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Article abstract

The Thomistic doctrine of the unity of substantial form accounts for the Cartesian mind's close unity with body, but for their independence Paul Hoffman advised the pluralist reading of the composite attributable to William of Ockham and Duns Scotus. Principally to link Cartesian thought to a more extensive ethical tradition, I suggest that the Thomistic doctrine could be developed to respond to Marleen Rozemond's objections to a scholastic reading if the substantial form is taken to be the argument to incline the conatus or appetite of existence.

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AQUINAS, DESCARTES AND THE UNITY OF SUBSTANTIAL FORM

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RÉSUMÉ : La doctrine thomiste de l'unité de la forme substantielle explique l'unité près de l'âme cartésienne avec le corps, mais pour leur indépendance Paul Hoffman a conseillé la lecture pluraliste du composite attribuable à Guillaume d'Ockham et Duns Scot. Principalement pour lier la pensée cartésienne à une tradition éthique plus étendue, je suggère que la doctrine thomiste pourrait être développée pour répondre aux objections de Marleen Rozemond à une lecture scolaire si la forme substantielle est considérée comme l'argument d'incliner le conatus *ou de l'appétit de l'existence.*

ABSTRACT : The Thomistic doctrine of the unity of substantial form accounts for the Cartesian mind's close unity with body, but for their independence Paul Hoffman advised the pluralist reading of the composite attributable to William of Ockham and Duns Scotus. Principally to link Cartesian thought to a more extensive ethical tradition, I suggest that the Thomistic doctrine could be developed to respond to Marleen Rozemond's objections to a scholastic reading if the substantial form is taken to be the argument to incline the conatus *or appetite of existence.*

A subtle incongruity emerges in the opening passages of the Sixth Meditation. The meditator contends that the mind and body are "really distinct" but then goes on to speak of a close unity. After much of the lengthy discourse of the *Meditations*, and by way of an argument for the existence of sensory objects, the meditator rehearses the grounds (from the Second Meditation) for distinguishing mind and body : "I have a clear and distinct idea of myself, insofar as I am simply a thinking, non-extended thing ; and […] I have a distinct idea of body, in so far as this is simply an extended, non-thinking thing. And accordingly it is certain that I am really distinct from my body" (AT VII 78, CSM II 54).[1] The meditator then goes on to disavow the Platonic image as a "sailor in a ship" — understood to be suggestive of an especially distant relationship of the mind to the body — and to say instead, "I am […] closely

1. *The Philosophical Writings of Descartes*, 3 vol., trans. John Cottingham, Robert Stoothoff, Dugald Murdoch and, for correspondence (vol. 3), Anthony Kenny, Cambridge, Cambridge University Press, 1984 ; *Œuvres de Descartes*, 12 vol., ed. Charles Adam and Paul Tannery, Paris, Vrin, 1964-1976.

joined and, as it were, *intermingled* with it, so that I and the body form a unit" (AT VII 81, CSM II 56, emphasis added). The conflict in these passages is widely thought to condemn Descartes's conception of the relationship of mind and body in the *Meditations*, and lead to the well-known admission, thought to be one of defeat, in the correspondence with Elisabeth : that it is impossible for us to simultaneously understand both their unity and independence.

The apparent incompatibility of the mind's close unity with a body and their mutual independence might be due, as Paul Hoffman suggested, to our at least implicit reliance on the Thomistic doctrine of the unity of substantial form, the belief that the intellective soul is the one "substantial form" of a human body, and the others — such as the nutritive and sensitive souls — merely the "accidents" (certain "faculties" or "powers") of an essentially intellectual nature. Using the Thomistic doctrine of the unity of substantial form to model the Cartesian composite would be the most intuitive to explain the meditator's feeling of a close unity with a body, but not their independence. We need, Hoffman therefore advised, to use an alternative scholastic doctrine of the composite — commonly attributed to William of Ockham and Duns Scotus — as a combined plurality of substantial forms, each needed to fully define a thinking/animal body. As Hoffman explained, the *ens per se* (the "unity in itself") of the meditator's experience could "be composed of a plurality of actual things. For example, on Ockham's view prime matter, the form of corporeity, the sensory soul, and the intellectual soul are all actual constituents of a human being".[2]

An outstanding critic of Hoffman's model, Marleen Rozemond, has stressed the Platonic provenance of the image of "intermingling" (*Phaedo* 81c) in the above passage in the *Meditations* and the many ways the organic unity of the Aristotelian composite would be opposed to the independence of Cartesian mind and body, and Descartes's explicit rejection of the scholastic substantial form in favour of concepts (those of geometry) of greater use in mechanistic science.[3]

What I recommend is that the Thomistic doctrine would itself be compatible with the genuine independence of the Cartesian mind and body, and the geometric relations of a mechanistic science, if the substantial form is understood to be only indirectly definitive of a natural body, but more directly of the *conatus* or appetite of its existence. A "natural body", Aquinas remarks, is "inclined" by its substantial form to

2. *Essays on Descartes*, Oxford, Oxford University Press, 2009, p. 28.

3. *Descartes's Dualism*, Cambridge, Mass., Harvard University Press, 1998, p. 145 and 157 ; "Descartes, Mind-Body Union, and Holenmerism", *Philosophical Topics*, 31, 1-2 (2003), p. 343-367, at p. 355 and 363-364 ; and "Descartes and the Immortality of the Soul", in John COTTINGHAM, Peter HACKER, ed., *Mind, Method, and Morality : Essays in Honour of Anthony Kenny*, New York, Oxford University Press, 2010, p. 252-276, at p. 267-268. The "watch analogy" ("Descartes, Mind-Body Union, and Holenmerism", p. 363-364), that like the functioning of a watch, life depends for Descartes on the mechanistic operation of a body, is further explored in Robert PASNAU, "Form, Substance, and Mechanism", *Philosophical Review*, 113, 1 (2004), p. 31-88, at p. 56-57. Aquinas adopted the same perspective as reflected in the watch analogy, however, in that life depends for Aquinas on the functional unity of the "elements". See ST 1.76.6*ad* 2, *Summa Theologica*, trans. Fathers of the English Dominican Province, New York, Benziger, 1948 ; *Opera Omnia*, ed. Fundación Tomás de Aquino, 2000-2013, *http://www.corpusthomisticum.org/iopera.html* ; and the *Super De Anima* § 144, trans. Kenelm Foster and Silvester Humphries, *Commentary on Aristotle's De Anima*, Notre Dame, Dumb Ox Books, 1951.

its existence (ST 1.59.2*ad* 1). The natural body would be inclined by its substantial form to its existence, I'm suggesting, as the *affirmation* is inclined by the argument to the *felt necessity* of a subject's nature. "Actuality", Aquinas tells us, "is observed in the substantial form [i.e. the argument] prior to its being observed in the subject" (ST 1.77.6). The substantial form is generally thought to be in some sense God's idea or the "principle" expressed, for example in Leslie Armour's sense, in the manifest behaviour of a body.[4] As "all things flow", Aquinas explained,

> […] from the Divine will, all things in their own way are inclined by appetite towards good, but in different ways […] [in one way] without knowledge, as plants and inanimate bodies. Such inclination towards good is called "a natural appetite". […] [By another,] with some knowledge […] as in the sense […] called a "sensitive appetite". […] [By another,] as inclined towards good in general. Such inclination is termed "will" (ST 1.59.1).

The argument is therefore God's, on the reading I propose, and the appetite of an individual's existence would be God's will inclined by the argument for a subject's nature.

An ambiguity in the discussion of substantial form tends to confuse the sense of God's idea of and the self-consciousness of an individual. The felt necessity of the argument for each individual's existence could be called their "apportionments of being", to use Lawrence Dewan's translation of *modos essendi* ("modes of being") (see ST 1.14.6).[5] If consciousness depends on our reflecting on our existence, then the individual's self-consciousness could be explained by the structure of the idea, in that the idea is structured to be self-reflective.

Another issue suggested by the above quote that I can only gesture toward resolving is the substantial form's inclination of the appetite "towards good" in view of Descartes's alleged repudiation of "final causes" in science.[6] An analogy in the *Nicomachean Ethics* extensively employed by Aquinas — that "in morals the end is what principles are in speculative science" (ST 1-2.8.2, Aristotle, *Nicomachean Ethics*, 1151a15-20) — needs to be explored thoroughly, I suspect, to understand the role of geometric concepts in Descartes's understanding of science as a development in Thomistic ontology. The essential nature is one meaning of a thing's "end". This meaning of "end" makes sense of the analogy of the felt necessity of ends and first principles of speculative science, and Descartes's use of geometry in the role of a substantial form of existence.

Again outside the scope of the essay is the suggestion in the above of a sensitive animal's being inclined "with some knowledge" toward the good — the issue of Descartes's reputed rejection of the consciousness of animals.[7] The fact that Descartes

4. "Descartes and Eustachius a Sancto Paulo : Unravelling the Mind-Body Problem", *British Journal for the History of Philosophy*, 1, 2 (1993), p. 3-21, at p. 14-15.
5. *St. Thomas and Form as Something Divine in Things*, Milwaukee, Wis., Marquette University Press, 2007, p. 44.
6. See Justin SKIRRY, *Descartes and the Metaphysics of Human Nature*, London, Continuum, 2005, p. 125.
7. John COTTINGHAM surveys the issue in *A Descartes Dictionary*, Oxford, Blackwell, 1993, s.v. "animal". Hugh Hunter suggested this trenchant issue at the conference at Dominican University College (see the final note).

considered the "movement in the brain […] common to us and the brutes" especially mechanistic needn't be taken to discount the consciousness of animals. The "souls [of animals ; *leur âme*] [are of] […] a completely different nature" (AT VI 58, CSM I 140). The substantial forms of the sensitive animals' existence would be developed in some respects more and in some respects less extensively than our more intellectual forms of sensitive experience over and beyond the purely mechanistic aspects of our own and the animal's existence.

I. THE CONTEXT IN HISTORY

Taking up the reading of substantial form as the argument for a natural body's existence, we can explore degrees and kinds of such argument to respond to Ockham's critique of the Thomistic doctrine of the unity of substantial form, and thereby establish the appropriate model to account for the independence as well as the unity of the Cartesian mind and body. That the speculative model has a logical basis in an issue alive at the time gives it the appropriate context in history.

Aquinas's main argument for the unity of substantial form had been that because the existence of a subject follows on the substantial form, another, supposedly substantial form of the same individual had to be accidental to the already given one (ST 1.77.6 ; see also *Super De Anima* § 224, ST 1.76.4). The doctrine also seemed to account for the overall unity and the requisite animality of the scientific animal's nature, and the experience of conflicts such as of desire and prudence (ST 1.76.3). The appetite would have to be one in itself to be conflicted by either the arguments for desire or those for prudence.

Their differences in the definition of substance explained their separate views on unity of substance. While a subject has to act independently to meet the Thomistic criterion of a separate substance (*Super De Anima* § 20), for Ockham it's enough that forms "expel each other" in the same subject (SL 1.43, 137, OPh 1, 125).[8] The same experience of a clash of desire and prudence therefore seemed to Ockham to imply that the sensitive and intellective souls are "really distinct", because "desiring something and spurning that same thing are contraries in the same subject" (*Quodl.* 2.10, 132-133, OTh 9, 157-158).[9] Thus, in the body, the substantial form expels its contrary, but the incorruptibility of the intellective soul, Aquinas remarks, depends on the ability to simultaneously conceive of "contraries" (ST 1.75.6), and I take it therefore the ability of being simultaneously disposed by the arguments of desire and prudence.

Though the complete series of Ockham's objections could be said to be in some sense anticipated by Aquinas in originally setting out the defence of the doctrine, Ockham could be understood to have uniquely developed the sense of Aquinas's

8. *Ockham's Theory of Terms : Part I of the Summa Logicae*, trans. Michael J. Loux, Notre Dame, Notre Dame University Press, 1974 ; *Guillielmi de Ockham opera philosophica et theologica*, ed. Gedeon Gál, Stephen Brown *et al*., St. Bonaventure, N.Y., Franciscan Institute, 1967-1985).

9. *Quodlibetal Questions*, 2 vol., trans. Alfred J. Freddoso and Francis E. Kelley, New Haven, Conn., Yale University Press, 1991.

admission that a dead body would have a new substantial form, and not be "left specifically the same […] when the soul leaves the body", Aquinas remarks, "another substantial form takes its place ; for a passing-away always involves a concomitant coming-to-be" (*Super De Anima* § 226 ; see also ST 1.76.8). The dead body would have, Ockham alleges, many of the same unique features of the original living one — such as a turned-up nose and broad hands — and the same substantial form must be the cause of these accidents. Hence, if the substantial form of these accidents could be expected to continue to support them beyond the death of the original body, it must be capable of acting independently (*Quodl*. 2.11, 137, OTh 9, 163). The objection rests on an "externalist" reading of Aquinas's criterion of separate existence, as the ability of the subject itself (the body) to act — to continue to support these accidents, for example — independently. An externalist reading concentrates on the exterior acts of a substance.

The speculative reply rests on an "internalist" reading, one of how the understanding is developed to account for the exterior acts of a substance. Aquinas responded to a similar issue of how the other "species" — the corporeal, the sensitive, etc. — could be ascribed to the one intellectual form of a human body. And he replied that the "parts […] do not make the species ; but the whole does, and therefore, properly speaking, we cannot say that these are of different species, but that they are of various *dispositions*" (ST 1.76.5*ad* 3, emphasis added). The speculative response would thus understand the accidents of a dead body to reflect many of the same *dispositions*, but no longer on the whole aligned to the complete argument for a living body. They would be aligned to sub-arguments, however, of use to one of a corpse's existence.

This response to Ockham gives us a model to resolve the conflict in the *Meditations*. As the experience of the unity of the Cartesian mind and body would be due to the felt necessity of God's synthetic or constructive argument for the composite, their independence would be due to the felt necessity of the *a priori* analytic or inductive arguments of the early *Meditations*. As the meditator observed, we could think of a mind independently of body but felt the absurdity of trying to conceive of it independently of the idea of "a thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions" (AT VII 28, CSM II 19), and likewise with "body" without the idea of "something extended, flexible and changeable" (AT VII 30-31, CSM II 20). The idea of body would be definitive of the scholastic subject ; the idea of the mind's affirming, denying, etc., of the appetite inclined by the argument. They would be each ideas in the mind, however, and together establish the mind's ability to act in accordance with its own nature independently of the essential nature of body. To act in accordance with the essential nature of body would be for the mind to be guided in developing an argument by the exigencies of an object in space, whereas for the mind to act in accordance with its own nature is to develop the argument more generally in accordance with the demands of its own self-identity, the coherence of the affirmation inclined by the argument for its object's existence.

II. THE CONTEXT OF THE *MEDITATIONS*

Argued for tentatively in the Second Meditation, the ability of the mind to act independently is recalled in the Sixth because the coherence and fullness of that way of thinking (thinking independently of body) is now warranted by the arguments for God's existence, and the ability of the mind to act independently of the body would be needed to establish the objectivity of Cartesian science.

Whereas a "great propensity to believe" in the existence of these objects must be symptomatic of arguments for their existence, if God is no "deceiver" (AT II 79-80, CSM II 55), the ability to act independently of body would be needed to develop the understanding of deceptive sensory experience such as of "dropsy" (the experience of a desire to drink that it would be harmful to one's health to satisfy). The account the meditator gives demonstrates the objectivity of a Cartesian science of experience.

As the "whole mind seems to be united to the whole body", the meditator remarked, the "divisibility" of body would have explained the mind's being "immediately affected […] only by the brain, or perhaps just by one small part of the brain [the 'pineal gland'] […] said to contain the 'common' sense" (AT VII 86, CSM II 59). The meditator therefore suggested the possibility of the pineal gland's continuing to support the sensory experience of a desire to drink while isolated from the overall health of the animal body (AT VII 86-89, CSM II 59-61). The Cartesian body would be "divisible" in the sense Ockham thought the subject to be capable of being divided between a given determinate nature and its contrary. The appetite of existence would by contrast be capable of being simultaneously inclined by the arguments for either one (AT VII 86, CSM II 59). The issue of the pineal gland for the scholastic reading is the conflict between the unity of the soul in itself and body's divisibility — "if the soul interacts only at the pineal gland", Rozemond therefore asks, "in what sense is the soul supposed to be united to the whole body ?"[10]

They would be in conflict in the body itself, because the body is subject to contrariety, yet they wouldn't be in conflict in the mind, because the mind, being the appetite of existence, would be capable of being inclined by the idea of both the mind itself (its idea of its essential nature as "affirming, denying", etc.) and the idea of its "objective" or intentional reality. As Descartes advised Elisabeth, "feel free to attribute […] matter and extension to the soul because that is simply to conceive it as united to the body […] the matter she has attributed to thought is not thought itself" (AT III 694-695, CSMK III 228, 28 June 1643). The image of "intermingling" in the meditator's observations of the unity of mind and body might merely indicate, as Geneviève Rodis-Lewis suggests, that "the interaction is felt by the whole body".[11]

10. "Descartes, Mind-Body Union, and Holenmerism", p. 355.

11. "Problèmes discutés entre Descartes et Regius', in Theo VERBEEK, ed., *Descartes et Regius*, Amsterdam, Rodopi, 1991, p. 36-46, at p. 39. As she argued, they needn't be taken to "intermingle" in the sense of being externally related : Descartes denied that the "as it were intermingling" (*quasi permixtio*) of mind and body would be of "two bodies" (AT VII 390, CSM II 266, Fifth Replies to Gassendi) ; and to Mersenne, explained that the intermingling could be situated between the "motion of the particles in the organs" and the "immediate effects produced in the mind" (AT VII 81, 437, CSM II 56, 294-295).

They would have "intermingled" in the sense of the appetite modified by the argument for the composite and by the sub-argument's involvement in the wider sphere of sensory and bodily experience.

The affirmation of the nature of body is nonetheless in itself free of the demands of an object in space. As Descartes explained to Henry More :

> Commonly when people talk of an extended thing, they mean something imaginable. […] they can distinguish by the imagination various parts of determinate size and shape, each non-identical with others […] no two can be imagined simultaneously in one and the same place. Nothing of this kind can be said about God or about our mind ; they cannot be apprehended by the imagination but only by the intellect […] we easily understand that the human mind and God and several angels can all be at the same time in one and the same place (AT V 270, CSMK III 361, 5 February 1649).

The objectivity of science depends on the capacity of the mind to similarly take or conceive of another perspective on the experience of having an animal body. To act in accordance with the mind's essential nature is to be capable of being moved beyond the requirements of a body even in recognizing the specific demands of an object in space.

III. THE ORGANIC UNITY OF THE ARISTOTELIAN COMPOSITE

The ordering of the appetite toward the more comprehensive argument for the composite is evident in Descartes's reply to Gassendi's suggestion that the pineal gland is simply the Stoic *hegimonikon* — the ruling part but nothing outside the functional unity of an animal body. As Descartes replied,

> […] if we are to take "soul" […] [in the sense of] the "first actuality" or "principal form of man", then [it is] […] the principle in virtue of which we think […]. For I consider the mind not as a part of the soul but as the thinking soul in its entirety (AT VII 356, CSM II 246).[12]

The "first actuality" and "principal form of man" easily allude to Aquinas's main proof of the unity of substantial form (that the "first" and "principal form" could only be followed by accidents), and to say it is "the thinking soul in its entirety" would have signified the Thomistic doctrine as applied to the substantial form of humanity, and the claim made in defence of it that the one substantial form of humanity "perfects matter according to […] various degrees […] the same essential form makes man an actual being, a body, a living being, an animal, and a man" (*eadem forma est per essentiam, per quam homo est ens actu, et per quam est corpus*, etc.) (ST 1.76.6*ad* 1).[13] The reply to Gassendi responds to Rozemond's objection — if taken,

12. As SKIRRY notes, for "Ockham, this entity [the subject for sensation] is an additional substantial form, but for Descartes this third entity is the complete substantial human nature" (*Descartes and the Metaphysics of Human Nature*, p. 125).

13. The reference to an "actual being" (*ens actu*) is not necessarily to another substantial form prior to one of "body", but actually seems to be Aquinas's reference to the act of being accomplished through any given substantial form of existence.

as it must, to apply to the Thomistic model — that "there is simply no mention of the idea [of an order of forms] in Descartes".[14] The pineal gland in Descartes's physiology must be considered in some sense central to the organic unity of a sensitive animal body, but the appetite of the animal body's existence would be further determined through the more comprehensive argument for the existence of the composite. Aquinas thus allowed that it is "precisely in the brain that animal forces culminate" (*perficiuntur*, "are perfected") (ST 1.115.5). The appetite of the animal body's existence would have to correspond to the more elaborate argument — "the same essential form [that]makes man an actual being, a body, a living being, an animal, and a man" — in the same way that the affirmation established by the argument for a subject's nature would have to correspond to a more developed idea of the grounds for its nature.

The scientific animal's own self-knowledge would have to be some type of superior sub-argument, lemma or dialectical thesis of God's argument, for the animal's self-knowledge would have a direct influence over its sensory and bodily experience. We can nonetheless cite the difference in the degree of comprehension of God's and the scientific animal's knowledge of the composite to respond to Robert Pasnau's objection to the Thomistic reading of the reply to Gassendi, that Aquinas only considered the intellect to be a "power", not the essence, of the soul. The relevant passage in the *Summa Theologiae* says our intellect is only a power of the soul because "in God alone His action of understanding is His very Being" (ST 1.79.1).[15] The scientific animal's idea of its existence would fail to establish its essence and fail to account for its existence. Yet Descartes's claim is that the thinking animal's capacity to conceive to some degree of this type of argument is itself distinctive of the intellective animal's existence, not that its self-knowledge would be sufficient to account for its existence.

Where Aquinas remarked that the soul has "an aptitude and a natural inclination to be united to the body" (ST 1.76.1*ad* 6),[16] following another of Rozemond's objections to Hoffman's scholastic reading of Descartes it might be noted that the Regius correspondence stressed the mind's and body's mutual indifference. "When we consider the body alone we perceive nothing in it demanding union with the soul", Descartes tells Regius, "and nothing in the soul obliging it to be united to the body" (AT III 461, CSM III 200, December 1641).[17] The answer to Rozemond's objection, if directed to the Thomistic reading, appears in Descartes's clarification given to Ar-

14. *Descartes's Dualism*, p. 145.

15. "The Mind-Soul Problem", in Paul J.J.M. BAKKER, Johannes M.M.H. THIJSSEN, ed., *Mind, Cognition and Representation : The Tradition of Commentaries on Aristotle's De anima*, Aldershot, Ashgate, 2008, p. 3-19, at p. 3-4, 14-15.

16. Aquinas considered the soul to be "incorruptible" in the sense of not being destroyed by its contrary. It has the unique "potentiality […] to receive" a more comprehensive understanding of a subject in its experience (ST 1-2.22*ad* 1). The separate (intellective) soul, in the sense of the sub-argument, may be said to have an "aptitude and […] natural inclination" to body therefore as a result of the soul's ability to conceive of the more refined knowledge engendered by experience.

17. *Descartes's Dualism*, p. 157.

nauld (in the Fourth Replies) of the "completeness" of the concepts of mind and body. A substance could be "incomplete insofar as it is referred to another [finite] substance […] in just the same way", Descartes explained, that "the mind and the body are incomplete […]. But", he goes on to say, "if they are considered on their own they are complete" (AT VII 221-222, CSM II 156-157). The substance or "existence" of a thing is relative to the elaboration of the argument to establish its nature (see Descartes's definition of "substance", AT IXB 24, CSM I 210, I § 51). The "completeness" of a substance is likewise relative to the argument. However comprehensive, it's simply "complete" in the sense of establishing a sense of the felt necessity of subject's nature.

The Cartesian analyses of the concepts of the mind and body established their existence in the Aristotelian-Thomistic category of simple substance. Aquinas accepted that, "in the case of things […] not composite but simple […] truth or falsity is not present […] as a result of any combination or separation […] in reality, but arises because their quiddity is known or not known. For when we acquire knowledge of the quiddity of any simple being, the intellect seems to be true" (*Sententia Metaphysicae*, V9 § 11).[18] The shift in methodology to the coherence of the appetite as the controlling factor in the analyses of concepts enabled Descartes to explore a science of diverse *modes* (in the sense of the ways of being) of the intellective soul, the "primitive […] simple notions" enumerated in the correspondence with Elisabeth : "[…] those of being, number, duration, etc. […] extension […] thought, which includes the perceptions of the intellect and the inclinations of the will. Lastly […] the notion of their [the mind's and body's] union". They would be each a simple substance insofar as they were "each understood through itself", and "in our own soul […] by [its] nature" (AT III 665-667, CSMK III 218-219, 21 May 1643). The felt necessity of the constructive argument for our natural body's existence would be itself a simple substance insofar as it had the same ground in "our own soul […] by [its] nature" as the analytic argument for the mind's independence.

We're unable to elaborate the synthetic argument for our natural body's existence fully enough to conceive of how it followed from the analyses of mind and body. As Descartes therefore admitted in the follow-up correspondence, "it does not seem to me that the human mind is capable of forming a very distinct conception of both the distinction between the soul and the body, and their union ; for to do this it is necessary to conceive of them as two things, and the two conceptions as mutually opposed" (AT III 693, CSMK III 227, 28 June 1643). The experience would be of an incomplete synthesis such as one of desire and prudence, except beyond the contingent limits of human science to resolve.

As Rozemond has also argued, however, Descartes's idea of "body, taken in a general sense" as a "pure" (or "incorruptible") substance (the Synopsis of the *Meditations*, AT VII 14, CSM II 10) entails its existing independently of a prior subject. This contradicts the "scholastic" notion of the dependence of form on matter. "The

18. *Commentary on the Metaphysics of Aristotle*, 2 vol., trans. John P. Rowan, Chicago, Henry Regnery, 1961.

scholastics did not have a notion of body as a pure substance in Descartes's sense", she explains "the separation of these [the scholastics' form and matter] […] constitutes the corruption and the natural ceasing-to-be of bodies" (see ST 1.75.6, on the soul's incorruptibility).[19] Aquinas nevertheless considered "primary matter" to be "created" (ST 1.44.2), and to be "created under some form" (ST 1.84.3*ad* 2). Against the same objection that "whatever is made is composed of a subject and of something else", Aquinas replied that "here we are speaking of things according to their emanation from the universal principle of being ; from which emanation matter itself is not excluded, although it is excluded from the […] mode of being made" (ST 1.44.2*ad* 1). The order of emanation depends thus on the capacity of God to conceive immediately of the whole nature of a subject. The most basic substantial form of body needn't rely on another subject then,[20] but solely on the capacity of the mind to conceive. "Wherefore matter, once understood as corporeal and measurable", Aquinas remarks, "can be understood as distinct in its various parts, and as receptive of different forms according to the further degrees of perfection" (ST 1.76.6*ad* 2). Aquinas's doctrine of the unity of substantial form entails that the idea of the space of a body would be an essential factor in the argument for its existence.

Aquinas goes on to discount the spurious grounds for the objection in that, though "it is essentially the same form which gives matter the various degrees of perfection […] yet it is considered as different when brought under the observation of reason" (*considerationem rationis differ*) (ST 1.76.6*ad* 2). A way to make sense of this passage is Carlos Bazán's contention that "if all the perfections of the compound are from the same formal principle, we cannot establish a real distinction between them, but only a distinction of reason".[21] The second type of "abstraction by the intellect" thus makes no difference to the character of the subject, for example if a "circle is abstracted by the intellect from any sensible matter" ; the first, however, does make a difference if, for example, "animal is abstracted from man" so only the animal is left (ST 1.40.3). The first type of abstraction of corporeal form must be available to God, but it becomes to some degree so to us through an adjustment in the character (albeit not the scope) of human science.

IV. DESCARTES'S OVERT REJECTION OF SCHOLASTIC SUBSTANTIAL FORM AS A CONCEPT IN SCIENCE

What Descartes rejected in the name of the scholastic substantial form in the Regius correspondence is the view expressed in a brief pamphlet by the Reform theolo-

19. "Descartes and the Immortality of the Soul", p. 267-268.

20. Aquinas and Descartes agreed that we couldn't know the substance of body in itself but through the idea of the three dimensions of Euclidean space (ST 1.77.1*ad* 7, ST 1.18.2, AT VII 176, CSM II 124, Third Replies to Hobbes, AT VIIIA 25, CSM I 210-211, I § 53). The most fundamental idea of body would be some infinitely more analytic one of Euclidean space.

21. B. Carlos BAZÁN, "La corporalité selon saint Thomas", *Revue Philosophique de Louvain*, Quatrième série, 81, 51 (1983), p. 369-409, at p. 404.

gians (led by Voetius) opposed to Regius' teaching of Cartesian physics at the University of Utrecht, the confused notion of "substance" reduced to "a merely corporeal whole". "When we deny substantial forms", Descartes advised Regius, "we mean by the expression a certain substance joined to matter, making up with it a merely corporeal whole" (AT III 502, CSMK III 207, January 1642). Although Descartes alluded to a rejection of substantial form in a number of places, it is in this letter in the Regius correspondence where the grounds for the rejection of scholastic substantial form are fully explained. The Reform theologians suggested Descartes's characterization of the scholastic substantial form, in that they said the "created substances are the immediate principle of their action", and further alluded to Suaréz's theory that some types of substantial form (those other than the intellective) are not "created" but "educed from the potency of matter".[22]

To respond to the theologians' pamphlet, Descartes advised the argument that the existence of a "substance" depends on its being "created *de novo* by God" (the soul, for example, is the "true substantial form of man"), but the defenders of "substantial forms" think they "emerge from the potentiality of matter" (AT III 505, CSMK III 208). The admission that the soul is the "true" substantial form of body is not merely Descartes's concession to the theologians of Utrecht : he says to Arnauld, too, that the "mind is substantially united to the body" (AT VII 228, CSM II 160).[23] The argument in the Regius correspondence is that the theologians' sense of substance depends on the prior reality of a given subject, whereas "true" substance is conceived independently by God. Aquinas, too, insisted that, "properly speaking, created things are subsisting beings" (ST 1.45.4). The same objection to the Utrecht theologians' conception of substantial form could, then, have favoured the Thomistic point of view.

Again, the Reform theologians defended the use made at that time in medicine of "occult qualities" to account for otherwise mystifying events such as an allergic reaction to cats,[24] and Descartes concluded that the defenders of substantial forms admit "they are occult and that they do not understand them", but the same "essential forms" could be given "manifest and mathematical reasons" in the Cartesian science (AT III 506, CSMK III 209). To the Utrecht theologians' concepts, Rodis-Lewis early on opposed the practice "of translating the internal structure and the intelligible properties, as in authentic Thomism".[25] The "essential forms" given "manifest and mathematical reasons" simply take on the role of substantial form in the more genuine, Thomistic sense.

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22. *On the Formal Cause of Substance : Metaphysical Disputation XV*, trans. John Kronen and Jeremiah Reedy, Milwaukee, Wis., Marquette University Press, 2000, p. 53-56 ; see *La querelle d'Utrecht*, Paris, Impressions nouvelles, 1988, p. 106 and 109, n. 79, with reference to *Disputationes Metaphysicae*, XV § 2, in *Opera Omnia*, 28 vol., ed. M. André and Carolo Berton, Paris, L. Vivès, 1856-1878, vol. 15, p. 505.
23. RODIS-LEWIS, "Problèmes discutés entre Descartes et Regius", p. 39.
24. *La querelle d'Utrecht*, p. 111.
25. Geneviève LEWIS [RODIS-LEWIS], *L'individualité selon Descartes*, Paris, Vrin, 1950, p. 36.

V. A WIDER INFLUENCE

As undoubtedly the appropriate model for the meditator's experience of a close unity with body, the Thomistic doctrine of the unity of substantial form could be developed to respond to Rozemond's objections to Hoffman's Ockhamist reading of Descartes, insofar as these could be applied to the Thomistic model, if "substantial form" is taken in the sense of the argument to incline the *conatus* or appetite of existence. As a compass of the Aristotelian empiricism of Aquinas and the Cartesian openness to explore concepts outside of those derived from sensory experience, this reading of substantial form dovetails into a recognition of the role of the Aristotelian formal cause in Spinoza's *Ethics*.[26] Aquinas accepted the possibility of a class of "passions" of the will, the intellective as opposed to the sensitive appetite (ST 1-2.22.3), and the *Ethics* of Spinoza might be seen as a study of these passions of the will by the methods of Cartesian science, and be aligned to the more extensive Aristotelian ethical tradition through the idea of "substantial form" in its authentic and legitimate sense.[27]

26. See Valtteri VILJANEN, *Spinoza's Geometry of Power*, Cambridge, Cambridge University Press, 2011 ; and Karolina HÜBNER, "On the Significance of Formal Causes in Spinoza's Metaphysics", *Archiv für Geschichte der Philosophie*, 97, 1 (2015), p. 196-233.

27. An earlier draft of this article was given at the conference, Aristotle and the Peripatetic Tradition, Dominican University College, Ottawa, 16-17 October 2014, and Medieval and Early Modern Philosophy, University of Ottawa, Ottawa, 4 July 2016. I'm grateful to Antoine Côté for direction and encouragement in recent years in the study of Ockham ; and Martin Pickavé, Aquinas.