# St. Thomas on the Unity of Substantial Form

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THE AIM of this essay is to explain and defend St. Thomas's understanding of the unity of substantial form against those who posit a plurality of substantial forms. Let me say, however, that I am not concerned primarily with the historical debate between St. Thomas and his contemporary adversaries.[1] I am concerned rather with certain contemporary Thomists who have drawn the conclusion that Thomas's account of substantial form needs to be modified or updated in light of the evidence of modern science.[2] While they remain unpersuaded by the attempt to reduce the human body to a mere aggregate of lifeless particles, they are moved by the apparently overwhelming evidence that many, if not most, of the properties of the living body are explained by the parts which make it up. This has led them to attempt to rejuvenate a modern version of the doctrine of the plurality of forms.

These Thomists argue that the human body possesses a plurality of substantial forms hierarchically ordered in accordance with the order and structure of the parts of the body. In response to such evidence as organ transplants, this theory grants each body part its own substantial form, ruled by the form of the whole organism. Since the heart can be kept

[1] For the details of the historical debate over the doctrine of a plurality of forms, see Daniel A. Callus, O.P., "The Origins of the Problem of the Unity of Form," *The Thomist* 24 (1961): 257–85; and Emily Michael, "Averroes and the Plurality of Forms," *Franciscan Studies* 52 (1992): 155–83.

[2] For a recent example see Terence L. Nichols, "Aquinas's Concept of Substantial Form and Modern Science," *International Philosophical Quarterly* 36 (1996): 303–18. For older examples see Pedro Descoqs, *Essai critique sur l'hylemorphisme* (Paris: Beauchesne, 1924); Virgil G. Michael, "On the Theory of Matter and Form," *Ecclesiastical Review* 73 (1925): 241–63.

alive and can even carry on some of its distinctive functions outside the body, it seems to have its own form.[3] At the same time, its cooperation with the other organs points to a substantial form governing the whole. The same argument applies to cells, which can also survive separation from the body under certain circumstances. Likewise, molecules within cells, atoms within the molecule, and subatomic particles of all orders seem to be specified and unified by forms of their own, as well as being parts of larger wholes. Except perhaps in the case of the lowest forms in the hierarchy, substantial form does not inform prime matter; rather simpler substances themselves serve as matter for a higher form.

Having presented the position of the pluriformists, let me outline my defense of St. Thomas's position. In the first part of the essay I will show that those who posit a plurality of forms confuse formal and efficient causality. They conceive of the form as a mover that governs and directs the material rather than as an intrinsic principle that causes the matter to be. Indeed, Thomas indicates that the plurality of forms hypothesis is not an adaptation of the hylomorphic theory at all; it is a disguised version of the Platonic view of the soul as the sailor in the ship, that is, a mover of the body rather than a form of the body. In the second part of the essay I will briefly outline the reasons why the soul ought not to be understood Platonically, that is, as an extrinsic mover of the body, but must rather be understood as a formal cause.

In the numerous places that Thomas deals with the question of the plurality of forms, his chief response is to point out that a substantial form, unlike an accidental form, causes the matter to be absolutely:

> Now it is the nature of a substantial form to give to matter its existence without qualification. For the form is that through which a thing is the very thing that it is; through accidental forms a thing does not possess unqualified existence, but only qualified existence, for example, to exist as large, or colored, or something of this kind. Therefore, if there is a form which does not give unqualified existence to matter but which accrues to matter that is already actually existing through another form, then such a form will not be a substantial form.[4]

As Thomas makes clear in this passage, it belongs to the very notion of substantial form that it accrue to matter directly and immediately. According to the hylomorphic theory form and matter together *constitute*

[3] See Nichols, "Aquinas's Concept of Substantial Form," 313–14, 316.

[4] Aquinas, *Questions on the Soul*, q. 9, trans. James H. Robb (Milwaukee: Marquette University Press, 1984).

a material thing. Matter and form, in other words, are not *beings* but *principles* of a being.[5] Unfortunately one is tempted to think of both matter and form as beings of some kind, incomplete substances that are perfected by being joined to each other.[6] One is tempted, for example, to think of prime matter as a kind of extended body lacking any specific qualities; and we imagine form as some kind of non-material thing that can give to matter a determinate shape and a particular set of qualities. The problem is that prime matter, by itself, is not a *body* of any kind and form, by itself, is not a *thing*. Rather, matter and form are principles *by which* material beings exist, the one as passive principle and the other as an active principle. Form and matter, then, do not exist independently of each other.[7] Here, however, lies the difficulty. As human beings, whenever we think of something, we cannot help thinking of it as a being of some kind. Thomas makes this point in regard to substantial form in a passage in *On the Virtues in General*:

> Many have erred concerning forms because they considered them in the way substances are to be considered. It seems that they were led to do this because, in the abstract, forms are given substantive names; we speak, for example, of virtue or whiteness and the like. As a result, some, deceived by this mode of expression, treat of forms as though they were substances. From this have arisen the errors both of those who held for the latent pre-existence of forms, as well as of those who claimed that all forms were immediately created. For these men reason that it is proper to forms to be produced in the same manner as are substances. Since they were unable to discover any source whence forms were educed, they taught either that they were (immediately) created or else that they pre-existed in matter. In this they failed to remember that existence does not belong to the form but to the (composite) subject through the form, so that becoming (fieri), which terminates in being,

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[5] For an excellent discussion of this distinction see Francis McMahon, "Being and Principles of Being," *The New Scholasticism* 17 (1943): 322–39. See also J. A. J. Peters, "Matter and Form in Metaphysics," *The New Scholasticism* 31 (1957): 447–83.

[6] This is the mistake of Suarez who regards form and matter as imperfect or incomplete substances. For a discussion of Suarez's failure to see that form and matter are principles of being rather than beings in their own right, see David M. Knight, S.J., "Suarez's Approach to Substantial Form," *Modern Schoolman* 39 (1962): 219–39.

[7] As St. Thomas notes: "[A] substantial form does not have being in itself, independent of that to which it is united, so neither does the matter to which it is joined. From their union results that being in which the reality subsists in itself, and from them is produced something essentially one." *Aquinas on Being and Essence*, trans. A. A. Maurer, 2nd ed. (Toronto: Pontifical Institute of Medieval Studies, 1968), chap. 6, para. 2.

> is not a process of movement of the form but of the complete subject. For just as form is termed being, not because it is itself a being, if we want to speak properly, but because by it something is; so form is said to become, not because it itself becomes, but because by it something becomes, when a subject is reduced from potency to act.[8]

In this passage Thomas is referring to those who err in thinking of form as the term of generation, but the same error is made by those who posit a plurality of forms. The problem is that they too readily identify the way things are in reality with the way in which we conceive them in the mind.[9] We conceive of substantial form as a thing, but it is only as the *principle* of a material being that form can be said to exist.

Having discussed the fundamental notion underlying the hylomorphic theory, that matter and form are the intrinsic *principles* of a material being, let us return to the position of those who maintain a plurality of forms. The pluriformists maintain that the same body can be informed by more than one form. A molecule of water, for instance, can have one form that makes it to be water and is the source of the various functions that belong to water as water and simultaneously have another substantial form, for example, the form of blood, that orders it to a further end and makes it to be a part of a larger whole. The problem with this position, however, is that if the water molecule already has a form that makes it to be water, adding another substantial form will not make the water *to be* since it already has being. Thus, what is described as "matter" is not a *principle* of a material being; it already *is* a being of some kind. But if the matter is already made to be a certain kind of being by a substantial form, how can it take on an additional form? The additional form cannot be a *substantial* form since it merely modifies an existing being. It appears that the only alternative is to describe the additional form as an accidental form. Those who posit a plurality of forms reject this alternative, however, because the additional form, on their account, does not simply reside in the molecule of water as an accident inhering in a substance. Rather, the additional form plays an active role since it orders and directs the water to a further end. Nevertheless, the problem remains: what is ordered and directed to a further end is something that already is a being of some kind. If the form acts upon the matter, but it does not make the matter to be, the only remaining alternative is that the form acts upon the matter as an agent or moving cause. There is an intrinsic connection between

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[8] Aquinas, *On the Virtues in Common*, a. 11, trans. J. P. Reid (Providence, RI: The Providence College Press, 1951).

[9] See *Summa theologiae* I, q. 76, a. 3, ad 4.

the failure to grasp that form is not a *being*, but rather a *principle* of being, and the misconception of the formal cause as an efficient cause. St. Thomas, in fact, notes the connection:

> For one thing to be another's substantial form, two conditions are required. One of them is that the form be the principle of substantial being to the thing of which it is the form: and I speak not of the effective but of the formal principle, whereby a thing is, and is called a being. Hence follows the second condition, namely that the form and matter combine together in one being, which is not the case with the effective principle together with that to which it gives being. This is the being in which a composite substance subsists, which is one in being, and consists of matter and form.[10]

Thus, it becomes clear that while the pluriformists claim to adapt or modify the hylomorphic theory, that is, the theory that substances are constituted by form and matter as *principles* of being, they instead conceive of both form and matter as beings in their own right related to one another as mover and moved.[11]

Thomas, in fact, frequently draws an explicit connection between the doctrine of the plurality of forms and the view of form as an agent or mover. St. Thomas points out that one can consistently posit a plurality of souls in a single body only if one conceives of the soul Platonically, as a *mover* rather than as a *form* of the body:

> Plato held that there were several souls in one body, distinct even as to organs, to which souls he referred the different vital actions, saying that the nutritive power is in the liver, the concupiscible in the heart, and the power of knowledge in the brain. . . . The opinion of Plato might be maintained if, as he held, the soul was supposed to be united to the body, not as its form, but as its motor. For it involves nothing unreasonable that the same movable thing be moved by several motors; and still less if it be moved according to its various parts. If we suppose,

[10] *Summa contra Gentiles* II, c. 68, translated by the Fathers of the English Dominican Province (London: Burns, Oates and Washbourne, 1934).

[11] One may wonder whether I have unfairly characterized the pluriformist position by seemingly denying that the soul can be a mover of the body when Aristotle and Thomas frequently speak of the soul as a mover. Thomas raises this objection and answers it by pointing out that the soul as mover presupposes a prior and more fundamental activity of the soul, that it causes the body to be an organized whole: "[T]he soul does not move the body by its essence, as the form of the body, but by the motive power, the act of which presupposes the body to be already actualized by the soul." *ST* I, q. 76, a. 4, ad 2; translation by the Fathers of the English Dominican Province (New York: Christian Classics, 1981).

> however, that the soul is united to the body as its form, it is quite impossible for several essentially different souls to be in one body.[12]

According to Thomas, then, the doctrine of the plurality of forms is reduced to the Platonic notion of the soul as sailor in the ship since one can consistently maintain a plurality of forms only if one conceives of the soul as a mover or agent cause rather than as a formal cause.

We are left, then, with two fundamental alternatives: we can either accept the hylomorphism of Aristotle and Thomas and affirm the unity of substantial form or we can adopt the Platonic view of the soul as the sailor in the ship and posit a plurality of movers. Given these alternatives, let me outline briefly the arguments against the Platonic view of the soul as mover of the body.[13]

The primary argument employed by St. Thomas to show that the soul ought to be understood as the form of the body rather than merely a mover of the body is that the soul, unlike the sailor in the ship, makes the body to be the kind of body that it is. In order to see that this is so, Thomas calls attention to the composition of an artifact such as a house or a ship and a naturally organized substance such as a living body:

> For the soul is the form of the entire body and of each of its parts: this must be asserted. For since the body of a human being or of any other animal is a natural whole, it will be called one because it has one form; and by this one form it is completed in a way far different from the mere aggregation or assembling of parts that is found in a house and in other artifacts of this kind. Hence it is necessary that each part of a human being and of an animal receive its existence and specific nature from its soul as from its essential form. Hence the Philosopher states that when a soul departs, neither eye, nor flesh, nor any other part of the body remains except in an equivocal sense.[14]

In the case of an artifact, then, the form of the whole results from a mere order or arrangement of its parts. In the case of a living thing, however,

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[12] *ST* I, q. 76, a. 3. See also *Questions on the Soul*, a. 11; *De spiritualibus creaturis*, a. 3.

[13] I do not focus here on those arguments that deal specifically with the human soul. Thomas spends a lot of time arguing, contrary to Plato, that the human soul is the form of the body. Part of the difficulty here stems from the fact that the highest operation of the human soul is not the operation of any bodily organ. This difficulty does not directly pertain to the position of the pluriformists, however, so I focus here instead on the evidence indicating that the soul or animating principle of any living thing ought to be understood properly as a form rather than a mover of the body.

[14] *Questions on the Soul*, q. 10. See also *ST* I, q. 76, a. 8; *ScG* II, c. 72.

the form does not result from assembling the parts; rather the form is *prior* to the parts because it gives them their being. Since when the soul departs the body ceases to function and the parts corrupt, the priority of the form is evident.

That the form of a living thing gives the parts of the body their existence and specific nature is also evident from the process of growth and maturation. When a plant grows, the various parts of the plant—root, stem, leaf, flower—are produced from within the plant. Of course, this is not literally true of *all* of the parts of a plant. A plant must have certain very simple parts for it to be at all. Nonetheless, most of the parts that characterize the mature organism are produced from within the already existing plant by a process of cell differentiation. In the production of a ship, however, we see that its various parts are produced separately and later added together. Thus the processes of generation and corruption show that the being of the living body, and not merely its various operations, stems from an intrinsic principle.

Now one might object that the evidence of modern medicine, especially the ability to transplant organs of the body, disproves the claim that when the soul departs, the organs of the body corrupt. If the heart, for example, can be kept alive after the departure of the soul, this suggests that the soul is not the cause of the being of the heart. One should not overlook the fact, however, that the heart needs to be kept alive. Under normal circumstances, the body begins to corrupt almost immediately after the departure of the soul. To argue that the soul is an extrinsic principle analogous to the sailor in the ship because in certain conditions one can artificially sustain the organs of the body is a very weak argument. When the sailor steps off the ship, one does not need to hook it up to life-support. Or if one wants to transfer its sail to another ship, it is not necessary to pack it in ice and airlift it to the desired destination.

Now one might reply that since the organs of the body can stay alive at all absent the soul requires us to posit that the organ has a life of its own independent of the soul. Indeed, there are remarkable cases in which the cells from a larger organism have been kept alive for years and years. I am thinking, for example, of the famous experiment in which chicken heart cells were kept alive in a laboratory for decades. I think that a solution to this problem can be found, however, by appealing to Thomas's notion of a transitional form, that is, a substantial form that belongs to matter either in the process of generation towards, or away from, a natural kind.[15] If in the process of generation we find certain animate substances such as

[15] For a discussion of the notion of transitional form in St. Thomas, see *In libros De generatione et Corruptione*, Bk. I, 1.8, n.3.

sperm and ovum which possess a transitional form, it is not surprising that we find something similar in the process of corruption. It seems at least plausible that the organs and individual cells of the body possess certain transitional forms that permit metabolic functions to continue for a limited time. But again, these forms are only *transitional* as is evident from the fact that the organs must be kept alive. One is merely slowing down, or arresting, the natural process of corruption.

Even if we suppose that the soul is responsible for the being of the cells and organs of the body, however, one might wonder whether one can maintain that all of the parts of the body have their being from the form of the whole. If, as the evidence of modern science suggests, a water molecule absorbed by the body remains chemically unchanged, how can we maintain that the water contained in the blood is caused by the substantial form of the whole organism?[16] Unlike the heart and the lungs, water does not seem to be generated from within, but assimilated from without.

This difficulty, I believe, is the most difficult to handle. One might be tempted to avoid the force of this objection by saying that water is not part of the substance of a living thing, but is merely used by a living organism as a medium in which cellular and intercellular functions can take place. One of the primary functions of water, after all, is that it is a universal solvent that facilitates the chemical reactions of other substances. The difficulty with this solution is that we are forced to say that most of the human body, roughly 80%, is not really part of the substance of you and me—a rather startling conclusion. But even if we were able to come to terms with the fact that most of us are not even half the man we used to be, we cannot stop here. Nearly all of the minerals in the human body are absorbed from without. As for the organic compounds, for example, proteins and amino acids, many of them can now be synthesized in the laboratory. If we maintain that water is not part of the substance of the human body, neither will be most of the other parts out of which it is made.

If a living organism is one substance we need an explanation of how the elements assimilated by the body can be said to derive their being from the substantial form of the whole. St. Thomas does suggest an answer. He suggests that higher forms, precisely because they are higher, are able to contain the perfections found in a lower form:

> [T]here is no other substantial form in man besides the intellectual soul; and that the soul, as it virtually contains the sensitive and nutritive souls, so does it virtually contain all inferior forms, and itself alone does what-

[16] See Nichols, "Aquinas's Concept of Substantial Form," 312–13.

> ever the imperfect forms do in other things. The same is to be said of the sensitive soul in brute animals, and of the nutritive soul in plants, and universally of all more perfect forms with regard to the imperfect.[17]

According to Thomas, it is part of the perfection of a higher form that it is able to supply the perfections of a lower form. Thus, just as it causes the being and perfection of the various organs and cells of the body, so it can also cause the being of water and other simpler substances that function as parts of the body. Moreover, the fact that the body's absorption of water takes place in such a way that its chemical properties and material structure are retained need not be taken as a proof that no substantial change has occurred; it might simply be an indication that water is the kind of substance that can be easily assimilated by the human body. It is because water contains just the right properties needed by the body that its transformation can take place effortlessly and without the dramatic sensible effects that often accompany substantial change. The notion of a hierarchy of forms, then, offers at least a plausible explanation of the assimilation of water by the human body.

One might respond, however, that the hypothesis of a plurality of forms can account for the incorporation of water into the human body in a way that is *more* plausible than the account of St. Thomas because it is more closely based upon the empirical evidence. If water does not *appear* to change, why suppose that it undergoes a substantial change? If the water in the body simultaneously retains its properties and material structure *and* acquires an ordination to a further end, the simplest and most elegant solution would appear to be the hypothesis of a plurality of forms. The strength of the doctrine of a plurality of forms is that it seems to be more firmly rooted in the empirical evidence.

Let me conclude by suggesting three ways in which the doctrine of the plurality of forms requires us to distance ourselves from the empirical evidence in a way that far exceeds Thomas's explanation of the way that lower forms are contained in the higher. First, by positing a plurality of substantial forms the pluriformists call into question our immediate experience of ourselves as one being. As St. Thomas notes, "it is one and the same man who is conscious both that he understands and that he senses. But one cannot sense without a body, and therefore the body must be some part of man" (*ST* I, q. 76, a. 1). Second, in order to posit a plurality of substantial forms one must recast the "form" as an agent or moving cause. In so doing one must posit movers that have their *being* independent

[17] *ST* I, q. 76, a. 4. See also *ST* I, q. 76, a. 3 and I, q. 76, a. 6, ad 1; *Questions on the Soul*, q. 11; *De spiritualibus creaturis*, a. 3.

of matter. But if such movers exist independently of the body then they will be immortal just as the human soul is immortal. Hence, each of the various forms posited by the pluriformist, whether it be the form of an individual blood cell or the form of a water molecule, is an immaterial soul.[18] Although the Thomistic position requires us to say that things are not always as they appear, it is much more consistent with our experience of the world since it refuses to grant that a soul or form can *exist* independently of the body unless there is some evidence that it can *operate* independently. Operation follows being.[19] Finally, the plurality of forms doctrine ultimately denies that things have natures, since it denies that the forms of things are intrinsic principles, recasting them instead as extrinsic movers. While our experience suggests that the nature of a tree is in the tree, the plurality of forms hypothesis separates a thing from its nature. Thus, while the pluriformists aim to modify, and thereby advance, the hylomorphic theory of Aristotle as a response to reductive materialism, they end by affirming a mechanistic view of nature presided over by immaterial movers inhabiting some otherworldly Platonic heaven. NV

[18] Leibniz, who is perhaps the most famous pluriformist, admits this fact. Like the pluriformists we are addressing, Leibniz maintains that every organized body is held together by its own monad, an immaterial mover responsible for holding together the organic body, and each monad is either a dominant or subordinate monad depending upon whether the body that it governs is contained by a larger whole. Since his monads are immaterial movers, he concludes that they are eternal.

[19] See *Questions on the Soul*, q. 19.