1974). Often, however, the suggestion is made merely for dramatic effect, as in the following passage by Joseph Owens (1992, 114):

> You *are* the things perceived or known. Knower and thing known . . . become one and the same in the actuality of cognition. From the strictly epistemological standpoint, this thoroughgoing identity of knower and thing known is the most important and most fundamental tenet in the Aristotelian conception of knowledge. Yet it is the tenet that evokes the hardest sales resistance in students, and is the last Aristotelian dictum to which they come to assent. . . . They do not like the idea of being a brown cow or a big bad wolf just because they are seeing those animals or thinking about them.

24. As regards sensory cognition, see Aquinas's remarks at *ST* 1.783: "The form of color is received in the pupil, but it does not become colored because of this." As regards intellectual cognition, see the discussion at *In DA* 2.24.45–56, where Aquinas points out that if this theory were true, in order to think about a stone, the mind would itself have to become a stone. (Aquinas takes this example from Aristotle's discussion in *De anima* 3.8, 431b30.)

(intentional) likenesses of their objects, this must be understood as his way of identifying a primitive, unanalyzable feature of them. In the remainder of this essay, we set out to defend these claims. Because our nonreductive interpretation is motivated by dissatisfaction with the standard alternatives, it is best appreciated in light of their failures. We begin, therefore, by presenting and criticizing the various ways in which the standard reductive interpretation has been developed before attempting to explain why only a nonreductive interpretation has the resources to succeed where these others fail. As will eventually become clear, even a nonreductive interpretation admits of more than one possible variation, depending on whether we take Aquinas's intentional likeness to be a primitive *relation* or a primitive *monadic* (or *nonrelational*) *property* of concepts. Although we shall ultimately advance a primitive nonrelational interpretation—on the basis of what Aquinas says about nonexistent objects—our main goal here is to show that a nonreductive approach fares better than any type of reductive interpretation.

2. Reductive Interpretations

As we have seen, what all reductive interpretations share in common is the assumption that Aquinas's account of the intentionality of concepts is committed to *an analysis* of intentional likeness in terms of two more basic relations: a relation of sameness (which concepts bear to the objects they represent) and a relation of intentional possession (which concepts bear to the mind). In order to clarify how the reductive interpretation relates to the questions with which we began this essay as well as to prepare for a discussion of the different ways in which it can be developed, it will be useful to represent it schematically (see figure 1).

The diagram is intended to represent the basic structure of all reductive interpretations, with the horizontal line standing for the sameness relation implied by condition (i) of the analysis and the squiggly, vertical line standing for the relation implied by condition (ii). For convenience, we shall refer to condition (i) as the "sameness condition"—since it tells us that a concept is somehow the same form as that of its objects. Likewise, we shall refer to condition (ii) as the "intentional-possession condition"—since it tells us that a concept is a form or property that is intentionally possessed by its subject, namely, the mind.

In principle, there could be as many different types of reductive interpretation as there are possible ways of understanding the two relations to which it appeals. In fact, however, commentators tend to

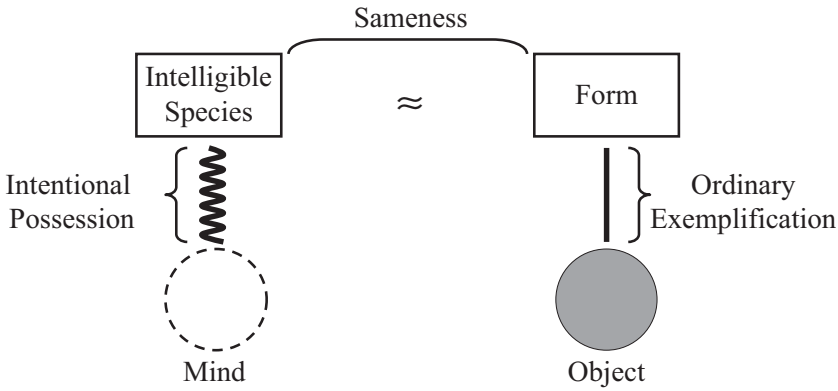

Figure 1. *Reductive Interpretation*: A form or property, F-ness, is a concept (i.e., an intelligible species) of an object O if and only if (i) F-ness is somehow the same as some form (or property) of O and (ii) F-ness is intentionally possessed by an immaterial mind.

agree in their understanding of intentional possession (taking it to be a sui generis type of property possession) and hence differ only with regard to the nature of the relation at issue in the sameness condition. Since Aquinas's texts suggest only three ways of understanding this relation—namely, as identity, formal sameness, or mere similarity—the standard types of reductive interpretation can be divided along the same lines. (More on these relations, and the divisions to which they give rise, below.)

Regardless of the differences among specific types of reductive interpretation, it should be clear that all of them have the resources for answering both the general and specific questions we introduced at the outset of the essay:

> *General question*: In virtue of what does a mental state possess intentionality at all (i.e., in virtue of what is it *of* or *about* anything at all)?
>
> *Specific question*: Assuming a mental state possesses intentionality, what determines its specific intentional content (i.e., in virtue of what is it about *certain* things rather than others—say, humans rather than cows)?

On any type of reductive interpretation, the general question will be answered by appealing to the relation of intentional possession: it is in virtue of standing in this relation to the intellect that the forms received

in it are representations or concepts *of* anything at all. Again, on any type of reductive interpretation, the specific question will be answered by appealing to the sameness relation: it is in virtue of standing in this relation that such forms are representations or concepts of *certain* objects (rather than others).

In the remainder of this section, we consider and reject three different ways of developing the reductive interpretation, depending on whether the sameness in question is taken to be literal identity (sec. 2.1), or instead some sort of "formal" sameness (sec. 2.2), or yet again some sort of similarity relation (sec. 2.3). Each of these developments has at least some precedent in the literature and, taken jointly, they appear to exhaust the live possibilities for developing the reductive interpretation. In rejecting each of these types of reductive interpretation, our strategy will be to bring forward only as much evidence as is needed to show its inadequacy. Even so, it will become clear along the way that our objections typically apply to more than one type of reductive interpretation. Indeed, most of our objections can be thought of as constituting a challenge for reductive interpretations generally. Although some reductive theories can meet some of the challenges, none can meet them all.

2.1. The Identity Theory

When Aquinas describes intelligible species or concepts as the forms of the objects they represent, it is perhaps most natural to interpret this as meaning that species are literally *identical to* forms of their objects. This is the leading idea behind the type of reductive interpretation we shall call the "identity theory." As it turns out, the identity theory is not an interpretation taken seriously by most Aquinas scholars. Even so, because it has some contemporary currency and can also be used to clarify both the nature and limitations of reductive interpretations generally, we shall consider it briefly.

2.1.1. The Identity Theory Stated

According to identity theory, intentional likeness or assimilation is a matter of *numerically one and the same form* being present in both the cognizer and the object cognized. On this theory, a subject has a concept of an object O just in case the subject possesses one of O's forms (in the

relevant way). It is not uncommon to find statements of the identity theory in textbook treatments of Aquinas's account of intentionality. To give just two examples, consider Tim Crane's formulation in the most recent edition of *Routledge Encyclopedia of Philosophy* (1998):

> The heart of Aquinas' view is that what makes my thought of an *X* of an *X* is the very same thing which makes an *X* an *X*: the occurrence of the form of *X*. The difference is the way in which the form occurs.

Or again, consider Robert Cummins's formulation in his *Meaning and Mental Representation* (1989, 3–4):

> An important scholastic theory holds that in perception the immaterial mind becomes inFORMed by the same FORMS that inFORM the thing perceived. . . . According to this theory, when you perceive a red ball, the very same FORMS that make the physical object of your perception red and spherical make your idea red and spherical. But of course a red ball in *idea* is a very different thing than a red ball *in matter*.[25]

As these sorts of examples testify, the identity theory has gained some currency among the general philosophical public.[26] This is somewhat surprising since it is difficult to find an unambiguous representative of the identity theory among Aquinas scholars. John Haldane may be the sole exception in this regard, but even he seems more interested in ascribing the view to Aquinas on systematic rather than

25. Here Cummins introduces the use of caps as a typographical convention to highlight the identity in question.

26. See also BonJour 1998; Haldane 1998; Sheehan 1969. We suspect that the general entrenchment of this view is due not only to its naturalness as an interpretation, but also to the fact that Peter Geach, whose works are well known among contemporary philosophers, often speaks in ways that suggest the identity theory. Consider, for example, the following passage, which seems to be the direct inspiration for both Crane's and Cummins's interpretation of Aquinas's views:

> What makes a sensation or thought of an X to be *of an X* is that it is an individual occurrence of the very form or nature which occurs in X—it is thus that our mind 'reaches right up to reality'; what makes it to be a *sensation* or *thought* of an X rather than an actual X or an actual X-ness is that X-ness here occurs in the special way called *esse intentionale* and not in the 'ordinary' way called *esse naturale*. (Anscombe and Geach 1961, 95)

Though Geach certainly speaks here as if Aquinas thinks numerically one and the same form "occurs" both in the mind and in its objects, his official view is that the form in the mind must be distinct from that of its object (and indeed that the "same" form in distinct objects must be numerically distinct). As he says a bit earlier in the same discussion (ibid., 84): "Though the essences of this cat and that cat are not identical—they contain different individualized forms—they are exactly alike, and so a single mental likeness (*species*) in a man's mind can correspond to both."

textual grounds. According to Haldane, identity theory is the only interpretation that can explain how thought can be intrinsically connected to its object—something that Thomistic commentators, at least since the time of Gilson, have often thought was necessary to avoid the sorts of worries about skepticism and idealism that so often afflict traditional representationalist theories of mind.[27]

2.1.2. Criticism of the Identity Theory

As we've noted already, what makes the identity theory particularly attractive is the fact that it provides the simplest, most straightforward interpretation of those texts in which Aquinas emphasizes the unity between knower and known in intellectual cognition. What is more, it has the virtue of preserving an intrinsic connection between thought and its objects.

As will become clear, the identity theory is not the only interpretation that preserves an intrinsic connection between thought and its objects. But even if it were, it's not clear that it would thereby gain any of the special theoretical advantages often claimed for it since it's not clear how merely preserving such a connection is supposed to enable us to sidestep controversies about skepticism and idealism.[28] In any case,

27. Thus, as a way of answering those such as Putnam and McDowell, who criticize traditional representational theories of mind, Haldane (1998, 267) says:

> If there is to be the sort of conformity of mind to thing which Putnam and McDowell seek, then I can only see this being provided according to an account of the sort developed by Aquinas when he writes that the intellect in act is the intelligible in act; or less scholastically, that the mind will only be of a thing when it is formally identical with it; when what we think and what is thought are the same.

According to Haldane (1993a, 255), on Aquinas's view, strictly speaking, thought "proceeds without intervening representations that stand between the thinker and what he or she is thinking of" (see also Haldane 1992 and 1993b). Although Haldane is not the only commentator to claim that Aquinas's views about the sameness between intelligible species and their objects has important theoretical advantages, he is (as far as we know) the only one to combine this sort of claim with a clear commitment to the identity theory. Other commentators in the same tradition (and who claim similar advantages for Aquinas's theory) typically defend the formal-sameness theory. See note 37 below.

28. After all, what philosophers such as Putnam and McDowell are concerned to avoid is any theory that allows for perceptions or thoughts of a reality that doesn't exist outside the mind. But how is the identity theory (as it stands) supposed to help us avoid that? All it guarantees is that when we think of (say) horses, we intentionally exemplify the form or property of being a horse, and hence that this form or property exists. But this by itself does not entail that there exists anything in extramental

it seems to us that the identity theory can be ruled out fairly quickly on textual grounds. For insofar as the theory allows for numerically one and the same form (say, being a stone) to be exemplified by more than one subject—indeed, by more than one subject in more than one way (naturally by stones and intentionally by the mind)—it clearly presupposes a form of realism about universals. Haldane may be happy to embrace the realistic consequences of this interpretation, but Aquinas himself explicitly rejects them. Consider, for example, the following passage, which, though early, is representative of Aquinas's theory of universals throughout his career:

> Humanity is something in reality, but there it is *not* universal, for no humanity outside the soul is common to many. (*In Sent.* 1.19.5.1)

Again, later in the same text:

> Even if *this* is a human being and *that* is a human being, it is not necessary that both have numerically the same humanity, any more than it is necessary for two white things to have numerically the same whiteness. On the contrary, it is necessary [only] that the one be similar to the other in having an [individual form of] humanity just as the other does. It is for this reason that the intellect, considering humanity, not as belonging to this thing, but *as such*, forms a concept that is common to all. (*In Sent.* 2.17.1.1; see also *DPN* 6; *SCG* 2.49–50)

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reality naturally exemplifying that property, and hence that there are any horses. On the contrary, to get this conclusion we must enrich the identity theory—as Haldane (1998, 269) himself does without any further comment or explanation—by adding that "intentional exemplification has as a condition of its occurrence some prior natural exemplification." Obviously, this sort of condition *will* ensure that our perceptions and thoughts have objects, but its addition appears to be ad hoc, and in any case has nothing corresponding to it in Aquinas.

Admittedly, something like Haldane's condition might appear to be justified by the Aristotelian doctrine that there cannot be unexemplified universals—assuming, of course, that Aquinas accepts it *and* it means something stronger than "there cannot be universals that are unexemplified *in some way or other, at some time or other*." But as we shall argue shortly, Aquinas rejects this (and all other types) of realism about universals. Again, the condition might appear to be a consequence of Aquinas's doctrine of abstraction, according to which our mental representations of (say) horses are derived from causal interaction with horses themselves. But here again the appearance is misleading. At best, the doctrine of abstraction establishes the *causal* dependency of intentional on prior natural exemplification, whereas avoiding the sort of skepticism that Putnam and McDowell are worried about requires a type of *broadly logical* or *metaphysical* dependency.

Obviously we cannot undertake here to provide a complete defense of Aquinas's theory of universals.[29] But passages like these certainly suggest that he rejects any form of realism about universals. Indeed, as we read him, Aquinas is best thought of, in contemporary terms, as a trope nominalist (i.e., someone who admits the existence of properties, but only as concrete individuals).[30] But if this is right—something we shall hereafter take for granted—then Aquinas can't possibly have held the identity theory.[31]

There are other difficulties facing the identity theory, difficulties that we shall discuss in connection with other reductive interpretations. But we need not raise them here, since the objection we have been discussing—call it the "nominalism objection"—seems sufficient by itself to rule out the identity theory as an interpretation. Indeed, this objection poses what we might think of as the first challenge facing any form of reductive interpretation. Given what Aquinas says about universals, the form received by the mind in cognition (i.e., the concept) and the form present in its object must be numerically distinct. Therefore, if we are going to analyze the intentionality of a given concept in terms of some type of sameness, it must be a relation that can obtain between distinct individual forms or tropes. The next two theories we examine are both capable of meeting this challenge, though as we shall see, they raise challenges of their own.

29. But see Leftow 2003 and the literature summarized there for further discussion.

30. In describing Aquinas as a type of nominalist about universals, the qualification "in contemporary terms" is important. According to another classification, perfectly consistent with our own and prevalent in the history of philosophy, Aquinas is a moderate realist or even a conceptualist, but certainly not a nominalist.

31. Strictly speaking, this is true only if we insist on conceiving of intentional possession as a type of property possession. For without this assumption, it is possible to develop a version of the identity theory compatible with Aquinas's nominalism. On the sort of view in question, sometimes associated with early moderns such as Descartes and Arnauld (see, for example, Nadler 1989), to say that a particular property or trope (such as Socrates' humanity) is both naturally and intentionally possessed will just be to say that it stands in different relations to different subjects—namely, a relation of property possession to its natural subject (say, Socrates) and some other relation to an immaterial mind representing it (say, Plato). Because this view is not prominent among Aquinas commentators, and ultimately falls prey to the same sorts of objections we raise against the formal-sameness theory (see note 40 below), we shall not consider this sort of view separately here.

2.2. The Formal-Sameness Theory

It is tempting to think that once identity is ruled out, similarity (sometimes called "sameness in the loose-and-popular sense") is the only sort of sameness relation left to hold between numerically distinct forms or tropes, and hence the only sort of sameness that a reductive interpretation could appeal to. As we shall see (in sec. 2.3 below), *there are* commentators who interpret Aquinas's views about intentionality in terms of similarity. But there are also many traditional Thomistic commentators who maintain that Aquinas's views should be interpreted in terms of another type of sameness relation—what they typically call "formal identity" but which we'll call "formal sameness" so as to avoid any possible confusion with identity proper. If these Thomists are right, then there is another version of reductive interpretation available—what we shall call the "formal-sameness theory."

2.2.1. The Formal-Sameness Theory Stated

The formal-sameness theory differs from the identity theory in one and only one respect—namely, its interpretation of the sameness condition. Thus, like the identity theory, it analyzes intentionality in terms of the mind's intentionally possessing a form that is the same as some form naturally possessed by its object. But unlike the identity theory, it takes the sameness in question to be formal rather than numerical. Thus, according to the formal-sameness theorist, for a subject to possess a concept of an object O is for there to be (at least) two distinct forms or tropes, F_1 and F_2, that stand in a special relationship (formal sameness) and are possessed in different ways by their subjects (intentionally by the mind and naturally by O). Obviously, the key to this theory lies in the proper understanding of the special relation of sameness to which it appeals. Since traditional Thomists do not (in our opinion) always succeed in making the nature of this relation clear, we shall explain it in our own way, drawing in particular on Aquinas's account of it in his short treatise, *On Being and Essence*.

In the second chapter of *On Being and Essence*, Aquinas argues that material substances, such as Socrates and Plato, have two metaphysical components: an individual form or trope of humanity and an individuator that accounts for the trope's individuality. There is a good deal of controversy over how to understand Aquinas's account of the nature of the individuator—Aquinas himself characterizes it as 'designated matter' (*materia signata*) or 'matter under determinate dimensions' (*materia*

sub determinatis dimensionibus)—but the details need not detain us.[32] For our purposes, all that is important is that individuals such as Socrates and Plato, or better Socrates' humanity and Plato's humanity, are individual, and hence distinct, only by virtue of their individuators. Thus, on Aquinas's view, Socrates' humanity and Plato's humanity are *intrinsically the same*—since they are individuated only by virtue of their respective individuators. This intrinsic sameness is what we think Aquinas has in mind when he speaks of "formal sameness," or of two (or more) forms being the same *as such*.[33]

We can clarify Aquinas's notion of formal (or intrinsic) sameness if we contrast his view of individuation with that of most contemporary trope theorists. Nowadays philosophers tend to think of tropes as "coming individuated" or "intrinsically individual."[34] Thus, if you were to ask them "What makes a trope of humanity individual (i.e., capable of belonging to one and only one subject, say, Socrates)?" they would respond by saying "Nothing over and above the trope itself; it is unique to its bearer, Socrates, and hence individual, just by virtue of being what it is." To put the point more vividly, suppose that we could put a humanity trope under a metaphysical microscope and focus only on what belongs to the trope itself, excluding anything extrinsic to it.[35] According to contemporary trope theorists, what we would see, in such a scenario, is not only that we have a trope of *humanity* (as opposed to animality or whiteness) but also that we have, say, *Socrates*' humanity (as opposed to Plato's).

As it turns out, Aquinas considers precisely this sort of view in the third chapter of *On Being and Essence*, only to reject it. His reasoning proceeds roughly as follows. If being individual (say, being Socrates') were in any way intrinsic to a trope, then we could not explain how our concepts are truly predicable of many. This is because Aquinas thinks that concepts are formed by abstraction—a psychological process that

32. *DEE* 2.4. Aquinas's views about the individuator seem to have developed over time. See the discussion in Wippel 2000, esp. 351–75.

33. Our discussion of formal sameness here (and in what follows) is indebted to the discussion of quidditative kinship in Hawthorne 1999.

34. See, for example, Campbell 1990. Actually, there's a slight complication here since contemporary trope theorists typically don't admit tropes in the category of substance. We ignore this complication in what follows.

35. Our talk of putting forms "under a metaphysical microscope" is the contemporary analogue of Aquinas's talk of the "absolute consideration" of forms. See, for example, *DEE* 3.

involves putting individualized forms or tropes before the mind while "ignoring" everything extrinsic to them. But then, if *being Socrates* were in some way intrinsic to Socrates' humanity, as contemporary trope theory would have it, *being Socrates*' could not be "ignored" in the process of abstraction. Hence, the representation resulting from such abstraction would not be of *humanity* in general, but of *Socrates' humanity*—which is predicable of one and only one thing, Socrates. And since, in general, things that are intrinsically F cannot be predicated of things that are not F, the same will go for every other concept formed on the basis of a trope that is intrinsically individual.

On the basis of these sorts of considerations, Aquinas concludes that tropes or individualized forms must be individuated only *extrinsically*, that is to say, only in virtue of their connection to something else (their matter, or matter under determinate dimensions—here again, the details aren't important). This is not to say that the individuator *does nothing* to the forms or tropes it individuates; nor is it to insist that individuality must be conceived as a relation. On the contrary, we can, if we like, conceive of the individuator as *giving* the forms or tropes it individuates a certain *nonrelational*—or better, *monadic*—feature (namely, individuality). Even in such a case, however, we shall have to say that the forms or tropes have the (monadic) feature in question in virtue of their relation to something wholly distinct from themselves—that is to say, that they have it *extrinsically*. Thus, to return to our metaphor: if we were to place one of *Aquinas*'s humanity tropes under our metaphysical microscope and again focus only on what is intrinsic to the trope itself—all we'd see is that we have a trope of *humanity* (as opposed to animality or whiteness), but *not* also that it is, say, *Socrates*' humanity (as opposed to Plato's). Indeed, on Aquinas's view, if we wanted to see *whose* trope it is (and hence the explanation for its individuality), we'd have to "zoom out," and focus not only on what's intrinsic to the trope itself, but also on that to which it's connected—namely, its matter or individuator.[36]

36. It needs to be emphasized that none of this implies that Socrates' humanity (i.e., what Aquinas calls the form of the part [*forma partis*]) is only contingently individual (as if it were individual in some worlds, but not in others). Presumably, Socrates' humanity is inseparable from what makes it individual. Thus, in all possible worlds in which Socrates' humanity exists, Socrates' matter exists—or at least *existed at some previous time*, since Aquinas wants to leave open the possibility that once Socrates' humanity or soul is individuated by matter, it can go on to exist temporarily by itself. To say that Socrates' humanity is extrinsically individual, therefore, is just to say that its individuality is to be explained by something external to it. And as far as we can

What all of this shows is that on Aquinas's view, tropes of humanity (or animality or whiteness or whatever) stand in a closer relation than that of mere similarity. For similarity, as it is ordinarily conceived, is a relation that can hold between things that differ intrinsically. But as Aquinas sees it, tropes (of say, humanity) don't differ intrinsically, even though they differ numerically. On the contrary, they are intrinsically the same, and it is their intrinsic sameness—a relation standing midway between identity and ordinary similarity—that Aquinas has in mind when he speaks of their being formally the same.

Understood in this way, Aquinas's notion of formal sameness seems to us perfectly coherent. On the face of it, moreover, it appears to provide a natural candidate for explaining his account of intentionality. Of course, by itself, an appeal to formal sameness can provide only a partial interpretation of Aquinas's account of the intentionality of intelligible species—namely, an interpretation of the sameness condition. Indeed, for the same reasons we considered in the case of the identity theory, the formal-sameness theory would appear to be incomplete without some account of the intentional-possession condition as well. For just as the ordinary exemplification of the universal property of being a stone is sufficient for being a stone, so too it would seem in the case of the ordinary exemplification of the corresponding trope. Evidently, therefore, in order to avoid the absurdity that the mind becomes its object, the formal-sameness theory must also take the intentional-possession condition to be introducing a sui generis type of exemplification.

2.2.2. Criticism of the Formal-Sameness Theory

The formal-sameness theory seems to enjoy all the advantages of the identity theory, while at the same time avoiding its chief difficulty. Not only can it make sense of Aquinas's talk of cognitive assimilation or unity (by appealing to formal or intrinsic sameness) as well as of intentional presence (by appealing to a sui generis type of exemplification), but

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tell, there is no outright absurdity in saying this, especially when this external thing is regarded as in some sense inseparable. In fact, Aquinas's thesis about the individuality of tropes seems to be exactly parallel to Kripke's thesis about the necessity of origins. Just as Kripke (1980, 113–15) thinks that the origin of a thing is essential to its numerical identity—so that, for example, Queen Elizabeth II could not have had different biological parents—so, too, Aquinas thinks that the matter in which tropes originate is essential to their individuality.

proponents of this interpretation also claim for it the same theoretical advantages supposedly afforded by the identity theory—namely, an account of intentionality that is able to overcome any worries about skepticism and idealism.[37] Unlike the identity theory, however, this way of reading Aquinas avoids the nominalism objection, since it appeals only to tropes (rather than universals).

No doubt, these advantages explain why the formal-sameness theory is the single most common interpretation to be found in the literature, having the support of the majority of traditional Thomistic commentators. There are a number of authorities we might cite in this connection, but the following passage from John O'Callaghan's recent book (2003, 240) provides a representative example:

> Suppose we ask, "How does our understanding of the substantiality of a dog, differ from our understanding of the substantiality of a man?" In answering this question, all that remains is to make reference to those features that pertain to a dog *as such*, and those that pertain to a man *as such*. . . . what it is for an act of understanding to be of an X, the act's essence or *quod quid esse*, does not differ from what it is for the X to be, the X's *quod quid esse*. Two things are formally identical when the characteristics that pertain to their form do not differ between them. I am suggesting that we treat this claim of formal identity [between the knower and the known] as an extension . . . of the way in which we treat the claim that two men or two dogs are formally identical. To do this we leave out of our consideration material characteristics that differ among [these objects].[38]

The formal-sameness theory seems to us clearly superior to the identity theory. Even so, we think that it too can be definitively ruled out on textual grounds. According to Aquinas, one of the distinguishing features of concepts is that they represent the natures or *quiddities* of things.[39] But this is incompatible with the formal-sameness theory. For according to this theory, concepts represent things in virtue of

37. For examples of commentators who make this sort of claim, see Gilson 1956, 227; Kretzmann 1993, 138; O'Callaghan 2003, esp. 255–56; Owens 1992; Perler 2000 and 2002, 104–5. Robert Pasnau (1997, appendix A) raises doubts about whether the formal sameness theory really does have the sorts of epistemological advantages so often claimed for it.

38. For other proponents of the formal-sameness theory, see Owens 1957, 1992; Gilson 1956; Kenny 1984, 87–89; Perler 2000 and 2002.

39. Indeed it is on the basis of this feature that Aquinas constructs his famous proof of the subsistence of the human soul or intellect. See, for example, *ST* 1.75.2, where Aquinas argues that because the intellect can represent the natures or essences of

standing in the relation of formal sameness to them and, hence, can be only "about" things that are intrinsically the same as they are. But concepts, as we have seen, are accidental forms falling in the Aristotelian category of Quality, and presumably qualities can only be intrinsically the same as other qualities. Contrary to Aquinas's own views, therefore, the formal-sameness theory entails that concepts can represent only the qualitative (as opposed to the quidditative) aspects of things.[40]

One might suppose, however, that the formal-sameness theory has the resources to respond to this objection. After all, formal sameness is only one part of its analysis of intentionality. What about the other part—namely, intentional possession? Couldn't one appeal to the sui generis nature of this relation *together with* formal sameness as a way of explaining how forms in the category of Quality represent things in other categories? It's difficult to see how this appeal would help. After all, if a quality (in this case, the concept) is not *in itself* formally (or intrinsically) the same as any nonqualitative form, how could it suddenly become such merely by being possessed or instantiated in a special way? And what would explain its becoming formally the same as *this* thing rather than *that*? Without answers to these questions—for which there's no obvious basis in Aquinas—this strategy seems of little avail.

In the end, therefore, it would seem that the objection we are considering—call it the "quiddity objection"—is just as sufficient for ruling out the formal-sameness theory as the nominalism objection was for ruling out the identity theory. Indeed, like the nominalism objection, the quiddity objection would seem to pose a challenge for reductive interpretations generally. Given what Aquinas says about the proper objects of concepts, in order for a reductive interpretation to be adequate with respect to the texts, it must take the type of sameness that holds between concepts and their objects to be not only weaker than identity (as the nominalism objection requires), but also broader than formal-sameness. Indeed, since there are as many natures or quiddities as there are categories of entity, the quiddity objection would seem to require that the sameness which explains the intentionality of concepts

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all material substances through its intelligible species, it must be an immaterial being capable of existence apart from the body.

40. As we can now see, this same objection applies to the identity theory as well (even in the version suggested in note 31 above). For just as qualities can only be intrinsically the same as qualities, so too they can only be identical to qualities.

be broad enough to hold between them and objects falling in *any* of the Aristotelian categories.[41]

One final consideration. We have been speaking as if the quiddity objection constitutes an objection to a particular interpretation of Aquinas rather than to Aquinas himself. But is this really correct? That is to say, is there anything to keep us from saying instead that the formal-sameness theory provides the correct interpretation of Aquinas and, hence, that his account of intentionality simply falls prey to the quiddity objection? Obviously, this is a possibility that must be kept in mind. But since the textual evidence for the formal-sameness theory is by no means decisive, and defending it as an interpretation requires committing Aquinas to a fairly serious blunder (especially given the central role that formal sameness plays in this interpretation of his account of intentionality), it seems reasonable to consider whether there might be another interpretation—one that is at least as well supported textually and avoids such a commitment.

2.3. The Similarity Theory

We come now to the third and final reductive theory in terms of which Aquinas's account of intentionality is often interpreted—what we shall call the "similarity theory."

2.3.1. The Similarity Theory Stated

Because the similarity theory is like the other reductive interpretations we've considered in all but one respect, our statement of it can be extremely brief. Like other reductive interpretations, the similarity theory analyzes intentionality in terms of sameness and intentional possession. Unlike them, however, it interprets the sameness condition in terms of mere similarity or resemblance. Thus, when a subject is said to possess a concept of an object O, the similarity theory takes this to imply that there are (at least) two distinct forms or tropes, F_1 and F_2, that are *similar to* each other as well as possessed in different ways by their subjects (intentionally by the mind and naturally by O).[42]

41. For the record, these are Substance, Quality, Quantity, Relation, Action, Passion, Place, Time, Position, Having.

42. Defenders of the similarity theory include Lonergan 1967, 148; Pasnau 1997, 105–13 (although at other points, for example 295–305, his discussion suggests the formal-sameness theory); and Pannacio 2001.

2.3.2. Criticism of the Similarity Theory

The similarity theory is, of course, immediately suggested by the failures of the identity and formal-sameness theories. Insofar as it appeals only to particular forms or tropes and a relation that can clearly hold between them (namely, similarity), it avoids the nominalism objection. Moreover, insofar as similarity can, at least in principle, hold between forms in any category, it also seems to avoid the quiddity objection. Finally, given the failure of the identity and formal-sameness theories, it is not immediately obvious what else besides a relation of similarity could explain Aquinas's talk of cognitive unity or assimilation.

In addition to being suggested by the failure of the identity and formal-sameness theories, the similarity theory can also claim some significant textual support. There are a number of passages in which Aquinas suggests that the relation between intelligible species and their objects should be understood *not* in terms of literal sameness, but rather in terms of some sort of similarity or likeness (*similitudo*). Indeed, in his more careful moments, he seems to *analyze* intentionality in terms of such similarity or likeness. To give three characteristic examples:

> Every cognition is produced by the cognized thing's *somehow* being in the one cognizing—namely, by virtue of a likeness. (*In DA* 1.12.377; see also 1.4.20–22)

> What is thought about is *not* present in the intellect by itself, but only according to its likeness. (*ST* 1.76.2 ad 4; see also *QDV* 1.3)

> For cognition to take place, it is required that a *likeness* of the cognized thing exist in the cognizer *as if* it were a form of the cognizer. (*ST* 1.88.1; see also *QDV* 10.19 ad 1)

Passages such as these constitute strong prima facia evidence for the similarity theory, not to mention further evidence against the identity and formal-sameness theories. For they indicate that although the thing represented must be present in the mind "in some way," it isn't present there literally, or even by way of formal sameness, but only according to a certain "likeness."

Despite these advantages, the similarity theory faces serious difficulties. Perhaps the chief difficulty is that of specifying the nature of the similarity or resemblance in question. If the similarity theory is to remain a genuinely reductive theory, and hence avoid appealing to a form of "primitive intentional likeness" of the sort we shall ultimately recommend, it must provide some account of the resemblance to which

it makes reference. But how is it to do this? In what respect are we to say that concepts *resemble* what they are about? Since everything is similar to everything else in *some respect*, it is necessary to identify the specific type of similarity that distinguishes intentionality from broader, nonintentional resemblance relations. It is, no doubt, for this very reason that Aquinas, as we've already seen (in sec. 1.1), explicitly introduces a type of cognitive or intentional likeness distinct from more ordinary types of similarity:

> The likeness holding between two things can be understood in two ways. In one way, it can be understood as an agreement in nature. This sort of likeness is not required between cognizer and cognized. . . . In another way, however, it can be understood as representation—and *this* sort of likeness is required between cognizer and cognized. (*QDV* 2.3 ad 9)

If passages such as this one were really intended by Aquinas to introduce a notion of similarity in terms of which intentional likeness is to be analyzed, we would expect to find him giving a substantive account of the nature of such similarity. Such an account, however, is not to be found in his works. In fact, Aquinas not only fails to provide such an account, he seems utterly uninterested in doing so. Commentators occasionally attempt to develop an account on his behalf, but their efforts proceed without any direct textual support.[43] In fact, as far as we can tell, the

43. There are a variety of suggestions in the literature about how to develop such an account. One such suggestion is to understand the similarity in question in terms of resemblance of functional features. Thus, a mental representation of, say, humanity would represent humans because it shares with them a common set of functional features or properties—properties that when exemplified by matter give us humans and when exemplified by the mind give us representations of humans. (See, for example, Putnam 1993 for this suggestion.) Though certainly provocative, the suggestion is incomplete at best. What exactly are these functional properties? What is it about them that enables their exemplification in one sort of subject to make objects of a certain kind, but in another sort to make representations of objects of that kind? And how exactly are we to understand the relationship between the "common" properties? Without further development, it is difficult even to see what the proposal comes to, much less how it would fit with Aquinas's texts. More promising, and much more common, is the suggestion that the similarity in question be taken to consist in some kind of structural isomorphism—that is, some sort of systematic correlation between the properties of an intelligible species and properties of its object. (See Marras 1974 and Pannacio 2001 for this suggestion.) But here again the proposal is incomplete without some further indication of how exactly we are to understand the isomorphism in question. And yet in this regard, commentators have been surprisingly unwilling to commit themselves. Indeed, in a recent discussion, Claude Pannacio (2001, 198) suggests that "any isomorphism will do . . . however abstract." But is it even clear that

most Aquinas ever says about intentional similarity or likeness is that "it can be understood *as representation*" (*QDV* 2.5 ad 7; see also 2.3 ad 9, 4.4 ad 2, *ST* 1.85.8 ad 3, and *SCG* 2.46). We take this as constituting a serious problem for any proponent of the similarity theory.[44] After all, if Aquinas meant to explain cognition in terms of some relation of similarity, why would he have failed to say anything positive or informative about the relation in question?

There are commentators who are aware of the difficulty, but embrace the similarity theory nonetheless. Thus, according to Robert Pasnau (1997, 112):

> The attitude Aquinas's account suggests is that one should go case by case in trying to understand the mechanisms behind representational likeness. Aquinas does not speculate on what the precise mechanisms might be in any given instance. To this extent, one might say that Aquinas doesn't have a theory of representation at all, in the sense that he doesn't give a determinate account. But it's not clear to me that a theory of representation in that sense would have been appropriate for the thirteenth century, given the available data. It is one of the merits of Aquinas' approach, I would suggest, that he does not rest his account of mental representation on any particular kind of likeness.

Pasnau's suggestion certainly seems to put the best face possible on the similarity theory. If Aquinas does in fact accept this theory, there must be *some* explanation for why he makes no attempt to explain intentional likeness; and we can think of no explanation more charitable than Pasnau's. Even so, this explanation gives us no positive reason to suppose that Aquinas did accept the similarity theory as opposed to some sort of "primitive" or "nonreductive" account of intentionality. In the next section, we shall return to the question of which sort of interpretation best fits with texts. Before doing so, however, we want to suggest that there

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there is an isomorphism, or systematic structural correlation, of any sort obtaining between intelligible species or concepts (which Aquinas conceives of as qualities of an immaterial mind) and their objects? At the very least, we're owed some reason for thinking that there is, and perhaps an example of what it might consist in. Short of that, it looks as if Pannacio is merely putting Aquinas's own account into another vocabulary without any helpful addition.

44. Indeed, for reasons that will become clear in the next section, we conclude from this that instead of analyzing intentionality in terms of similarity, Aquinas means to be indicating that he takes intentionality to be a sui generis or primitive form of likeness.

are grounds for being skeptical of the similarity theory even if appeals to charity were all we had to go on.

As Pasnau himself admits, what the similarity theory provides us with is not so much an account of intentionality as the beginnings of a research program. For insofar as Aquinas lacks a determinate account of intentional likeness, he lacks a determinate account of intentionality. Even so, Pasnau does not regard the incompleteness of the similarity theory as evidence against it as an interpretation. This attitude might be justified if the research program suggested by the theory were at all promising. But in fact it is not—at least not in the case of the intentionality associated with intellectual (as opposed to sensory) representations. Indeed, it's hard even to imagine how to begin providing a substantive characterization of intentional likeness that would square with the sorts of claims Aquinas makes about the intentionality of concepts. After all, such a characterization must, as we noted earlier, identify a type of similarity that is (a) broad enough to hold between qualities (since intelligible species are qualities) and forms in every other category, (b) narrow enough to include just those resemblance relations we're intuitively inclined to think of as intentional relations (that is, it must be a type of resemblance that holds only between forms of the mind and the things we intuitively take them to represent), and yet also (c) consistent with his explicit views about the immateriality of the intellect (that is, it must be a type of resemblance that can hold between immaterial and material forms—which rules out, on his view, causation or any form of resemblance deriving from causation).

What the foregoing shows is that there are serious costs associated with ascribing to Aquinas any form of similarity theory. The worry is not just that he will end up holding an incomplete theory of intentionality; rather, it is that this theory is one which he shows no interest in completing and which may well be incapable of being completed. Of course, this worry—let us call it the "incompleteness objection"—is not decisive. Probably no objections grounded in considerations of charity can be. Still, it should at least give us pause, especially once it becomes clear that this is not the only cost associated with the similarity theory.

To this point, all our objections to reductive interpretations—the nominalism, quiddity, and incompleteness objections—have focused on their understanding of the sameness condition, which appeals to some form of sameness as part of an analysis of intentionality. As it turns out, however, reductive interpretations can also be objected to on the basis of their understanding of the intentional-possession condition.

Indeed, the objection to which we now want to turn—what we'll call the "mystery objection"—arises from the appeal to a sui generis type of property possession.

The objection, in short, is that such an appeal is both methodologically and philosophically misguided. To see why, note that what we are looking for in a theory of intentionality is an account of a familiar but, nevertheless, puzzling phenomenon—namely, the fact that we are capable of thinking *about* or having thoughts *directed at* certain things. It is, of course, natural to suppose that this sort of phenomenon admits of further analysis or explanation. The problem is that, in appealing to sui generis intentional possession, reductive interpretations end up offering us an analysis in terms of something far less familiar and far more puzzling than the phenomenon they set out to explain. What is more, the very notion of intentional possession appears to border on incoherence. As the reductivist conceives of it, intentional possession is supposed to be a special type of property possession or exemplification. But how can this be? Exemplification is—almost by definition—a relation that a single subject cannot bear to contradictory properties (nothing can be simultaneously both F and non-F). But if intentional possession were a special type of exemplification, then it would appear that things could exemplify contradictory properties after all (since we can clearly think about both F and non-F at the same time).[45] In light of these sorts of considerations, we find it difficult to be confident we have even a preliminary grasp of the notion.[46]

The mystery objection is one that is commonly brought against Aquinas's account.[47] In fact, it is sometimes thought to explain why Aquinas's theory of intentionality had few adherents among his own contemporaries and successors. Consider, for example, the following remarks by Peter King (2006, 85):

> What is it for a form to be present only 'intentionally'? Aquinas never says, or to the extent that he does, his account was opaque to his disciples and detractors alike, then and now. Aquinas' failure to say what intentional presence consists in makes representationality into a mystery again, this time centered on the non-informing presence of the form in

45. Aquinas allows, of course, that we can think of many things at once (say, that something is both F and not-F); nevertheless he insists that we can do this only by virtue of exemplifying a single form or intelligible species. See, for example, *ST* 1.85.4.

46. We owe the basic form of this objection to Peter Abelard. See his *Logica 'ingredientibus'* 20.29 (translated in Spade 1994, 97).

47. See Tweedale 1990 and King 2006.

> the representor; it may well explain why Aquinas had few followers in philosophy of psychology during the Middle Ages.

Here King takes the utter mysteriousness of the notion of intentional possession, not only as evidence of the inadequacy of Aquinas's theory of intentionality, but also as an explanation for why it (allegedly) doesn't figure in subsequent philosophical psychology. But this isn't the only conclusion that can be drawn. Indeed, to the extent that we follow Pasnau and others in allowing considerations of charity to guide our interpretation, we would do better to regard the mystery objection as giving us grounds for rejecting any interpretation that appeals to the notion of intentional possession in explicating Aquinas's account of intentionality.[48]

It would, of course, be a mistake to assume that merely highlighting the implausible features of a given theory is sufficient to rule it out *as an interpretation*. As we've already acknowledged, Aquinas may well have held an implausible theory. Even so, the foregoing considerations do

48. We should note that, in response to the mystery objection, it is open to reductive theorists to drop their problematic interpretation of the intentional-possession condition and try to make do with only one type of property possession (namely, exemplification in the ordinary sense). But even here the prospects do not look good. Clearly *something* must be said about intentional possession. After all, Aquinas's appeal to this notion is explicitly designed to avoid the absurdity that the mind becomes its object in taking on the same form as that possessed by it. Of all the types of reductive theory we've considered, the similarity theory looks the most promising in this regard. For there is no obvious worry that in the mind's taking on a form *similar to* that possessed by a stone that it will become a stone. But even here there is still a question about how to specify the type of similarity in question, so as to rule out the mind's coming to represent everything in virtue of possessing *any* form whatsoever (since, in virtue of possessing any form, it will be similar to everything else in some respect). Moreover, as we can now see, there is a further problem—one associated with the asymmetry of intentionality. Intentionality is asymmetrical: that is, if one thing a represents another thing b, it doesn't follow that b represents a. Similarity, by contrast, is symmetrical: if a is similar to b, then b is similar to a. In addition to specifying the type of similarity involved in intentionality, therefore, the similarity theorist must also provide an account for why intentionality is (whereas similarity is not) asymmetrical.

In any case, we needn't insist that the challenges we have posed are insurmountable. Perhaps a form of the similarity theory can be developed that meets them. Our only point here is to observe that until the challenges are met, the similarity theorist (or reductive theorist generally) is left with an incomplete theory of intentionality. And the fact that Aquinas himself shows no interest in completing such a theory, or even any awareness that his own theory lacks completeness, suggests to us that trying to meet these challenges on Aquinas's behalf is an *interpretive*, if not a philosophical, dead end.

make it reasonable to look for another sort of interpretation—one that both fits better with the texts and leaves Aquinas with something better than a view which borders on incoherence.

3. Nonreductive Interpretations

The objections canvassed so far seem to us to provide compelling grounds for exploring the prospects of an alternative to any form of reductive interpretation. We now take up this project, first developing (sec. 3.1), and then defending (secs. 3.2–3.3), what appears to be the only alternative—namely, an interpretation that takes Aquinas's notion of intentional likeness as primitive or basic. For lack of a better term, we shall refer to this type of interpretation as "primitive-intentionality theory."

3.1. Primitive-Intentionality Theory Stated

The leading idea behind our interpretation is that intentionality is, for Aquinas, a primitive feature of concepts. Thus, unlike the other interpretations we've considered so far, ours is nonreductive in nature: it accounts for intentionality, not by *reducing* it to, or *explaining* it in terms of, something more basic, but rather by postulating it as an *unanalyzable* feature of its possessors. In order to clarify what this type of interpretation comes to, we can illustrate it, as we did in the case of reductive interpretations, schematically (see figure 2).

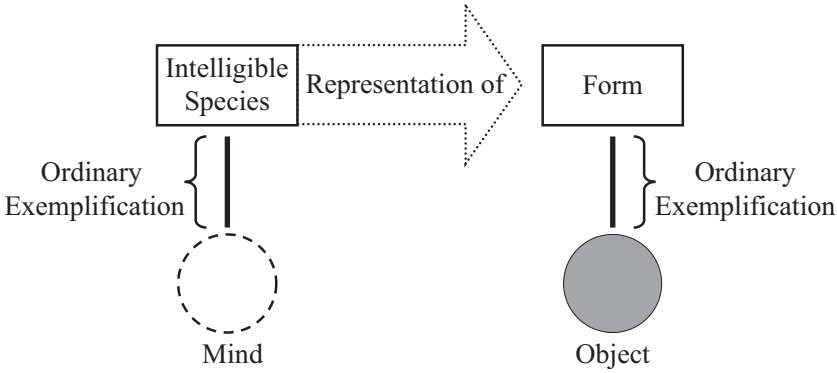

Figure 2. *Nonreductive Interpretation*: A form or property, F-ness, is a concept (i.e., an intelligible species) of an object O if and only if F-ness is a form that is by its very nature (or essentially) about O and is possessed by an immaterial mind.

As the diagram makes clear, the primitive-intentionality theory does not take Aquinas to be offering an *analysis* of intentionality. On the contrary, it assumes that when Aquinas speaks of the mind's *intentionally possessing* the forms of objects, he means to be indicating nothing more than that the mind comes to possess an *intention* of that form (that is, a representation that intends or refers to it). Again, when he speaks of these forms or intentions as *likenesses* of their object, it assumes that this too is merely a way of talking about their nature as representations—the fact that they are about or directed at objects in the world. Finally, at least as we shall be developing it, this theory assumes that intentional likeness is not only a *primitive* feature of intelligible species but also an *internal* (or essentially possessed) feature of them.[49]

As the diagram is also intended to make clear, our interpretation (like its reductive competitors) provides clear answers to the two questions about intentionality we introduced at the outset:

> *General question*: In virtue of what does a mental state possess intentionality at all (i.e., in virtue of what is it *of* or *about* anything at all)?
>
> *Specific question*: Assuming a mental state possesses intentionality, what determines its specific intentional content (i.e., in virtue of what is it about *certain* things rather than others—say, humans rather than cows)?

Primitive-intentionality theory will respond to both of these questions by appealing to the sui generis nature of intentionality, though in slightly different ways. In response to the general question, it will appeal to the general nature such intentionality confers on its possessors: that is to say, it will be in virtue of the general (or determinable) nature of concepts that they are *of* or *about* anything at all. In response to the specific question, by contrast, it will appeal to the specific nature of concepts or their intentionality: thus, it will be in virtue of their specific (or determinate) nature that they are of or about *certain things* (rather than others).

49. There are, of course, other *logically* possible ways of developing the theory. In particular, one could take intentionality to be a primitive but nonessential feature of concepts. Even so, we can think of no motivation for such a view. After all, if intentionality were a contingent feature of concepts, it would be necessary to identify further conditions for its possession—conditions that make reference to something beyond what's required for the mere existence of concepts (otherwise the intentionality would be essential). In that case, however, we seem to lose all motivation for regarding intentionality as primitive instead of simply reducing it to whatever else is identified as necessary and sufficient for its possession by concepts.

Although intentionality is, on this view, a primitive feature of concepts, it does not follow that its nature altogether resists further elucidation. On the contrary, as we indicated earlier, there are two different ways of developing this sort of theory, depending on whether we take this feature to be a relation or a monadic property. But before attempting to decide between these options, we want to show the superiority of a nonreductive interpretation (in whatever form it is advanced) over all reductive interpretations.

3.2. In Defense of Primitive Intentionality

To begin, it is important to emphasize that the general type of interpretation we have been describing provides us with a perfectly natural way of reading Aquinas's tendency to characterize intentionality in terms of both likeness (or assimilation) and intentional possession. Unlike the reductivists, who take Aquinas's talk of the mind's "intentional possession of its object's forms" to identify a pair of relations in terms of which intentionality is analyzable, we take this same talk to indicate that intentionality is rather a function of the mind's possessing *an intention* (or concept) of the object's form. Thus, whenever Aquinas speaks of the form of some object being intentionally present in the mind, we take this to mean that the form of the object in question is present in the mind via the mind's possession of a concept that represents it. Note, moreover, that since this interpretation presupposes a sui generis type of connection between concepts and their objects, it also makes good sense of Aquinas's speaking of intentionality as involving a special sort of unity or assimilation between cognizer and cognized.

Indeed, the primitive-intentionality theory not only fits as well with the standard textual data as any of the standard interpretations; it also makes good sense of certain texts that look extremely puzzling from their vantage point. Consider, for example, a passage we quoted earlier in support of the similarity theory (in sec. 2.3.1). Although Aquinas speaks here of intentionality as a kind of likeness, the passage does not ultimately support a reductive reading:

> The likeness holding between two things can be understood in two ways. In one way, it can be understood as an agreement in nature. This sort of likeness is not required between cognizer and cognized. . . . In another way, however, it can be understood as representation—and *this* sort of likeness is required between cognizer and cognized. (*QDV* 2.3 ad 9)

It seems quite clear that Aquinas means to be *distinguishing* intentional likeness here from other, ordinary notions of likeness rather than *reducing* it to them. In fact, on the most straightforward reading of this passage, he means to be distinguishing intentional likeness by introducing it as a special, sui generis form of likeness. And, of course, if that is right, it's the notion of intentionality itself—and not any ordinary form of likeness—that is fundamental in Aquinas's account of intentional likeness.

Again, consider another passage in which Aquinas bypasses talk of likeness or sameness altogether and instead explains cognitive assimilation or unity directly in terms of representation or intentionality:

> The conformity (*applicatio*) of the cognizer to what is cognized—which produces cognition—is *not* to be understood in terms of sameness (*identitas*).[50] On the contrary, it is to be understood in terms of *representation* (*repraesentationis*). In this sense, it is not necessary that something is in the cognizer in the same way it is in the cognized. (*QDV* 2.5 ad 7)

Once again the upshot seems to be that intentionality as such is fundamental. Much the same can be said for those texts (cited at the outset of the essay in sec. 1.1) in which Aquinas explicitly marks a distinction between two types or categories of "likeness" or "assimilation," namely, the type that obtains in ordinary cases of resemblance and the type that obtains in cases of representation between species and the objects they represent.

What is interesting about all these texts is that, in addition to providing positive evidence for a nonreductive interpretation, they seem to undermine one of the chief motivations behind the standard, reductive alternatives: namely, the assumption that the only way two (or more) things can be "alike" is if they "agree in nature" or "share some common form." Certainly it cannot be denied that Aquinas often speaks *as if* this assumption were true. But, as the foregoing passages make perfectly clear, when he is being most careful, he denies that agreement in nature or form is required for anything other than ordinary likeness.

Finally, in addition to the strength of its textual support, it should be noted that our interpretation also appears to be the only

50. '*Identitas*' is a term of art in medieval philosophy, covering a number of relations (including identity in the ordinary contemporary sense, as well as what we've called 'formal sameness'), and hence it should not be assumed that it can be straightforwardly transliterated as 'identity'. For some discussion of Aquinas's use of this term, see Schmidt 1966, 195–96.

interpretation that is capable of avoiding all the more systematic or doctrinal objections raised in connection with reductive interpretations. According to our interpretation, a concept is a particular quality numerically distinct from the form of the object it represents. Hence, the nominalism objection does not arise for it. Our view likewise sidesteps the quiddity objection. Insofar as it takes intentionality to be a sui generis feature of concepts or intelligible species, it leaves open the possibility of their representing the quidditative natures (or forms) of things in any category whatsoever. Again, insofar as our interpretation invokes nothing beyond ordinary property possession, it appears to avoid the mystery objection. Finally, because our interpretation takes intentionality to be a primitive or unanalyzable feature of concepts, it yields a perfectly determinate account of the phenomena it attempts to elucidate, and thereby avoids even the incompleteness objection facing the similarity theory.

But perhaps it will be said that the primitive-intentionality theory does not quite avoid *all* the objections associated with reductive accounts. For, even if it avoids the specific version of the mystery objection that applies to all reductive interpretations, it might nonetheless appear to face a version of its own. After all, doesn't our theory introduce a mysterious primitive by making intentionality sui generis? And isn't this a mystery just as problematic as the sort we criticized in connection with reductivism?

We think not—and for two reasons. First, the appeal to primitive intentionality made by our interpretation involves none of the methodological problems associated with the reductivist appeal to a sui generis type of property possession. As we explained earlier, where reductive interpretations go wrong is in appealing to a mysterious notion of property possession as part of an *explanation* or *analysis* of intentionality, a strategy that succeeds only in rendering the phenomena to be explained more puzzling than it was to begin with. By contrast, our interpretation simply claims that such intentionality does not admit of genuine analysis. Granted, this leaves us with a certain amount of mystery, but no more than we started with. And in any case, every theory is bound to appeal to some sort of primitive (since not everything can be explained in terms of something else), and hence to involve mystery at some point. On our interpretation of Aquinas, the intentionality associated with concepts is just such a primitive. Thus, to the extent that appealing to a "mysterious" primitive is a cost for the primitive-intentionality theory, it is not obviously an unacceptable one.

But there is another reason for sharply distinguishing the type of "mystery" associated with primitive intentionality from that associated with intentional possession (conceived as a special type of property possession). As we argued earlier, the notion of intentional possession is not only mysterious, but borders on incoherence (see sec. 2.3.2). There is, by contrast, nothing incoherent in the notion of intentionality itself—and nothing incoherent in taking it to be primitive.[51]

51. One might still worry about the *pervasiveness* of this mystery in Aquinas's account since it might seem that insofar as our interpretation commits Aquinas to a nonreductive account of intentionality in the case of mental representation, it also commits him to a nonreductive account of intentionality *tout court*. Given the sheer amount of controversy surrounding Aquinas's views about sensible species (and in particular, the plausibility of a materialist or reductive interpretation of their intentionality), we concede that it would be a serious cost of our interpretation if it *forced* the same sort of nonreductive position on this debate. Fortunately, however, it does not. In order to see why, we need to draw a distinction between two ways in which intentionality might be primitive. On the one hand, it might be *conceptually* primitive—that is, primitive in the sense that the *concept* of intentionality cannot be analyzed or explained in terms of any more basic concepts (like those of sameness and intentional possession). On the other hand, it might be *ontologically* primitive—that is, primitive in the sense that the *property* or *relation* of intentionality cannot be analyzed or explained in terms of any more basic properties or relations (like those of sameness and intentional possession). Now, on our reading of the texts, Aquinas is committed to the view that intentionality in general is *conceptually* basic. This, we take it, is the point of his saying that intentionality is a special form of likeness: it is not something that can be *understood* in terms of anything more basic. Even so, it does not follow from the *conceptual* irreducibility of intentionality that it is also *ontologically* basic for Aquinas. To make this point vivid, consider a person who thinks that the concept of a relation is primitive or basic, and hence that our talk of relations cannot be translated into talk about individuals and their monadic (or nonrelational) properties. Even for such a person it remains an open question as to whether we need to admit irreducible relations or polyadic properties into our ontology to explain the truth of our relational talk. Indeed, such a person might think that such questions can be decided only on a case-by-case basis, perhaps admitting fundamental relations for certain sorts of relational truths, and not for others.

Something similar holds, we think, in the case of Aquinas's views about intentionality. Although intentionality is always conceptually basic, it is an open question whether it is also always ontologically basic. In the specific case of mental representations (or intelligible species), we have argued that, given the textual data, it must be regarded as ontologically basic, given the fact that, in the case of an immaterial mind, there are no properties or relations (such as identity, formal sameness, or similarity) to which it could plausibly be (ontologically) reduced. Whether Aquinas also thinks that intentionality is ontologically basic in the case of sensible species would require a separate investigation, and hence is something about which we intend to remain neutral here.

As it turns out, there is a way of pressing the worry about the mystery associated with our interpretation. Hilary Putnam (1982), for example, has argued that postulating a primitive connection between mental representations and their objects not only introduces mystery into one's account of intentionality, but magic as well. This is an important concern—one that we shall return to below, when we take up the question of how Aquinas's account stands relative to contemporary discussions of intentionality. Before doing so, however, we want to conclude this section by returning to something we mentioned earlier—namely, the possibility of distinguishing more than one type of primitive intentionality.

3.3. In Defense of Primitive Nonrelational Theory

So far we have been discussing primitive-intentionality theory in general terms, so as to remain neutral about how exactly to conceive of the primitive feature to which it appeals. There are, however, two different ways in which the theory can be further developed: one can say that the primitive feature is either a relation (a dyadic or two-place property) or a genuinely monadic (one-place) property. According to the first—call it "primitive relational theory"—concepts are entities that by their very nature stand in a relation to the objects they are about. According to the second—call it "primitive nonrelational theory"—concepts are by their very nature *about* other things, but their *aboutness* consists, not in any relation in which they stand, but rather in a monadic or nonrelational feature they possess.[52] Our reason for remaining neutral between these two versions, until now, has been dialectical. Our primary aim in this essay is to establish the superiority of nonreductive interpretations generally over all versions of reductive interpretation. In order to fill out our own, preferred interpretation of Aquinas, however, it is necessary at this point to say a few words about which of the two types of primitive intentionality we think Aquinas is committed to.

52. This is not to deny that concepts can, on this view, stand in a relation to the objects they are about (at least when those objects exist). On the contrary, it's just to deny that their *aboutness*—that is, their intentionality—consists in any relation. Thus, on the primitive nonrelational theory, we need to distinguish two different features: (i) the monadic property of *being intentional*, which concepts have by nature, and (ii) the relation of actually *intending* (or referring) in which concepts stand to the objects they are about when those objects exist. (The primitive relational theory, of course, has no need for such a distinction, since according to it being intentional just consists in standing in the intending or referring relation to a given object.)

For reasons that we shall rehearse only very briefly, we think there are good textual grounds for preferring the nonrelational version of the primitive-intentionality theory over the relational version. According to Aquinas, we can have intellectual cognition, and hence concepts, of things that don't exist—that is, things such as centaurs, unicorns, and goat-stags.[53] This claim makes good sense on the primitive nonrelational theory, since according to this version of the theory, thinking about an object, existent or not, requires only that the mind possess a form or concept with a special monadic property. But the same claim is difficult to square with the relational version. After all, relations require their relata to have being in some sense.[54] But, then, if intentionality is to be explained in terms of a relation between concepts and their objects, it will follow that thinking about centaurs, unicorns, and goat-stags entails that there are such nonexistent things after all—a view that we think Aquinas rejects.[55]

Admittedly, there are passages in which Aquinas speaks *as if* he accorded a type of being even to nonexistent objects—namely, "intentional being" or "being of reason" (*ens rationis*).[56] At first blush, such passages might suggest, not only that there is a realm of nonexistent objects, but also that the introduction of this realm is motivated precisely by the assumption that intentionality always consists in *a relation*—in this case to something having mere *intentional* being.[57] Yet, while it is certainly possible to read Aquinas's treatment of beings of reason in this way, we deny that it is the only or the best way to read it. On the contrary, when Aquinas characterizes (say) a centaur as a being of reason, we think that he is best understood as referring to the concept of a centaur—in effect, to be saying that there is nothing in extramental reality corresponding to this concept. And the reason for this is systematic: when Aquinas distinguishes beings of reason (*entia rationis*) from real beings (*entia realia*), he doesn't say that *only* fictional creatures are beings of reason. On the contrary, he says that anything that can be thought about *in any way*

53. See, for example, *DEE* 1.

54. Although we think it is clear that Aquinas accepts this assumption, there are some in the history of philosophy who reject it—especially in the case of intentional relations. See Haldane 1996 for further discussion of this view.

55. In short, Aquinas seems to us to be committed to *actualism*, the view that there are no nonexistent objects. But the primitive-relational theory seems inconsistent with this.

56. See, for example, *DEE* 1 and *In Sent.* 1.19.5.1 and 2.34.1.1.

57. See, for example, Klima 1996 and 1993.

whatsoever qualifies as a being of reason.[58] As far as thought is concerned, therefore, the only difference between fictional and nonfictional (or real) creatures is that, while there are concepts of both, only concepts of real creatures have something corresponding to them in extramental reality. This is the point we take Aquinas to be making when he says that fictional creatures are (mere) beings of reason.[59]

We realize that these considerations are not decisive and may well fail to persuade anyone already inclined to read Aquinas as committed to the existence of nonexistent or intentional beings. Even so, in light of the philosophical difficulties associated with doing so and the naturalness with which Aquinas's texts can be read as rejecting such a realm of nonactual beings, we conclude that the primitive nonrelational theory provides the best overall interpretation of Aquinas.

4. Primitive Intentionality and the Contemporary Debate

One of the virtues claimed for Aquinas's account of intentionality by proponents of the standard interpretations (especially, the identity and formal-sameness theories) is that it accords to the mind (or intellect) an utterly unmediated access to the world. Indeed, because Aquinas characterizes the intentionality of mental representations as a matter of the mind's possessing the same form as its object, commentators have often claimed that, for Aquinas, a concept is not, strictly speaking, a *representation* of any sort—rather, it just *is* its object (possessed intentionally).[60] As already noted, moreover, this general understanding of Aquinas's account has, at least since the time of Gilson, been thought to give his

58. See again the texts cited in note 56.

59. This interpretation of Aquinas is further supported by his explicit remarks about intentional relations (for example, *ST* 1.13.7). In general, Aquinas analyzes relational situations in terms of individuals and their monadic properties. Thus, if Simmias is taller than Socrates, this is to be explained, on Aquinas's view, in terms of Simmias, Socrates, and a pair of monadic properties (say, their respective heights). Like other medieval philosophers, however, Aquinas makes an exception to this analysis for situations involving intentional relations. If Simmias is thinking about Socrates, where both Simmias and Socrates exist, Aquinas says that this is to be explained in terms of Simmias, Socrates, and a single monadic property (or quality) of Simmias. The fact that Aquinas takes the ontological ground for intentional relations in general to be located in just one of their relata (in this case, Socrates) certainly suggests that he endorses the nonrelational (over the relational) version of primitive-intentionality theory. For further discussion of Aquinas's views about relations, see Brower 2001.

60. See Haldane's remarks quoted in note 27 above. See also de Libera 1996, 275; Perler 2000, 114, and 2002, 393; O'Callaghan 2003; Wéber 1990, 2709.

views an advantage over more traditional representationalist theories of mind, especially with regard to worries about skepticism and idealism.[61] Indeed, because proponents of the identity and formal-sameness theories see Aquinas as not only preserving an intrinsic connection between thought and its objects but also as *individuating* concepts in terms of their objects, they have, in more recent literature, begun to classify Aquinas as an externalist in the philosophy of mind.[62]

By now it will be clear that we reject this understanding of Aquinas's account of intentionality. In this final section, however, we want to draw out the precise implications of our interpretation of Aquinas vis-à-vis contemporary debates about intentionality to which his views are so often favorably compared. Admittedly, this will require us to go beyond the specific philosophical issues Aquinas himself was concerned to address. But the comparison will prove useful, not only for clarifying our own interpretation and correcting some persistent misunderstandings, but also for identifying the real philosophical significance of Aquinas's account, including the prospects and pitfalls it faces.

4.1. Aquinas and Contemporary Theories of Intentionality

To begin, it is important to see that contemporary theories of intentionality can be divided into different categories, depending on how they answer different questions about the individuation of intentional states. Suppose we have a mind M that thinks about or intends an object O and that it does so by possessing a representation R. There are two questions we might ask about such representations:

> 1. To what extent (if any) do R's intentional or semantic properties depend on R's relations to other representations possessed by M?
>
> 2. To what extent (if any) do R's intentional or semantic properties depend on R's relations to things external to M?

The first question is at the heart of the dispute between the proponents of atomism and holism. According to *atomism*, the intentional or semantic properties of a given mental representation are determined independently of any relation it bears to other representations; in principle, therefore, it is possible for the mind to think about an object (say, a horse), even if it possesses no other mental representations whatsoever.

61. See references cited in notes 27 and 37 above.
62. Jenkins 1996 and 1991, 631; O'Callaghan 2003, chap. 8; Haldane 1992.

According to *holism*, by contrast, this is impossible. The intentionality of a given mental representation depends on its relations to other members of a total system of representations.[63]

The second question, which concerns the contribution of external reality to the individuation of intentional states, is the one at dispute between proponents of internalism and externalism. According to *internalism* (also known as *individualism*), mental representations possess their intentional or semantic properties independently of how things stand in the external environment; that is to say, the content or intentionality of representational states is "narrow" in the sense that it is determined solely by properties intrinsic to the subjects of such states (i.e., by properties that require the existence of no individuals other than the possessor of the intentional state in question). According to *externalism* (or *anti-individualism*), by contrast, the content or intentionality of representation is "wide"; it is determined solely by the relation in which the subject of the intentional state in question stands to the extramental environment.[64]

To the extent that Aquinas has been discussed in the contemporary context, he has been considered only in connection with the internalist-externalist debate. And here, as we've already indicated, he has been characterized exclusively as an externalist. If our interpretation of Aquinas's account is correct, however, it should be clear that this is a mistake; he is an internalist. On his account, as we have argued, the intentional properties of concepts are sui generis monadic properties—properties possessed even in the absence of the objects they represent.

Even if Aquinas's account is best characterized as internalist, its full significance cannot be appreciated until it is also considered in connection with the atomism-holism debate. Indeed, it is here that we find a respect in which Aquinas's account diverges from most contemporary forms of internalism. For reasons that will become clearer shortly, most contemporary internalists accept some form of holism about mental content. That is to say, even though they reject the view that the content

63. There are also so-called *molecularist* theories, according to which the intentional or semantic properties of a given representation are determined not by all (or even most) of the members of a total system of representations, but only by certain (relatively small) parts of it. For further discussion of these distinctions, and some variations among different authors, see Block 1996 and Fodor and LePore 1992.

64. In addition to the pure forms of internalism and externalism distinguished here, there are also "two-factor" theories, according to which mental representations have two sorts of content or intentionality, one of which is narrow and the other of which is broad. For further discussion of these distinctions, see Segal 2000.

or intentionality of a given mental state depends on its relation to the external world, they nonetheless assume that it depends on its relation to other mental states—and, hence, on other items in some larger system of representations. Aquinas's internalism, by contrast, is decidedly atomistic. On his view, the intentionality of a given mental representation is not determined by *any* relation in which it stands—be it a relation to the external environment or to other mental representations. On the contrary, he takes its referential properties to be intrinsic features of it.[65]

None of this should be taken to deny that, as a matter of fact, a subject's current mental or intentional states are the result of complex causal processes. Indeed, in the ordinary course of nature, Aquinas thinks they arise via a complex process of abstraction from sensory representations initiated by a subject's interactions with objects in the extramental environment.[66] Nonetheless, Aquinas's account, as we interpret it, leaves open the possibility for a powerful being, such as God, to produce directly any intelligible species whatsoever in a subject, and hence without the ordinary causal processes.[67]

Again, our interpretation should not be taken to imply that Aquinas rejects the existence of an intrinsic connection between concepts and the objects they represent, at least when those objects exist. As we have seen, Aquinas thinks that a concept of (say) a horse is a mental state or quality (i.e., an intelligible species) that, by its very nature, refers to the forms or properties in virtue of which horses are horses (say, tropes of equinity). Given this, however, it follows that in all possible worlds in which both (a) a mind possesses such a concept and (b) there exist horses, the concept in question will relate the mind to those horses via a relation of intending or referring. And even in worlds in which there are no horses but where God generates in the mind of the subject the concept of a horse, it will nevertheless be true that *if* horses existed, the subject's concept *would* relate his mind to them.[68]

65. At least this is true for simple or "noncomplex" concepts or mental representations (and more specifically, those which are categorematic rather than syncategorematic in nature). As Aquinas sees it, simple concepts can be combined (via a process of "composition" and "division") to form complex concepts or propositional thoughts. In their case, however, Aquinas would say that their content is determined by the simple representations that are their semantic constituents.

66. See note 17 above.

67. In fact, Aquinas thinks something like this happens after death and before the resurrection of the body. See *ST* 1.89.

68. It's important to recall here that on the nonrelational version of primitive-likeness theory, we must distinguish between (i) the monadic property of being

The fact that Aquinas's account preserves such an intrinsic connection between concepts and their objects, when those objects exist, may perhaps explain why some have been led to see it as externalist—since those who ascribe externalism to Aquinas often do so on the grounds that his views are calculated to preserve such a connection.[69] In any case, the fact that he is able to preserve such a connection, without embracing any form of externalism, makes his specific brand of internalism all the more interesting.

4.2. The Mystery Objection Revisited: Prospects and Pitfalls for Aquinas's Account

If the foregoing characterization of Aquinas's account succeeds in highlighting its philosophical interest, it also allows us to see why it's likely to appear philosophically objectionable. The problem is not that his account presupposes either internalism or atomism per se. For these two views, taken separately, have a certain amount of intuitive appeal, as well as currency in contemporary discussions of intentionality. The problem has rather to do with the way in which his account conjoins both internalism and atomism. And this is objectionable, as John Haugeland points out, because it appears to be inconsistent with a fundamental assumption of contemporary theories of mind, namely, materialism:

> In the good old days, a philosopher might hold that mental entities are somehow ontologically distinctive (modes of a special substance, say), and then maintain that an essential part of that distinction lies in their having original [as opposed to derivative] intentionality as an intrinsic property. Thus, just as material entities have mass and extension intrinsically, so mental entities have content—that's simply the way God made them (end of discussion). In the present metaphysical context, this is the methodological equivalent of stealing home [in baseball]; and the force of vapid materialism is precisely to throw it out. (Haugeland 1990, 386)

What Haugeland refers to here as "vapid materialism" is just the assumption that everything (or at least everything contingent) supervenes on the material. Now, as we've seen, Aquinas is not interested in providing

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intentional and (ii) a relation of referring or intending, which holds between (indeed, supervenes on) an intelligible species and its object, when that object exists. See note 52 above.

69. See, again, the discussion of Haldane in sec. 2.1 and O'Callaghan 2003, chap. 8.

a materialistically acceptable account of intentionality. But even so, why think his account is *inconsistent* with such a project—that is, with vapid materialism? The answer, as Haugeland (ibid., 386) claims, has to do with the nature of matter:

> No single patch of matter can, purely in virtue of its own physical structure, and regardless of the rest of the universe, mean exactly one thing. . . . Hence vapid materialism seems to imply that the intentionality of any individual state or occurrence always depends on some larger pattern into which it fits.

In short, Haugeland thinks nothing material can be intrinsically intentional—that is to say, no individual physical object or state is, in and of itself, *about* anything else (nor can it be the supervenience base for such aboutness). Thus, insofar as Aquinas is committed to saying that individual mental states *are* intrinsically intentional, his account is inconsistent with materialism, even of the most vapid sort, and so must be rejected.

Of course, this is not so much an objection to Aquinas's account as a statement of a sociological fact: to the extent that Aquinas's account is inconsistent with materialism, it is simply passé. But even here, what Haugeland seems to have shown is not the inconsistency of Aquinas's views with materialism, but rather the inconsistency of a larger set of claims that includes both Aquinas's views and materialism:

(α) Mental representations are intrinsically intentional.
(β) Nothing material can be intrinsically intentional.
(γ) Materialism is true.

Now one could, of course, follow Haugeland in thinking that, of these three claims, the first is the least plausible and hence the one to be rejected.[70] But this is by no means the only way to go here. One might, for example, agree with Haugeland about the truth of materialism, but deny his account of matter at (β). This seems to be the position of John Searle, which is tantamount to the rejection of Haugeland's claim that Aquinas's endorsement of (α) is inconsistent with materialism.[71] Again,

70. As noted above, (α) is equivalent to *the conjunction* of atomism and internalism. There is, therefore, more than one way to reject it—namely, by rejecting atomism (as, for example, functionalists or conceptual role theorists do) or by rejecting internalism (as the externalists do).

71. See, for example, Searle (1980), who thinks intentionality is a mysterious causal property that biochemists have yet to explain (but presumably will explain at some point in the future).

one might take the plausibility of both (α) and (β) to be so strong as to provide the basis for an objection to materialism. If nothing material can, by its very nature, represent one thing (or set of things) rather than another, and if thoughts or concepts can and do represent in this way, then such thoughts or representations must be essentially immaterial. This sort of argument is not at all far removed from the sorts of things Aquinas himself says.[72] But whether or not the argument is ultimately successful, it calls attention to the significant role that certain background assumptions (or current fashions) have played in shaping the contemporary debate.[73]

It is not, however, just the antimaterialist implications of Aquinas's view that are likely to seem objectionable in the current climate of debate. Hilary Putnam, for example, has argued that *no* representation (whether material or not) could be connected to its object in the way Aquinas's view suggests:

> What is important to realize is that what goes for physical pictures also goes for mental images, and for mental representations in general; mental representations no more have a necessary connection with what they represent than physical representations do. The contrary supposition is a survival of magical thinking. . . . Thought words and mental pictures do not *intrinsically* represent what they are about. (Putnam 1982, 3–5)

Unlike the previous worry, this objection points to more than a difference in attitudes toward the truth of materialism. Indeed, in light of our earlier discussion, we can see that it is in fact an extension of what we previously called the "mystery objection." Stated succinctly, the objection amounts to this: Aquinas's account makes the relation between minds and the world mysterious or magical by refusing to explain the intentionality of representation in terms of something other than the intrinsic properties of representational states.

To be fair, there are at least two things to be said in response to this objection on Aquinas's behalf. The first is that, whether we like it or not, there *may* be some mysteries in the world that cannot be removed. The demand for explanations in terms of what is more familiar (or in

72. See in particular his argument for the immateriality of thought from the nature of its intentionality in *In DA* 2.12.5.

73. This seems all the more true given that the standard arguments for materialism in philosophy of mind are likely to have no force for someone with theistic leanings. See Plantinga 2007 for an evaluation of seven of the most common such arguments from this perspective.

Aristotelian terminology, "better known") is reasonable in those cases where such explanations are likely to be true. But to demand such explanations across the board, and without qualification, is to make the notion of explanation unreasonably subservient to our own epistemic limitations.

The other thing to be said is that the objection seems to beg the very question at issue—namely, whether entities can in general be intrinsically *about* or essentially *related to* other things (at least when the latter exist). One could just deny that this is possible, insisting that the truth of this denial is an obvious necessary truth. This seems to be Michael Devitt's suggestion (1990, 83) as to how we should understand Putnam's objection:

> The idea that psychological states do not determine reference, like many of the best ideas, seems obvious once it is pointed out. *How could* something inside the head determine reference, which is a relation, to particular things outside the head? Nothing internal and intrinsic to an object could ever determine such a relation.

It is not clear to us, however, that the general principle Devitt appeals to here—that nothing inside an object is alone sufficient to determine its relation to something outside it—is an obvious necessary truth. After all, there are perfectly respectable philosophical doctrines that appear to presuppose its falsity (for example, the doctrine that there are sets, abstract propositions, or possible worlds).[74] Even so, it must be admitted that any attempt to defend Aquinas's views about mental representation must face up, one way or another, to this form of the mystery objection.

Obviously, the question of whether Aquinas's account can ultimately be defended against this form of the mystery objection goes beyond the scope of this essay. Our aim has not been to provide an interpretation that safeguards Aquinas's account against every possible objection, but rather to clarify that account sufficiently to make clear the objections that it really faces. Even so, insofar as any defense of Aquinas's account of concepts and intentionality requires a proper understanding of the account itself, we take ourselves to have made some progress on the latter project as well.

74. Van Inwagen 1986 makes this point in response to a form of the magical reference objection developed by David Lewis. For a partial concession on Lewis's part, see Lewis 1991.

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