

10. JOHANN CLAUBERG, CORPOREAL SUBSTANCE,
AND THE GERMAN RESPONSE

There is little doubt that the philosophy of Descartes had a major influence on subsequent seventeenth-century thought. Texts written in the second half of the century are full of references to him, some praising him, some not. Johann Christoph Sturm, the well-known professor at the university in Altdorf, nicely summarized the situation in his important *Philosophica eclectica* of 1686. According to Sturm, in his chapter entitled *De Cartesianis et Cartesianismo*, there is much disagreement about what Cartesianism is, about its perils, and insights: for some philosophers, Cartesianism is more than a sect, it is a religion; for others it is an object of hatred.¹ Given all the talk about the Cartesian philosophy during the period, it is striking to note how few thinkers took seriously his conception of corporeal substance. Throughout Europe, philosophers were happy to embrace many of Descartes' proposals in natural philosophy while either ignoring or seriously transforming his account of corporeal substance. The relatively progressive Aristotelian of Paris, Jean Baptist du Hamel, was prepared to explain some phenomena by Cartesian means, but insisted that these physical explanations be grounded firmly in an Aristotelian conception of substance.² One of the first and most important Cartesians and the Dutch philosopher who converted Clauberg to Cartesianism, Johannes de Raey, combined his "new philosophy" with a heavy dose of Aristotelianism.³ The flamboyant English Catholic, Kenelm Digby, constructed his own, somewhat odd account of corporeal substance to support a mechanical physics,⁴ while prominent Germans like Erhard Weigel, Johann Christoph Sturm, and the young Leibniz turned Descartes' *res extensa* into prime matter.⁵

It is noteworthy therefore that Johann Clauberg took Descartes' conception of corporeal substance quite seriously and *attempted* to use it as the metaphysical foundation for Cartesian physics. I say 'attempted' because it was not an easy task. Although Descartes' theory of corporeal substance was supposed to act as the foundation for his physics, that foundation was not as secure as it might have been. Descartes had not satisfactorily solved a number of serious problems. For Descartes' contemporaries, trained as they were in the Aristotelian philosophy and thoroughly familiar with Platonic thought, the problems surrounding his notion of corporeal substance were especially acute. In this

paper, I will articulate some of most serious of these questions, all of which concern the ontological status of corporeal substance; indicate how Clauberg attempted to answer them; and then briefly note how some prominent German philosophers responded.

SOME QUESTIONS CONCERNING DESCARTES' CONCEPTION OF CORPOREAL SUBSTANCE

In the *Principia philosophiae*, Part I, Descartes tells us a good deal about corporeal substance. Given my purposes now, two claims about *res extensa* or extension are particularly important. At *Principia* I, 63, Descartes writes:

Thought and extension can be regarded as constituting the nature of intelligent substance and corporeal substance; they must then be considered as nothing other than thinking substance itself and extended substance itself, that is, as mind and body.⁶

At *Principia* I, 53 Descartes explains that:

each substance has one principal property which constitutes its nature and essence and to which all its other properties are referred. Thus, extension in length, breadth, and depth constitutes the nature of corporeal substance.... Everything else which can be attributed to body presupposes extension and is merely a mode of an extended thing.⁷

These claims suggest that corporeal substance is a subject whose nature or essence is extension and whose other properties or modes are to be understood through that essence, that all corporeal properties are modes of extended things, and therefore that all corporeal properties inhere in corporeal substance.⁸

At least since the time of the *Objectiones*, commentators on Descartes' philosophy have noted a number of problems that arise concerning these claims. I want to focus on four of these. The first three questions involve the relation between *res extensa* and the individual corporeal thing. The fourth one involves the exact ontological status of *res extensa* taken by itself.

The first two questions concern the status of individual bodies. Descartes is not *absolutely* clear about whether or not individual material things count as corporeal substances. Nor is he clear about what counts as the subject or the bearer of corporeal properties. Sometimes he writes as though each body is a substance. At *Principia* I, 60, he explains:

For example, even though we may not yet know for certain that any extended or corporeal substance exists in reality, the mere fact that we have an idea of such a substance enables us to be certain that it is capable of existing.... And similarly from the mere fact that each of us understands himself to be a thinking thing and is capable, in thought, of excluding from himself every other substance, whether thinking or extended, it is certain that each of us, regarded

in this way, is really distinct from every other thinking substance and from every corporeal substance. And even if we suppose that God has joined some corporeal substance to such a thinking substance so closely that they cannot be more closely conjoined ... they nonetheless remain really distinct.⁹

And we find him in *Principia* I, 64, claiming that:

Thought and extension may also be taken as modes of a substance insofar as one and the same mind is capable of having different thoughts; and one and the same body, with its quantity unchanged, may be extended in many different ways....

As he goes on to explain, thought and extension are "in the substances of which they are modes".¹⁰ Sometimes however Descartes suggests that there is only one extended substance, whose various arrangements constitute the different individual things. For example, in his *Synopsis* of the *Meditationes de prima philosophia*, he writes:

First we need to know that absolutely all substances, or things which must be created by God in order to exist, are by their nature incorruptible.... We need to recognize that body, taken in the general sense, is a substance, so that it too never perishes. But the human body, insofar as it differs from other bodies, is simply made up of a certain configuration of limbs and other accidents of this sort.¹¹

In *Principia* I, 60, Descartes talks as though individual bodies are parts of corporeal substance. He writes concerning corporeal substance that "if it exists, each and every part of it, as delimited by us in our thought, is really distinct from the other parts of the same substance."¹²

Such texts encourage confusion about the status of individual material things. Our first question is: what exactly is the ontological status of an individual body; is it a corporeal substance or not? The second question is closely related to the first. On the one hand, corporeal substance is constituted of *res extensa* which therefore appears to be the ultimate corporeal subject. As the passage from *Principia* I, 53 quoted above makes clear, extension is the essence of corporeal substance and that through which all the properties of a body are understood. It seems obvious that all corporeal properties ultimately reduce to and inhere in extension and therefore that extension is the subject or bearer of all corporeal properties. On the other hand, extension taken generally does not exist; rather, arrangements or individual variations of extension exist. To put it another way, there is not mere extension in the world, there are amoebas, baboons, whirlpools, and xylophones. It would seem to follow that corporeal properties do not exist in extension as such, but in individual arrangements of extension. In this case the individual corporeal thing is the subject of corporeal properties. Surely part of the confusion here is encouraged by the ambiguity of the Latin term 'corpus'. Descartes is careless with its use and shifts back and

forth between using the term to refer to *res extensa* considered generally, and using it to designate the individual corporeal thing.¹³ But the problem is not merely terminological. Descartes seems not to have been clear about what was to count as the corporeal subject. On the one hand he wants to replace the Aristotelian conception of corporeal substance; on the other, he accepts the Aristotelian assumption that a substance is an underlying bearer of properties and the subject of change. Our second question is: between extension generally and the individual body, what counts as the subject of corporeal properties?

The third question concerns the explanatory relation between the corporeal properties of the individual thing and the extension that is supposed to constitute its nature. The problem arises from the awkward fact that an individual corporeal thing is really more than mere extension: it is varied or arranged extension. According to Descartes, extension or matter is everywhere the same and is inherently passive. Therefore particular bodies with their particular corporeal properties result only because God activates the matter. As Descartes puts it at *Principia* II, 23:

*Any variation in matter, or any diversity of its forms, depends on motion. The matter existing in the entire universe is thus one and the same.... All the properties which we clearly perceive in it are reducible to its divisibility and consequent mobility in respect of its parts....; any variation in matter, or diversity in any of its forms, depends on motion.*¹⁴

In other words, motion or activity must be added to extension before any particular body results. Extension by itself is not sufficient to produce corporeal properties. But if extension is insufficient to produce corporeal properties, then how are we to understand Descartes' claim quoted above that extension can be considered as extended substance itself, that is, as body?¹⁵

These first three questions stand firmly in the Aristotelian tradition and its assumptions about substance. Our final question is rooted in the Platonic tradition and concerns the relation between unity and being. Plato, Plotinus, and other members of the Platonic school had emphasized the unity of being where the assumption was that the more being a thing had, the more unified it was.¹⁶ According to Plotinus, there was "the One" or "the Unity itself" at the top of the ontological hierarchy and matter – devoid of any genuine unity – at the bottom.¹⁷ Against this philosophical background, it was awkward for Descartes to make corporeal substance, whose nature it was to be divisible, one of the two kinds of fundamental reality. So, here the question is: how can *res extensa* be a genuine thing and yet be divisible by nature?

CLAUBERG'S ANSWERS

I want to argue that there are excellent reasons for believing that Clauberg recognized exactly these problems in Descartes' philosophy and, unlike most of his contemporaries, offered a solution to them. He attempted to remain consistent with the basic tenets of Descartes' metaphysics while at the same time

answering the questions articulated above. We find Clauberg's answers in *Disputationes Physicae*, chapters III–VI. This text was part of a series of related works published in 1664, with an introduction by Johannes de Raey, and entitled *Physica quibus rerum corporearum vis & natura; Mentis ad Corpus relatae proprietates; denique Corporis ac Mentis arcta & admirabilis in Homine conjunctio explicantur*.

Concerning question (1) and the status of the individual corporeal thing, Clauberg is clear in his response. His argument to the conclusion that the individual corporeal thing is a substance rests neatly on two Aristotelian assumptions: first, that something is a subject if and only if properties inhere in it and, second, that something is a substance if and only if it is a subject.¹⁸ In *Disputatio* VI, Clauberg assumes a distinction between *res extensa* or matter, which is the essence of every individual body, and the individual body itself. On the basis of the Cartesian metaphysics which Clauberg accepts and which we articulated above, corporeal properties always exist in extension and moreover each individual body is a particular arrangement of matter or extension. It follows that each individual corporeal thing will have corporeal properties inhering in it. Given the two assumptions just articulated, this implies that an individual corporeal thing will function as a subject and hence will be a substance. Clauberg embraces this conclusion. As he puts it at the end of *Disputatio* IV, an individual corporeal thing is a "this substance".¹⁹ It will become clear below that his response is ultimately untenable. For the moment however we should be impressed with Clauberg's forthrightness: he has given a straightforward response to question (1) while remaining consistent both with Descartes' basic tenets about corporeal substance and with some received (i.e., Aristotelian) assumptions about substance.

Clauberg's answer to question (1) makes clear the importance and difficulty of question (2). From what we have just said, the properties of an individual body somehow inhere in its matter or extension. But in this case there is a real question as to whether the corporeal properties belong primarily to the matter or to the individual body which is an arrangement of matter. In other words, what counts as the subject of corporeal properties? Clauberg works very hard to clarify Descartes' position. It is striking that his solution depends on a version of the scholastic distinction between primary and secondary matter. He writes:

Therefore, we must distinguish between *prime Matter*, what is extended simpliciter and considered universally, what is pure substance, depending on God alone; and *secondary matter*, namely, what is extended in this way or that, what is provided with this or that form, what is placed in a certain class of things. For the existence of any concrete thing comes from substance and either one or several modes, by means of which such a substance is constituted. Prime matter refers to the primary and general part of Physics, secondary matter refers to the secondary and particular part.²⁰

According to Clauberg, *res extensa* or prime matter does not exist except in particular arrangements or variations. Therefore, it is the secondary matter that

will act as the subject of all actual corporeal properties. In other words, corporeal properties will always inhere in the individual corporeal thing.

But this does not entail that the individual corporeal thing is the ultimate subject. For Clauberg, secondary matter just is arranged *res extensa* or prime matter and therefore the properties of the individual ultimately inhere in that primary stuff. He insists that each of the basic corporeal properties (i.e., figure, place, and motion) reduces to extension and shows in what sense they do.²¹ In *Disputatio* III, entitled "To be a body, is to be an extended thing", he explains: "A corporeal thing considered generally is a thing with length, breadth, and depth ...; in a word, a body may be described as *res extensa*."²² According to Clauberg, every body has its own properties of length, breadth, and depth; that is, every body is the subject of its own corporeal properties. But insofar as each body is no more than an arrangement of prime matter, the subject of its properties is ultimately its *res extensa*. He summarizes the point of *Disputatio* III:

Therefore, because extension in length, breadth, and depth is something real and positive, which invariably occurs in each and every corporeal thing, before which nothing prior occurs to our mind in the contemplation of a corporeal thing, justly is extension considered *the proper essence or nature of a corporeal thing*.²³

Concerning all corporeal matters, the ultimate subject, the ultimate object of knowledge, and the ultimate explanatory principle is matter or *res extensa*. According to Clauberg, "there is nothing prior to extension in a corporeal thing"²⁴ and moreover "extension necessarily occurs in any existing [corporeal] Thing".²⁵ It seems clear that the ultimate subject matter in which all corporeal properties inhere is *res extensa*. In other words, both the properties which exist in the secondary matter or body and the secondary matter itself ultimately reduce to primary matter or *res extensa*. In *Disputatio* VI, under the subheading *Extension is the true essence of body*, he nicely summarizes the point: "Finally, we understand extension, in which there exists divisibility, figure, place, and the other corporeal properties, [as] the adequate subject by which all the things which are in a body are sustained."²⁶

Once again our answer to this question highlights the importance and difficulty of the next. Nor is it an exaggeration to say that the success of Clauberg's answers to the first two questions very much depends on the cogency of his response to the third. For Clauberg and for many first generation Cartesians, it was particularly important to describe adequately the explanatory relation between extension and individual corporeal properties.²⁷ Although many philosophers in the second half of the seventeenth century were attracted to Cartesian physics, a large subset of these were unsure about the adequacy of its metaphysical underpinnings. For many philosophers, the tenability of the Cartesian system very much rested on whether or not a convincing account of this explanatory relation could be given.²⁸

Following Descartes, Clauberg maintains that extension is most fundamental in corporeal things,²⁹ admits of variety,³⁰ and is that out of which particular

bodies are made.³¹ In *Disputatio* IV, he describes the production of corporeal things from prime matter in Aristotelian terms. According to Clauberg, bodies are made out of primary matter in the same way that buildings are made out of wood: the latter is a necessary but not sufficient condition for the existence of a building, matter is by itself insufficient for the existence of an individual corporeal thing.³² As Clauberg explains in *Disputatio* IV: extension is neither water nor fire nor any particular thing. In order for there to be a building, there must be both wood *and* a builder; in order for there to be a particular thing, there must be prime matter *and* an active principle. Because prime matter does not have its own source of activity, something active must *do* something to it to produce a corporeal thing.³³

But this is odd. *Res extensa* is supposed to constitute the essence of an individual corporeal thing and yet it is insufficient by itself either to produce the individual or to constitute its nature. Clauberg fully grasps this difficulty³⁴ and offers his distinction between primary and secondary matter as a solution. His solution is subtle. Following Descartes, Clauberg maintains that God is the "first cause" and what causes matter to be arranged or modified in the way that it is.³⁵ Clauberg goes beyond his predecessor however in conceiving of the relation between God and matter within an Aristotelian framework. For Clauberg, God plays the role of the active principle that limits and determines the passive principle and thereby creates with it an individual corporeal substance. The fundamental difference between primary and secondary matter is form. On Clauberg's account, prime matter is inherently passive³⁶ while form is an arrangement or variation of matter that results from God's activity. Two important points follow. First, when Clauberg insists that secondary matter is "what is extended in this way or that, what has this or that form", what he means is that God has arranged prime matter in this or that way. "Secondary matter or this substance" is just arranged prime matter.³⁷ Second, once arranged by God, matter has an organization that constitutes the nature of the individual thing and acts as the cause of its own properties. This form or arrangement of matter constitutes its nature and functions as the cause and explanation of its properties. Clauberg insists that as long as this organization continues, the individual retains the same appearance and the same name. In case we had any doubts about its importance, he explains that the organization of an individual thing preserves it much like salt preserves meat.³⁸ In summary, Clauberg's answer to question (3) is that *res extensa* or prime matter explains all the corporeal properties of an individual body in that the nature of an individual body just is prime matter organized by God.

Clauberg also directly confronts question (4). In *Disputatio* III, he acknowledges the problem. After noting that "every body is conceived as what is divided into parts", he admits that: "Division tends toward non-being".³⁹ His response to this criticism is to insist that *res extensa*, as a substance, is positive, real, and unified. He writes: "And so corporeal substance truly consists in indivisibility".⁴⁰ But how? Again, Clauberg's response is subtle. He offers (at least) three arguments for the unity and reality of *res extensa*, each of which assumes his distinction between *res extensa* treated generally and *res extensa* as the

organized matter in individual corporeal things.⁴¹ In all three arguments, Clauberg agrees that the organized matter of individual bodies is by nature divisible, but he denies that this fact in any way undermines the ontological priority of *res extensa*. Clauberg insists throughout that extension "is positive and absolute to the highest degree".⁴² First, he argues that when our minds abstract from individual bodies and comprehend "nothing but extension", they have thereby grasped the real essence of body which is something wholly real and positive.⁴³ Second, he argues that the divisibility of an individual body presupposes the positive reality of extension since there can be no division unless there is something real and positive to be divided. He summarizes the point in *Disputatio* VI: "therefore, before a thing may be divided, being must be posited, and this being must exist in the thing. Moreover, in a body this is extended being".⁴⁴ Finally, Clauberg insists that divisibility does not constitute the whole nature of extension. He writes: "division is negative, extension is not." The impenetrability of extension is something positive and, in this sense, there is more to extension than mere divisibility.⁴⁵ In other words, the negativity of divisibility should not be applied to extension in itself. Therefore, Clauberg insists extension "is a substance, a unity, and a true thing".⁴⁶

These are clever responses to the most obvious questions arising from Descartes' proposals about corporeal substance. Let's consider some reactions to Clauberg's revamped Cartesianism. The weaknesses in his position were astutely identified by a few of his more clever contemporaries.

SOME GERMAN RESPONSES TO CLAUBERG'S PROPOSALS

Clauberg's texts were widely read in his native Germany and it is very likely that they offered many German philosophers their first introduction to the philosophy of Descartes. The young Leibniz, for example, seems to have been happy to discuss the philosophy of "the Cartesians"⁴⁷ and to argue against Descartes' metaphysics mostly on the basis of his familiarity with texts by Clauberg.⁴⁸ For someone like Leibniz who was thoroughly educated in the Aristotelian and Platonic traditions and yet who was fascinated by the new physics, Clauberg's answers would have been both tempting and disturbing. His account of an individual body as constituted of organized *res extensa* would have seemed a tempting way to combine Cartesian mechanical physics with a proper (that is, Aristotelian) notion of substance. His attempt to make *res extensa* or prime matter a substance and subject in its own right would have seemed entirely problematic.

Let me explain both the temptation and the problems in Clauberg's account by means of two examples. Both Johann Christoph Sturm (1635–1703) and Gottfried Wilhelm Leibniz (1646–1716) were prominent German philosophers in the second half of the seventeenth century. Both were familiar with Clauberg, both accepted an account of an individual corporeal thing that was similar to Clauberg's, and both rejected his attempt to make *res extensa* a substance. For philosophers like Sturm and Leibniz, the basic problem with Clauberg's revised Cartesianism was that it tried to make something that was

fundamentally incomplete and insubstantial into a substance. Clauberg himself highlights the problem when he explains that matter is wholly passive and has nothing active in it.⁴⁹

The young Leibniz is wonderfully explicit about exactly why *res extensa* should not by itself be considered a substance.⁵⁰ In an important essay of 1668, he explains:

A *substance* is a being which subsists in itself. A *being which subsists in itself* is one that has a principle of action within itself.... No body apart from concurrent mind or God has a principle of motion within itself.... Thus the substance of human body is union with the human mind; and the substance of bodies which lack reason is union with universal mind or God....⁵¹

In *Confessio naturae contra atheistas*, which was written in the same year, he argues that the nature of body as proposed by the moderns is not sufficient to explain corporeal properties. Accordingly, "these naturalists must admit that body is not self-subsistent and cannot subsist without an incorporeal principle."⁵² In short, Leibniz refuses to accept the crux of Clauberg's responses to the problems facing Descartes' conception of corporeal substance. Leibniz insists that *res extensa* can be neither a substance nor a subject nor an explanation of corporeal properties nor a unified thing exactly because it does not have its own principle of activity. Despite this significant disagreement however Leibniz agrees with Clauberg that secondary matter or organized *res extensa* is a substance, a subject, an explanation of corporeal properties, and a unified thing. Like Clauberg, the young Leibniz thinks that, when *res extensa* is activated and organized by God, the result will be an organized arrangement of matter that will constitute the nature of an individual corporeal substance and that will act as the cause and explanation of its properties.⁵³

Sturm was equally unimpressed by Clauberg's revised account of Cartesian corporeal substance. Like Leibniz, he accepts the Cartesian account of matter and thinks that all "Natural things" are made from it.⁵⁴ But, also like Leibniz, he insists that since matter is pure potential and lacks all form, it is not itself a substance; rather, it is a principle of substance.⁵⁵ As he neatly puts it: "Whatever is is through its form."⁵⁶ In short, both Sturm and Leibniz disagreed with Clauberg (and Descartes) about what constituted the nature of the individual body. As we have seen, Clauberg claimed that *res extensa* was the essence of the individual thing, the subject matter of corporeal properties, the cause and explanation of those properties, and the positive reality that stood prior to any corporeal thing. Sturm and the young Leibniz quite rightly saw that matter or *res extensa* by itself was not up to these tasks. Before this passive principle could function either as a subject of properties, or as unified thing, or as a cause and explanation of corporeal properties, it had to be organized by an active principle so as to constitute *with that principle* the corporeal nature of the individual body. In other words, they rejected Clauberg's attempt to solve the problems with Descartes' notion of corporeal substance. They both seemed to take those problems to be unsolvable.

But we Clauberg enthusiasts need not despair. There is good reason to believe that Clauberg encouraged these German philosophers to take seriously the Cartesian notion of *res extensa* and to recognize the ease with which it could be inserted into an Aristotelian conception of substance. Both Sturm and the early Leibniz agreed with Clauberg that *res extensa* or prime matter was activated by God and thereby became an individual corporeal thing with an essence and nature. They also agreed with him that, once matter was combined with an active principle, it constituted the nature of the unified individual corporeal thing and the subject of corporeal properties. In short, although they rejected Clauberg's revised account of corporeal substance, they accepted his account of an individual corporeal thing as a corporeal substance constituted of organized matter. To put it somewhat paradoxically, while Clauberg's Cartesianism was doomed, his Claubergianism was a surprising success.⁵⁷

NOTES

1. Johann Christoph Sturm, *Philosophica eclecticica*, Altdorf, 1686, pp. 139–42; 161–64.
2. See Jean Baptist du Hamel, *Philosophia vetus et nova ad usum scholae accommodata* ... Paris, 1682, and *De consensu veteris et novae philosophiae libri quatuor seu promotae per experimenta philosophiae*, published in a collection of books by du Hamel under the title *Operum philosophicorum*, Paris, 1681. It is significant that Sturm applauds du Hamel for his conciliatory approach and his awareness of the importance of Descartes' physics. Sturm cites him as someone who is prepared to accept the Cartesian physics but not its accompanying metaphysics. See Sturm, *Philosophia eclecticica*, p. 181f.
3. Johannes de Raey, *Clavis philosophiae naturalis sive Introductio ad naturae contemplationem Aristotelico-Cartesianam*. Leiden, 1654. For an account of De Raey and his general importance, see Theo Verbeek, *Descartes and the Dutch: Early Reactions to Cartesian Philosophy, 1637–1650*, 1992, esp. 11, 70–76, 81f. Verbeek documents the ascendancy of the new philosophy among Dutch philosophers and shows, among other things, that largely due to the influence of De Raey, Cartesianism was "almost normal" as early as 1650 in Leiden (p. 82). It is clear that De Raey inspired much of Clauberg's Cartesianism and that many of their interpretive positions are similar; it would be interesting to explore the details of that relation.
4. Kenelm Digby, *Two Treatises in the one of which the nature of bodies, in the other, the nature of souls is looked into in a way of discovery of the Immortality of Reasonable Souls*, London, 1644; Repr. by Garland Publishing Inc., New York and London, 1978.
5. On the views of Sturm and Leibniz, see below.
6. For the original text, see *Oeuvres de Descartes*. Charles Adam and Paul Tannery, eds. 1964–75. Paris: J. Vrin (hereafter AT); for a good English translation, on which I mostly depend, see *The Philosophical Writings of Descartes*, Vol. I and II, trans. J. Cottingham, R. Stoothoff, D. Murdoch, Cambridge University Press, Cambridge, 1988 (hereafter CSM). AT VIII, pp. 30–31: CSM I, p. 215: "Cogitatio & extensio spectari possunt ut constituentes naturas substantiae intelligentis & corporeae; tuncque non aliter concipi debent, quam ipsa substantia cogitans & substantia extensa, hoc est, quam mens & corpus".
7. AT VIII, p. 25: CSM I, p. 210 "...una tamen est cuiusque substantiae praecipua proprietates, quae ipsius naturam essentiamque constituit, & ad quam aliae omnes referuntur. Nempe extensio in longum, latum & profundum, substantiae corporeae naturam constituit.... Nam omne aliud quod corpori tribui potest, extensionem praesupponit, estque tantum modus quidam rei extensae..."
8. In this paper I ignore the scholarly debates that surround the details of Descartes' physics and focus only on those metaphysical problems to which Descartes' texts give rise and which concerned Clauberg and other first generation Cartesians. For a recent scholarly discussion of the details of Descartes' physics and for some of the vast literature on the topic, see Dennis Des Chene's *Physiologia: Natural Philosophy in Late Aristotelian and Cartesian Thought*, Cornell University Press, Ithaca and London, 1996.
9. AT VIII, pp. 28f: CSM I, p. 213: "adeo ut, exempli causa, ex hoc solo quod jam habeamus ideam substantiae extensae sive corporeae, quamvis nondum certo sciamus ullam talem revera existere, certi tamen sumus illam posse existere;... Itemque, ex hoc solo quod unusquisque intelligat se esse rem cogitantem, & possit cogitatione excludere a se ipso omnem aliam substantiam, tam cogitantem quam extensam, certum est unumquemque, sic spectatum, ab omni alia substantia cogitante atque ab omni substantia corporea realiter distingui. Ac etiamsi supponamus, Deum alicui tali substantiae cogitanti substantiam aliquam corpoream tam arcte conjunxisse, ut arctius jungi non possint..., manent nihilominus realiter distinctae..."
10. AT VIII, p. 31: CSM I, p. 215f. "Cogitatio & extensio sumi etiam possunt pro modis substantiae, quatenus scilicet una & eadem mens plures diversas cogitationes habere potest; atque unum & idem corpus, retinendo suam eandem quantitatem, pluribus diversis modis potest extendi.... Per hoc enim, quod ipsas in substantiis quarum sunt modi consideramus, eas ab his substantiis distinguimus, & quales revera sunt agnoscimus."
11. AT VII pp. 13f: CSM II, p. 10: "... primo ut sciatur omnes omnino substantias, sive res quae a Deo creari debent ut existant, ex natura sua esse incorruptibiles...; ac deinde ut advertatur corpus quidem in genere sumptum esse substantiam, ideoque nunquam etiam perire. Sed corpus humanum, quatenus a reliquis differt corporibus, non nisi ex certa membrorum configuratione aliisque ejusmodi accidentibus esse conflatum..."
12. AT VIII, p. 28: CSM II, p. 213: "...atque si existat, unamquamque ejus partem, a nobis cogitatione definitam, realiter ab aliis ejusdem substantiae partibus esse distinctam." He suggests the same point at *Principia* II, 25.
13. Within the generation of philosophers following Descartes, there were many who saw the need to distinguish clearly between the abstract mathematical notion of body and the notion of body as an active thing in nature. It is worth noting that in his *Lexicon Philosophicum* of 1653, Johann Micraelius asserts that *corpus* "is either physical or mathematical." The former "is a natural substance having a nature that is more active than passive, i.e. more form than matter". The mathematical body is one having three dimensions, namely, length, breadth, and depth. See Micraelius' *Lexicum Philosophicum terminorum Philosophis unitatum*, Jena, 1653, p. 282.
14. AT VIII, p. 52f: CSM II, p. 232. "Omnem materiae variationem, sive omnem ejus formarum diversitatem pendere a motu. Materia itaque in toto universo una & eadem existit.... Omnesque proprietates, quas in ea clare percipimus, ad hoc unum reducuntur, quod sit partibilis, & mobilis secundum partes...; sed omnis materiae variatio, sive omnium ejus formarum diversitas, pendet a motu."
15. *Principles* I 63; this is a paraphrase of the Latin quoted in note 6.
16. In ways that have not been thoroughly explored, the philosophy of Renaissance Platonists like Marsilio Ficino and Giovanni Pico della Mirandola flowed north and was imbibed by a number of seventeenth-century Protestant philosophers. There developed an active Platonism in Germany which was (mostly) independent from the English one and which formed part of the background to some of the important philosophical developments in the second half of the century. Although the Platonic connection between being and unity was accepted by many scholastic philosophers, the early modern Platonists took it more seriously than had their scholastic predecessors. For a preliminary account of German Protestant Platonism, see my "Humanist Platonism in Seventeenth-Century Germany", *London Studies in the History of Philosophy*, vol. I, ed. Jill Kraye and Martin Stone, Routledge, 1999.
17. For the connection between being and unity in Plotinus' thought, see e.g. *Enneads*: III.8.10.20–26; VI.2.11.9–18; VI.9.1.14; V.4.1. There has been some important recent literature on some of the topics discussed here concerning Descartes' *Principia philosophiae*. For a good introduction to some of these issues and for citations to other material, see Frédéric de Buzon and Vincent Carraud, *Descartes et les Principia II: Corps*

- et mouvement*, Paris, Presses Universitaires de France, 1994.
18. For example, we find both assumptions at work in *Disputatio* IV, 4 where he writes: "Cum ergo Materia seu res extensa per se existere dicitur & *Substantia* appellatur, non denotatur ejus independentia a causa, sed a subjecto tantum, hoc est, quod nullo indigeat subjecto ad existendum, sicuti figura, motus & similia subjectum requirunt, cui insint". Here the basic idea is that matter is rightly called a substance and can be said to exist per se because it is a subject in which properties exist.
 19. *Disputatio* IV, 17. See also *Disputatio* IV, sects. 8–9.
 20. *Disputatio* IV, 15: "Itaque distinguendum est inter *Materiam primam*, hoc est extensum simpliciter & universe consideratum, quod mera substantia est, a solo Deo pendens; & *Materiam secundam*, hoc est aliquid hoc illóve modo extensum, hac illóve forma praeditum, in certo rerum genere collocatum. Nam inde existit aliquid concretum ex substantia & modo uno vel pluribus, quibus talis constituitur substantia. Materia prima ad primam & generalem, materia secunda ad secundam & specialem Physicae partem spectat".
 21. *Disputatio* VI, sects. 11–14.
 22. *Disputatio* III: "*Corpus esse, est extensum esse*. I. *Res corporea* generaliter considerata est res longa, lata & profunda..., uno etiam verbo corpus describi potest, *res extensa*."
 23. As Clauberg explains at *Disputatio* III, 12: Quoniam igitur extensio in longum, latum, & profundum aliquid reale & positivum est, quod soli & omni rei corporeae perpetuo convenit, quo nihil prius in contemplatione rei corporeae menti nostrae occurrit, jure extensio ista censetur *propria essentia seu natura rei corporeae*."
 24. *Disputatio* III, sect. 8: "*extensione nihil in re corporea prius*".
 25. *Disputatio* III, 2 that "... extensio necessario *alicui Rei* existenti convenit".
 26. *Disputatio* VI, 17: "Tandem extensionem intelligimus, cui divisibilitas, figura, situs & aliae corporum proprietates insunt, quo tanquam idoneo subjecto sustentantur omnia quae sunt in corpore".
 27. Johannes de Raey, Erhard Weigel, Sturm, Leibniz, and many others struggled with this problem. For a summary of the views of Sturm and Leibniz, see below.
 28. As I will suggest in the conclusion, there were important German philosophers writing in the second half of the century who rejected Descartes' conception of corporeal substance and replaced it with their own notion because they did not think that Descartes' account adequately supported his physics.
 29. E.g. *Disputatio* III, sect. 8.
 30. *Disputatio* III, sect. 7.
 31. *Disputatio* IV, sects. 1–2.
 32. *Disputatio* IV, sects. 2–5.
 33. *Disputatio* IV, sects. 1–2.
 34. E.g., at *Disputatio* IV, especially sect. 9, and sects, 13–14; *Disputatio* VI, especially sects. 9–14.
 35. *Disputatio* IV, sect. 14.
 36. *Disputatio* VI, sect. 9.
 37. *Disputatio* IV, sect. 17.
 38. *Disputatio* IV, sect. 14.
 39. *Disputatio* III, sect. 9. "Ita licet omne corpus concipiatur *dividuum* esse in partes.... Divisio tendit ad non esse".
 40. *Disputatio* IV, sect. 16: "Atque ita *substantia corporea vere in indivisibili consistit*."
 41. This of course is the distinction between prime and secondary matter, but in *Disputatio* III where some of these arguments occur, Clauberg does not use this terminology, which he introduces in the next *Disputatio*.
 42. *Disputatio* VI, sect. 13: "...maxime positivum atque absolutum." See also *Disputatio* VI, sects. 9, 15. Of course the context here is that of beings in the created world; Clauberg insists that corporeal substance depends entirely on God. See e.g. *Disputatio* IV, sects. 3, 4.
 43. *Disputatio* VI, sects. 3, 16–18, 22. At sect. 16: "possumus tamen extensionem optime mente concipere..., possumus concipere corpus indefinitum atque interminatum, in quo nil nisi extensio consideretur. Extensio igitur essentia corporis est, a quo ne cognitione

- quidem separari potest." At sect. 18: "Inveni tandem extensionem, eam realem, substantialem, denique essentiam corporis esse contendo."
44. *Disputatio* VI, sect. 15: Porro divisibilitas praesupponit extensionem.... *Divisio non fit nisi in ea quae insunt*. Antequam igitur res dividatur, ponitur esse, ponitur aliquid ei inesse. Hoc autem in corpore est, extensum esse"; also see *Disputatio* III, sect. 8.
 45. *Disputatio* VI, sect. 15: "Divisionis quoque conceptus negativus, extensionis non item. Quod autem corpus habet partes, quarum alia est extra aliam posita, ita ut haec illam penetrare non possit, sed cum ea per extremitatem suam juncta continuum faciat &c. id totum in relatione positum est, atque insuper divisionis ac terminationis conceptum, utrumque negativum, praestruit."
 46. *Disputatio* III, sect. 8: "[extensio] substantiam, unum, verum esse."
 47. *Gottfried Wilhelm Leibniz: Sämtliche Schriften und Briefe*, Akademie der Wissenschaften, Berlin, Series II, Vol. I, p. 15.
 48. In a letter of 1675, Leibniz admits: "Cependant ce que je sçay des meditations metaphysiques et physiques de Mons. des Cartes n'est presque venu que de la lecture de quantité de liures ecrits un peu plus familièrement, qui rapportent ses opinions". See *Gottfried Wilhelm Leibniz: Sämtliche Schriften und Briefe*, Akademie der Wissenschaften, Berlin, Series II, Vol. I, p. 247. That Clauberg is Leibniz's favorite Cartesian is clear. In a letter of October, 1668, he says that Clauberg is "more pleasing" than Descartes (see Series II, Vol. I, p. 15); and in an essay of May 1671, Leibniz calls Clauberg "the most learned" of the sect (see Series II, Vol. I, p. 112).
 49. See for example *Disputatio* VI, sect. 9: "Corporis vel, quod idem est, Materiae essentiam quaerimus. Haec in formis & qualitibus consistere nequit, quoniam haec omnia principia activa sunt. At Materia est aliquid passivum...."
 50. For a detailed discussion of the development of Leibniz's metaphysics and its relation to such problems, see my *Leibniz's Metaphysics: Its Origins and Development*, Cambridge University Press, New York and Cambridge, England, 2000, chapter 3; for a summary of that account, see Mercer and R.C. Sleigh, Jr., "The Early Metaphysics to the *Discourse on Metaphysics*", in Jolley, ed., *The Cambridge Companion to Leibniz*, 1995, 67–123, sects. 1–2.
 51. *Gottfried Wilhelm Leibniz: Sämtliche Schriften und Briefe*, Akademie der Wissenschaften, Berlin, Series VI, Vol. I, pp. 508–99: *Substantia* est ens per se subsistens. *Ens per se subsistens est*, quod habet principium actionis in se.... Nullum Corpus praecisa mente concurrente, habet principium motus in se.... Ita Substantia corporis humani est unio cum mente humana; Substantia corporum ratione carentium est unio cum mente universali seu Deo...."
 52. *Sämtliche Schriften und Briefe*, Series VI, Vol. I, p. 490: "Tum vero fatebuntur, ut spero, naturalistae nostri, corpora sibi non sufficere nec sine principio incorporeo subsistere posse."
 53. By 1671, Leibniz had replaced God as the active principle in individual corporeal substances with individual minds. For an account of this metaphysical shift and its motivations, see my *Leibniz's Metaphysics: Its Origins and Development*, chapters 3–5.
 54. Sturm, *Philosophica eclectica*, pp. 377–78.
 55. *Ibid.*, p. 392f.
 56. *Ibid.*, p. 379: "Quicquid est per suam formam est."
 57. I would like to thank Vincent Carraud and Joseph McAlhany for helpful comments on this article.