

POWERFUL LOGIC: PRIME MATTER AS PRINCIPLE OF INDIVIDUATION AND PURE POTENCY

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I

A LEAN HYLOMORPHISM STANDS as a metaphysical holy grail. It would provide an ontology of the composition of material substances that would look materialistic—and so friendly to naturalist interests—but with the extra goodies of dualism or idealism.¹

I believe that Aquinas's hylomorphism—as presented in his *On Being and Essence*²—is in many ways successful in providing such a lean hylomorphism. To wit, Aquinas viewed prime matter as both a fundamental principle of individuation for material things as well as pure potency to other actualities in the system as a whole.³ As I interpret Aquinas's view, therefore, a given substance is not a third thing constituted by its prime matter but is in fact identical with it.

However, on the long view of philosophy, Aquinas's view of prime matter has been neglected as a dead option for contemporary

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¹ Among those seeking to find a lean hylomorphism include Anna Marmodoro, "Aristotle's Hylomorphism, Without Reconditioning," *Philosophical Inquiry* 36 (2013): 5–22; Robert Koons, "Staunch vs. Faint-Hearted Hylomorphism: Toward an Aristotelian Account of Composition," *Res Philosophica* 91, no. 2 (2014): 151–77; Michael Rea, "Hylomorphism Reconditioned," *Philosophical Perspectives* 25 (2011): 341–58. Other attempts at articulating hylomorphic-style accounts of material objects include Kit Fine, "Things and Their Parts," *Midwest Studies in Philosophy* 23, no. 1 (1999): 61–74; Katherine Koslicki, *The Structure of Objects* (New York: Oxford University Press, 2008); and Mark Johnston, "Hylomorphism," *Journal of Philosophy* 103, no. 12 (2006): 652–98.

² Thomas Aquinas, *On Being and Essence*, trans. Armand Maurer (Toronto: The Pontifical Institute of Medieval Studies, 1968).

³ In fact, one of the values of this paper is to seek to show how prime matter as pure potency can also be the principle of individuation for a material substance. It is the feature of prime matter as pure potency that led Eleonore Stump, *Aquinas* (New York: Routledge, 2005), 47, and Christopher Brown, *Aquinas and the Ship of Theseus* (London: Continuum, 2005), 126, to reject prime matter as a valid candidate for the principle of individuation in material substances.

ontologies. This for two reasons: (1) Aquinas's view of prime matter both as the principle of individuation for material things and as pure potency, and hylomorphism in general, is incoherent and inconsistent;⁴ and (2) prime matter in itself as pure particularity is unable to be understood, by Aquinas's own admission,⁵ and so it would seem unable to provide illumination for any ontology!

I seek to neutralize reasons (1) and (2) through a single unique thesis: Aquinas makes progress toward harnessing prime matter in his hylomorphic ontology by modeling his understanding of it on the idea of logical genus. This thesis will help us to understand how prime matter is both principle of individuation and pure potency (second section) and will argue that, due to the vague properties of prime matter, prime matter has a relation of vague identity to the substance that it individuates (third section).

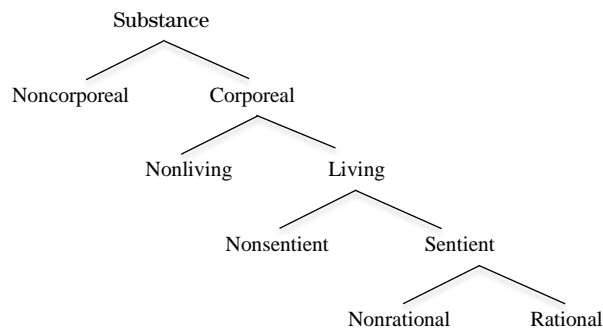
For our purposes, genus, species, and difference are logical concepts that identify relationships between concepts found on the Porphyrian tree (*Figure 1*). At the top of the tree is substance, which is understood as a logical genus. Directly under "substance" are the *differentiae* "corporeal" and "noncorporeal." If one understands the genus in relation to each difference, one derives two species; thus, "corporeal substance" and "noncorporeal substance" are both species. Yet, "corporeal" itself has two branches under it, namely, "living" and "nonliving." This continues on: under "living" is "sentient" and "nonsentient"; under "sentient" is "rational" and "nonrational." Thus, species is a logical composition of a genus and a difference. One can also see that "genus," "difference," and "species" are all relative terms: something that is understood as a genus can sometimes be understood as a difference. Finally, a species expresses the definition of a thing, and

⁴ For example, Bernard Williams, "Hylomorphism," *Oxford Studies in Ancient Philosophy* 4 (1986): 89–99, characterizes hylomorphism as ambiguously materialistic and dualistic. Also, Christopher Hughes, "Matter and Individuation in Aquinas," *History of Philosophy Quarterly* 13, no. 1 (1996): 5, concludes that "there is no uniform answer to the question, 'what role does matter play in the individuation of material substances?'" In addition, Gordon Barnes, "The Paradox of Hylomorphism," *Review of Metaphysics* 56, no. 3 (2003): 516, points to the unclear relationship between the form and the substance. A similar complaint could be made about the relationship between the prime matter and the substance.

⁵ See *Summa theologiae* I, q. 86, a. 1, in Thomas Aquinas, *Thomas Aquinas on Human Nature* (Indianapolis: Hackett Publishing Company, Inc., 1999).

from this we can make two observations. The first is that although the truest species will be the most determinate one and (so it will be the species that is nearest to the bottom of the tree) this species is logically linked up to the very top of the tree insofar as the concepts located higher in the tree are analytically contained in the species. The second is that such logical concepts are modes through which to understand how the world around us is constructed. This is seen by the fact that the species is a way of locking down in our understanding the real essence of an extra-mental thing.⁶

Figure 1: Porphyrian Tree



II

Characteristics of Prime Matter as Revealed by the Model. In order to get our bearings, let us briefly look at the big picture of Aquinas's metaphysical view.⁷ All material substances are hylomorphically composed of substantial form and prime matter. Such substances are subjects of accidents, which are said to inhere in them. Both the substantial form and the accidents are individuated, where substantial

⁶ For a discussion of real essences, definition, and a defense of something like the Porphyrean tree, see David Oderberg, *Real Essentialism* (New York: Routledge, 2007), 92–105.

⁷ For a textually grounded treatment of Aquinas's metaphysics as based on the entirety of Aquinas's works, see John F. Wippel, *The Metaphysical Thought of Thomas Aquinas* (Washington, D.C.: The Catholic University of America Press, 2000). Wippel does not discuss prime matter in great detail in the context of the *On Being and Essence* text.

form is individuated by the prime matter and accidents are individuated by the substance in which they inhere. A substantial form (of which there is but one per substance) is said to actualize the potency of the prime matter, and the accidental forms are understood to actualize the potency of the substance. Cribbing from the Islamic philosopher Ibn Sina (Avicenna), the act of existence is understood to be the fullest actuality of a substance toward which the substance stands in potency. Actualized dimensionality and partedness of the substance is understood to be an actualization of the substance by way of the form of quantity. In virtue of the forms or essences residing in various ways in the substance, one is able to abstract concepts through which one grasps substances. The essence of material things includes both matter and form. In order to fix reference and secure it by way of intensional determination, the essence existing in an individual substance is formally identical to the way it is thought about, wherein the essence is understood to exist either according to an individual mode of being or according to a conceptual or universal mode of existence. The formal content itself, not considered according to its mode of existing, is called a common nature.⁸

Prime Matter as Pure Potency₁ = Prime Matter as Ultimate Substratum. What does it mean for prime matter to be pure potency? Following Aristotle, Aquinas holds that prime matter is the ultimate substratum for substantial forms.⁹ A justification for this view is familiar: Aristotelian physics requires prime matter as a *sine qua non* for continuity through substantial change, a scenario in which substantial forms themselves come and go through a continued process of change.¹⁰

⁸ For a treatment of this hard teaching of Aquinas's metaphysics, see Paul Symington and Jorge J. E. Gracia, "Grossmann and the Ontological Status of Categories," in *Studies in the Ontology of Reinhardt Grossmann*, ed. Javier Cumpa (New Brunswick: de Gruyter, 2010). For a standard and influential treatment of the topic, see Joseph Owens, "Common Nature: A Point of Comparison Between Thomistic and Scotistic Metaphysics," *Mediaeval Studies* 19 (1957): 1–14.

⁹ Thomas Aquinas, *Commentary on Aristotle's Metaphysics*, trans. John P. Rowan (Notre Dame, Ind.: Dumb Ox Books, 1995), 435.

¹⁰ See Thomas Aquinas, *On the Principles of Nature*, in *Thomas Aquinas: Selected Writings*, ed. and trans. Ralph McInerney (New York: Penguin, 1998), 18–29. For strong motivation for believing that there must be substratum for substantial change, see Robert Pasnau, *Metaphysical Themes* (New York:

In *On Being and Essence*, Aquinas seeks to identify matter in the composition of material objects by appealing to the logic of genus, species, and difference due to the fact that these latter “are related proportionately to matter, form, and composite in nature, though they are not identical to them. A genus is not matter, but it is taken from matter as designating the whole.”¹¹

How does the logical genus help us to conceive of the role of prime matter as metaphysical substratum?¹² In order to understand Aquinas, and to envision coherently the various roles played by prime matter, prime matter as the ultimate subject of predication of substantial properties should be located as something like a mathematical limit or target at the top (“substance” side) as opposed to the bottom of the Porphyrean tree (“rational” side).¹³ Similar to calculus, in which there is

Oxford University Press, 2011), 27–29; and David P. Lang, “The Thomistic Doctrine of Prime Matter,” *Laval theologique et philosophique* 54, no. 2 (1998): 367–85. For a contemporary treatment argued in terms of real substantial capacities, see Andrew J. Jaeger, “Back to the Primitive: From Substantial Capacities to Prime Matter,” *American Catholic Philosophical Quarterly* 88, no. 3 (2014): 381–95.

¹¹ Aquinas, *On Being and Essence*, 41.

¹² This question has largely gone unanswered. For example, the great Cajetan, *Commentary on Being and Essence*, trans. Lottie H. Kendzierski and Francis C. Wade (Milwaukee: Marquette University Press, 1964), addresses matter as the principle of individuation and then jumps to a discussion of common natures when commenting on Aquinas’s *On Being and Essence*. The latter part of *caput* 1 (chap. 2 in Aquinas, *On Being and Essence*) is mostly left unaddressed.

¹³ The explicit claim that prime matter should be located at the top of the tree is controversial and unique for a complex of reasons. One of the reasons is that interpreters conflate being an individual with matter as the principle of individuation. For example, you see commentators place individuals at the bottom of the tree—for example Oderberg, *Real Essentialism*, 99, places the individual human beings under the species “human being”—without recognizing that the principle of individuation as prime matter must be located at the top of the tree. Yet there is a distinction that Aquinas makes between the individual mode of a being that a thing has (which is related to its most fundamental actualization) and the principle of individuation as located in prime matter, which provides the thisness to the existing individual. Joseph Bobik, *Aquinas on Being and Essence* (South Bend, Ind.: University of Notre Dame Press, 1965), 76 and Anthony Kenny, *Aquinas on Being* (New York: Oxford University Press, 2002), 14, also hold a similar interpretation. Jorge J. E. Gracia, *Introduction to the Problem of Individuation in the Early Middle Ages* (Washington, D.C.: The Catholic University of America Press, 1984), 27, identifies the common trend among medievals to seek to understand how a

a limit of a specific value as the value of a function approaches it, prime matter as substratum is to be understood as the limit approached by increasingly generic conceptualizations. The value of the limit of these generic concepts is prime matter itself, although prime matter is not, in fact, a direct member of the Porphyrean tree.¹⁴ The difference as logically directed to the genus shows us toward prime matter and locates the place of ultimate substratumhood from within the conceptual apparatus of the tree itself, as opposed to a procession down from genus to difference, which moves us away from it. Put in this way, we see where the focus of the predicates expressed by the tree resides.

To justify this assertion, I shall focus less on a textual argument in favor of an argument from coherence.¹⁵ My interpretation is a way to

species or kind is divided or multiplied into many. He does not limit such a move to identifying an *infima species* below the species, however, and so is consistent with my interpretation. Peter King, "The Problem of Individuation in the Middle Ages," *Theoria* 66 (2000): 9, puts it this way: "The genus would be related to the species in much the same way the species would be related to the individual. The essence of each lower element along a categorial line in the Tree of Porphyry would be constituted by the feature that formally differentiates it from the higher element: the genus is contracted to the species through the specific differentia, the species to the individual by the individuating differentia."

¹⁴ This way of understanding Aquinas's approach helps to placate the worry of Kenny (*Aquinas on Being*, 13), of how Aquinas switches back and forth between treating the concrete essence abstractly and the abstract essence concretely.

¹⁵ Although my interpretation has strong textual support. (1) In support of the interpretation that prime matter is to be located at the top of the tree (in the direction of genera), Aquinas (*On Being and Essence*, 36 and following) says that the difference between Socrates and "human" lies in the fact that Socrates—insofar as he is individuated by matter—has designated matter whereas "human" has nondesignated matter. Designated matter is that which is considered under determined dimensions. It is important to point out that he is not saying designated matter is equated with determinate dimension (although some have so equated them, such as Bobik, *Aquinas on Being*), but rather that it is grasped as a designated individual through a consideration of a determinately dimensioned thing (this is the view of Cajetan, *Commentary on Being*, 99). He then goes on to say that genus and species differ as designated and undesignated (or, a genus can be understood as designated or designated and same with the species), but do so in different ways. Whereas the genus is designated with respect to the species by way of the specific difference, the genus is designated with respect to the individual by way of matter determined by dimensions. From this it is clear enough that there are opposite movements related to the tree: in the designation of species from the genus by way of the specific difference and, most importantly for our purposes, in the designation

save the coherency of Aquinas's view of prime matter and the roles he assigns it. Laboring under the assumption that *On Being and Essence* is philosophically coherent, the objective of my interpretation is to make good sense of the work.

When we look at the members and order of the Porphyrean tree (namely, genus, species, and difference) as a whole, we see an order of divergence or branching when proceeding down the tree and an order of convergence when proceeding up the tree. For example, something that falls under the genus "living" and considered only as such could equally be either "sentient" or "nonsentient." But a substance generically understood as falling under a difference—"sentient," for instance—will not have the same flexibility when considering under which genus it will fall: the substance is *de facto* under the genus "living." When one thinks of the difference "sentient," one sees that it has as its subject something that is also "living," which is that upon which "sentient" and "nonsentient" converge. This is the case when one considers a species, say, "sentient living thing," where "living thing" is understood to be the subject of "sentient." To put it another way, to say that the genus expresses the subject of the difference is to say that when we think of the difference "sentient," the order of the tree tells us that we do not think that it could be equally true of the genera "living" and "nonliving," but that it is only true of things that are also "living." Thus, a

of the individual from the species by way of the genus! The individuation of the individual is grasped through an indexical act through determinate dimensions, but what is grasped is radically intellectually deficient due to its potency, and so Aquinas seeks to model it on the genus. Thus, matter as the principle of individuation is modeled at the top of the tree. (2) There is also textual support for the interpretation that prime matter should be viewed something like a mathematical limit at the top of the tree. It was established already that Aquinas is using genus/species/difference as a model for understanding hylomorphic composition of form and matter. However, Aquinas, *On Being and Essence*, 36, denies the following: "Because matter is the principle of individuation, it might seem to follow that an essence, which embraces in itself both matter and form, is only particular and not universal." Since genera/species/differences are universal in nature, prime matter as individuator should be understood as approached by the movement up the tree without being specifically located on the tree. This is not a problem for Aquinas since there is a special relationship between designated and nondesignated matter, and he favorably quotes Ibn Rushd (Averroes), that "Socrates is nothing else than animality and rationality" (Aquinas, *On Being and Essence*, 37).

consideration of a genus, from the side of a difference, points us up the tree to the ultimate substratum of predication.

This aids in refining our understanding of prime matter as substratum, which too often is presented as something like a hidden shelf upon which properties are placed.¹⁶ If we take prime matter as the limit of this model (prime matter is not a genus, but it is modeled on the notion, just as the limit of $f(x) = 1/x$ as x approaches infinity is 0 without 0 ever being the value of $f(x)$) beyond the highest genus, we should understand prime matter of a substance as the ultimate substratum of substantial forms, where prime matter is expressed through the notion of a genus and form expressed through the notion of a difference. Just as a genus expresses the subject for its appropriate difference in a species, so too prime matter is the substratum of a substantial form in an essence.

There are two moments by which prime matter as substratum is revealed to us by way of the tree. First, in a given species we see that the difference falls under the genus, the latter expressing the subject for the attribute expressed by the difference. Second, since there is an order among the species themselves on the tree—and ultimately, these predicates need to link up with extramental things—there is a directionality of convergence toward the ultimate subject of predication of substantial attributes at the top of the tree—the substance side.¹⁷

¹⁶ For example, Jonathan Bennett, “Substratum,” *History of Philosophy Quarterly* 4, no. 2 (1987): 198. Even Aristotle’s view of substratum or substance has been interpreted in this way, for example in J. L. Mackie, *Problems from Locke* (New York: Oxford University Press, 1976), 77. I agree with Justin Broackes, “Substance,” *Proceedings of the Aristotelian Society*, New Series 106 (2006): 164, that “[w]e are given *things with properties*” as opposed to the assumption that we are given just properties, and then the thing that is its substance or substratum is “I know not what” that underlies it. This assumption makes a tropes or bundle theory of substances attractive from the start.

¹⁷ I think that Aquinas’s technique for identifying and modeling prime matter sheds new light on the so-called drawbacks Rea, “Hylomorphism Reconditioned,” points to in a standard hylomorphic account. Rea has difficulties with (1) universal–particular distinction, (2) the notion of inherence, and (3) the inability to identify viable candidates for matter and form in nature or intelligible primitives. Aquinas’s way smoothes the way for all three of these and puts them on firmer ground. For example, (3) is modeled on the very common and intelligible notion of genus/species/difference and the actuality/potentiality notions address (1) and (2) quite well.

Note that the difference is not predicated of the genus itself (for example, “Animal is rational”) but of something that has been logically quantified, (“Some animal is rational”). So I am not saying that genus is the subject of predication of the difference and that there is transitivity of predication up to prime matter which resides at the top of the tree. Rather, in the concept “rational animal,” the genus serves explicitly to express the subject insofar as “animal” is the focus of the difference “rational,” and since “animal” is also a difference, the focus gets passed along up the tree as it approaches its limit: the ultimate substratum, which is identified conceptually as prime matter.¹⁸

At this point, I need to address briefly, but definitively, a criticism that might be considered a fatal flaw in the above analysis. If prime matter is identified at the top of the tree, then a contradiction arises. On one hand, substance is generically indifferent to corporeal and incorporeal substances, yet according to my analysis, substance generically understood is identified with prime matter. On the other hand, Aquinas is quite clear that immaterial substances do not have prime matter.

In order to reconcile this difficulty, simply put, prime matter is placed at the top of the tree for material substances and not for immaterial ones. For Aquinas, the Porphyrean tree is an abstraction, and as such there are not individual and separate forms or essences

¹⁸ An advantage of this view is that it provides a stable and continuing substratum because it does not hold that particulate matter, which comes and goes, is the substratum. This stable substratum stands in contrast to contemporary hylomorphic views according to which matter is identified as the more familiar matter of the scientists (namely, atoms, quanta, and so on) and form is a property of structure of the hylomorphic substance (Koslicki, *The Structure of Objects*) or a relation among the parts of the whole (Johnston, “Hylomorphism” and Williams, “Hylomorphism”). Due to the instability of the substratum on Johnston’s view, which would have to be the material parts that are the subject of the relation among them, I agree with Koons (“Staunch vs. Faint,” 156) that it suffers from “material mereological incontinence.” However, Fine’s (“Things and Their Parts”) “variable embodiment” view allows for the gaining and losing of parts. On Koslicki’s view, the substratum is harder to identify in a principled way since the whole is constituted by a combination of the material parts and the formal structure that is a proper part of the whole. Such “faint hearted” hylomorphic accounts suffer in general from overdetermination and ontological inflation.

corresponding to each level of the tree.¹⁹ Rather, the Pophyrean tree is generated in principle by way of an apprehension of a single substantial form actualizing prime matter. Since we are not acquainted with the single substantial forms of immaterial substances through perception, they are placed on the Porphyrean tree in an indirect and gerrymandered fashion, as being analogous to material substances and, for other philosophical reasons, without matter at all (whether it be prime or spiritual in nature).

Prime Matter as Pure Potency₂ = Prime Matter as Maximally Indeterminate. Beyond prime matter as substratum of substantial forms, prime matter is also understood to be indeterminate in relation to the substantial form. This notion has been articulated in Aristotelian metaphysics in terms of potentiality and actuality. Mere potency to existence is not sufficient for actual existence. In this way, prime matter is pure potency toward substantial existence and requires actualization by the substantial form in order for a substance hylomorphically composed of prime matter to exist.

How does the relation between genus, species, and difference help us understand prime matter as pure potency, as understood in light of the preceding comments? It is fairly clear that the genus is in a state of indeterminacy with regard to the difference, and the difference expresses (in the species) a principle of determination related to its genus. We see this in the fact that animal in itself is not something observed to exist; we do not or cannot see a generic animal walking or crawling around (which would it be?). This is because “animal” is not sufficiently determinate to exist. Rather, we see Tibbles the cat and Rex the dog in the extramental world, and this because each has some determination beyond merely being “animal.”

¹⁹ Two distinct species that share a genus do not have a generic essence in common: “Although the genus signifies the whole essence of the species, it is not necessary that different species of the same genus have one essence. The unity of the genus comes from its indetermination or indifference, but not in such a way that what is signified by the genus is a nature numerically the same in different species, to which would be added something else (the difference) determining it as a form determines a matter that is numerically one. Rather, the genus denotes a form (thought not precisely any one in particular) which the difference expresses in a definite way, and which is the same as that which the genus denotes indeterminately.” Aquinas, *On Being and Essence*, 42.

However, to say that “animal” is indeterminate with regard to being an existing thing is not to say that a thing is not identified with, or characterized by, levels of indetermination. Instead, as we see with the logic of genus, species, and difference, the genus itself tells us about what exists but in an incomplete way.²⁰ That is, it is true that “Socrates is an animal”—Socrates exists as an animal—despite the fact that “animal” is not fully determinate. In this way, it is true to say that Socrates is actually an animal even though animality itself is in potency to its specific difference.²¹ To understand something according to an indeterminate notion is not tantamount to saying that that thing is indeterminate, full stop. It is true to say, rather, that Socrates, inasmuch as he is an animal, possesses some potentiality and indetermination. To understand this more fully, through our logical technique, let us see how this bears on the notion of prime matter as indeterminate.

First, it turns out from our reflection on the nature of genera that as indeterminate it at once is incomplete in itself, and in this sense is distinct from the species that it composes, and yet intrinsically related to the difference that completes it. The reason for this is that although the difference should be understood as falling outside the genus, at the same time the genus “contains within it” intrinsically all of its specific differences, potentially.²²

Why say that a genus contains all differences within it? Should not one merely say that a difference is added to the genus absolutely from the outside, tacked onto it, as it were? Against this suggestion, the

²⁰ In fact, as David Wiggins, *Identity and Spatio-Temporal Continuity* (Oxford: Blackwell, 1967) argues, such sortal properties are necessary for answering questions of identity with respect to that which is characterized by it. Note that although “animal” might be such a sortal necessary for identity determination, it is still incomplete or indeterminate with respect to the full identity of the thing characterized by it.

²¹ This is because, according to Aquinas (*On Being and Essence*, 41), for example, “man is composed of animal and rational . . . [but] not . . . as a third reality is made up of two other realities. . . . The concept ‘animal’ signifies the nature of a being without the determination of its special form, containing only what is material in it with respect to its ultimate perfection.” Aquinas understands the notion of being an animal in such a way that form and prime matter—two separate principles—are poles which together cocontribute actuality and potentiality to constitute the true attribute of animality.

²² Aquinas, *On Being and Essence*, 38: “whatever is in the species is also in the genus but in an undetermined way.”

indeterminate is to be understood, rather, in relation to that which determines or completes it. To say that indetermination is intrinsically related to its determination is to say that, from an understanding that there is some indetermination, one can conclude that there is some determination (even if only a potentially existing one) corresponding to it. For example, a lock is indeterminate to the determination of a key that opens it (even if that key has been destroyed). In this way, in order for the genus to be indeterminate, it must be intrinsically related to that further determination.²³

Similarly, prime matter as being maximally indeterminate has within itself a range of possible attributes that can, in a sense, be intrinsically attributed to it. In other words, the substratum is in potency to substantial attributes—it contains the ability to have, under certain conditions, certain properties actually attributed to it. We can say that prime matter indeterminately contains all substantial properties that are determinately and actually able to be realized in it.

Second, it is observed that although prime matter can be actually determinate regarding a certain specific difference, nevertheless, it remains indeterminate with respect to that same difference!²⁴ This

²³ In fact, Aquinas (*On Being and Essence*, 35) suggests that if a genus were not intrinsically related to its species, then it would have an accidental relationship to the species, and would be ruled out as the genus for the species!

²⁴ For this reason, contrary to Robert Pasnau, *Thomas Aquinas on Human Nature: A Philosophical Study of Summa Theologiae, Ia75-89* (New York: Cambridge University Press, 2001), 131, I think that Aquinas is a realist about prime matter and affirms that it exists. However, on one hand, prime matter is pure potency since it accounts for why a thing retains its potency for substantial change while, on the other hand, it is not indistinguishable from nothing since it can be actualized without losing its identity as prime matter. Thus, I agree with Jeffrey E. Brower, *Aquinas's Ontology of the Material World: Change, Hylomorphism and Material Objects* (New York: Oxford University Press, 2014), 123, when he states that Aquinas believes prime matter is a being in actuality, but not through itself. Similarly, G. E. M. Anscombe and P. T. Geach, *Three Philosophers* (Ithaca, N.Y.: Cornell University Press, 1961), 71, deny that prime matter “never *has* any form at all.” Irrespective of this, the pure potentiality doctrine was hard to swallow for Aquinas’s scholastic contemporaries: “Scholastic treatments of this paradox must steer between two unacceptable outcomes. If they give prime matter some kind of character, as it seems they must, then they face the risk of turning prime matter into the actual substratum of corpuscularian theory. If, fearing this result, they stress the pure potentiality of prime matter, they then risk the suggestion that such matter does not actually exist at all,” Pasnau, *Metaphysical Themes*, 36.

relates back to the comment made above regarding the true statement “Socrates is an animal.” One can understand a substance only as falling under the genus and not falling under some specific difference—in fact, this might be as much as one may know about that substance. For this reason, although it is the case that that substance in fact has difference *D*, it will also at that time be potentially or indeterminately *D*, since *D* falls under genus *G*, and *G* expresses a relation of potentiality to *D*. Thus, something is both actually an animal and potentially an animal at the same time.²⁵ It is potentially an animal insofar as “animal” falls under “living thing,” where to be a living thing itself is indeterminate with respect to being an animal. Similarly, given a substance that has a substantial form actualizing the potency of the prime matter, the prime matter will still remain in potency to that substantial form. This is seen from the fact that, as said above, a given substance remains in potency to the property expressed by the genus even though a corresponding species obtained through a difference is predicated of it. For example, although it is true that Socrates is a rational animal, it still remains the case that Socrates is also in potency to rationality due to the fact that he is an animal. This is because “animal” in itself is indeterminate in its relation to “rational.”²⁶

Our consideration of prime matter as pure potency yields two misconceptions in interpreting Aquinas on prime matter.

Misconception (1): Prime matter as pure potentiality means that it has no actuality whatsoever.

²⁵ Christopher Hughes, “Aquinas on Continuity and Identity,” *Medieval Philosophy and Theology* 6 (1997): 93–108, thinks there are serious problems in Aquinas’s claim that matter is a being in potency alone and that matter is a being in actuality. He denies actuality to matter because it is not a complete individual substance but only a part of one. However, as I argue here, Aquinas holds prime matter to be the whole substance itself.

²⁶ For textual support for interpreting Aquinas as holding that something can be simultaneously in potency and in actuality with respect to the same property, one need look only at the fact that Aquinas, *On Being and Essence*, 41, holds that the genus—which is taken from the matter of the substance and signifies potency to substantial attributes—signifies the whole while the difference—which is taken from the substantial form as signifying all that is essentially actual in the substance—also signifies the whole. The substance is wholly a potential being and an actual being. I call this the entirety thesis, which I address briefly at the end of the paper.

In answer to (1): To say that prime matter is pure potentiality means not that it has no actuality but rather that despite being the substratum of the determination of actual attributes, it retains its status as being in potency to all properties that it is indeterminate with respect to, including those that it has actualized within it.

Misconception (2): Since a genus is only a concept and does not signify something really distinct from species or difference, it does not in itself correspond to an objectifiable entity.²⁷ For example, the animality of Socrates is in itself in no way an extramentally existing entity. In other words, due to the fact that substantial properties are to be understood only in relation to an actually existing substance with a single substantial form, and since there is but a conceptual and not real distinction between species, difference, and genus, a given substance should not be identified extramentally with substances that fall under the genus but not under the species under which it in fact falls.

In response to (2): Although it is true that there is no real distinction between genus and difference because properties expressed by both genus and difference are grounded in a single substantial form, at the limit of these concepts, prime matter is to be understood as really distinct from substantial form and as such serves as an additional ground to the substantial form for understanding a substance extramentally.²⁸ Substantial form and prime matter should be thought of as poles that generate the tree but are themselves “offstage”—prime matter being the foundation for being able to think of substances according to generic concepts at all.²⁹ Prime matter is a real and unique ground in a substance, and due to the fact that it provides radical

²⁷ For example, Peter Coffey, *Ontology or the Theory of Being: An Introduction to General Metaphysics* (New York: Longmans, Green and Co., 1938), 140, says that purely logical distinctions (as between genus and species) “have no other reality as objects of thought than the reality they derive from the constitutive or constructive activity of the mind.”

²⁸ Aquinas, *On Being and Essence*, 41, expresses this when he says that “man is a being composed of soul and body as from two things there is constituted a third entity which is neither one of them: man indeed is neither soul nor body.”

²⁹ Aquinas, *On Being and Essence*, 41: “The concept ‘animal’ signifies the nature of a being without the determination of its special form, containing only what is material in it with respect to its ultimate perfection. The concept of the difference ‘rational’, on the other hand, contains the determination of the special form.” Here Aquinas is clearly contrasting the concepts generated from the principles that ultimately ground them.

potency, generic considerations of a given substance will express extramentally objectifiable “real properties” of that substance, which are to be understood as real potencies of that substance to other substantial kinds. That is, potency expressed in a genus is grounded in reality and as such expresses a real potency in any given substance that falls under that genus and can be treated as an object associated with the substance itself. For example, it is true that Socrates is an animal. Socrates being an animal is not only due to his substantial form, which provides actuality, but also because he is composed of prime matter, which is pure potency. As such, the animality of Socrates should be considered as an indeterminate object associated with Socrates that provides the ground for Socrates remaining in potency to some nonrational animal.³⁰

Principle of Individuation = Maximal Ontological Vagueness. Prime matter, or matter simply, is claimed as the principle of individuation for material substances. Basically understood, prime matter is the principle that accounts for a thing being individual or a thing being a this. (We follow Lowe’s definition of individual where x is an individual if and only if x is an instance of something y and x itself can have no instances.³¹) Although I am going to leave the notion of being a “this” as an intuitive notion, it should be understood as an ontological notion rather than an epistemological one. Prime matter is not being thought of here as the principle by which we can distinguish individuals from each other³² but rather the ultimate principle or ground by which a thing simply is, in

³⁰ Further support for interpreting Aquinas in this way relates to his discussion of “body.” See Aquinas, *On Being and Essence*, 39, 40. “Body” can be understood correctly as a substance that has a form from which there follows the designability of three dimensions with precision, so that from that form no further perfection would follow, but if something is added, then it is beyond its signification. In this sense body will be an integral and material part of an animal, since soul will be something understood to be superadded to the body. See Gyula Klima, “Man = Body + Soul: Aquinas’s Arithmetic of Human Nature,” in *Thomas Aquinas: Contemporary Philosophical Perspectives*, ed. Brian Davies (New York: Oxford University Press, 2002). In this way, body can be understood as an object that is a mixture of form and matter taken at a certain level of generalization that is understood as excluding a more specific determination of it. This has a real basis.

³¹ E. J. Lowe, *Kinds of Being* (Oxford: Blackwell, 1989), 38.

³² See P. F. Strawson, *Individuals* (London: Methuen & Co Ltd., 1965).

itself, that which can be indicated say, by pointing a finger, as a “this”—what Aquinas refers to as “the first principle of individuation for material creatures.”³³ So we are not looking for what metaphysicians refer to as the individuation conditions for material substances, which would no doubt include additionally the substantial form, and some list of accidents, and so on; rather, we are after an understanding of how prime matter provides the important individuation condition of being simply a “this” to a substance.³⁴

However, understanding prime matter as the principle of individuation in this sense is saddled with the problem that prime matter is inherently unintelligible.³⁵ Intelligibility comes with considering something according to universalizable properties, whereas prime matter is vague and cannot in a straightforward way be understood in this way.

What does a reflection on genus, species, and difference bring to an understanding of prime matter as principle of individuation? Recall that we placed prime matter as the limit at the top of the Porphyrean tree. As such, prime matter as the principle of individuation must also be understood as holding that position.

But wait a minute. If prime matter is a principle of individuation through which a thing is a “this,” and the Porphyrean tree is constituted by universal concepts, which are by nature abstracted from prime matter, how can prime matter be understood in relation to the Porphyrean tree at all? How could it be the case that prime matter is

³³ Scott Williams, “God’s Knowledge of Individual Material Creatures According to Thomas Aquinas,” *Proceedings of the Society of Medieval Logic and Metaphysics* 6 (2006): 111. Note that dimensionality in itself is not sufficient to be indicated as a “this.” This is because dimensional determinations are understood under a universal modality (think of geometrical properties) and require thisness. As expressed in J. E. Lukasiewicz, G. E. M. Anscombe, and K. Popper, “The Principle of Individuation,” *Proceedings of the Aristotelian Society*, Supplementary 27 (1953): 107, Popper’s view that things are rendered diverse through spatiotemporal differentiation confuses how we are able to distinguish objects from each other and the principle that makes such differentiation possible. Anscombe and Geach in *Three Philosophers*, 74, say that geometrical figures are individuated in themselves.

³⁴ For a thorough treatment of the concert of principles involved in the full individuation of material substances in Aquinas, see Kevin White, “Individuation in Aquinas’s *Super Boetium De Trinitate*, Q. 4,” *American Catholic Philosophical Quarterly* 69, no. 4 (1995): 543–56.

³⁵ Aquinas, *On Being and Essence*, 36.

expressed in every species as the subject of the difference when genera, species, and differences are all universal in nature and not particular? If prime matter were to be contained in species relative to the difference, and expressed through the genus, would not this imply that the genus, difference, and species would all be particular and not universal?

This view comprises Misconception (3): Since a consideration of something is in virtue of its form being able to be removed (abstracted) from its particularity as a universal concept, since prime matter is not identified with any form, it cannot in principle be understood as modeled on the universal notions of genera, species, and difference. It is simply unintelligible.³⁶

In response: Indeed the substantial forms existing extramentally are the ground for abstracting universal concepts, and it is clear that the explicit members of the Porphyrean tree are universal in nature. So we begin with the standard association between form and universals, on the one hand, and between particularity and matter, on the other, and as such logical concepts do not individuate. However, as we have seen, other dynamics are at work in the tree: those of generic to specific and indeterminate to the determinate. In fact, these dynamics allow one to reassociate its members in an opposite way: associating universality with matter!³⁷ Due to the dynamics in play, we obtain another sense of

³⁶ For example, Bobik, *Aquinas on Being*, 96: “To say that the genus is taken from matter (or to say that matter furnishes the content of the concept of the genus) cannot mean from prime matter . . . since prime matter is of itself unknowable, and the genus is a principle of knowledge.”

³⁷ Textual support for this claim is given in Aquinas’s mysterious use of the designated versus the nondesignated (*Being and Essence*, 36–38). Aquinas does not just call matter designated but he also refers to the species as “designated.” “Designated” is a term that is being used to disassociate intelligibility and universality from what is simply abstracted from matter or grounded in actuality. This is because he is trying to identify in an intelligible way matter without treating it as an actuality to a potency (say, an actuality of a potency in the species). Thus, universality can be used to express intelligibility in the sense of being more generic. He is showing that designated expresses intelligibility by saying that the genus is “designated” with respect to the species by way of the specific difference, which is taken from the actuality of the substantial form, but this is an intelligible grasp associated with the more common notion of universal as more actual and removed from matter. Aquinas takes up the notion of the universality of logical concepts in relation to essences in the context of the problem of universals in *caput 2* (chap. 3 in Aquinas, *On Being and Essence*).

“universal” by observing the degrees of the generic concepts and indetermination. In this way, we see that by “universal” is not meant “not particular” nor “excluding the particular” but, rather, “indistinct” or “indeterminate.” In this way, moving from a species to a genus is proceeding toward a more universal grasp of a thing. To use Aquinas’s example from his *Summa theologiae*, proceeding from “rational animal” to “animal” is like the following progression: initially noting that something is coming toward you, to realizing that an animal is coming toward you, to finally realizing that a dog is approaching.³⁸ If we reverse this phenomenon—going from what is determinate toward what is increasingly indeterminate and generic—we get a glimpse of the sense of a universal consideration of a thing not merely as removed from matter according to the first sense of universal, but according to the dynamic of increasing generic universal representations or objects, providing an ultimate sense of indistinct particularity³⁹—not without particularity but rather with indistinct particularity. Thus, we can associate the notion of matter with a kind of universality.⁴⁰

So it is granted that we begin with the first notion of universal (namely, abstracted from matter), and this is what populates the tree. However, the dynamic of generic and specific allows us to indicate two poles: one heading down toward the single form of the whole of the existing substance and the other heading up toward prime matter, which is captured as maximally generic. But we see that both the form of the substance itself and prime matter are offstage since the universal concepts are generated from the integration of prime matter and the form. If we move toward the difference, we see as its limit the source of specification, which is the form. If we move toward the genera, we understand as its limit the source of vagueness and nonspecification,

³⁸ Aquinas, *Human Nature*, 155–70.

³⁹ Lukasiewicz is incorrect when he says, “As far as I understand this, no proposition with ‘matter’ as subject can truly be asserted according to Aristotle. It is not true that ‘matter is a stone’ (a thing), or that ‘matter is extended’ (quantity), or that ‘matter is white’ (quality) and so on.” Lukasiewicz, “Principle of Individuation,” 71.

⁴⁰ As Wippel points out, Aquinas held that “prime matter cannot be known directly in itself.” But he uses his technique to know it indirectly but intelligibly. This technique is made possible due to the following condition: “While prime matter includes no form within its essence or nature, it is never realized in fact apart from some form.” Wippel, *Metaphysical Thought*, 314.

which is prime matter.⁴¹ The fact that prime matter is not able to be understood as a universal in the usual sense itself is not a problem since prime matter is still the limit to the increasing degrees of generic representation and is defined in these terms, not unlike the way a limit is a set value for a mathematical function that never has the value of the limit as its value.

Since prime matter is modeled as residing at the top of the tree, prime matter as principle of individuation will be understood as maximal or universal generic vagueness. The more generic a grasp of a thing obtained, the “clearer” a grasp of the principle of individuation you realize.⁴² We see at its limit the pure particularity of a thing itself: a place

⁴¹ I agree with Marmodoro’s consideration of Aristotle’s hylomorphism as being a nonmereological hylomorphism—in which a whole is identical to its enmattered form—in contradistinction to contemporary mereological hylomorphisms (“Aristotle’s Hylomorphism”). The advantage of Aristotle’s view accounts for a genuine unity of the substance by comparing a genus (involved in defining substances) with matter according to the commonality that just as the genus is shaped by the difference, so too the matter is shaped by the form (see *ibid.*, 19–21). Just as the genus and difference together provide a truly unified characterization of a thing (a definition), so too the form and matter are truly unified. Aquinas advances this technique in *On Being and Essence*.

⁴² Thus I disagree with Joshua P. Hochschild, who says that “while it is possible to speak about the individual essence of Socrates, it is not possible to formulate the *ratio* of that essence, because definitions are intelligible and universal while an individual, *qua* individual, includes something not available to the intellect, namely, the particular designated matter of that individual.” Joshua P. Hochschild, “Kenny and Aquinas on Individual Essences,” *Proceedings of the Society for Medieval Logic and Metaphysics* 6 (2006): 50. Hochschild continues, “At best, it seems, we might try a quasi-definition of Socrates’ individual essence, which would make reference to this particular chunk of designated matter. Notice, however, that for such a quasi-definition, I must make reference to designated matter, but that does not mean that the essence signified by this (quasi-)definition “contains” or is composed of designated matter. It means that the only way I have of picking out that essence (Socrates’) as opposed to some other individual essence (Plato’s) is by reference to the designated matter which individuates it.” On my interpretation, there is no worry to preclude designated matter when signifying the essence of Socrates since all designated matter amounts to is the vague and radically indeterminate (the *thisness*) aspect of Socrates, which due to its vagueness is open to being an aspect of things not identical to Socrates (such as Plato). It is not not included in the essence; rather, it is merely understood as determinate in the consideration of the essence of Socrates, and for this reason Aquinas says that “Socrates is nothing else than animality and rationality.” Aquinas, *On Being and Essence*, 37.

of mere singularity that could be anything; simply put, a “this.”⁴³ Once again, this is consistent with the idea of a thing being understood “universally”: it includes an intelligible grasp of the thing as particular (through an appreciation of the designated matter obtained through an indexical apprehension of the object), which clearly pertains to the object being apprehended. At the same time, due to a consideration of it according to a radical generic status (the unity of the concept breaks down to being merely a “this,” which potentially refers to many items) it simultaneously is apprehended in a vaguely universal way so that it need not pertain only to the certain object being considered. Thus, prime matter is able to be modeled upon a universal understanding of some substance as that which is indistinctly particular and true of one

⁴³ This generic grasp is what Aquinas, *On Being and Essence*, 37, was wanting us to apprehend when considering a thing under determinate dimensions: not the shapes and colors that make a thing up but only its thisness. This can come only through such an indexical consideration since everything else is understood universally in the sense of being removed from such indexical considerations. Similarly, the pure thisness is what Aquinas is suggesting “would enter in the definition of Socrates if Socrates could be defined” (ibid., 37). This is contrary to Christopher Hughes, “Matter and Actuality in Aquinas,” in *Thomas Aquinas: Contemporary Philosophical Perspectives*, ed. Brian Davis (New York: Oxford University Press, 2002); “Matter and Individuation”; and “Aquinas on Continuity.” Hughes holds that “thick matter”—matter partly composed of form—is what individuates and not “thin matter.” Hughes thinks that there is no uniform answer to the question, “What does matter play in the individuation of material substances?” in Aquinas. On my interpretation, prime matter plays the role of providing the fundamental thisness to substances, and this is all ontologically prior to the role played by thick matter and integral parts of the substance. Similarly, this thick notion of matter as individuator engenders the puzzles of identity discussed in Kit Fine, “A Puzzle Concerning Matter and Form,” in *Unity, Identity and Explanation in Aristotle’s Metaphysics*, ed. Theodore Scaltsas, David Charles, and Mary Louise Gill (New York: Oxford University Press, 1994). King, “Problem of Individuation, 12, 13, has “quantified matter” (whether with determined dimensions or indetermined dimensions) as Aquinas’s view on the principle of individuation for material substances.

thing only,⁴⁴ but it is not clear (even ontologically) of which thing it is true!⁴⁵

An advantage of this approach to understanding prime matter as individuator is it gets us to an understanding of prime matter as its own thing (as the limit of more and more generic understandings of the form and matter composite) but in a way that is commensurate with the universal grasp of a thing via abstraction of form. As a result, we see that although prime matter is not the same as form—they are really distinct from each other since one cannot be reduced to the other—prime matter can be understood as a function of form as the source of the maximal vague thisness that is associated with, and complementary to, the form. Also, although prime matter is understood by way of what is universally conceptualized, prime matter remains the distant limit of its approaching conceptualizations and is open to being understood as distinct from form in itself; after all, prime matter is indeterminate and

⁴⁴ As such there is an identification of numerical unity and distinctness from other things. Brower, *Aquinas's Ontology*, 114, concludes that “things are one in number whose matter is one.” However, in the apprehension of the thisness of a material substance one has not obtained a notion of the unity of the thing since it is a consideration of the thing according to its prime matter and not its form. Since unity involves form, we are free to claim that the apprehension of thisness of a thing is consistent with vagueness regarding which thing it distinctly applies to. This is how I interpret Aquinas’s claim (*On Being and Essence*, 42) that “prime matter is said to be one because of the elimination of all forms.” For this reason, I agree with the view rejected by Brower, in which prime matter is “more like that associated with a universal than an individual,” in the sense of “universal” (generic and vague) that I articulated above, while holding that it is not “clearly inconsistent with . . . Aquinas’s views about change and numerical sameness.” Brower, *Aquinas's Ontology*, 117.

⁴⁵ This resolves a paradox pointed to by Barnes (“Paradox”). The paradox arises in the tension between Aquinas holding that there is a real distinction between the substantial form and the substance, and that there cannot be a real distinction between the form and the substance. It can be modified for our purposes to consist of the tension between a seemingly real distinction between matter and the substance, on one hand, and a mere conceptual distinction between the matter and the substance, on the other. It would seem that there should be a real distinction between the substance and the matter since matter is really distinct from form and the substance includes the form. Yet it seems that there should not be a real distinction between the substance and the matter due to the strong unity between the two (as similar to a genus/species relationship). In answer to this paradox, prime matter is not really distinct from substance, but it is vague about which one it is not really distinct from.

substantial form is determinate. Instead, if one moves beyond the approaching conceptualizations and instead models it on the prime matter itself—not as the limit of the concepts of the tree—the form and all features collapse into the pure thisness of the substance, and one gets locked out from any intelligible universal grasp of it.⁴⁶

But how can maximal ontological vagueness be the principle of individuation? A way to answer this question is by highlighting the lesson of Max Black's "Sphere Land," a world consisting of two indiscernible spheres:⁴⁷ there is no property recognized as such that fundamentally differentiates the two spheres. According to Aquinas's account, this is the prime matter of each sphere, which gives each its thisness. Progressively generic considerations of the sphere gets us to the generic grasp of a sphere as a mere "this," which Black points out is not a property that is discernible between the two: they are both "thises."⁴⁸ But certainly the characterization of the sphere as a "this" presents to us the notion of it being individual and applying to one

⁴⁶ As Aquinas says later in the *On Being and Essence*, "The potency of prime matter is not . . . [fitted to receive intelligible forms], since prime matter receives a form by limiting . . . it to individual existence." Cited by Wippel, *Metaphysical Thought*, 306.

⁴⁷ Max Black, "Identity of Indiscernibles," *Mind* 61, no. 242 (1952): 153–64.

⁴⁸ Textual support for the interpretation of Aquinas as holding that the principle of individuation is fundamentally ontological vagueness is found in Aquinas's discussion of his statement that "[a]lthough the genus signifies the whole essence of the species, it is not necessary that different species of the same genus have one essence." *On Being and Essence*, 42. He holds that "[t]he unity of the genus comes from its indetermination or indifference, but not in such a way that what is signified by the genus is a nature numerically the same in different species, to which would be added something else (the difference) determining it as a form determines a matter that is numerically one. Rather, the genus denotes a form (though not precisely any one in particular) which the difference expresses in a definite way, and which is the same as that which the genus denotes indeterminately. . . . It is clear, therefore, that when the indetermination which causes the unity of the genus is removed by the addition of the difference, there remain species different in essence." Aquinas, *On Being and Essence*, 42. So, instead of thinking that matter (which is modeled on the notion of genus) is numerically one in all things of distinct species, he turns it around and holds that every distinct possible determination by form exists indeterminately or vaguely in matter in an ontologically individuated (though nonactualized) way. The unity of the matter is in its status as fundamentally being the thisness of all possible forms that can be realized in it. Thus, it is vague regarding of which of the numerically distinct substances it is the thisness.

existing thing only, such as sphere A or sphere B.⁴⁹ I would point out that the grasp of the thisness of sphere A or sphere B stops not at a universal grasp but at the limit of this grasp, which is the pure particularity into which the universal grasps collapse. So there is a vague relation between the thisness of A and B and the generic “thisness” that they each have.⁵⁰ (Aquinas sees this as the confluence of an intelligible grasp at the level of the particularity of sense perception.⁵¹) Because the unity of the concept breaks down at such a high generic consideration, thisness applies to A and only to A or B and only B, but it is unclear to which one the thisness applies.⁵² Thus, we

⁴⁹ In this way, the intension pertaining to individuation is the fact that individuality is impredicable in the sense that “To predicate is to say something of something else.” Gracia, *Introduction to the Problem*, 29. Although approached through generic concepts, when one gets to an apprehension of the thisness of a thing, it is no longer saying something of something else, but instead merely identifying it.

⁵⁰ I follow Morreau’s counsel that to be committed to vague objects is not to think that there are some sort of shady presences, being neither there nor not there, having dodgy identities, being not quite the same nor different from others. Morreau argues that, from the fact that something has fuzzy boundaries, it does not follow that that thing with fuzzy boundaries itself has an indefinite identity. Michael Morreau, “What Vague Objects Are Like,” *The Journal of Philosophy* 99, no. 7 (2002): 333–61. In the case of prime matter, at the level of prime matter, due to the radical potency to be a number of diverse substances, the substantial properties that it has is vague. However, in addition to this, Aquinas seems to be committed to the idea that prime matter is indeterminately identical to Plato or Socrates, and so on. See Terence Parsons, *Indeterminate Identity: Metaphysics and Semantics* (Oxford: Clarendon Press, 2000).

⁵¹ See *Summa theologiae* I, q. 84, a. 7 (Aquinas, *Human Nature*, 155–70). There Aquinas argues that sense impressions are necessary conditions for understanding material things in the world since the goal is to grasp things as they exist individually. In order to do this, perception is required and perception is the the fundamental basis for understanding a particular thing. Conversely, in order for perception to be amenable to understanding, what is perceived and the principle of its individuation need to be amenable to intelligible apprehension. In this way, perception is also vague in nature—is potentially this or that thing intelligibly understood—and requires determination by the actualization of intellection.

⁵² With this in mind, we can address Oderberg’s (*Real Essentialism*, 109) arguments against prime matter as the principle of individuation. First, he claims that prime matter cannot be the principle of individuation because “it is common” or “multiply instantiable.” As we suggest, prime matter is common or universal due to its vagueness, not because it is an abstractable attribute, and so is not multiply instantiable. Second, he claims that prime matter is indivisible and so cannot serve as the principle of diversity. On our interpretation, prime

have found the principle of individuation for the spheres in their vague thisness.⁵³

Does this view amount to the metaphysical view of haecceitism, the view that there are bare identities across possible worlds in the sense of identities that do not supervene on qualitative properties?⁵⁴

Answer: If we are to understand Aquinas correctly, we should not conflate the principle of individuation with conditions for numerical unity. Although one should always heed the Quinean dictum, “no entity without identity,” only the actualizing form and prime matter together as the substance have a full application of numerical unity applied to it. On Aquinas’s view, there are at least three conditions that are essential for an uncomplicated application of numerical identity: (1) thisness, (2) individuated substantial form, (3) actual existence.⁵⁵ If *x* and *y* are thises that does not also mean that they are numerically identical. Rather, to be something that has numerical identity is to think of it as a this;⁵⁶ but, on the other hand, one could refer to a group of numerically distinct things under the understanding of them merely being this. Thisness provided by prime matter is not the same thing as unity, which is provided by an actualized substantial form. Thus, “thisness” is about as basic notion of vagueness as one can get, and as a result, prime matter does not retain the potency to be either a this or not a this.⁵⁷

matter is radically diverse in itself as being potentially an infinite number of unrealized individuals. This is supported by Aquinas’s (*Being and Essence*, 42) claim that prime matter is not numerically identical across distinct individuals. This interpretation also shows that there is a close connection between the principle of individuation and the principle of distinctness in a thing.

⁵³ One could object here that this seems also to be true of other attributes. For example, one could say that “sphericity” applies to A and only A, or B and only B, but it is unclear to which one exclusively the “sphericity” applies. However, this would be incorrect since such a property does not include the exclusivity that “thisness” possesses when understood properly as determinate matter considered indexically.

⁵⁴ For the argument for haecceitism, see Robert Adams, “Primitive Thisness and Primitive Identity,” *Journal of Philosophy* 76 (1979): 5–26; and Roderick Chisholm, “Identity through Possible Worlds,” *Nous* 1 (1967): 1–8.

⁵⁵ Due to further complications inherent in the doctrine noted in Kenny, *Aquinas on Being*, I am not addressing the “act of existence.”

⁵⁶ In this way, prime matter contributes to distinction among material things, obtaining what Gracia (*Introduction to the Problem*, 26) identifies as one of the common notions involved with being an individual.

⁵⁷ Based on an examination of Aquinas’s *Sentences Commentary*, Marta Borgo, “Early Aquinas on Matter,” *Tópicos, Revista de Filosofía* 45 (2013): 112,

This interpretation is not the interpretation that you find of prime matter as the principle of individuation in Aquinas. This brings out some more misconceptions.

The view of individuation that I am offering is a very bland one indeed. Should we not have a more exciting notion of individuation? Misconception (4): Since prime matter is the principle of individuation for Aquinas, and since an individual is the ultimate actualization and determination of a thing, it must be understood as coming from the difference side—as an *infima species*—and thus residing at the bottom of the tree (for example, an individual should be understood as a further determination of human: Socrates and Plato in relation to the species human).⁵⁸

In answer to (4): We see that prime matter as principle of individuation is a function of vagueness observed as one gains a more and more “universal” notion of a substance. As we saw, a universal grasp is not inconsistent with an understanding of particularity. More importantly, to put individuation at the bottom is to abandon prime matter, which is pure potency, as principle of individuation.

Misconception (5): Prime matter is “stuff.”⁵⁹

puts it this way: “from the beginning matter was provided with a plurality of formal determinations, which made it apt to originate individuals specifically distinct from one another. Still, primordial matter was relatively formless, insofar as its formal determinations were not yet provided with their respective active and passive qualities.”

⁵⁸ The realization of this criticism materialized in the form of giving up on prime matter as the principle of individuation and instead identifying the principle of individuation as an *infima species*—or deepest actualization or determination for an existing thing—such as John Duns Scotus’s famous *haecceitas*. Timothy B. Noone, “Individuation in Scotus,” *American Catholic Philosophical Quarterly* 69, no. 4 (1995): 535, describes Scotus’s reasoning this way: “In explaining how matter is determined to this individual, we must posit a determining factor that renders matter this matter (*materia signata*), a principle that renders the matter into distinct parcels.” This provides ultimate noninstantiability for substances.

⁵⁹ Brower, *Aquinas’s Ontology*, 119, refers to prime matter as “stuff” but also thinks it should be understood to be something like “atomless gunk.” For example, he says “that distinct portions of it can be combined to form larger portions” (115). I reject Brower’s interpretation since prime matter is only potentially able to be divided in the actualization of quantitative form. Anscombe and Geach, *Three Philosophers*, also refer to matter as “stuff.” That prime matter is “stuff” is suggested from the influence from Averroes of thinking of prime matter as related to indeterminate dimensionality. See Silvia

In response to (5): Although “stuff” is not a very descriptive term, it is descriptive enough to know that it should be excluded from a radical understanding of prime matter. “Stuff” is a mass noun. However, prime matter as I have interpreted it should be thought of as a count noun according to its most inchoate realization.⁶⁰ Prime matter is the “thisness” of a substance, which is nothing other than the ultimate vagueness of, but commensurate with, a substantial form. In fact, as we shall see, prime matter should be identified with the substance as a whole, and substance for Aquinas is not stuff.⁶¹

What our interpretation amounts to is that prime matter is the ground for our ability to understand substances in a truly indeterminate and vague way, right down to the ultimate vagueness of understanding it as a mere “this.” This offers a fundamental individuation to a substance that is prior to its composition by what can be considered as “stuff,” namely quantity, with dimensionality.⁶² Yet thisness is transitive.

Donati, “The Notion of *Dimensiones Indeterminatae* in the Commentary Tradition of the *Physics* in the Thirteenth and in the Early Fourteenth Century,” in *The Dynamics of Aristotelian Natural Philosophy from Antiquity to the Seventeenth Century*, ed. Cees Leijenhorst, Christoph Luthy, and Johannes M. M. H. Thijssen (Boston: Brill, 2002) for a helpful discussion of this doctrine among twelfth-century medievals. However, having indeterminate dimensionality presupposes an existing this that has such indeterminate dimension and so should not be equated with prime matter nor with the principle of individuation.

⁶⁰ Although Oderberg (*Real Essentialism*, 76) explicitly denies that prime matter is “world stuff,” it is not clear that he holds that it is not fundamentally a mass noun as opposed to a count noun, as I am arguing for here.

⁶¹ A more common interpretation of prime matter than the one I am presenting here is well captured by Dean Zimmerman, “Theories of Masses and Problems of Constitution,” *The Philosophical Review* 104, no. 1 (1995): 77: “There is a nondisjunctive kind K that is necessarily such that for every x, if x is a physical object, then there is a mass y of K such that x is constituted by y and y is homeomerous.”

⁶² Aquinas, *Being and Essence*, 38. Aquinas holds a radical view about the priority of the substance to its integral parts as Calvin G. Normore, “Ockham’s Metaphysics of Parts,” *The Journal of Philosophy* 103, no. 12 (2006): 740, describes: Aquinas “insisted that in a composite substance there were no parts, integral or essential, which were ontologically prior to the substance. A composite substance, an animal, for example, comes to be out of other substances; but only the prime matter of that out of which it comes to be remains in the new substance, and that prime matter has no existence of its own.” It should be qualified though that the prime matter and form are not prior to the substance because the substance signifies the act of existence, which is prior to essence composed of matter and form.

When we point to a thing in all of its dimensional parts and indicate it indexically, we are indeed pointing to a physically quantified thing. But the quantity itself obtains its thisness in virtue of the thisness of the prime matter of the substance, which the accidental quantitative forms subsequently determine dimensionally.⁶³ A benefit of this view is that it allows us to understand how a thing can change its dimensional parts without losing its numerical identity:⁶⁴ a radical component for the identity of the substance is fixed prior to its varying quantitative make-

Dimensionality plays a role in the more derivative notions of individuation of a material substance and their diversity. As Anscombe and Geach (*Three Philosophers*, 74) helpfully point out, “we need dimensive quantity to account for the individuation of different parts in a single substance. . . . [O]ne eye, say, is differentiated from the other because their matter is geometrically differentiated.” *A fortiori*, since parts are individuated from each other by way of quantity, and dimensionality is involved in this individuation by quantity, the parts of distinct substances will also be individuated from each other and so there can be no cospatial location. In addition, since prime matter has an intrinsic relationship to substantial forms—in other words, substantial forms preexist in the potency of the prime matter (Brian Leftow, “Souls Dipped in Dust,” in *Soul, Body and Survival: Essays on the Metaphysics of Human Persons*, ed. Kevin Corcoran [Ithaca: Cornell University Press, 2001], 212)—it determines the scope of possibility and as such will constrict the scope of possible realizations to things with dimensionality. Albert Baz, “Prime Matter and Physical Science,” *Proceedings and Addresses of the American Philosophical Association* 29 (1955/56): 17: “prime matter if possessing indefinite dimensionality prior to the reception of form, restricts the field of possible existents to be defined as possibles in respect to prime matter possessing that dimensionality.” For a distinction between principle of individuation and diversity see Hector-Neri Castaneda, “Individuation and Non-Identity: A New Look,” *American Philosophical Quarterly* 12, no. 2 (1975): 131–40. However, as we indicate below, prime matter serves the role both as principle of individuation and its connected role as principle of diversity.

⁶³ Clearly Aquinas does not hold the view that became common in the later Middle Ages according to which the substantial form works something like an internal efficient cause, which was rejected by the early modern philosophers. See Robert Pasnau, “Form, Substance and Mechanism,” *The Philosophical Review* 113, no. 1 (2004): 31–88. Rather, Aquinas’s view is that the form–matter composition is prior to the existence of material parts and as such bestows on the physical parts the concrete properties to interact physically as the unified functionality of the whole substance. It is no coincidence that this movement toward a mechanistic philosophy that developed after Aquinas followed a move of reconceiving prime matter on a corpuscular model. See Pasnau, *Metaphysical Themes*, 40–47.

⁶⁴ A problem that plagues materialist notions of identity. See Peter van Inwagen, “The Doctrine of Arbitrary Undetached Parts,” *Pacific Philosophical Quarterly* 62 (1981): 123–37, and Zimmerman, “Theories of Masses.”

up. This addresses the so-called problem of constitution, which concerns the relationship between an object and the stuff of which it is composed, as well as the problem of the many, which concerns the unity of the object in relation to the multiplicity of its parts.⁶⁵

Misconception (6) about prime matter: Prime matter as substratum is a bare particular.

In response: To say that something is indeterminate with respect to another thing is to understand it as being identified intrinsically with that which determines it. Thus, there is a deep assimilation understood as an identity between prime matter and the substance that it hylomorphically constitutes. This is the subject of the next section.

III

Prime Matter as Vague Object and Vaguely Identical to Substance. In this section, we shall examine further the notion of prime matter as a vague object and then examine the way that prime matter is identical to substance.

Prime Matter as Vague Object. What are the similarities and differences between the indeterminateness of prime matter and vagueness in an ontological context? I think Aquinas plausibly held that prime matter in itself has vague (substantial) properties. It is not clear whether some prime matter actually has some substantial property or not, only that it is a this. Since it has vague substantial properties, it is a vague object. Since it is a vague object, there is indeterminate identity between prime matter x and prime matter y .⁶⁶

⁶⁵ The view presented in this paper would qualify as a “staunch hylomorphism” as described by Koons in “Staunch vs. Faint,” since the whole substance is nonemergent in nature and is clearly prior to the parts that compose it. It fits the description of “Reverse Mereological Essentialism” (RME) in the sense that the existence of each part is dependent on the whole. There are problems with RME regarding substantial change that cannot be addressed here.

⁶⁶ Zimmerman, “Theories of Masses,” 65, disagrees with the possibility of metaphysical vagueness: “I am convinced by the ‘linguistic theory of vagueness’: vagueness is a product of our sloppy ways of talking about the world; there are no ‘vague objects’ in the real world, nor do any objects have ‘vague properties,’ although they do have real properties that we sometimes

As we saw above, there is understood to be a mixture of the determinate and indeterminate in one and the same existing substance. Socrates is determinate insofar as he is an existing rational animal.⁶⁷ However, Socrates, insofar as he is an “animal”—the object animal associated with Socrates—contains that which is indeterminate in himself, and the ultimate ground of all of this indetermination (that which grounds our ability to think of him as possessing indeterminacy) is prime matter.

Vagueness relates to there being boundary cases where the description under which an object falls neither clearly characterizes nor does not characterize the object. For example, it is questionable whether during some span of time the property “setting sun,” applies or doesn’t to an event occurring on the horizon, namely, the timeframe when it is not clear whether the sun has set or not. The event itself is vague with respect to that description. Perhaps one could make the notion more precise, thereby ruling out or including some otherwise questionable aspects of the events regarding the original concept “setting sun,” but as it stands there is a period of time in that event where it is not the case that the sun has set or not.

The way that I described the notion of the vague event of the sun setting was consistent with a semantic theory of vague predicates called supervaluationism.⁶⁸ On this theory, propositions that have genuine vague predicates have indeterminate truth-value. However, although

grasp only imprecisely and indeterminately.” However, it seems to me that the main motivation for rejecting ontological vagueness (despite the fact that it seems to be fairly well grounded in experiential intuition), is that it renders the world rather unintelligible. I would note that locating prime matter as a vague object with vague identity in fact aids us in making sense of the world by providing a ground for generic conceptions of the world, as argued above. On my interpretation, vagueness is no more or less mysterious than something being a “this.” It is worth noting that although prime matter is vague, actualized substances are themselves not.

⁶⁷ I should point out that although I am using language of *x* insofar as it is *F*, I am not interpreting this according to relative identity, as is the case with philosophers and Aquinas interpreters such as Peter Geach, *Reference and Generality* (Ithaca, N.Y.: Cornell University Press, 1980). Rather, I am using this notion as a sortal term that is consistent with absolute interpretation of identity (see Wiggins, *Identity*). In fact, I am relying on vague identity to avoid making the move toward relative identity.

⁶⁸ See Kit Fine, “Vagueness, Truth and Logic,” *Synthese* 30, nos. 3/4 (1975): 265–300, and Rosanna Keefe, *Theories of Vagueness* (New York: Cambridge University Press, 2000).

indeterminate, they can be understood as related to further determinations or what are referred to as further precisifications. However, the problem with propositions with vague predicates is that there is no single precisification that is relevant to such properties since there are often a wide variety of conflicting precisifications that are acceptable determinations or disambiguations of the vague predicate. The interesting scenario for our purposes is where some precisifications for the vague predicate would render a corresponding proposition true, while other legitimate precisifications would render a corresponding proposition false. For example, regarding the proposition, "Socrates is bald," on the acceptable precisification of the vague predicate, "baldness is constituted by a number of attached hairs of n or less," the proposition would be true since Socrates has n number of attached hairs. But on the acceptable precisification that "baldness is constituted by a number of attached hairs n minus h ," Socrates would not be bald. On supervenience we should note that (1) the precisifications add crisp borders—they are not themselves vague—although there are a number of possible precisifications that conflict that are available for the vague predicate; (2) there are not necessarily any vague objects (ontologically considered), only vague predicates, which arise from semantic imprecision.

In contrast to (2), we are thinking about things in a way that is committed to the existence of vague objects. One can see a link between vagueness and the indetermination of objects associated with a given substance that corresponds to a genus. A genus is not merely a generalization through which we can think of something, but it actually picks out an extramentally grounded object (carefully qualified) associated with a particular substance. Due to the partial grounding of our concepts of extramental substances in prime matter, such an object falls under the genus as such, and as a result the genus itself has an objective counterpart.⁶⁹ Just as a generic concept can be understood as semantically vague, so too the corresponding ontological object to the genus should be understood as metaphysically vague. For example, just as the object animal as such, associated with Socrates, is indeterminate with respect to any existing animal (for instance, a fox), so too an

⁶⁹ Such an object would be identified by Aquinas as a "common nature" (nature absolutely considered) that is neither equated with an extramental thing nor merely a concept in the mind. See Aquinas, *Being and Essence*, 46.

existing thing x understood under the description “animal” constitutes a borderline case since the notion of animal in itself neither includes nor precludes more specific descriptions under which x falls. That is, “animal” does not in itself include actual properties, such as “being a giraffe,” but neither does it actually preclude them, as “animal” is able to be truly predicated of an actually existing giraffe; it possesses the property of being a giraffe potentially. Thus, just as animal is a vague object in relation to further determination, so too prime matter is the ultimate vague object in relation to all further determination by a substantial form. For example, it is the object “this” of Socrates.⁷⁰

Regarding (1): A question arises regarding precisifications in relation to the vague object expressed by a genus. Since supervenience is a semantic theory, it seems that we are committing a category mistake in saying that there is some further precisification to the vague object expressed by a genus. Instead, is not it more correct to say that precisifications are conceptual refinements or disambiguations (perhaps even a fairly arbitrary one) of another concept or word? In answer to this,⁷¹ we saw earlier that Aquinas sees the relationship between prime matter and substantial form—and a genus and a difference—in terms of indetermination to determination. Thus, both prime matter and the object that falls under a genus are incomplete and, due to prime matter, indeterminate. What they are indeterminate with respect to is the full determination of the substantial form in order to exist as such, and the specific difference in virtue of the substantial form. Thus, there is an isomorphic relationship of determination to indetermination between the semantic and ontological realms.⁷² In this way, the ontological correlate to precisification is formal determination.

⁷⁰ Adams, “Primitive Thisness,” 6, refers to “thisness” as a property but qualifies it as being consistent with being an object: “A thisness is the property of being identical with a certain particular individual—not the property that we all share, of being identical with some individual or other, but my property of being identical with me, your property of being identical with you, etc.”

⁷¹ Using ersatz possible world theory, E. J. Barnes and J. R. G. Williams, “A Theory of Metaphysical Indeterminacy,” in *Oxford Studies in Metaphysics: Volume 6*, ed. Karen Bennett and Dean Zimmerman (New York: Oxford University Press, 2011), 103–48, also adopt the notion of precisifications in the context of metaphysics by identifying precisificationally possible worlds (those worlds that do not determinately misrepresent reality): p is indeterminate just in case the precisificationally possible worlds disagree over whether p is the case.

⁷² Aquinas, *Being and Essence*, 41.

In this way, although animal can be understood as an extramental object, it is incomplete and requires determination by some further object—ultimately grounded in the substantial form. This correlation sets up an interesting connection with supervenience: There is an ontological correlative to it where prime matter is a maximally vague object, and a precisification of this object (or, rather, determination) is the substantial form of the substance with which it is associated. Ultimately, for prime matter (p) and substantial form (s), it will be supertrue with respect to p that “ p is determined by s_1 ,” or “ p is determined by s_2 ,” or “ p is determined by s_n ,” while it is indeterminate that “ p is determined by s_l .”⁷³ So prime matter will have a range of crisp boundaries associated with it.⁷⁴

The Relationship of Identity between Prime Matter and Substance.

Now, what is the relationship between the vague object that is prime matter and substance?

On interpretations of Aquinas’s take on prime matter, there is an unsatisfying distance portrayed as existing between a given substance and its prime matter. For example, some hold that the relation between a substance and matter is that of composition and not identity.⁷⁵ Others separate them into fairly independent categories of potentiality and actuality without a clear understanding of the relationship between potentiality and actuality in a unified substance.⁷⁶ However, Aquinas points out that “the genus . . . signifies the matter” and that “the genus is . . . taken from the matter as signifying the whole.”⁷⁷ The view that

⁷³ See Aquinas, *Being and Essence*, 42 and following.

⁷⁴ The notion of precisifications is particularly helpful because it nicely portrays the idea of the vagueness of the prime matter in itself in comparison to the determination that it received in relation to the form. In order for a substance to be this particular at all, it requires some determination (although at the level of prime matter it is unclear which determination it has) and so it will be supertrue that this will be something specific (like Plato or Socrates).

⁷⁵ For example, Brown, *Ship of Theseus*, 121, identifies the view in which Socrates is disembodied as that which is composed of his soul. Stump, *Aquinas*, 216, argues for the rejection of the dichotomy between materialism and dualism.

⁷⁶ For example, Barnes, “Paradox,” and Hughes, “Aquinas on Continuity.”

⁷⁷ Aquinas, *Being and Essence*, 40. This view is rejected by John Duns Scotus, who holds that “A substance is distinct . . . from its matter.” Richard Cross, “Identity, Origin, and Persistence in Duns Scotus’s Physics,” *History of Philosophy Quarterly* 16, no. 1 (1999): 12. Interestingly, as Cross points out, and

Aquinas expresses by such a statement is what I shall call the entirety thesis.⁷⁸ For any substance x , if x has prime matter then the prime matter of x is the same as x , where “same” means indeterminately identical to x .⁷⁹

The prime matter of the substance x is the substratum of all objects that fall under substantial predicates $P_1 \dots P_2 \dots P_n$, and as such what is expressed by each predicate is understood to be identified with the substratum. The prime matter of x accounts for x being a this; to contemplate this fact is to think of the whole insofar as it is “this,” as opposed to something that is merely part of the whole. Even if there is a principle in x (prime matter) through which it can be understood in a vague way, that does not make it incompatible with or excluding what is fully determinate and complete in itself (to say that x is this animal

perhaps somewhat counterintuitively, it is precisely by pointing to a nonidentity between matter and substance that causes problems for thinking that a person can survive his own death in virtue of the continuation of his soul. This is because the substance is made up of form and matter and so cannot continue to exist under the condition that only the soul exists. This problem goes away if it can be coherently argued that the form itself and the matter itself are each entirely the substance.

⁷⁸ Something like the entirety thesis is suggested by Charlotte Witt, “Hylomorphism in Aristotle,” *The Journal of Philosophy* 84, no. 11 (1987): 673: “matter is one way of being the composite substance, and form is another way of being it.” I have argued that Aquinas develops his hylomorphism along these lines.

⁷⁹ Barnes and Williams, in “Metaphysical Indeterminacy,” 113, sum up the notion of metaphysical indeterminacy well: “We think that metaphysical indeterminacy represents a fundamental kind of unsettledness. For metaphysical indeterminacy with respect to p , there is not some unique state of affairs—the state of affairs of p being indeterminate—which obtains just in case it’s (metaphysically) indeterminate whether p . Rather, there are two possible (exhaustive, exclusive) states of affairs—the state of affairs that p and the state of affairs that not- p —and it’s simply unsettled which in fact obtains.” Prime matter is too weak to be in itself determinately identical to its corresponding substance. Leftow, “Souls Dipped,” 137, would need to follow up his analysis of Aquinas with something like the entirety thesis when he claims the following: “For Thomas, the soul’s metaphysical compliment is not a body but prime matter. . . . Thomas [is not] any . . . sort of dualist, because what there is to the body if it is abstracted from the soul—prime matter—hasn’t the stature to be a partner in any sort of dualism. It cannot even exist on its own.” However, Leftow seems to be conflating the question of whether something can exist on its own with whether it is a separate principle in itself. If the latter holds, then Aquinas would be a sort of dualist, unless one accepts the entirety thesis for the relationship between substance and prime matter.

and y is this rational is not to say that x is not identical to y).⁸⁰ The vague description (to its limit of thisness) contains within it the potency to be actualized (according to an ultimate determination)—its completeness through the form that in fact does fully actualize it—and so implicitly includes the existing substance x as a whole.⁸¹

However, there are serious philosophical problems that a defender of the entirety thesis would have to face, and although I think it is indeed defensible and helpful to a fully consistent hylomorphic account, I shall leave this task for another time. There is much to be said for trying to defend the entirety thesis, not the least of which is that it faces Zimmerman's challenge of finding an ontological view that avoids the pitfall of spatially colocated objects stubbornly wed to material constitution views (either of the multiple-category or single-category variety), and allows for identity through the loss or gain of material parts

⁸⁰ In this way, prime matter allows for the fundamental feature of noninstantiability for individuals identified by Jorge J. E. Gracia, "Individuals as Instants," *The Review of Metaphysics* 37, no. 1 (1983): 57, 58: "Non-instantiability . . . is an ontological feature, and it is independent both of the specific kind of thing the individual is as well as of the kind of universe to which the individual belongs. Whether the universe in which the individual is found has one or more individuals is immaterial if non-instantiability is considered as the fundamental feature of the individual, since non-instantiability unlike distinction, is not an extrinsic relation. Similarly, non-instantiability seems independent of duration and change, as well as the specific kind of individual involved." However, on my interpretation of Aquinas, this noninstantiability of individuals does not preclude it from being hylomorphically unified as things of specific kinds.

⁸¹ There is a well-known argument by Gareth Evans, 1978, "Can There Be Vague Objects?" *Analysis* 38, no. 4 (1978): 208, against indeterminate identity. J. R. G. Williams, "Multiple Actualities and Ontically Vague Identity," *The Philosophical Quarterly* 58, no. 230 (2008): 135, formulates it this way: (1) it is indeterminate whether a is identical with b [assumption]; (2) a has the property of being indeterminately identical with b [from 1]; (3) it is not indeterminate whether b is identical with b [premise]; (4) b does not have the property of being indeterminately identical with b [from 3]; (5) therefore a is not identical with b [from 2 and 4]. According to my analysis, (3) is false. This b is Socrates although this b is indeterminately identical to Socrates because this b could be indeterminately identical to Plato. The view is not unlike Williams's "multiple actualities," except the multiple actualities on Aquinas's view are made possible by the vague potentiality of prime matter.

(irrespective of their being of the gunky or nongunky variety) without relying either on a relative notion of identity or temporal parts.⁸²

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⁸² Zimmerman, "Theories of Masses"; Dean Zimmerman, "Coincident Objects: Could a 'Stuff Ontology' Help?" *Analysis* 57, no. 1 (1997): 20.