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David Squires

In this paper, I propose a Thomistic hylomorphic solution to Peter Unger's *problem of the many*. I begin by reviewing the problem, as well as explaining key features of the hylomorphism that I will employ in the solution. I then provide the solution and defend it against Hud Hudson's claim that hylomorphism is useless as a solution to Unger's problem, as well as against other objections.

In the following, I defend a Thomistic hylomorphic solution to Peter Unger's *problem of the many*—a puzzle about material constitution that concludes that once we affirm the existence of one ordinary body,[1] we have good reason to believe that there are, in fact, a great many overlapping bodies of the same kind. The solution provides a principled way to conclude that once we have affirmed the existence of one body in some case, additional overlapping bodies do not exist, and hence do not threaten Unger's problem. The paper has five parts. In the first, I briefly review Unger's problem, as well as expound Hud Hudson's claim that hylomorphism fails as a solution. In the second, I provide a summary of the basics of Thomistic hylomorphism. In the third, building upon my exposition of the basics, I explain two key features of Thomistic hylomorphism of particular importance to my solution. In the fourth, I provide the proposed solution, making use of those features. In the fifth, I respond to Hudson's critique of hylomorphism as a solution to the problem of the many, as well as to other objections to my solution.

1 I use the term *ordinary body* or just *body* neutrally in the introduction and first part of this paper to mean something such as a cloud, a stone, a human being, or a house. Aquinas would consider such things to be substances or substance analogues, which are hylomorphic composites of different sorts. In part two of the paper, however, I will define the term *body* as *signate prime matter* existing in three dimensions. *Body* will then be used throughout the rest of the paper with this meaning.

1 What Is the Problem of the Many?

What is Peter Unger's problem of the many? I will here present an *affirmative* version[2] of it that seeks to show that once we affirm the existence of one ordinary body—a cloud, a stone, a human being, etc.—we have good reason to believe that there are, in fact, a great many overlapping bodies of the same kind, where *overlap* is to be understood as the sharing of parts. Were this to be true, it would contradict our pre-philosophical datum that there is but one ordinary body—the one whose existence we originally affirmed—and it is this contradiction that is *the problem* according to this affirmative account of it.

Take, for example, a cloud apparently isolated from other clouds, Unger's original example of an ordinary body. This cloud—let's name it *Jack* to keep track—is composed of a great many water droplets. But now consider that there is something very much like Jack in the same vicinity, namely *Janet*, which is composed of all the droplets that make up Jack plus one more very nearby. There is also *Chrissy*, which, if we're honest, is a drop short of Jack and two short of Janet. If Jack is a cloud, then surely Janet and Chrissy are clouds as well, for they differ only minutely in those respects relevant to being a cloud—e.g., all three have nearly the same temperature, shape, color, mass, chemical content, etc.

Why think that Janet or Chrissy exists at all? Well, if the droplets that compose Jack satisfy certain cloud-making conditions, whatever those turn out to be—and they do, for in introducing the problem we have *affirmed* that Jack exists—then so also will the droplets associated with Janet and Chrissy, for those droplets are in only infinitesimally different conditions, differences that presumably cannot have any bearing on whether something is composed or not. Jack, Janet, and Chrissy, then, exist and are clouds. If three's company, then we can expect a crowd, for we can, of course, repeat this procedure *ad nauseam* until there are a great many more than three overlapping clouds where we thought that there was only one.

2 Unger's (1980, 417–418) original formulations of the problem are often *conditional*, e.g., *if* there is a cloud, then there are countless overlapping clouds. The formulation of the problem in this paper is not conditional but *affirmative*, in that it affirms without question the existence of a certain substance and then reasons to many overlapping substances. As a philosopher inclined to much of Thomistic theory, I prefer this formulation of the problem, since Thomists affirm unwaveringly the existence of primary substances whose existence Unger is willing to doubt. See Hudson (2001, 11–17) for another example of an affirmative version.

The problem of the many cannot be avoided merely by appealing to bodies composed of simple rather than complex entities. One cannot, for example, reject the above considerations on the basis that it isn't water droplets that compose a cloud, but rather certain, more fundamental, physical simples—e.g., point particles of various kinds—for the problem can be repeated in this new context. If the simples that compose Jack satisfy certain cloud-making conditions, and they do, then so do the simples associated with Janet and Chrissy.

Similarly, there is no obvious refuge from the problem if bodies turn out to be continuous. Suppose that Jack were continuous. If 1% of this body were to vanish, the other 99% would presumably still be a cloud. But then the 99% *is* a cloud, even when the 1% exists, for when the 1% exists, the 99% finds itself in only infinitesimally different conditions from ones in which it composes a cloud, again, a difference that presumably has no bearing on composition.

Responses to the problem of the many in contemporary metaphysics have been numerous. In his monograph, *A Materialist Metaphysics of the Human Person*, Hud Hudson collects the solutions on offer before presenting one of his own. He finds none of them particularly compelling, not even that of his own design, which he describes as "the least unappealing of a great host of unappealing alternatives" (2001, 45).[3]

I agree with Hudson that his own solution and those summarized in his monograph are all unappealing, with one exception—hylomorphism. Before defending hylomorphism as a solution to the problem of the many, however, we should briefly investigate Hudson's reasons for thinking that it is useless for answering Unger, for I hope to show that it is not problematic in the ways that he imagines.

Hudson lumps hylomorphic theory in with Cartesian dualism under the heading of "dualistic" answers to the problem of the many (2001, 19–21). The idea in proposing either theory as a solution to Unger's problem is that both Cartesian dualism and hylomorphism posit something immaterial that is related in some way to a body—e.g., an immaterial substance or a substantial form—that might then serve as what Unger terms a *selection principle*, a principle that allows us to select the only body present and to disregard any supposed others (1980, 449).

3 See Hudson (2001) for a summary of various alleged solutions to the problem of the many, which includes some of the better-known responses, such as the eliminative solution in Unger (1979) or the "partial identity" response in Lewis (1999), as well as Hudson's original "partist" solution or his original application of the brutal compositional theory in Markosian (1998) to the problem.

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Hudson views hylomorphism to be so deeply problematic a theory that he does not deal with it specifically, but the reader is given the impression that what he has to say against Cartesian dualism as an answer to Unger will apply equally well to the case of hylomorphism (2001, 20–21). The main problems facing both forms of dualism, then, are the following, which Hudson states in the context of a discussion of human beings:[4] the dualist must either 1) choose which of the many human bodies generated by the problem of the many the immaterial selection principle belongs to, which is a problematically arbitrary decision, or 2) admit that the immaterial selection principle belongs to each of the bodies generated by the problem of the many, which commits the dualist to either a) the existence of many overlapping human beings, or b) the existence of one human being with many overlapping human bodies, both of which are problematically counterintuitive results (2001, 20–21). According to Hudson, then, far from solving the problem of the many, both Cartesian dualism and hylomorphism leave us with the unenviable task of choosing between various absurdities that arise on account of the many bodies generated by the problem.

Contrary to Hudson's account, I will argue that hylomorphic theory provides an effective solution to the problem of the many, one which does not force on us any of the above-mentioned absurdities. There are many versions of hylomorphic theory: classical, medieval, and contemporary. The one I will defend below as an answer to Unger is Thomistic in nature. By means of it, I will attempt to give Unger the selection principle he requires. This principle—a single substantial form through which comes a single substantial *esse*—as I will argue, ensures that there are not many overlapping substances of the same kind. To show that this is the case, I will first review the basics of Thomistic hylomorphism and then give a brief account of two key features of Thomistic hylomorphic theory that are important for solving Unger's problem.

4 Hudson states his objection in terms of *persons*. I alter this to *beings* only in order a) to put Hudson's objection in a form that will motivate hylomorphic theorists to see it as a problem that needs to be addressed and not as something that should be written off, because it uses the term *person* in a way that classical hylomorphic theorists would not, and b) to make Hudson's objection more general and thus more powerful against hylomorphic theory, since it will now apply to hylomorphic substances that are not persons. The substance of his objection is preserved entirely.

2 Thomistic Hylomorphism: The Basics

Thomistic hylomorphism has its origins in Aristotle's category theory and theory of change. Following Aristotle, Aquinas claims that there are ten most general kinds of being into which individuals in the world fall. Thus, this individual human being—e.g., Socrates—is in the category of *substance*, while this individual canary yellow is in the category of quality, and this individual six feet is in the category of quantity, etc. Things that fall into categories other than substance are collectively called *accidents*. Corresponding to the distinction between substance and accident, Aquinas claims that there are two kinds of existence, *substantial existence* (*esse substantiale*) and *accidental existence* (*esse accidentale*) (*De Principiis Naturae*, *cap*. 1). To be a human being is an example of the former, to be pale the latter (*DPN*, 1).

Something, moreover, is said to be in potency to each kind of existence. For example, reproductive blood in the female is in potency to being a human being, while a human being is in potency to being pale (*DPN*, 1).[5] Aquinas is comfortable calling anything that exists in potency to either substantial or accidental existence *matter*, though he often prefers to reserve this term for what is in potency to substantial existence, calling what is in potency to accidental existence a *subject*, i.e., *underlying thing* (*DPN*, 1). While Aquinas gives reproductive blood—the *matter from which* (*materia ex qua*) a human being is generated—as an example of what is in potency to substantial existence, it is important to note that fundamental matter or *prime matter* (*materia prima*)[6] is also properly said to be in potency to substantial existence. It is better, however, to say this of *signate prime matter* (*materia signata*)—*this prime*

5 I preserve Aquinas' outmoded embryological example for the sake of accurately reporting the content of *De Principiis Naturae*, but nothing of importance hangs on it, since sperm and egg or some of their components are that which today Thomists would say are in potency to substantial existence.

6 References to prime matter occur throughout Aquinas' corpus. See *DPN,* 2 for a concise account. Prime matter never exists except under some substantial form, but the substantial form it exists under is not included in its essence. It is thus said to be *pure potency* (*potentia pura*). References to matter as pure potency occur throughout Aquinas' corpus. For an example, see *Summa Contra Gentiles*, lib.1, cap.17, n.7.

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matter[7] existing under continuous quantity in three dimensions[8]—since what receives the individual substantial existence of a substance must itself be individual.[9]

Just as whatever is in potency to some kind of existence can be called matter, so everything *by which* (*a quo*) something has existence, whether accidental or substantial, can be called *form* (*DPN*, 1).[10] Thus, an accidental form is that by which something has accidental existence—e.g., pale is that by which Socrates is pale—while a substantial form is that by which something has substantial existence—e.g., the rational soul is that by which Socrates is a human being. Aquinas sometimes calls form an *act* or *perfection*, since it is

7 References to signate matter also occur throughout Aquinas' corpus. See *De Trinitate Boëthii*, q.4, a.2 for a concise account. According to Aquinas, the source of prime matter being signate is continuous quantity. See *DTB*, q.4, a.2, where Aquinas notes that, "Matter is made to be this, i.e., signate, insofar as it exists under dimensions." (*Et ideo materia efficitur haec et signata, secundum quod subest dimensionibus*). It should be noted that *some* continuous quantity is the source of prime matter being signate rather than any particular continuous quantity. Signate prime matter may thus remain *this matter* even if it sometimes has different continuous quantities—i.e., different accidents. See *DTB,* q.4, a.2 for Aquinas' distinction between determinate and indeterminate dimension.

8 In his *Categories*, at $5^{a}15$, Aristotle notes that continuous quantity is composed of parts that have position. It is my opinion that, for Aquinas, signate prime matter itself is a whole composed of parts that have position, a feature that it possesses not from its own essence, but from the continuous quantity that it possesses. A reason for saying that signate prime matter itself is a whole that has parts with position is that the potency for substantial existence, which is signate prime matter's essence, cannot be identical under every part of a continuous quantity, lest the potency for substantial existence in, say, my right hand be identical to the potency for substantial existence in my left hand. They cannot be identical, however, since, were they identical, human substantial existence could not depart from my right hand without also departing from my left, which is clearly false, since I could lose one hand but not the other. Prime matter is thus not only made signate by possessing continuous quantity, but it is also made to be a whole whose parts have position. In what follows, I will understand the term *body* in certain passages of the *Summa Theologiae* to signify signate prime matter as described here.

9 To say that signate prime matter is in potency to substantial existence is not to say that it does not *yet* have substantial existence, for it exists under a substantial form that grants dimension, nor is it to say that it is a complete substance of some kind on account of possessing substantial existence, as Socrates is when he possesses substantial existence, rather it is to say that substantial existence comes to it through a substantial form when the composite substance whose matter it is exists. The ultimate source of substantial existence is God, the First Being, Whose essence is existence, though material agents also play a dispositive role in a substance coming to substantial existence. The various relationships of agent, form, matter, and substantial act of existence are discussed further below.

10 Aquinas also uses *through whic*h (*per quam*)—which we will see below—to describe the way in which something has existence from form. There is no difference in meaning between the two expressions in this context.

through form that something exists actually or is perfected in being, whether substantially or accidentally.[11]

Where do substantial forms come from? According to Aquinas, substantial forms exist potentially in signate prime matter and are *educed*—drawn out—from the potency of matter by an agent or agents with the appropriate active powers for causing certain dispositive accidental changes in a substance or substances. When a substance or substances have been perfectly disposed via these accidental changes, a substantial form or forms are instantly educed from signate matter, which is a substantial change—a change in *what* there is.[12] An agent is *always* necessary for the eduction of a substantial form from the potency of matter, for otherwise matter would come to have a substantial form for no other reason than that it can. Were one willing to admit this, one might as well admit that the only reason that what is divisible became divided is because it was divisible. Agents' eduction of substantial form from matter will be further discussed in part five below.

Aquinas' matter/form ontology for both *accidental unities*—e.g., Socrates with a tan—and *substantial unities*—e.g., Socrates—is a constituent ontological strategy. Aquinas thus conceives of Socrates with a tan as a composition of an individual substance with an individual qualitative accident and Socrates as signate prime matter with an individual substantial form.[13]

11 Form is frequently called act in Aquinas' corpus. See, for example, *ST* I, q.75, a.1, where the soul—a substantial form—is said to be the act of a body. Nothing prevents something which is act in one context from being potency in another. For example, substantial form is act when compared to body, but it is potency when compared to substantial *esse*. For an example of form being called perfection see *ST* I, q.49, a.3, ad 3.

12 References to the eduction of form from matter are frequent in Aquinas' corpus. See, for example, *De Veritate*, q.5, a.8, ad 8. The wording of this paragraph is intended to capture the fact that Aquinas allows for a single substantial form to be educed from the signate matters of multiple substances, as when the form of a mixed body is educed from the signate matters of various elemental substances, as well as for multiple substantial forms to be educed from the parts of the signate matter of a single substance, as when the forms of various non-living substances are educed from the various parts of the signate matter of an animal that is perishing. There can be only one substantial form per substance, however, a point that will be covered in detail below. See footnote 26 for a discussion of the persistence of matter through substantial change.

13 Socrates is unlikely to be uniformly tan all over. The individual accident thus marks out a part of Socrates by giving it accidental *esse*. Parts of the tan part of Socrates do not have additional individual tan accidents, for the individual accident perfects the whole tan part in accidental *esse*, and, in doing so, perfects its parts in accidental *esse*. Below, we will see that a single substantial form does the same for the substantial body and its parts, but with respect to substantial *esse* rather than accidental *esse*.

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So far, we have discussed matter, form, and two kinds of existence. It may already be clear, but the point should be emphasized that there is a real distinction for Aquinas between that which receives existence and the existence which it receives.[14] This real distinction is to be understood by analogy with the act/potency distinction on display in the difference between matter and form. Just as the signate prime matter in Socrates stands as potency to his individual substantial form—to his rational soul—as act, so the composite of signate prime matter and individual rational soul—his individual *whatness* (*quidditas*) or *essence* (*essentia*)—stands as potency to substantial existence, which Aquinas calls a substantial *act of existence* (*actus essendi*), or *esse substantiale*, or sometimes just *esse*. In Socrates, then, there is not only the composition of signate prime matter and substantial form but also the composition of individual essence and substantial *esse*.[15]

As a final consideration concerning the basics of Thomistic hylomorphism, it is important to note that Aquinas sometimes speaks in different ways about the matter/form composition of substances. As we've seen, Socrates is a composite of signate prime matter and individual substantial form. At times, however, Aquinas speaks of Socrates as composed of a body and a soul. The explanation for this is found in the second chapter of *De Ente Et Essentia*, where Aquinas notes that *body* (*corpus*) can be taken to signify something that has a form of corporeity—a form which grants extension in three dimensions—but to exclude any further perfections that might also be found in that thing, such as sensation or intellection. When *body* is used in this way, the soul is beyond (*praeter*) what is signified by the word. As such, the term *body* cannot signify the whole of Socrates but only the composite of signate prime matter and the form of corporeity responsible for Socrates' extension in three dimensions, which composite Aquinas calls an *integral and material part* (*integralis et materialis pars*) of Socrates—i.e., a part that stands as potency to the soul as a further act or perfection. The distinction between a form of corporeity and the soul, however, is a merely notional distinction, for as we'll soon see, Aquinas' doctrine of *the unicity of substantial form* demands that, in reality, the substantial form, the form of corporeity, and the soul are identical in fact, even if not notionally equivalent, for it is numerically one and the same substantial form that grants substantial *esse*, extension in three dimensions,

14 There is a discussion among Thomists about whether there is a real distinction between an accident and accidental *esse*. See Wippel (2000, 261–265) for a detailed account.

15 See Wippel (2000, 132–176) for a detailed discussion of the essence/*esse* distinction with regard to substances.

and various powers and operations of life to those substances that have all of these features.

Below, I will be considering a passage in which Aquinas says that the substantial form gives substantial *esse* to the body and to its parts. Were we to understand the term *body* in this passage to mean the composite of signate prime matter and the form of corporeity and to note that the form of corporeity is, in fact, identical to the substantial form, to then say that the substantial form gives substantial *esse* to the body would be to say that it gives *esse* to the composite of itself and signate prime matter. The substantial form, however, cannot give *esse* to itself in the composite, since it is a dictum for Aquinas that nothing can cause its own existence. I do not think that a thinker of Aquinas' caliber would have missed this point, so I will thus understand the term *body* in this passage to mean *signate prime matter* existing under continuous quantity in three dimensions, and I will use it throughout the rest of this paper with the same meaning.[16] In dealing with Unger's problem below, I will represent bodies in my sense as collections of bits, following Hudson's model of the corporeal world rather than Aquinas', in which bodies are continuous.[17] Let this serve as a primer for a further discussion of two key features of Thomistic hylomorphism that are of importance to solving Unger's problem.

16 Understanding the solution in this paper requires that body in this sense not be confused with the Cartesian sense of body, in which body is a complete substance. Body in my sense is not a complete substance but only a material part of a substance. It may strike some philosophers as strange to define body in the way that I have, since Socrates' body is supposed to be sensible, while prime matter is not. It is true that Aquinas speaks of sensible matter, but this means that signate prime matter, which *in its own right* cannot be detected by the five exterior senses, is further perfected by certain accidents—the proper sensibles—which can be detected in their own right by those exterior senses. In a way, then, body is sensible, but in a way it is not. See *ST* III, q.76, a.7 for a confirmation of the view that body *as such* cannot be sensed by the exterior senses. My definition of body as signate prime matter cannot thus simply be refuted with the following modus tollens: If body were signate prime matter, then Socrates' body would not be sensible, but it is sensible, therefore . . .

17 When, in part four, I adopt Hudson's bit-model of the corporeal world, I intend there to be only one signate prime matter counted per complex substance, which matter has actual parts—i.e. bits—that are internally continuous but spatially divided. For reasons of space, I will not offer a theory of what would have to be said about continuous quantity were bodies composed of bits. For Aquinas, of course, signate prime matter is altogether continuous when existing under continuous quantity in three dimensions.

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3 Two Key Features of Thomistic Hylomorphism of Importance to Solving Unger's Problem

The two features I have in mind relevant to solving the problem of the many are 1) the unicity of substantial form, and 2) the fact that substantial form is that through which both a whole body and all its bodily parts receive the perfection of substantial *esse*. Let us examine these features in order.

3.1 *The Unicity of Substantial Form*

It is important to note that, according to Aquinas, there is one and only one substantial form per substance—a doctrine known as *the unicity of substantial form*. Aquinas defends the unicity of substantial form on the ground that substances are substantially one absolutely (*unum simpliciter*) and that this is only possible if there is only one substantial form per substance. For example, consider the following passage from the *Summa Theologiae*, *Prima Pars*, Question 76, Article 3:

> An animal would not have oneness absolutely speaking (*non esset simpliciter unum*) if it had more than one soul.[18] For nothing has oneness absolutely speaking except because of a single form through which the thing has existence (*esse*), since the fact that an entity is a being and the fact that it is unified derive from the same source. And so, things that are denominated from different forms, e.g., white man, do not have oneness absolutely speaking. Therefore, if the fact that a man is living were derived from one form, viz., the vegetative soul, and the fact that he is an animal were derived from a second form, viz., the sentient soul, and the fact that he is a man were derived from a third form, viz., the rational soul, then it would follow that a man does not have oneness absolutely speaking [. . .]

The demand that a substance has one and only one substantial form is ultimately grounded in the claims that substantial form is a source of substantial *esse* and that a substance can have only a single substantial *esse*, the principle discussed above as distinct from a substance's individual essence. If a substance had more than one substantial *esse*, it would not be one substantial being after all, for there would be as many substantial beings as there are

18 As noted above, soul is the substantial form of a living thing. Higher souls grant the powers and operations of lower souls, as well as further powers and operations. For example, the sentient soul grants not only the powers of growth, nutrition, and reproduction but also the powers of sensation.

substantial *esses*. That a substance can have only one substantial *esse* can also be arrived at by noting that *esse* is, as noted above, an act or perfection. A substance that is made actual or perfected in being by one *esse* cannot, therefore, be further made actual or perfected by another *esse*, for nothing can come to be which already is—a Parmenidean dictum of old. Since a substantial form is that through which an individual substance has its substantial *esse* and a substance can have only one substantial *esse*, then a substance can have only one substantial form, lest it fail to be *unum simpliciter* by being sundered into many substances by a multiplicity of substantial *esse*s, each of which comes through a different substantial form.

Though, in the above passage, Aquinas has limited himself to defending the unicity of soul in a human being, his reasoning can be extended to cases in which the substantial forms in question are not souls. Indeed, the fact that substantial *esse* comes through a thing's substantial form is why Thomistic hylomorphic theorists deny the actual existence of elemental substances in non-elemental substances—a doctrine referred to as the *virtual presence* or *potential existence* of elemental substances in non-elemental substances. If elemental substances were present in act in non-elemental substances, then they would be present under their own substantial forms, for to be in substantial act for a corporeal thing is to have a substantial form. But if the elements were present under their own substantial forms, then they would have their own distinct *esse*s through those forms. Where we thought that there was a single substantial existent—e.g., some bronze—there would, in fact, be only many elemental substantial existents, for, given Aquinas' understanding of a substance, what we were calling *some bronze* cannot have both one substantial *esse* and many substantial *esse*s.[19]

19 It might be supposed that the empirical presence of elemental substances—whatever those turn out to be—or even non-elemental substances within, say, an animal provides an easy refutation of the doctrine of the virtual presence of substances within substances, the idea being, *look*, here is an electron or there is carbon, and so there are substances in act in a substance. The problem with this approach, from the Thomistic perspective, is that it disregards the Aristotelian/Thomistic claim—discussed in footnote 16 above—that substance is not *per se* sensible to the external senses or *per se* detectable to scientific equipment. What we sense with the external senses or detect with equipment are, according to Thomists, certain accidental forms, not their underlying substance. The appearance of, say, carbon in an animal body, then, is no proof that carbon is present in act in an animal body, but only that some of the accidents presented by a part of an animal are the same in species as some of those presented by certain other substances when they are not virtually present in an animal.

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There is but one substantial form per substance, then, on the Thomistic theory I wish to defend as a solution to Unger's problem, and this substantial form is that through which an individual composite substance has its single substantial *esse*.

3.2 *Substantial Form as That through Which Both Whole and Part Receive Existence*

Second, the hylomorphism that I here defend as capable of solving Unger's problem maintains that substantial form is that through which both bodily whole and bodily part receive the single substantial *esse* of a substance. We can find Aquinas articulating this point, for example, in the *Summa Theologiae*, *Prima Pars*, Question 76, Article 8 as part of his discussion of whether the soul exists in the whole body and in each of its parts:

> However, since the soul is in fact united to the body as its form, it must exist in the whole body and in each part of the body. For it is a substantial form and not an accidental form. But a substantial form is the perfection not only of the whole, but of each part. For since a whole consists of its parts, a form of a whole that does not give existence (*esse*) to each part of a body is a form which is, like the form of a house, itself a composition and an ordering [of parts]; and a form of this sort is an accidental form. The soul, by contrast, is a substantial form, and so it has to be the form and actuality not only of the whole but also of each part [. . .]
>
> Note, however, that since the soul requires diversity in the parts, it is not related in the same way to the whole and to the parts. Rather, it is related to the whole in the first place and *per se* (*primo et per se*), as to its proper and proportionate perfectible; by contrast, it is related to the parts secondarily (*per posterius*), insofar as they are ordered toward the whole.[20]

20 I have altered "since the whole is what it properly and proportionately perfects" to "as to its proper and proportionate perfectible" to keep closer to the precise meaning of the Latin. The notion that the whole body is the *proportionate* perfectible of the substantial form relates to Aquinas' distinction between *per se* and *per accidens* causes and effects. *Per se* causes and effects are said to be proportionate to one another, but not *per se* causes and *per accidens* effects. If a builder is a cause of a house but also a cause of strife—because some people did not want it built—*qua* builder, he is a *per se* and proportionate cause of a house but only a *per accidens*, i.e., coincidental, cause of strife, for he caused strife only through causing a house, which was his proper effect *qua* builder. To say that the whole body is the primary and proportionate perfectible of the substantial form, while a part of the body is not, is thus to say that the whole body receives *esse per se* through the substantial form, while the part receives *esse* through the substantial form

In discussing the unicity of substantial form, we have already seen that it is through the substantial form that an individual corporeal substance has *esse*. An individual corporeal substance, however, is composed of substantial form and body, and body—signate prime matter existing under continuous quantity—is itself a quantitative whole of quantitative parts. The passage under consideration aims to show us why it *must* be the case that a substance's substantial form is that through which both the whole body and its parts have the single substantial *esse* of the individual substance.

On Aquinas' account, the form of a house is not a substantial form after all, but a certain ordering of substances. This ordering, being accidental, is not such as to grant substantial *esse* to the house nor any of its would-be substantial parts. Lacking a single substantial form through which comes a single substantial *esse*, a house is not really one substance *simpliciter*, but rather many substances ordered according to the purpose of a builder.[21] This being true of the house, the parts of a genuine substantial body must have *esse* through numerically the same substantial form through which the whole substantial body has *esse*, and the *esse* of the parts must be numerically the same *esse* as that of the whole substantial body, for, were there more than one *esse* through more than one substantial form, the case of the animal would be the same as the case of the house, but *ex hypothesi* the cases are different.

Aquinas' noting that a substantial form belongs to the whole *in the first place and per se* (*primo et per se*) and to the parts *secondarily* (*per posterius*) serves to point out that, properly speaking, what is perfected in *esse* through the form is the whole substantial body, and what is perfected in *esse* secondarily—i.e., only through the perfection in *esse* of the whole body—are the parts of the body. It must be noted, if we are to answer Unger's problem, that only the composite of the substantial form and that to which it belongs *primo et per se*

no doubt, but only as a coincidental result of the whole's receiving *esse* through the substantial form. To say that the substantial form is related to the whole body *primo et per se*, or vice versa, is effectively the same as saying that one is the *per se* and proportionate cause of the other, or that one is the *per se* and proportionate effect of the other, whereas to say that the substantial form is related to a part of the body *per posterius*, or vice versa, is to say that one is a *per accidens* cause of the other, or that one is a *per accidens* effect of the other. I have tried to capture most of this in plainer language below by talking about the parts being perfected in *esse* "only through" the perfection in *esse* of the whole.

21 Some ordinary bodies—e.g., a house—really are many substances, then, and this is not a problem unless any of the substances involved in them suffer from the problem of the many. Part four of this paper aims to show that no substance suffers from the problem of the many.

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is a substance of a given kind. Attention to Objection 3 and the reply of the same article will make the point:

Objection: *De Anima* 2 says that the soul as a whole is related to the whole body of the animal in the same way that the part of the soul is related to a part of the body, e.g., the power of vision to the pupil. Therefore, if the whole soul exists in each part of the body, then it will follow that each part of the body is an animal [. . .]

Reply: The animal is composed of the soul and the whole body, which is its primary and proportionate perfectible. But the soul is not in a part in the same way. Hence, it is not necessary for a part of an animal to be an animal.[22]

The substantial form, then, brings into being a unique whole that is not a quantitative part of any substantial body.[23] The only thing that is a substance of a given kind is the composite of the substantial form and its proper perfectible—the whole body.[24] So much, then, for the two key features of Thomistic hylomorphism that I wish to bring to bear on Unger's problem.

4 A Thomistic Solution to the Problem of the Many

How might we bring these features to bear on the problem of the many? My statement of the problem of the many, recall, begins by *affirming* the existence of some ordinary body. The solution that I propose here is itself *affirmative* in that it begins by taking for granted the existence of an ordinary bodily substance. This is as it should be, for hylomorphism is not a theory that aims to demonstrate the existence of ordinary bodily substances. Rather, it takes for granted the existence of some ordinary bodily substance and then reasons to its principle of unity, i.e., a single substantial form through which a single substantial *esse* comes to the whole body and to its parts.

Let us affirm the existence of such a bodily substance, then, and see whether the problem of the many can arise in the hylomorphic context described. The substantial status of clouds is, dare I say, a bit up in the air, so let us choose

22 I have altered "which the soul perfects in the first place and proportionately" to "which is its primary and proportionate perfectible" to keep it in line with the alteration above.

23 For Aquinas, the universe is not a substance.

24 It is worth noting that Aquinas' reply here is not just an *ad hoc* reply to the objection but that it flows systematically from his theory of *per se* and proportionate vs. *per accidens* causality described above in footnote 20.

an example of something that Aquinas would certainly agree has substantial unity, say, an individual rabbit.[25]

Let there exist, then, a certain rabbit, Jack. In the hylomorphic context described above, this rabbit is a composite of one body and one substantial form—in this case, one sentient soul. Now consider a set—viz., *Primary Set*—that contains all the bits the sum of which is Jack's body. Consider also three other sets—viz., *Larger Set, Smaller Set*, and *Mixed Set*—Larger Set contains all the bits in Primary Set plus one more not in Primary Set, Smaller Set contains all but one of the bits in Primary Set, and Mixed Set combines the features of Larger Set and Smaller Set in that it contains one bit not in Primary Set and is missing one bit in Primary Set. Are there additional rabbits corresponding to the sums of bits in any of these three sets? If there are, then the problem of the many has reared its ugly head in the hylomorphic context, but if there are not, then hylomorphism will have shown itself effective against the problem.

There are no additional rabbits. Consider the members of Larger Set, which includes all the bits in Primary Set the sum of which is Jack's body and one additional bit that is not in Primary Set. There is no additional rabbit corresponding to this set. Consider why this is the case: a rabbit is the composition of a substantial form and a sum of bits that has this form *primo et per se*. The sum of the bits in Larger Set, however, does not possess Jack's substantial form *primo et per se*, for only one sum may possess it in this way, and it is the sum of the bits in Primary Set that does.

Does the sum of the bits in Larger Set, perhaps, possess a numerically different substantial form *primo et per se*? It cannot, for if it did, many of the parts of the sum of the bits of Primary Set would have two substantial *esses*, for, by affirmation of Jack's existence, they have Jack's *esse* through

25 In what follows, I will assume Unger's preferred cloud/droplet model of the corporeal world in which whole substantial bodies are composed of bodily parts—I'll call them "bits" in keeping with Hudson's terminology—each of which is itself internally continuous but discrete from other such parts. Keep in mind, however, that the solution does not require this assumption and can be adapted to views in which bodies are either a) composed of parts that are simple and discrete, or b) altogether continuous. I will also make use of certain sets, as well as the term *sums* to indicate certain aggregates of bits of the material world, but keep in mind that I do not intend anything ontological in making use of these terms, though many philosophers frequently do. This is just to say that I am not claiming that sets are Platonic objects, or that any sum whatsoever is a unified whole. Indeed, the question of whether such sums correspond to additional rabbits is precisely the point under investigation. I am only attempting to conveniently track the sections of the material world that I'll be talking about.

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Jack's form *per posterius*, and they would also have the *esse* of the supposed second form possessed *per posterius*. For example, by affirmation of Jack's existence, Jack's, say, heart has his *esse* through his substantial form possessed *per posterius*, and it would also have the *esse* of the supposed second form possessed *per posterius*, for the sum of the bits with the second form would have numerically the same heart, this heart having all and only the same bits as Jack's heart.

One of the reasons, again, that Jack's heart cannot have two substantial *esse*s is that, as noted above, substantial *esse* is an act or perfection, and nothing can be made actual or perfected with respect to which it is already made actual or perfect. This is as true of substantial existence as it is of being canary yellow. If the glass is half full, then, by all means, fill it, but if it is full, then it cannot be filled. There is only one substantial form, then, and it is Jack's, for recall that it was Jack's existence that we affirmed at the start. Larger Set, then, does not threaten us with Unger's problem, for there is no substantial form possessed *primo et per se* by the sum of the bits in this set, and hence there is no additional rabbit corresponding to this set.

Neither, however, do we end up with additional rabbits on account of large arbitrary parts of Jack's body, such as the large arbitrary part that is the sum of the bits in Smaller Set. The sum of the bits in Smaller Set has one *esse* and has it through a form possessed *per posterius,* as parts do—it has the *esse* of Jack's body. A rabbit, however, is a composition of a substantial form and a sum that has a substantial form *primo et per se*. Smaller Set, then, does not correspond to an additional rabbit, for while the sum of its bits is composed with Jack's form, that sum does not possess that form *primo et per se*, as it would need to if there were to be an additional rabbit corresponding to Smaller Set.

Just as we cannot postulate a second substantial form possessed *primo et per se* by the sum of the bits in Larger Set, so we cannot do so for the sum of the bits in Smaller Set, for to do so would leave many of Jack's parts with two substantial *esse*s through substantial forms possessed *per posterius*, which is impossible for the same reason noted above. There is only one substantial form, then, and again, we need not ask which sum this belongs to, for it was Jack's existence that we affirmed at the start, and thus it is the sum of the bits in Primary Set that possesses this form *primo et per se*.

Mixed Set is an interesting set on account of its tendency to cause trouble. Hudson shows some interest in solving Unger's problem, at least in the case of living things, by making use of the principle that no proper part of a living thing of some species is a living thing of the same species (2001, 26–27).

Hudson, however, does not employ substantial forms. He considers a rabbit to be nothing but a sum of bits, rather than a composition of a substantial form and a sum of bits. If—taking up Hudson's non-hylomorphic view for the moment—the sum of the bits in Primary Set were a rabbit, and no rabbit could have a rabbit as a proper part, then the sum of the bits in Smaller Set could not be a rabbit. Likewise, neither could the sum of the bits in Larger Set be a rabbit, for then it would have a rabbit as a proper part—viz., the sum of the bits in Primary Set. Hudson cannot use this principle, however, in the case of Mixed Set, for let the sum of the bits in Primary Set be a rabbit, and let the principle be true, nevertheless, the sum of the bits in Mixed Set is not thus excluded from being an unwanted additional rabbit, since this sum is not a proper part of the sum of the bits in Primary Set.

But Mixed Set won't present the hylomorphic theorist with any trouble. It can be resolved in the same way that the other two sets were resolved, for this set does not possess Jack's form *primo et per se*. Nor can it possess a second form *primo et per se*, and this is so for the same reason given above.

Since sets like Larger, Smaller, and Mixed Set are the only ones the sums of whose members threaten us with Unger's problem, to defeat them is to defeat the problem of the many.

5 Objections and Replies

I will now reply to three objections, beginning with Hudson's original objection to hylomorphic theory as a solution to Unger's problem.

Objection 1: You hylomorphic theorists must choose between one of three disastrous options regarding Jack. Either you must choose which of the rabbit bodies generated by the problem of the many the substantial form belongs to, which could only be a problematically arbitrary decision, or you must assign the substantial form to each of the bodies generated by the problem of the many, which gives you either many overlapping rabbits, or if not, one rabbit with many overlapping rabbit bodies, either of which is monstrous.

Reply 1: This objection assumes that there are a great many rabbit bodies lying about which exist on account of the problem of the many and that I must then problematically choose which one of these rabbit bodies to assign the substantial form to or assign it to all of them. To treat rabbit bodies in this manner is to treat them as though they can exist and be rabbit bodies independent of possessing a substantial form *primo et per se*. This, however, is not the case, for what it is to be a rabbit body is to be the proper perfectible of

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a rabbit substantial form—i.e., to be a unique whole that is not a quantitative part of any substantial body and that is caused to exist by the substantial form. There are thus no such rabbit bodies lying about for me to have to make problematically arbitrary decisions about. Rather, there is one rabbit body—Jack's body—that exists by possessing his form *primo et per se*, and there are no other rabbit bodies, for nothing else overlapping possesses Jack's substantial form or any other substantial form *primo et per se*.

Objection 2: You made a very problematically arbitrary decision in assigning the substantial form to the sum of the bits in Primary Set, for any of the other sums could have been Jack's body.

Reply 2: I did decide something, but not in a problematically arbitrary way. In affirming Jack's existence, I also affirmed his body's existence, for Jack is a composite of his substantial form and his body. Having done this, I needed a way to indicate this body to you, and the way I chose to do so was by saying that it is the sum of the bits in Primary Set. You are correct to say that "any of the other sums could have been Jack's body", in that, presumably, Jack's substantial form could belong *primo et per se* to a sum that includes a different number of bits than however many bits are included in the sum of the bits in Primary Set. I could acknowledge this by describing the four sets and then assigning the substantial form to the sum of the bits in one of the sets other than Primary Set, but this would be counterproductive. Say that I assign it to the sum of the bits in Larger Set. I would then need to define an *Even Larger Set* to make the point that sums of bits larger than the sum that is Jack's body do not correspond to additional overlapping rabbits.

There was nothing arbitrary, however, about the reasoning in part four of the paper, for once it had been set down that the sum of the bits in Primary Set is Jack's body, there were found to be no other sums that possess a substantial form *primo et per se*—either Jack's form or another form—and this followed in a principled way. Having innocently arbitrated which sum is Jack's body—for some sum must be his body, since Jack exists—I prevented, by means of certain principles, any other rabbit bodies that might compete with this sum and any other rabbits that might compete with Jack from ever existing.

Objection 3: So your point is that whether Jack's body is a sum of this number of bits or that number of bits, there are no overlapping rabbits competing with Jack. Fine. But it seems that you still face issues of problematic arbitrariness. For instance, suppose that in the first moment of Jack's existence the sum that has his form *primo et per se* is the sum of 100 bits. Why should his form be educed from certain bits but not from others? For example, consider

105 bits very nearby one another. Why should Jack's form be educed from bits 1-100, rather than from, say, bits 6-105?[26] There is presumably no good reason, and so you'll just have to choose. Whether or not there are many overlapping rabbits, then, hylomorphism still faces a problematic sort of arbitrariness.

Reply 3: It is not arbitrary or undecidable from which bits in the world a substantial form is first educed. As discussed in part two, no substantial form is educed from the matter or parts of matter of an existing substance or substances[27] without some agent causing the appropriate dispositive accidental changes required for the eduction of a new substantial form. We can put this fact to work in answering the objector.

Suppose that Jack's form—on account of its nature[28]—is the kind of form that can be educed from no fewer than 100 bits, and it was initially educed

26 Since I'm determinately numbering bits in this example, with the numbers serving as names, it's worth noting that there is a difficulty concerning the persistence of prime matter through substantial change. Does matter or a part of matter retain its identity through a substantial change, or—to use the medieval formula—does matter or a part of matter persist numerically the same through a substantial change? Some have suggested that it must, lest there be nothing to differentiate substantial change from the annihilation of one substance and the creation of another *ex nihilo*. On the other hand, if matter or its parts persist numerically the same through a substantial change, the matter in question will have the *esse* of one substance before the change and the *esse* of another after, and how could something with numerically distinct *esses* be numerically the same principle? On the first view, the bits *from which* a new substantial form will be educed are numerically the same as the bits *in which* the new substantial form will exist. On the second view, the bits *from which* a form will be educed are *not* numerically the same as the bits *in which* the new form will exist. Rather, at the moment of the eduction of the new form, *esse* comes through the new substantial form to certain newly existent bits that are not the same in number as—i.e., not identical with—those from which the new form was educed. I will not take a stance on this issue in this paper, since the main solution and replies to the objections do not require a decision. The language throughout part five thus aims at neutrality on this issue. With regard to my reply to objection 3 anyway, my point will be that whether or not the bits *in which* the new substantial form exists are numerically the same as those *from which* the new substantial form was educed, it will not be arbitrary or undecidable from which bits in the world a form was educed. See Pasnau (2011,17–76) for medieval debates on the nature of matter and the question of its persistence.

27 In this reply, I am careful to maintain the distinction between matter and substance, since, according to both Aristotle and Aquinas, corporeal agents operate on substances, not on matter. One thus cannot speak of agents acting on bits, as well as forms being educed from them. Rather, agents act on the composite of matter and its substantial form, and substantial form is educed from bits—i.e., from matter—when the substances in question have been properly disposed.

28 According to Aquinas, matter exists for the sake of form, and form for the sake of the end. Certain necessary accidental features of the body of a given kind of substance, then, are determined by its form for the sake of certain operations. Size restrictions will be included in these determinations, as well as the kinds of accidental forms required for the continued existence of a given kind of substantial form in signate matter or for its eduction from signate matter.

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from bits 1-100 rather than 6-105. Contrary to the objector's assertion, we do not lack for explanations as to why it happened thus. Let's start with the fact that it failed to be educed from 6-105. Why is this so? The reasons may vary. For example, perhaps bits 6-100 belonged to a part of a substance or parts of substances that over time had acquired the appropriate accidental forms such that if 101-105 belonged to a part of a substance that had undergone the appropriate dispositive accidental changes, Jack's form would have been educed from bits 6-105. The part of a substance containing bits 101-105, however, though it could have undergone the appropriate dispositive changes, did not ever have the right spatial location with respect to an agent with the appropriate active powers to cause those dispositive accidental changes in it required for the eduction of Jack's form from bits 6-105.

Alternatively, perhaps 101-105 belonged to a part of a substance that—because of the substance's natural kind—did not possess the appropriate passive powers to be affected by some nearby agent's active power to cause the dispositive accidental changes in it required for the eduction of Jack's form from bits 6-105. Not just anything can cause just any kind of accidental change in just anything, after all, but agents require patients with the passive powers to be changed in various ways that correspond to the agents' active powers to cause change in those ways.

Whatever the reason was that 6-105—or any other such grouping—failed to be the matter from which the form was educed, 1-100 did not so fail. Why? Perhaps bits 6-100 belonged to a part of a substance or parts of substances that over time had acquired the appropriate accidental forms such that if 1-5 belonged to a part of a substance that underwent the appropriate dispositive accidental changes, Jack's form would be educed from bits 1-100, and this is what indeed occurred.

It does not matter whether we know the details of what in fact occurred. What matters is that hylomorphic theorists are not left storyless. We can avoid the charge of problematic arbitrariness by appealing to the operation of agents capable of causing the right sorts of dispositive changes in various substances, even if we cannot provide the exact details in this or that case, or even in any case.

Similar sorts of replies involving agents can be given to objections pertaining to Jack after the first moment of his form's eduction. For example, one might object that, at a given moment of Jack's existence, it is problematically arbitrary that a sum of a certain number of bits possesses Jack's substantial form *primo et per se* rather than a sum of a slightly greater number of bits. This, however, is

false. The number of bits included in Jack's body at a given time is presumably a function of his interaction with various substances in his environment. For example, certain active powers possessed by Jack—e.g., his nutritional faculty—will cause accidental changes in other substances such that they lose their substantial forms, and his body is in turn either sustained in its number of bits or even composed of a determinately greater number of bits than before. Alternatively, certain passive powers, such as his power to be cut, in tandem with the active powers of certain agents to cut, will account for his body being composed of some determinately smaller number of bits than before. It is not arbitrary, then, that Jack's body is the sum of a certain number of bits at a given time, but it is a sum of that size at that time because of the histories of some of Jack's active and passive powers.

Precisely which bits in the world, however, are parts of Jack's body? Given human epistemic limitations, this question can likely be answered with certainty only in the following way: these bits, whichever they are in the world, the sum of which has Jack's form *primo et per se*. If we do not know for certain in any deeper way than this which sum in the world has Jack's form *primo et per se*, this is no problem for the solution presented in this paper. Some sum does, for Jack exists, and, therefore, so does his body. This we affirmed, and unlike Unger, we aren't willing to stop affirming it. What the solution and replies in this paper accomplish is a ban on any other overlapping sums competing with it and a ban on any other overlapping rabbits competing with Jack.

Rabbits may multiply, then, and multiply like rabbits, but they do this as we suppose that they do, and not according to the admirable philosophical imagination of Peter Unger.*

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