

WHAT IS IT LIKE TO BE A MATERIAL THING? HENRY MORE AND MARGARET
CAVENDISH ON THE UNITY OF THE MIND

by

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1. INTRODUCTION

One argument for the immateriality of the mind or soul appeals to the unity we discover in our mental lives. It goes like this: our minds exhibit a kind of unity that no material thing can possess; therefore, our minds are not material. This argument's history stretches from Plotinus's formulation in *Enneads* IV.7 to Kant's discussion in the *Paralogisms of Pure Reason*, where he famously dubs it the 'Achilles' argument.¹ The label has stuck.

¹ For an overview of the history of this argument, see Ben Lazare Mijuskovic, *The Achilles of Rationalist Arguments: The Simplicity, Unity, and Identity of Thought and Soul from the Cambridge Platonists to Kant: A Study in the History of an Argument* (The Hague: Martinus Nijhoff, 1974) and the essays in Thomas Lennon and Robert Stainton (eds.), *The Achilles of Rationalist Psychology* (Dordrecht: Springer, 2008). Rozemond traces this argument through the early modern period in a series of influential papers, focusing especially on Descartes, Clarke, and Leibniz. See, for example, Marleen Rozemond, 'The Achilles Argument and the Nature of Matter in the Clarke-Collins Correspondence', in Thomas Lennon and Robert Stainton (eds.), *The Achilles of Rationalist Psychology* (Dordrecht: Springer, 2008), 159-175; Marleen Rozemond, 'The Faces of Simplicity in Descartes's Soul', in Klaus Corcilius and Dominik Perler

In the *Immortality of the Soul* (hereafter *Immortality*), Henry More argues that materialism cannot account for two kinds of mental unity:

1. The integration that occurs when a single perception has complex content, as when someone sees a face or a checkerboard, and,
2. The integration of inputs from different senses into a single mental life, as when someone sees, touches, and hears simultaneously.²

More argues that, in a materialist framework, these cases share a structure. Both presuppose that a *single* subject or perceiver can have *multiple* perceptions simultaneously. In the first case, More

(eds.), *Partitioning the Soul: Debates from Plato to Leibniz* (Berlin: De Gruyter, 2014), 219-244; and Marleen Rozemond, 'Mills Can't Think: Leibniz's Approach to the Mind-Body Problem', *Res Philosophica* 91(1): 1-28. For an updated version of the Achilles Argument, see William Hasker, 'Concerning the Unity of Consciousness', *Faith and Philosophy* 12(4) (1995), 532-547. I follow Lennon and Stainton in using the expression 'Achilles argument' for *any* argument for the immateriality of the mind or soul that appeals to mental unity.

² The abbreviation for More's *Immortality of the Soul* is as follows. *IM: The immortality of the soul, so farre forth as it is demonstrable from the knowledge of nature and the light of reason* (London, 1659). Abbreviations of frequently cited primary texts from Cavendish are as follows. *GNP: Grounds of Natural Philosophy* (London, 1668); *OEP: Observations upon Experimental Philosophy*, ed. Eileen O'Neill [based on the 1668 edn.] (Cambridge: Cambridge University Press, 2001); *PL: Philosophical Letters; or, Modest Reflections upon some Opinions in Natural Philosophy* (London, 1664); *PPO-1663: Philosophical and Physical Opinions*, 2nd edn. (London, 1663).

argues that, for the materialist, a complex perception is a complex of perceptions. Someone's visual experience of a face is a composite of perceptions of the eyes, ears, nose, and mouth. In the second case, More assumes that the input from different senses consists in a multiplicity of perceptions. When someone sees, touches, and hears, she has visual, tactile, and auditory perceptions.

More then argues that materialism absurdly implies that a single subject or perceiver *cannot* have multiple perceptions simultaneously and, therefore, cannot account for the two kinds of mental unity mentioned above. Hence, we are not wholly material. Something in us—call it a mind or soul—is not a body and pulls our perceptions together.

More's argument poses a *prima facie* threat to Margaret Cavendish's unorthodox brand of materialism. In *Philosophical Letters* II.xiii, Cavendish responds to it. Cavendish maintains that she *can* account for both kinds of mental unity, despite her thoroughgoing materialism about natural phenomena, human beings included. She adopts a two-fold strategy. First, she argues that a single material subject *can* have multiple perceptions simultaneously on the grounds that a single part³ of matter can have multiple figures at the same time. Hence, there is no *general* obstacle to mental unification in her system—or at least More hasn't identified one. Second, Cavendish concedes that the integration of perceptions from different senses requires more explanation. The difficulty is that perceptions belonging to different senses occur in different parts of the body. If seeing occurs in the eyes, smelling in the nose, hearing in the ears, what

³ Sometimes Cavendish uses the phrase 'single part' to refer to an atom that does not exist as part of an encompassing whole (*OEP* 126). I use this expression differently. By a single part, I just mean *one* part of body, a usage Cavendish also employs (*PL* 95).

knits these various perceptions together into a single mental life? Cavendish appeals to rational matter to integrate these perceptions.

A person's mind or rational matter—terms Cavendish often uses interchangeably—notices the sensory perceptions occurring in the perceiver's sense organs and produces copies of these perceptions in its own substance (*PL* 49, 111, 116, 192, and 434; *OEP* 190, 193).⁴ The rational matter in the eye copies the visual perceptions occurring there, the rational matter in the ear copies the auditory perceptions in the ear, etc. As Cavendish writes, 'it is impossible, for a Human Creature, to know any otherwise, but in part; for, being composed of parts, into Parties, he can have but a parted knowledg, and a parted perception of himself' (*GNP* 55). Although we might assume that a person's rational matter integrates these perceptions by transmitting them to a centralized portion of rational matter in the head, that is not Cavendish's view. Instead, she holds that when the mind integrates perceptions across modalities, the different parts of rational matter share their knowledge with each other through a process that Cavendish describes as 'information or intelligence' so that they all come to perceive alike (*OEP* 152). When rational

⁴ Cavendish distinguishes the 'natural' soul or mind of a human being from their 'divine' or 'supernatural' soul, arguing that the natural soul is material, the supernatural soul immaterial (*PL* 210-1, 216-7; *OEP* 221). In the *Grounds*, however, she retracts the claim that we have immaterial souls by arguing that God is the only immaterial (*GNP* 239). I will bracket this complexity by focusing on the natural mind. For discussion of the two souls in Cavendish, see Stewart Duncan, 'Debating Materialism: Cavendish, Hobbes, and More' ['Debating'], *History of Philosophy Quarterly*, 29(4) (2012), 391-409, at 396; and Deborah Boyle, *The Well Ordered Universe [Well-Ordered]* (Oxford: Oxford University Press, 2018), 132-3.

parts successfully communicate their knowledge, each part knows what all the others know. They pool their knowledge; they perceive alike. When someone hears, sees, and tastes, each part of her mind hears, sees, and tastes alike, in parallel and in unison. The Cavendishian mind approximates simplicity by achieving uniformity of perceptions across its parts.

Although historians of early modern philosophy have started paying more attention to Cavendish, they have not yet examined her response to More's version of the Achilles argument.⁵ So far as I know, this paper is the first detailed account of her engagement with this

⁵ For discussion of Cavendish's relation to More, see Jacqueline Broad, *Women Philosophers of the Seventeenth Century [Women Philosophers]*, (Cambridge: Cambridge University Press, 2002); Sarah Hutton, 'Margaret Cavendish and Henry More', in Stephen Clucas (ed.), *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle* (Aldershot: Ashgate, 2003), 185-198; Duncan, 'Debating'; Jasper Reid, *The Metaphysics of Henry More [Metaphysics]* (Dordrecht: Springer, 2012); David Cunning, *Cavendish: Arguments of the Philosophers [Arguments]* (Oxford/New York: Routledge, 2016); and Noah Delwiche, 'Divided We Stand: Margaret Cavendish and the Material Divisibility of Souls' (B.A. Thesis, Philosophy Department: Harvard University, 2018).

argument. Scholars such as James,⁶ Michaelian,⁷ and Boyle⁸ have noted Cavendish's claims that rational matter integrates the inputs from different senses. But they have not explained *how* rational matter integrates. Moreover, they have largely ignored the more basic question raised by More's argument of how a single perceiver can have multiple perceptions in a materialist framework. This paper contributes to the growing scholarship on Cavendish by explaining how she accounts for these forms of mental unity.

2. MORE'S TARGET: HOBBS-INSPIRED MATERIALISM

More's Achilles argument targets a Hobbes-inspired materialism. Hobbes is the best (or worst?) of the materialists, who sees most keenly into what 'would be most true if there were nothing but *Matter* in the world' (*IM* 114). Although Hobbes understands little about 'the nature of Spirits', More explains, 'that defect is compensated with an extraordinary Quick sightedness in discerning of the best and most warrantable ways of salving all Phaenomena from the ordinary allowed properties of Matter' (*IM* 111). A refutation of Hobbes, then, is a refutation of the best version of materialism.

More reconstructs the Hobbesian framework as having four main planks:

⁶ Susan James, 'The Philosophical Innovations of Margaret Cavendish' ['Innovations'], *British Journal of the History of Philosophy*, 7(2) (1999), 219-244, at 232.

⁷ Kourken Michaelian, 'Margaret Cavendish's Epistemology' ['Epistemology'], *British Journal of the History of Philosophy*, 17(1) (2009), 31-53, at 42.

⁸ Deborah Boyle, 'Margaret Cavendish on Perception, Self-Knowledge, and Probable Opinion' ['Perception'], *Philosophy Compass* 10(7), 438-450, at 443. See also Boyle, *Well-Ordered*, 77-8.

1. Perception is motion. When someone sees red, her visual perception is a motion in her body.
2. The subject of a perception—i.e. the perceiver—is the portion of matter whose motion constitutes this perception. If seeing red consists in the vibration of a neuron, then the neuron is the thing that sees red.
3. A perception with a complex content—such as a visual experience of a face or a checkerboard—is made up of many perceptions. Someone is the subject of a complex perception only if they are the subject of the many perceptions that make it up.
4. Physical things can be divided into parts, but only so far. Eventually we arrive at indivisible physical points or atoms.

To clarify More's target, let's work through each of these planks. These planks describe the view that More is criticizing, not his own position. I will sometimes omit this qualification, as More often does himself.

First, More assumes that the best version of materialism reduces perception to motion. When someone looks at an apple, their visual perception of its color reduces to motion occurring somewhere in their body. More's 'Axiome XX' encapsulates this claim: '*Motion or Reaction* of one part of the Matter against another, or at least a continuance thereof, is really one and the same with Sense and Perception, if there be any Sense or Perception in Matter' (*IM* 111). More's use of the term 'reaction' evokes Hobbes's view that perception reduces specifically to the motion produced in a perceiver's body when it is impacted by another. According to Hobbes, when an object impinges on a person's sense organs, the motions are transmitted through the

nerves and finally to the heart. Perception consists in the heart's resistance or reaction to these motions: the heart's *pushing back* ever so slightly against the object's effects (*EW* 390-2).⁹

Second, More assumes that perception requires a subject. As More writes, 'we find in our selves, that *one and the same thing* both hears, and sees, and tastes, and, to be short, perceives all the variety of Objects that Nature manifests unto us' (*IM* 125-6; emphasis added). A cursory inward glance reveals more than a flurry of perceptions: it additionally reveals that all these perceptions belong to 'one and the same thing', i.e., a unified subject or *I*. More holds that, in a materialist framework, the *subject* of a perception—the perceiver—is the portion or part of matter whose motion constitutes this perception. In other words, the thing that perceives is the thing that moves, namely, some portion of matter.

In 'Axiome XXV', More states that a portion of matter is the subject of a perception *only if* this portion of matter receives the motion constitutive of this perception: '*Whatever impression or parts of any impression are not received by this perfect Parvitude or Reall point of Matter, are not at all perceived by it*. This is so exceeding plain of it self, that it wants neither explication nor proof' (*IM* 122). An atom is the subject of a perception *only if* 'this perfect Parvitude or Reall point' receives the relevant motion. Elsewhere he claims that a portion of matter is the subject of a perception *if and only if* it receives the motion constituting this perception:

⁹ Although Cavendish sometimes suggests that perception consists in motion, she argues against Hobbes's view that perception consists in reaction (*OEP* 138). For discussion of Hobbes vis-à-vis Cavendish, see Duncan, 'Debating', 392-3; and Marcus Adams, 'Visual Perception as Patterning: Cavendish Against Hobbes on Sensation' ['Patterning'], *History of Philosophy Quarterly*, 33(3) (2016), 193-214.

Axiome XXI: *So far as this continued Reaction reaches, so far reaches Sense or Perception, and no farther.* This axiom is to be understood as well of Duration of time, as Extension of the Subject, viz. That *Sense* and *Perception* spread no further in Matter than *Reaction* does, nor remains any longer than this *Reaction* remains. Which truth is fully evident out of the foregoing Axiome. (*IM* 112)

When More writes that a perception ‘reaches’ as far as motion and no farther, he is saying that the subject of a perception is the subject of the relevant motion.

Here is another way to think about the second plank. We can distinguish two notions of subject: a subject_a of awareness and a subject_i of inherence. A subject_a grasps a perception’s object and is aware of the world *through* the perception. If someone has a visual perception of a red balloon, the subject_a is the being who is aware of the red balloon: the perceiving *I*, self, or mind. A subject_i is something in which qualities exist, something like a substance. A rock is a subject_i, since it is something in which qualities, such as size and shape, exist. In his reconstruction of the materialist framework, More assumes that the subject_a of a perception is the subject_i in which this perception-cum-motion exists. In what follows, when I write about a subject without qualification, I typically mean a subject_a of awareness.

Third, according to the Hobbesian materialist, a perception with complex content is a composite of perceptions. Different parts of an object produce different motions in the perceiver. When someone looks at a face, the eyes produce one kind of motion in the perceiver, the nose a different motion, and so forth. The materialist, according to More, takes each of these motions to constitute a perception of the part that causes it. The complex pattern of motion made up of all

these motions together constitutes the perceiver's visual experience of the face as a whole: the 'whole image of the Object' in More's terminology. Hence, a perception of a complex object is a complex of perceptions. If someone has an experience of a complex object, they will thereby be the subject of multiple perceptions.

More commits the materialist to the view that a perception with complex content consists in a complex pattern of motion, with different aspects of this pattern corresponding to different parts of the object, in his discussion of Axiom XXIV: '*The distinct Impression of any considerable extent of variegated Matter cannot be received by a Meer point of Matter*' (*IM* 115). More argues that a physical point cannot 'be a Subject distinctly receptive of the view, haply, of half an Horizon at once' because the 'view'—i.e. the visual perception—of this complex object is constituted by 'reall and distinct motion from reall distinct parts of the Object that is seen' (*ibid.*). The 'whole image of an object' is made up of various motions corresponding to the parts of the object. Moreover, for the hypothetical materialist, each of these constituent motions is a perception. When More considers whether the complex pattern of motion might be distributed across the parts of the common sensorium, he argues that different parts of the common sensorium would thereby perceive different parts of the object (*IM* 130).

Fourth, in the *Immortality of the Soul*, More defends an atomistic conception of matter: namely, the claim that physical things can be divided into parts, but only so far. Eventually we arrive at indivisible physical points or atoms, terms More uses interchangeably. We arrive at 'a *perfect Parvitude*, or the *least Reality* of which Matter can consist' (*IM* 115). These points have magnitude/extension and, hence, intellectually distinguishable parts: '[f]or every Quantity is *intellectually* divisible' (*ibid.*). We can distinguish the right half of an atom from its left. But atoms cannot be cut in half: '[t]he least that is conceivable is so little, that it cannot conceived to

be discernible into less' (*IM* 30). Given that More accepts an atomic theory of matter, he unsurprisingly assumes that the most plausible materialism is a form of atomism.¹⁰

3. MORE'S VERSION OF THE ACHILLES ARGUMENT

More presents his version of the Achilles argument as a *reductio* on the Hobbesian framework outlined above. He argues that this framework is incompatible with the kinds of mental unity we discover in ourselves. More initially focuses on the integration of inputs from different senses into a single mental life. During the subsequent argument, he switches to the integration that occurs when a single perception has a complex content, as when someone sees a face. This switch might seem jarring. But More holds that, in both scenarios, a single subject has multiple perceptions simultaneously. If the materialist cannot accommodate this mental structure, they are in real trouble.

More introduces the argument as follows:

the [materialist] Hypothesis is false, and that *Matter* is utterly *incapable* of such operations as we find in our selves, and that therefore there is *something in us Immaterial* or *Incorporeall*. For we find in our selves, that one and the same thing both hears, and sees, and tastes, and, to be short, perceives all the variety of Objects that Nature manifests unto us. Wherefore Sense being nothing but the impress of corporeal motion from Objects without, that part of Matter which must be the common *Sensorium*, must of necessity receive all that diversity of impressions from Objects . . . (*IM* 125-6)

¹⁰ For more on More's atomism, see Duncan, 'Debating', 396; and Reid, *Metaphysics*, ch. 2.

If one and the same thing is the subject of multiple perceptions, this can only be because one and the same parcel of matter—call it the ‘common Sensorium’—receives the motions constitutive of these perceptions.¹¹ This follows from the second plank discussed above. But, More argues, one piece of matter cannot receive all these perceptions-cum-motions and, hence, one piece of matter cannot be *the subject* of the many perceptions constituted by these motions.

More considers a person’s experience of a complex object. On the materialist view, ‘the whole image of the Object’ is a composite of perceptions, so that it has a similar structure as the multi-modal case: one perceiver, many perceptions (*IM* 120). Suppose, then, that someone is looking at a face. Her overall experience includes perceptions of the eyes, nose, mouth, ears, and so forth. Thus, if this individual perceives the whole face, then she must be the subject of all these constituent perceptions. And if she is the subject of all these perceptions, then she must contain a material structure—the common sensorium—that simultaneously receives all the motions that constitute these perceptions.

¹¹ When More introduces the common sensorium, he does not take a stand on its location or realization in the human body. He assumes that a materialist must be committed to *some* such physical structure that integrates perceptions by receiving the constitutive motions. Later in the *Immortality*, More considers various opinions about what the common sensorium might be: the human body as a whole, the orifice of the stomach, the heart, the brain, the pineal gland, etc. (*IM* 154-6). More initially ignores the differences between these opinions because the Achilles argument depends only on ‘*Matter generally considered*’ and, hence, applies to all of them (*IM* 154).

More appeals to a trilemma that originates with Plotinus to argue that the common sensorium might receive these various perception-cum-motions in one of three ways:

1. *One* of the physical points making up the common sensorium receives *all* the various motions,
2. *Each* of these physical points receives *all* the motions, or
3. *Different* physical points receive *different* motions.¹²

On the first option, *one* physical point is *the* subject of multiple perceptions: it perceives the eyes, nose, mouth, ears, and so forth. On the second, *each* physical point is *a* subject of multiple perceptions. Each point perceives the eyes, nose, mouth, and ears alike, in parallel and massively duplicated. On the third option, different physical points are the subjects of different perceptions. One physical point perceives the eyes, another point perceives the nose, and yet another perceives the mouth. As More writes:

For concerning that part of Matter which is the Common *Sensorium*, I demand whether [i] some one point of it receive the whole image of the Object, or whether [ii] it is wholly received into every point of it, or finally whether [iii] the whole *Sensorium* receive the whole image by expanded parts, this part of the image, and that part that. (*IM* 129)

¹² For discussion of Plotinus's formulation, see Devin Henry, 'The Neoplatonic Achilles', in Thomas Lennon and Robert Stainton (eds.), *The Achilles of Rationalist Psychology* (Springer: Dordrecht, 2008), 59-74.

Through a process of elimination, More argues that none of these options can account for the fact that *one and the same thing* sees the entire face and, hence, has multiple perceptions at once. Since *one and the same* thing obviously *can* have these multiple perceptions simultaneously, More concludes that the materialist hypothesis is false.

Let's look at how More eliminates each of the materialist's options.

(a) Against Options (i) and (ii)

More objects to options (i) and (ii) on the grounds that a single physical point or atom cannot receive all the diverse perceptions-cum-motions that make up a complex experience. These options differ only in whether one or many physical points are assigned this impossible feat. As More writes, '[t]he distinct Impression of any considerable extent of variegated Matter cannot be received by a meer point of Matter' (*IM* 115). The problem is that atoms lack 'integral' parts:

This Parvitude therefore that is so little [i.e. a physical point or atom] that it has properly no integral parts, really distinguishable, how can it possibly be a Subject distinctly receptive of the view, haply, of half an Horizon at once? Which sight is caused by real and distinct motion from real distinct parts of the Object that is seen. (*IM* 115)

Distinct parts of an object—like a face—produce distinct motions in the perceiver that constitute perceptions of those parts. An atom, however, cannot receive all these distinct motions simultaneously, and so cannot be the subject of all the perceptions constituted by these motions. Thus, an atom cannot perceive the whole face.

To drive this point home, More notes that our experiences of ‘variegated Matter’ often includes perceptions of different colors simultaneously. Someone looking at a checkerboard sees *black* and *red* at the same time. If perception is constituted by motion, then perceiving different colors requires different motions. ‘That diversity there is of Sense or Perception does necessarily arise’, More explains, ‘from the diversity of the Magnitude, Figure, Position, Vigour and Direction of Motion in parts of the Matter’ (*IM* 112). Hence, an atom could perceive different colors simultaneously—like black and red—only if the atom could move in two different ways at once. But More thinks this is impossible. Moving in different ways requires different moving parts, which an atom lacks. Different motions are incompatible. An atom can move left or right, up or down, but not both simultaneously. As More writes, ‘seeing Motion is the cause of Sight, the contrariety of Objects for Colour must arise out of contrary modifications of Motion in this particle we speak of, that immediately communicates the Object to the Sentient: which contrariety of Motions at the same time and within the same surface of the adequate place of a Body is utterly incompatible thereto’ (*IM* 116).

(b) Against Option (ii)

Option (ii)—on which each of the physical points making up the common sensorium receives all the perceptions-cum-motions—faces additional problems:

But if every point or particle of this Matter could receive the whole image, which of these innumerable particles that receive the Image entirely, may be deemed *I myself* that perceive this image? For if I be all those points, it will come to pass, especially in a small object and very near at hand, that the line of impulse coming to diverse and distant

Points, it will seem to come as from several places, and so one Object will necessarily seem a Cluster of Objects. But if I be one of these Points, what becomes of the rest? Or who are they? (*IM* 129-30)

More sets up a dilemma. Either I am constituted by *all* the physical points making up the common sensorium, or I am identical to *one* of them. If I am constituted by *all*, then this option predicts that I would see objects not just double, but duplicated many, many times over, once for each of the perceiving points. If I am just *one* of these points, then I share my body with many other perceivers since there is no principled difference between *me* and the ‘innumerable [other] particles that receive the Image entirely’ (*ibid.*). Each point has an equally good claim to being a perceiving subject, which leads to a dizzying multiplication of perceivers. Neither consequence is palatable.

(c) *Against Option (iii)*

Having ruled out options (i) and (ii), More argues that (iii) won’t save the materialist either:

There remains therefore only the third way, which is that the parts of the image of the Object be received by the parts of this portion of Matter, which is supposed the common *Sensorium*. But this does perfectly contradict experience; for we find our selves to perceive the whole Object, when in this case nothing could perceive the whole, every part perceiving only its part; and therefore there would be nothing that can judge the whole. No more than three men, if they were imagined to sing a song of three parts, and none of

them should hear any part but his own, could judge of the Harmony of the whole. (*IM* 130; see also 164 and 175-6)

Consider the experience of looking at a face. The perception of the eyes consists in the motion of *one* part of the sensorium, the perception of the nose consists in motion in *another* part of the sensorium, and so on. One perception occurs over *here*, while another perception occurs over *there*. But, More argues, the subject of a perception—the thing that perceives—is the part of matter in motion. That is the second plank of the materialist framework described above. If these perceptions-cum-motions inhere in different parts of the common sensorium, then the perceptions of the different features belong to different subjects. One thing sees the eyes, something else sees the nose. Nothing perceives both. No matter how tightly we pack perceptions, they inhere in different parts of matter and, hence, belong to different material subjects. ‘But’, as More points out, ‘this does perfectly contradict experience’ (*ibid.*).

A materialist might object that there *is* something to which all the various perceptions-cum-motions belong: the common sensorium as a whole! According to this objection, the whole common sensorium sees both eyes and nose because one of its parts sees the eyes, and another sees the nose. The whole common sensorium is the *one* subject of the *many* perceptions.

In response, More considers the conditions under which we attribute motion to a whole body as opposed to just one of its parts (*IM* 156). Given the materialist’s view that perception is motion, these conditions should apply to perceptions as much as any other kind of motion. More holds that a given motion belongs to a whole body just in case all the parts of the body participate in this motion. When a horse gallops west, the whole horse moves west in virtue of all its parts moving west. While the horse’s legs move in a different pattern than its head or tail, the

motion of the whole is the common denominator of the motions of its parts, namely, their tending west. In contrast, the whole horse does not move when it flicks its tail, because most of the horse's parts are not involved in this flicking motion.

Thus, a given motion—say, the motion constituting a perception of a nose—belongs to the whole common sensorium just in case each part of the common sensorium participates in this motion. More draws this conclusion when he considers the opinion that the entire human body is the common sensorium: ‘upon supposition we are nothing but *meer Matter*, if we grant the *whole Body* to be one common *Sensorium*, perceptive of all Objects, Motion which is impressed upon the Eye or Ears, must be transmitted into all the parts of the Body. For Sense is really the same with communication of Motion’ (*IM* 156). So long as a perception-cum-motion is confined to a single body part, such as the eye or ear, the perception-cum-motion does not belong to the body as a whole. A perception-cum-motion belongs to the whole body only when it is transmitted or shared across ‘all the parts of the Body’. But option (iii) stipulates that different perceptions-cum-motions belong to different parts of the common sensorium. Thus, on this option, the materialist is *not* entitled to claim that the whole common sensorium is the one and the same thing that receives all the motions constituting a person's multiple perceptions.

According to More, the perceptions of the parts belong to the whole if and only if these perceptions are shared by *all* the parts. Assuming that the common sensorium is made up of atoms or physical points, the perception of a single atom belongs to the whole common sensorium just in case each of the atoms making up the common sensorium has its own copy of this perception. Thus, the perceptions of the parts belong to the whole just in case More's option (ii) obtains, with each physical point making up the common sensorium perceiving in parallel

and alike. But More has already argued that that won't work. In sum: this development of (iii) collapses into option (ii), which has already been shown to be a non-starter.

The materialist is out of options. They lack an explanation of the fact 'that one and the same thing both hears, and sees, and tastes, and, to be short, perceives all the variety of Objects that Nature manifests unto us' (*IM* 125-6). More concludes that we should reject the materialist hypothesis.

(d) A Streamlined Version of More's Argument

We can distill the core of More's argument as follows:

- (1) If materialism is true, then perception reduces to motion.
- (2) If perception reduces to motion, then the subject of a perception is the portion of matter to which this motion belongs.
- (3) Different motions are incompatible or contrary. A portion of matter can have only one motion at a time.

Therefore,

- (4) If materialism is true, then a given material subject can have only one perception at a time.

But,

- (5) A subject can have multiple perceptions at a time.

Therefore,

- (6) Materialism is false.

Premise (1) spells out More's target: a Hobbes-inspired materialism that reduces perceptions to motions occurring in the body.

Premise (2) locates the subject of perception in the swirl of matter. Consider someone looking at an apple. A visual perception of red occurs. Call this perception *p*. Given premise (1), this perception is identical to some motion *m*, presumably in the perceiver's body. Premise (2) then says that the subject of perception *p* is the narrowly circumscribed portion of matter to which motion *m* belongs, or in which *m* inheres. If this perception consists in the vibration of a neuron, or the neuron's tracing a figure-eight pattern, then the neuron would be the subject of this perception (*IM* 112; see also 122).¹³

Premise (3) claims that different motions are incompatible, contrary, or mutually exclusive. A given portion of matter can have only one motion at a time, on pain of contradiction. A given part of matter can move left or right, up or down, east or west, zig or zag, but it cannot move in two ways at once. As More writes, 'the impress of the one will take off immediately the impress of the other' (*IM* 118). In this regard, motions are like shapes. Nothing can be spherical *and* cubic at the same time: these are mutually exclusive properties for any portion of matter. More commits himself to this premise in his objections to the first and second forks of his trilemma.

¹³ One materialist response would be to deny that perception requires a subject. Such a materialist might claim that there are human bodies, in which various motions occur, and that some of these motions constitute perceptions, but they would deny that there is a unitary subject to which all these perceptions belong. That *is* one possible view, and it *might* even be Cavendish's. As we shall see below, however, I do not think Cavendish jettisons the concept of a subject, but instead complicates and fragments it. I am grateful to Alison Peterman for pressing this point.

Premise (4) concludes that, if materialism is true, then a subject can have at most one perception at a time. If distinct perceptions reduce to distinct motions, and distinct motions are contrary or incompatible qualities, then distinct perceptions reduce to contrary or incompatible qualities (*IM* 116). Multiple perceptions-cum-motions cannot co-exist in a single portion of matter. Given the identification of subject and portion of matter, multiple perceptions cannot belong to a single subject at the same time. If we assign the contrary perceptions to different portions of matter, as the third fork of More's trilemma suggests, these contrary perceptions will belong to numerically distinct subjects. Otherwise, we would not have removed the contradiction. Hence, each subject is confined to a *single* perception at a time. Premise (5) notes that a subject *can* have multiple perceptions simultaneously. We can see, taste, and smell all at once. So, materialism is false.

The crux of More's Achilles argument is that materialism absurdly implies that a subject can have at most one perception at a time. The centrality of this issue emerges when More considers whether a materialist could *approximate* the experience of having multiple perceptions simultaneously if the subject were to rapidly cycle through perceptions, so that they would blur together from the subject's point of view. More imagines the materialist arguing as follows: '[t]hat the distinct parts of the Object do not act upon this round particle, which is the Cuspe of the visual Pyramide, at once, but successively, and so swiftly, that the Object is represented at once; as when one swings about a fire-stick very fast, it seems one continued circle of fire' (*IM* 118).¹⁴ More concludes that the materialist's 'subterfuge' will not work: 'we shall find this

¹⁴ This maneuver resembles Descartes's account of emotional conflict in terms of the mind's rapid oscillation in *Passions* I.47.

instance very little to the purpose' (*ibid.*). One issue is that the materialist's proposal seemingly implies that 'we shall onely see [an object] by parts, the parts vanishing and coming again in a competent swiftness, but very discernible' (*IM* 119). More's discussion of this 'subterfuge' highlights that the problem for the materialist is to explain how one subject can have multiple perceptions simultaneously.

At this point, someone might object to premise (3) as follows. Although a portion of matter cannot have two *contradictory* motions at the same time, the same portion of matter *can* have multiple motions at the same time, so long as they are not contradictory. Though a portion of matter cannot move north and south at the same time, it can move south and east at the same time, resulting in an overall south-east trajectory. Similarly, a portion of matter can move circularly and linearly at the same time, resulting in an overall curved or wiggly path.¹⁵

More can reply to this objection in three ways. First, he might claim that for the purposes of this argument, he is referring to a body's overall or resultant motion, not the component motions. When More explicitly discusses the nature of motion—in the *Divine Dialogues*, for example—he seems concerned with overall motion.¹⁶ And a body can partake in only one overall motion at a time. Second, More might concede that some motions and some perceptions are compatible. To create problems for the materialist, all he needs is the assumption that there exist perceptions p_1 and p_2 , such that (i) it is possible for one subject to have p_1 and p_2 simultaneously,

¹⁵ I am grateful to Donald Rutherford and Paul Audi for pressing this objection.

¹⁶ Henry More, *Divine dialogues containing sundry disquisitions & instructions concerning the attributes and providence of God: the three first dialogues treating the attributes of God and his providence at Large* (London: 1668), 101-110.

and yet (ii) p_1 and p_2 reduce to contradictory motions. Given More's view that perceptions of contrary qualities—such as black and red, soft and hard, and so forth—reduce to contradictory motions, and given that many of our experiences includes perceptions of contrary qualities, this situation will be common (*IM* 116). Third, appealing to component motions does not obviously help the materialist avoid the thrust of More's argument. The materialist is trying to explain how one material thing or subject can partake in multiple perceptions-cum-motions at the same time. If the materialist were to reduce perceptions to component motions rather than overall motions, then a person's overall experience would reduce to the overall motion of a material thing, and the various perceptions making up this overall experience would reduce to the component motions that together result in this overall motion. But, More might argue, the component motions probably won't correspond neatly to the multiple perceptions that a subject can enjoy simultaneously. To make this reply stick, More might point to a case where a mismatch occurs between the number of component motions and perceptions. Although more work needs to be done here, More clearly has resources to respond to this objection. For simplicity's sake, I will continue writing as if a body can partake in only one motion at a time: this will allow us to put More into conversation with Cavendish more easily.

3. CAVENDISH RESPONDS TO MORE

Although Cavendish is not the kind of materialist that More envisions, she nevertheless seems vulnerable to his Achilles argument. Cavendish holds that the natural world, which includes human beings and their minds, is material. But where many of her contemporaries, such as Hobbes, Descartes, and More, recognize a single type of matter, Cavendish recognizes three degrees: rational, sensitive, and inanimate (*PPO-1663* xxxii, *OEP* 24 and *GNP* 3). The three

degrees of matter are blended throughout nature and explain different aspects of natural phenomena, including different aspects of our mental lives (*PPO-1663*, 43; see also *OEP* 16, 34-5, 127, 158, and 271). Rational and sensitive matter are animate. They are active, self-moving, and perceptive. Inanimate matter can be moved but it does not move itself. It is passive and inert. Ordinary physical things—such as tables, chairs, plants, animals, and human beings—are made up of all three kinds of matter. Cavendish refers to such ordinary physical things as ‘effective parts’ of nature, whereas she refers to rational, sensitive, and inanimate matter as ‘constitutive parts’ (*OEP* 27).¹⁷

The Achilles argument poses a *prima facie* threat to Cavendish’s system because she identifies perceptions with the ‘figurative motions’ of sensitive and rational matter, or ‘figures’ for short. As Cavendish writes, ‘[a]ll perception is made by one and the same matter, through the variety of its actions or motions, making various and several figures, both sensitive and rational’ (*PL* 169-70; see also *OEP* 142, 156). Indeed, Cavendish often lumps figure and motion together,

¹⁷ For discussion of the three degrees of matter, see Eileen O’Neill, ‘Introduction’, in Margaret Cavendish, *Observations upon Experimental Philosophy* (Cambridge: Cambridge University Press, 2001), x-xxxvi, at xxiii-xxv; Cunning, *Arguments*, 196-99; Boyle, *Well-Ordered*, 64-7 and 72-4; Jon Shaheen, ‘Part of Nature and Division in Margaret Cavendish’s Materialism’ [‘Division’], *Synthese* 196(9) (2019), 3551-3575; and Marcy Lascano, *Monism, Vitalism, and Self-Motion: The Metaphysics of Margaret Cavendish and Anne Conway [Monism]* (Oxford: Oxford University Press, forthcoming).

preferring the umbrella term ‘corporeal figurative motions’.¹⁸ In the context of Cavendish’s system, then, we might reformulate More’s argument as follows: a single part of matter can have at most one figure at one time. Hence, if perception reduces to figure, and the perceiver or subject to which a perception belongs is the part of matter that is qualified by this figure, then a perceiver can have at most one perception at a time, which is absurd.

Cavendish discusses More’s version of the Achilles argument in *Philosophical Letters* II.xiii. She writes, ‘[a]gain says your Author’, that is, More, ‘That Matter is utterly incapable of such operations as we find in our selves, and that therefore there is something in us Immaterial or Incorporeal; for we find in our selves that one and the same thing, both hears, and sees, and tastes, and perceives all the variety of objects that Nature manifests unto us’ (*PL* 169). In response, Cavendish insists that she can accommodate the point that ‘one and the same thing both hears, and sees, and tastes, and perceives’ because matter performs all these operations:

I answer, That is the reason there is but one matter, and that all natural perception is made by the animate part of matter; but although there is but one matter in Nature, yet there are several parts or degrees, and consequently several actions of that onely matter, which causes such a variety of perceptions, both sensitive and rational: the sensitive perception is made by the sensitive corporeal motions, copying out the figures of forreign objects in the sensitive organs of the sentient; and if those sensitive motions do pattern out forreign objects in each sensitive organ alike at one and the same time, then we hear, see, taste,

¹⁸ See Alison Peterman, ‘Margaret Cavendish on Motion and Mereology’ [‘Mereology’], *Journal of the History of Philosophy* 57(3), 471-499, at 473-4.

touch and smell, at one and the same time: But Thoughts and Passions, as Imagination, Conception, Fancy, Memory, Love, Hate, Fear, Joy, and the like, are made by the rational corporeal motions in their own degree of matter, to wit, the rational. *And thus all perception is made by one and the same matter, through the variety of its actions or motions, making various and several figures, both sensitive and rational.* (PL 169-70, emphasis added)

More's phenomenological datum has two aspects: multiplicity *in* unity. We discover in ourselves that we can have multiple perceptions simultaneously. Cavendish purports to account for this datum on the grounds that 'one and the same matter' can perform a variety of 'actions or motions' (*ibid.*). Unfortunately, Cavendish's reference to 'one and the same matter' is ambiguous between saying that one *type* of matter makes 'various and several figures, both sensitive and rational', or that one *token* of matter does the job. Either way, it's unclear how Cavendish explains how 'one and the same thing' can have multiple perceptions at once.

Fortunately, Cavendish has more tricks up her voluminous sleeves. More's argument presupposes that different figures or motions exclude each other, so that one part of matter can have at most one figure or motion at one time. This assumption allows More to argue that if perception reduces to figure or motion, then a perceiver can have at most one perception at a time. Cavendish rejects this presupposition. Instead, she insists that a single part of matter *can* have multiple figures simultaneously, and, hence, multiple perceptions at the same time. This response emerges a few pages later in *Philosophical Letters* II.xiii, when she considers the first and second forks of More's trilemma:

Concerning that part of Matter which is the Common Sensorium, your Author demands, Whether some point of it receive the whole Image of the object, or whether it be wholly received into every point of it? I answer, first, That all sensitive Matter is not in Points: Next, That not any single part can subsist of it self; and then that one Part doth not receive all parts or any part into it self; but that Parts by the power of self-motion can and do make several figures of all sizes and sorts, and can Epitomize a great object into a very little figure . . . *But*, says your Author [i.e. More]; *How can so small a Point receive the Images of so vast or so various objects at once, without obliteration or confusion.* First, I answer, That, as I said before, sensitive Matter is not bound up to a Point, nor to be a single self subsisting Part. Next, as for confusion, I say, that the sensitive matter makes no more confusion, then an Engraver, when he engraves several figures in a small stone, and a Painter draws several figures in a small compass; for a Carver will cut out several figures in a Cherry-stone, and a Lady in a little black Patch; and if gross and rude Art is able to do this, why may not Ingenious and Wise Nature do? (*PL* 172)

Whereas More's formulation of the Achilles argument presupposes an atomic theory of matter, Cavendish denies that atoms or physical points exist in nature (*OEP* 125).¹⁹ So the question of whether a physical point could receive 'the whole image of an object' never quite arises; rather, the question is whether one small part of matter can receive several figures 'without obliteration

¹⁹ See Karen Detlefsen, 'Atomism, Monism, and Causation in the Natural Philosophy of Margaret Cavendish', *Oxford Studies in Early Modern Philosophy*, 3 (2006), 199-240; and Shaheen, 'Division'.

or confusion' (*PL* 172). Cavendish appeals to everyday examples—a cherry stone, a tiny painting—to argue *yes*.

Cavendish's disagreement with More is about whether different figures are incompatible or exclude each other, since this determines whether a part of matter can have multiple figures and, hence, multiple perceptions simultaneously. Cavendish argues that seemingly incompatible figures are often compatible. In the middle of her response to the Achilles argument in *Philosophical Letters* II.xiii, Cavendish discusses quicksilver. This might seem like a *non sequitur* of staggering proportions. But this apparent digression allows Cavendish to argue that material things—and, specifically, rational and sensitive matter—can have a greater variety of figures or qualities at one time than More allows. She writes:

As for what your *Author* [More] says, *That we cannot conceive any portion of Matter, but is either hard or soft*; I answer, That these are but effects of Matters actions, and so is rare, and dense, and the like; but there are some Creatures which seem neither perfectly rare, nor dense, nor hard, nor soft, but of mixt qualities; as for example, Quicksilver seems rare, and yet is dense; soft, and yet is hard; for though liquid Quicksilver is soft to our touch, and rare to our sight, yet it is so dense and hard, as not to be readily dissolved from its nature; and if there be such contraries and mixtures in one particular creature made of self-moving Matter, what will there not be in Matter it self, according to the old saying: *If the Man such praise shall have; What the Master that keeps the knave?* **So if a particular Creature hath such opposite qualities and mixtures of corporeal motions, what will the Creator have which is self-moving Matter? Wherefore it is impossible to affirm, that self-moving Matter is either all rare, or all dense, or all hard, or all**

soft; because by its self-moving power it can be either, or both, and so by the change and variety of motion, there may be soft and rare Points, and hard and sharp Points, hard and contracted Globes, and soft and rare Globes . . . (*PL* 171, emphasis added)

More assumes that a given part of matter can have only *one* motion, *one* figure, *one* density, etc. at a time—and, hence, only one *perception* at a time. Quicksilver shows that an ordinary physical thing can be many things at once. Quicksilver has multiple motions, figures, and densities. Indeed, Cavendish claims that quicksilver has ‘opposite qualities and mixtures of corporeal motions’ (*ibid.*). But if quicksilver can be many things at once, so too for animate matter. Hence, both sensitive and rational matter can have multiple perceptions-cum-figures simultaneously.

This not simply an *ad hoc* maneuver to respond to More. Cavendish also claims that one part of matter can have multiple figures later in *Philosophical Letters*:

How is it possible, that numerous figures can exist in one part of matter? For it is impossible that two things can be in one place, much less many. My answer in short is, That it were impossible, were a part of Matter, and the numerous figures several and distinct things; but all is but one thing, that is a part of Matter moving variously; for there is neither Magnitude, Place, Figure, nor Motion, in Nature, but what is Matter, or Body . . . (*PL* 513)

Since a part of matter is ‘but one thing’ with its several figures, it *can* have multiple figures.

While Cavendish’s reasoning is obscure, she clearly states that ‘numerous figures can exist in

one part of matter' (*ibid.*). This suggests that Cavendishian figures are not geometrical shapes but are more like properties or qualities. Multiple geometrical shapes cannot co-exist in a single part of matter (assuming it is a single subject of inherence), for nothing can be round and square at the time. Multiple properties or qualities can co-exist, in contrast, so long as they are not incompatible. An apple can be round and red simultaneously.²⁰

Moreover, in the *Philosophical and Physical Opinions* (1663), Cavendish argues that someone can have multiple thoughts simultaneously precisely because a single portion of matter can have multiple figures:

Many wonder what Thoughts are, and how such Millions can be within so little a Compass as the Brain. I answer that a Little quantity of the Rational Animate matter may make Millions of Figures, which Figures are Thoughts . . . and like Pictures, Many Figures may be drawn in one Piece, and every Figure in a Several Posture . . . Again, say, some, how is it possible that there should be so many Several Thoughts in the Head at One time . . . ? To the first I answer, how many Several Postures may a Man put his Body into at One time, nay, I may say, One Part of the Body? For how many Several Postures may the Face draw it Self into at One time? (*PPO-1663* 266-7; see also 90; and *PL* 22-3)

²⁰ For more on what Cavendish means by 'figure', see Alison Peterman, 'Empress vs. Spider-Man: Margaret Cavendish on Pure and Applied Mathematics' ['Empress'], *Synthese* 196(9) (2019), 3527-3549, at 3537; and Colin Chamberlain, 'Cavendish in a Material World: Margaret Cavendish Against the Early Modern Mechanists' ['Color'], *Philosophical Review*, 128-(3) (2019), 293-336, at 326.

When Cavendish says that ‘Many Figures may be draw in one Piece’, someone might interpret her as attributing the different figures to different parts of the one piece of matter. On this reading, one part of matter can have multiple figures simultaneously because this part of matter is itself a composite whole made up of further parts. Different figures would belong to different parts, which would function as distinct material subjects of inherence. One figure would exist over *here*, another would exist over *there*. I don’t think that’s what Cavendish is getting at. When she says that ‘Many Figures may be drawn in one piece’, she is attributing the many figures to the very same material subject of inherence: namely, one part of matter. That’s why Cavendish shifts the reader’s attention away from the human body as a whole to concentrate on *one* part of the human body—the face—and the “many several postures” it can “draw it Self into at One time” (*ibid.*; see also *PL* 513).

Let me sum up. More argues that a material subject cannot have multiple perceptions at the same time because perceptions reduce to motion or figure and one part of matter can have at most one motion or figure at a time. Cavendish responds to More’s argument by arguing that one part of matter can have multiple figurative motions and, hence, multiple perceptions simultaneously. The kind of multiplicity in unity we discover in our mental lives is baked into the nature of matter itself. For Cavendish, then, there is no *general* obstacle to a single perceiver having multiple perceptions—or, at least, More hasn’t identified one. Still, Cavendish allows that the integration of inputs from different senses is puzzling, even if More does not correctly identify the puzzle. And that brings us to the next section.

4. CAVENDISH ON MULTI-MODAL INTEGRATION

Cavendish holds that perceptions belonging to different senses occur in different parts of the body. The eyes see, the ears hear, and the nose smells. As Cavendish writes:

if there be an object which is to be patterned out with all its proprieties, the colour of it is perceived only by sight; the smell of it is perceived by the nose, its sound perceived by the ear . . . so that every sense in particular, patterns out that object which is proper for it; and each has but so much knowledge of the said objects as it patterns out; for the sight knows nothing of its taste, nor the taste of its touch. . . (*OEP* 180; see also 46, 183; *PPO*-1663 46-7, 82-3; *GNP* 55)

In this passage, Cavendish alludes to her view that human and animal perception consists in patterning (*OEP* 169, 222). According to this doctrine, human perception requires likeness between the perceiving subject and the object perceived. Cavendish refers to the resembling state of the perceiver as a ‘pattern’, which is a species of figure, namely, a figure that is *patterned on* an external object. As Cavendish writes, ‘the perception of the exterior senses in animals, at least in man’ is made by ‘patterning or imitation’ (*OEP* 15). She reiterates that ‘the sensitive and rational motions in our sensitive organs, do work by way of patterning or imitation’ (*OEP* 174). And she emphasizes the likeness in *Philosophical Letters*. ‘To pattern out’, Cavendish explains, ‘is nothing else but to imitate, and to make a figure in its own substance or parts of Matter *like* another figure’ (*PL* 421; see also 540, emphasis added). When a human perceiver looks at an apple, the perceiver sees the apple in virtue of the parts of her eye organizing themselves to

resemble the apple's color and shape.²¹ This account of patterning presupposes the reality of so-called secondary qualities like color, sound, and smell, since the perceiver assimilates themselves to the object perceived. That's exactly right for Cavendish.²²

The problem, then, is that each of the sense organs has its own perceptions and point of view. The eyes see, but do not hear nor smell. The ears hear, but do not see nor taste. Each of the sense organs is trapped in its own perspective. Nothing, seemingly, knits their perspectives together. But this conflicts with More's observation that 'we find in ourselves that one and the same thing, both hears, and sees, and tastes, and perceives all the variety of objects that Nature manifests unto us' (*IM* 125-6). In short: if the subject of a perception is the part of matter in which this perception occurs, and if visual, auditory, and olfactory perceptions occur in different parts of the human body, then these perceptions will have different subjects. If a person's eyes

²¹ Although Cavendish sometimes writes as if the resemblance were literal—such that a part of the perceiver is actually red when she sees red—this is probably not her considered view (*OEP* 178-9). For more on patterning, see James, 'Innovations', 232; Michaelian, 'Epistemology', 39-44; Boyle, 'Perception', 439 and 442-3; Boyle, *Well-Ordered*, 101-2; Adams, 'Patterning'; Cunning, *Arguments*, 42-3, 160-1, and 189-90; Chamberlain, 'Color', 317-20; Peterman, 'Empress', 2534-2535; and Lascano, *Monism*. As Georgescu notes, Cavendish does *not* assume that all perception occurs through patterning. Laura Georgescu, 'Self-Knowledge, Perception, and Margaret Cavendish's Metaphysics of the Individual', *Early Science and Medicine* 25 (2020), 618-639, at 621-2. I will bracket this complexity by focusing on the human case.

²² See Chamberlain, 'Color'.

see, her ears hear, and her nose smells, then—seemingly—no *one thing* sees and hears and smells, since eyes are neither ears nor noses.

Cavendish appeals to a division of labor between rational and sensitive matter to explain the integration of perceptions across distinct senses. As I mentioned above, Cavendish holds that every ordinary physical thing—including animals and human beings—is made up of three degrees of matter: rational, sensitive, and inanimate. The sensitive matter in a person's sense organs is responsible for registering the sensory qualities of objects by producing sensory perceptions of them. A person's rational matter unifies these perceptions. As Cavendish writes in the *Philosophical and Physical Opinions* (1663 edition):

every particular Part of the Body hath a particular Sensitive Knowledge, so that the Sensitive Animate Matter and Motions make several Knowledges in several Parts of the Body: As for Example, Each Sense hath a particular Knowledge, for the Eye knows not what the Ear hears, nor the Ear knoweth not what the Eye seeth, nor the Nose knows not of the Ear's hearing or the Eye's seeing, nor all those Senses of the Tongue's tasting, nor the Tongue knows nothing of the other Senses; and Touch, though it be a general Sense, yet every several Touch is a several Sensitive Knowledge . . . but the Rational Animate matter and motions have a more general Knowledge, throughout, and of every particular Part of the Body, by reason it is not so mix'd with the Inanimate matter as to be troubled with, or to labour on the Inanimate matter, but moves purely and entirely on or in its own Matter, by which freedom, *the Rational matter and motions take a general Notice, as also particular Notice of the Sensitive motions, in every several Sense and Appetite; as*

also of the outward Objects that the Senses present to the Rational. (PPO-1663 46-7, emphasis added)

Rational matter takes ‘a general Notice’ of what is happening in each of the perceiver’s organs, thereby duplicating their perceptions and integrating them into a more encompassing, unified perspective. As Cavendish writes a few pages later, ‘the Rational Animate matter in the same Body straight moves its own Matter and Motions in the same Prints or Figures [as found in the sense organs], *by which it informs it self* of the Sensitive Actions; which Information is named Knowledge or Understanding’ (PPO-1663 48-9, emphasis added; see also 64-5 & 83; see also GNP 9). This passage suggests that a person’s rational matter itself serves as the unified subject for the multiplicity of perceptions: rational matter is the one and the same thing that hears, sees, and tastes.

Cavendish sometimes refers to rational matter’s unifying role by saying that *the mind* integrates perceptions in different modalities. This usage appears later in the *Philosophical and Physical Opinions*:

When the Senses move Regularly, every several Sense, and Sensitive motions in the Sensitive passages, informs the Mind, for each several Sense informs the Mind according to each Senses Propriety, of each several Quality or Parts of the Fruit, as also of the whole Figure of the Fruit, so that every several Quality, or Part, or Object of the Fruit, as Colour, Sent, Taste, and Touch, is presented through several Sensitive passages, as the Eye, Nostrils, Mouth, and Pores in the Flesh of the Hand, by which several Passages, the several Qualities or Parts of the Fruit are presented in several Objects by the several

Senses in the several Passages; so that the several Senses in the several Passages make a perfect Division or Distinction of the several Qualities, which are the several Parts of the Fruit, *and then the Mind joins these several Prints of several Objects of several Parts, into the like Figure of the whole Apple, just as it is in itself* . . . and though the Rational matter and motion doth for the most part pull all the several Sensitive Prints of the several Part of the Apple, into one whole Figure of the whole Apple, yet the Rational motions may move in such Prints or Figures of each Part severally, as the several Senses have presented . . . (PPO-1663, 82-83)

She also describes the mind as integrating sensory perceptions in the *Observations upon Experimental Philosophy*:

sense does perceive, as it were, in part, whenas reason perceives generally, and in whole; for if there be an object which is to be patterned out with all its proprieties, the color of it is perceived only by sight; the smell of it is perceived by the tongue, and its hardness or softness, coldness or heat, dryness or moisture, is perceived by touch; so that every sense in particular, patterns out that object which is proper for it; . . . *But the mind patterns out all those figures together, so that they are but as one object to it, without division:* which proves, that the rational perception, being more general, is also more perfect than the sensitive; and the reason is, because it is more free, and not encumbered with the burden of other parts . . . (OEP 180)

When Cavendish refers to the mind in these passages, she is *not* talking about an immaterial thinking substance à la Descartes or More. Rather, a person's mind just is rational matter, which is as composite and divisible as any kind of matter. She writes that 'the natural mind or soul' is 'made of rational matter' (*PL* 49) and that 'this material or corporeal Mind is *nothing else* but what I call the rational matter' (*PL* 192; see also 111, 116, and 434; *OEP* 190).²³

²³ Scholars disagree about where to locate an individual person's mind in Cavendish's metaphysical scheme. Some identify mind and rational matter in Cavendish, as I have here. See, for example, James, 'Innovations', 238-9; O'Neill, 'Introduction', xxv; and Broad, *Women Philosophers*, 46 and 51. This identification locates an individual person's mind at the level of constitutive rather than effective parts. Other commentators—such as Karen Detlefsen, 'Cavendish and Conway on the Individual Human Mind' ['Individual'], in Rebecca Copenhaver (ed.), *Philosophy of Mind in the Early Modern and Modern Ages* (London/New York: Routledge, 2018), 134-156, at 137; Lascano, *Monism*; and Peterman, 'Mereology', 494—locate an individual person's mind at the level of effective parts, that is, at the level of ordinary objects made up of the three degrees of matter. When Detlefsen writes that we can understand a 'natural individual', an effective part, as 'a center of unified sense and reason, and therefore a center of phenomenological self-awareness', she seems to be saying that the natural individual or effective part plays the role of the mind for Cavendish. Detlefsen, 'Individual', 137. I suspect that Cavendish often blurs the distinction between the constitutive and effective levels by offering explanations—for instance, of the perceptual process—that cross back and forth between these levels.

In addition to introducing some new terminology in these passages, Cavendish suggests a further sense in which rational matter unifies perceptions: namely, that a person's rational matter represents multiple sensory qualities as belonging to a single object. As Cavendish writes, 'the Rational matter and motion doth for the most part pull all the several Sensitive Prints of the several Part of the Apple, into one whole Figure of the whole Apple' (*PPO-1663*, 82-83).

Other commentators such as James,²⁴ Michaelian,²⁵ and Boyle²⁶ correctly note that Cavendish takes rational matter to unify inputs from different senses. But they do not explain *how* rational matter unifies. Specifically, they do not explain how rational matter can be the unified subject for a multiplicity of perceptions, given that rational matter is itself composite. As Cavendish writes, '[t]he natural mind or soul is of one kind, yet being made of rational matter, it is dividable and composable' (*PL* 49). Thus, Cavendish's claim that a person's rational matter is the 'one and the same thing' that hears, sees, and tastes appears vulnerable to the third fork of More's trilemma. If one part of a person's rational matter sees, and another part of a person's rational matter hears, then we might worry that no *one* thing both sees and hears. Indeed, in the same breath that Cavendish says that rational matter integrates, she says that 'all perceptions, both Sensitive and Rational, are in parts' (*GNP* 9; see also *PPO-1663*, 80). Boyle writes that 'it is the rational matter's patterning out all those motions of the sensitive matter *together* that constitutes the person's rational and conscious perception of the whole [object]' (2015, 443). But

²⁴ James, 'Innovations', 232.

²⁵ Michaelian, 'Epistemology', 42.

²⁶ Boyle, 'Perception', 443; and Boyle, *Well-Ordered*, 77-8.

if the rational pattern is scattered across several parts, in what sense does rational matter pattern 'all those motions of the sensitive matter *together*' (Boyle 2015, 443, emphasis added)?

Perhaps a privileged chunk of rational matter in a person's body—somewhere in the head, for instance—plays the role of More's common sensorium. On this picture, this privileged chunk of rational matter would detect the sensory perceptions occurring in the sense organs, and then produce copies of these perceptions in its own substance. This special part of rational matter would then serve as the unified subject of multiple perceptions in different modalities because it would simultaneously instantiate copies of them. As we saw in the previous section, Cavendish holds that one part of matter can have multiple figures/perceptions simultaneously, so nothing in her system obviously rules out this centralized picture. And Cavendish sometimes flirts with this possibility:

But since the sensitive organs in man are joined in that part; we believe that all knowledge lies in the head, by reason the other parts of the body do not see as the eyes, nor hear as the ears, nor smell as the nose, nor taste as the tongue, etc. All which makes us prefer the rational and sensitive motions that work to those perceptions in the mentioned organs, before the motions in the other parts of the body . . . (*OEP* 151; see also PPO-1663, 50; GNP 48)

This centralized picture does *not* represent Cavendish's considered view, however. This passage articulates a tempting position—'that all knowledge lies in the head'—that Cavendish rejects. In this passage, Cavendish distances herself from this position by referring to it as what 'we [i.e. the

ignorant masses] believe', rather than the truth.²⁷ The continuation of the passage reminds us that rational matter exists throughout the human body:

whenas yet these [motions in the other parts of the body] are no less rational and sensible than they, although the actions of their sensitive and rational perceptions, are after another manner . . . And therefore, the head or brains cannot engross all knowledge to themselves; but the other parts of the body have as much in the designing and production of a creature . . . (*OEP* 151-2)

We make an all-too-common mistake, according to Cavendish, when we prefer the rational and sensitive matter in the head. This points towards a decentralized picture of the way rational matter operates.

Cavendish explicitly rejects the centralized picture—on which *one* part of matter is solely responsible for integrating all the perceptions from different senses—in *Philosophical Letters* II.xix when she discusses the common sensorium:

There are various opinions concerning the seat of Common Sense, as your *Author* [i.e. More] rehearseth them in his *Treatise of the Immortality of the Soul*; But my opinion is, That common sense hath also a common place; for as there is not any part of the body that hath not sense and reason, so sense and reason is in all parts of the body, as it is observable by this, that every part is subject to pain and pleasure, and all parts are

²⁷ I am grateful to Marcy Lascano for emphasizing this point.

moveable, moving and moved; also appetites are in every part of the body: As for example, if any part itches, it hath an appetite to be scratched, *and every part can pattern out several objects, and so several touches . . .* (PL 188, emphasis added)

And she heaps scorn on the idea that the common sense can be assigned to a particular organ in the body:

Wherefore I am not of the opinion, that [the common sense], is as a Point, or some such thing in a little kernel or *Glandula* of the Brain, as an Ostrich-egg is hung up on the roof of a Chamber; or that it is in the stomach like a single penny in a great Purse; neither is it in the midst of the heart, like a Lady in a Lobster; nor in the blood, like as a Menow, or Sprat in the Sea; nor in the fourth ventricle of the Brain, as a lousie Souldier in a Watch-tower. (PL 189; see also 185-6)²⁸

No *one* part of rational matter is solely responsible for integrating the inputs from multiple senses. But what other option might there be? My proposal is that *many* parts of rational matter integrate the inputs from multiple senses, in parallel and in unison.

Rational matter exists in every part of a person's body. The rational matter in a person's eyes copies the visual perceptions occurring there, the rational matter in the ear copies the

²⁸ Cavendish refers to the common sense as 'that which moves the body', which is an expression she picks up from More (PL 189). Though I have focused on the common sensorium's integrative role, More assumes that the common sensorium also moves the body (IM 129, 157).

auditory perceptions, etc. Rather than transmitting these copies to a centralized portion of rational matter in the head, the various parts of rational matter share their knowledge with each other through a process that Cavendish describes as 'information or intelligence' so that all come to perceive alike (*OEP* 152). When rational parts successfully communicate their knowledge, each part knows what all the others know. When someone hears, sees, and tastes, each part of her mind or rational matter hears, sees, and tastes alike, in parallel and in unison. In other words, the rational matter in her eyes hears, sees, and tastes, and so does the rational matter in her ears, and in her tongue.

In *Philosophical Letters* II.xix, dedicated to the common sense, Cavendish suggests that the integration of sensory input is distributed and duplicated across the parts of the mind: 'Nor is there any thing which can better prove the mind to be corporeal, then that *there may be several Figures in several parts of the body made at one time, as Sight, Hearing, Tasting, Smell, and Touching*, and all these in *each several organ*, as well at one, as at several times' (*PL* 190, emphasis added). The mind or rational matter operates in such a way that several of its parts are each the subjects of several perceptions simultaneously, namely, seeing, hearing, tasting, smelling, and touching. On my reading, then, Cavendish accepts a version of the second fork of More's trilemma, except that Cavendish substitutes the parts of a person's mind or rational matter for the atoms making up the common sensorium.

My proposal helps explain why Cavendish assigns rational matter the job of integrating input from different senses, given that she takes rational matter to be especially good at achieving this kind of uniformity across its parts:

It may very well be, that a man in a deep contemplative study, doth not always feel when he is pinched or touched; because *all* the rational motions of his body concur or join to the conception of his musing thoughts; so that only the sensitive motions in that part, do work to the perception of touch; whenas the rational, even of the same part, may work to the conception of his thoughts. . . . *for one rational part can inform all other rational parts in a moment of time, and by one act . . .* (OEP 152-3, emphasis added; see also OEP 180, PPO-1663 46-7, 68)

One part of a person's rational matter can inform all the other parts of the rational matter, so that they can 'concur or join' to the same set of perceptions. According to my proposal, this is what happens when rational matter integrates perceptions from different senses. The parts of rational matter in a person's sense organs engage in a process of *mutual* information, so that each of these parts comes to duplicate the perceptions of all the others.

5. WHAT IS SPECIAL ABOUT RATIONAL MATTER?

Still, we might wonder why Cavendish holds that rational rather than sensitive matter is required to integrate perceptions from different senses. Both rational and sensitive matter can have multiple perceptions simultaneously, and both can achieve uniformity across their parts, even if rational matter is *better* at these tasks. In the *Grounds*, Cavendish writes that rational matter 'can more *easily* make an united perception, than the Sensitive' because rational matter is 'freer' (GNP 9). This claim presupposes that sensitive matter can *also* unite perceptions, albeit with difficulty.

The answer is that although a given part of sensitive matter can integrate perceptions within a single sense modality, such as vision, only rational matter can integrate perceptions *across* modalities. Only a part of rational matter can simultaneously see, hear, and taste. Rational matter's freedom is freedom *from* inanimate matter. Sensitive matter, in contrast, is encumbered: every portion of sensitive matter is united to a portion of inanimate matter, such that the sensitive matter cannot help but act with and through this inanimate matter.²⁹ Cavendish compares sensitive's matter relationship with inanimate matter to the relationship between workers and the building materials they use to make a house (*OEP* 24; see also *PPO-1663* 3, 19, 51-2). We might also think of sensitive matter as a painter who creates images using inanimate matter as canvas and paints. The sensitive matter in the eye, for example, perceives *red* by configuring its chunk of inanimate matter into a pattern of red; the sensitive matter in the ear perceives *middle C* by configuring the inanimate matter in the ear into a pattern of this note. As Cavendish writes, "[t]he Sensitive part of Animate matter worketh only on the Inanimate matter, Creating Infinite Figures or Creatures of the Infinite Inanimate part of matter" (*PPO-1663* 14).³⁰

²⁹ A given part of sensitive matter needn't be united to the very same part of inanimate matter in perpetuity (*OEP* 181). Sensitive matter's union with inanimate matter is, arguably, as mysterious as Descartes's union between mind and body. And much like Descartes, Cavendish treats this union as primitive (*OEP* 26-7). See Shaheen, 'Division', 3557.

³⁰ Someone might object that if sensitive matter produces its patterns in and with inanimate matter, then inanimate matter would thereby perceive. I don't think this follows. Sensitive matter operates on a chunk of inanimate to produce a likeness or resemblance between this chunk and an external object. This operation constitutes the sensitive matter's perception. The inanimate

A given portion of inanimate matter, structured in a certain way, can embody some patterns but not others. The inanimate matter in a person's eye can embody patterns of color or light, but not into patterns of sound or smell. Hence, the portion of sensitive matter that *uses* the inanimate matter in the eye to perceive is thereby constrained in what it can perceive. The sensitive matter in the eye can perceive color or light, but not sound or smell. As Cavendish writes:

The reason why the same perception that is within the eye, cannot be in the hand, or in any other part of a man's body, is, that the parts of the hand are composed into another sort of figure than the eyes, ears, nose, etc. are; and *the sensitive motions* make perceptions according to the compositions of their parts; and if the parts of the hand should be divided and composed with other parts, into another figure; (as for example, into the figure of an eye, or ear, or nose) then they would have the perceptions of seeing, hearing, and smelling. . . (*OEP* 185-6, emphasis added)

Sensitive matter's dependence on inanimate matter prevents it from simultaneously seeing, hearing, and tasting. A portion of sensitive matter can perceive only what its corresponding inanimate matter can pattern. Thus, no portion of sensitive matter can be the *one and the same thing* that sees and hears and tastes because no portion of inanimate matter can pattern color, light, sound, and flavor all at once. If a parcel of inanimate matter—e.g. in the eye—has the

matter is that *by which* perception occurs; it is not *that which* perceives. I am grateful to Marleen Rozemond for pressing this point.

organization required to embody a pattern of color or light, then it will lack the right organization to embody a pattern of smell or sound. Similarly, if a parcel of inanimate matter—e.g. in the ear—has the requisite organization to pattern sound, then it cannot pattern color and taste.

Rational matter is not thus constrained. Rational matter does not depend on inanimate matter and is not hostage to its limitations. When someone sees, hears, and smells, this perceiver's rational matter copies the sensory impressions scattered throughout her sense organs. But rational matter produces these copies by shaping *itself* into the relevant patterns, like a dancer using his body as his medium. As Cavendish writes, 'for I believe that the Eye, Ear, Nose, Tongue, and all the Body, have knowledg as well as the Mind, onely the rational matter, being subtil and pure, is not incumbred with the grosser part of matter, to work upon, or with it, but leaves that to the sensitive, and works or moves onely in its own substance, which makes a difference between thoughts, and exterior senses' (*PL* 115-6, emphasis added). She reiterates this point later in *Philosophical Letters*:

But this is to be observed, That the rational matter can and doth move in its own substance, as being the purest and subtillest degree of matter; but the sensitive being not so pure and subtil, moves always with the inanimate Matter, and so the perceptive figures which the rational Matter, or rational corporeal Motions make, are made in their own degree of Matter; but those figures which the sensitive patterns out, are made in the organs or parts of the sentient body proper to such or such a sense or perception: as in an animal Creature, the perception of sight is made by the sensitive corporeal motions in the Eye; the perception of hearing, in the Ear, and so forth. (*PL* 170-1; see also 18-9; *PPO*-1663 14, 25, and 43)

The recalcitrance of inanimate matter prevents a given portion of sensitive matter from simultaneously seeing, hearing, smelling, and tasting. Rational matter is free of this obstacle. Hence, a single portion of rational matter can see *and* hear *and* smell *and* taste at the same time.³¹

Cavendish also suggests that rational matter can more easily achieve uniformity of perceptions across its parts because of its freedom from inanimate matter: ‘the Rational matter and motions, that is dispersed throughout all the Body, hath a better Correspondence with it Self, than the Sensitive Animate matter hath, by reason it is not incumbred with the Dull or Inanimate part of Matter’ (*PPO-1663* 68; see also *OEP* 152-3). Rational matter ‘hath a better Correspondence with it self’ in that it is better at getting all of its parts in line so that they perceive alike. The rational parts communicate better, so that they can integrate the information registered by a person’s various sense organs.

5. MANY OR ONE?

We might worry that Cavendish has missed the point. We are trying to explain how perceptions from different senses get combined into a unitary experience. But Cavendish has offered not one

³¹ In emphasizing that rational matter can represent many different things because it is unencumbered by inanimate matter, Cavendish echoes Aquinas’s view that the intellect can cognize the natures of all bodies precisely because the intellect operates independently of body. See Robert Pasnau, *Thomas Aquinas on Human Nature* (Cambridge: Cambridge University Press, 2001), 51-7.

but many qualitatively similar experiences, distributed across the parts of rational matter. If many parts of rational matter perceive in parallel, this raises the specter of double, triple, or multiple vision that plagues the second fork of More's trilemma.

Cavendish addresses this worry in her discussion of binocular vision. She argues that when a person's parts perceive in unison—e.g. when two eyes perceive alike—their perceptions merge together:

But if a thousand eyes do perceive one object just alike, then they are but as one eye, and make but one perception; for like as many parts do work or act to one and the same design; . . . for, put the case there were a hundred thousand copies of one original; if they be all alike each other, so as not to have the least difference betwixt them; then they are all but as one picture of one original; but if they be not alike each other, then they are different pictures, because they represent different faces. And thus for a matched pair of eyes in one creature; if they move at the same point of time, directly to one and the same parts, in the same design of patterning out one and the same object; it seems but as one act of one part, and as one perception of one object. (*OEP* 183)

It is somewhat unclear whether Cavendish holds that a bunch of parts all having the qualitatively same perception will result in the whole having a single perception,³² or that it *seems* as if the whole has a single perception. Either way, Cavendish's overall point is clear. When parts

³² See Peterman, 'Empress', 3534.

perceive in unison, their perceptions merge into a unified phenomenological whole. Applied to the case of rational matter, when the parts of a person's mind perceive in unison, their perceptions merge into a single stream of consciousness.³³

This passage suggests that Cavendish accepts More's account of the conditions under which a perception belongs to a whole: when each of the parts has a copy of the perception. This coheres nicely with Cavendish's view that a motion belongs to a composite whole just in case each of the parts participates in this motion: 'the whole body moves according to each part, and so do all the bodily Faculties and Proprieties, and not according to one single part' (*PL* 188, emphasis added; see also 177, 185-6). Cavendish differs from More, however, in holding that matter—and, specifically, rational matter—can satisfy these conditions.³⁴

The Cavendishian mind is fluid. A collection of rational parts function as a single mind in virtue of the fact that these parts have qualitatively identical perceptions or, in other words, when these parts achieve a homogeneity of perceptions. This picture suggests that a human being will contain as many minds as they contain homogenous portions of rational matter. To take a somewhat fanciful example, if all the rational matter on the right side of my body perceives red and no green, whereas all the rational matter on the left side of my body perceives green and no

³³ This move is apiece with Cavendish's tendency to blur the type-token distinction in her metaphysics. I am grateful to Alison Peterman for this observation.

³⁴ Peterman gestures at a similar account of what binds parts into a whole more generally: 'we might say that parts are parts of a whole in virtue of having similar geometrical figures. But that raises the question of what binds similar figures into one creature'. Peterman, 'Mereology', 492n.132.

red, then I will be literally of two minds. A human being's many minds will have shifting and vague boundaries, as the perceptions of their parts change. Perhaps these minds will admit of degrees. If a collection of rational parts perceive *almost* alike, with just a few negligible differences, these parts will be *almost* as one. And that sounds like Cavendish to me.

6. CONCLUSION

In the *Immortality of the Soul*, More argues that a materialist cannot accommodate two kinds of mental unity: (i) the integration that occurs when a perception has complex content, and (ii) the integration that occurs when someone perceives via different senses. More holds that, in a materialist framework, both kinds of mental unity share a basic structure: that *one* perceiver has *multiple* perceptions. And More contends that the materialist cannot accommodate this structure.

More's argument goes like this: if a given perception just is motion, then the perceiver to which this perception belongs—the *self*, *subject*, or *I*—is the part of matter to which this motion belongs. But a part of matter can have only one motion at a time. A part of matter can move up or down, left or right, zig or zag, but not both at once. Thus, a part of matter can have at most one perception at a time, and, hence, a material subject cannot have multiple perceptions at the same time. But that conflicts with the fact that we regularly experience ourselves as having multiple perceptions simultaneously. More concludes that something in us is immaterial or incorporeal.

Cavendish responds that More underestimates matter. Cavendish argues that perception reduces to 'corporeal figurative motions' or 'figures' and she insists—*pace* More—that one part of matter can have multiple figures simultaneously. Taking a step back from the details of the texts, we can see Cavendish making a powerful but simple point in response to More. We should

be open-minded about what matter is like and what it can do. If we discover that our minds exhibit a surprising feature—like multiplicity in unity—and if we have independent reason to think that our minds are material, then that suggests that matter can have the surprising feature in question. For Cavendish, reflection on one’s own mind reveals what matter is like.³⁵

Still, Cavendish allows that the integration of inputs from multiple senses requires special explanation. She can’t simply point out that one part of matter can have multiple perceptions, since in this case the various perceptions occur in different parts of the body: seeing in the eyes, hearing in the ears, and tasting in the tongue.

Rational matter unites these perceptions. But no *one* part of rational matter—in the head, for example—is uniquely responsible for copying and thereby integrating the sensory perceptions scattered across the sense organs. Rather, the rational matter in the eye communicates with the rational matter in the ears, and the rational matter in the tongue, and vice versa, so that all these parts of rational matter come to perceive alike. This might suggest that Cavendish falls prey to the second fork of More’s trilemma, since she seems to have multiple streams of consciousness with qualitatively identical experiences running through a person’s body. Cavendish anticipates this worry and responds to it in her discussion of binocular vision. When parts perceive alike, they perceive as one. As Cavendish writes, ‘if a thousand eyes do

³⁵ Cunning discusses this style of argument in Cavendish. David Cuning, ‘Cavendish on the Intelligibility of the Prospects of Thinking Matter’, *History of Philosophy Quarterly*, 23(2) (2006), 117-136. Cavendish’s strategy anticipates Strawson’s arguments for ‘realistic materialism’. Galen Strawson, *Real Materialism and Other Essays* (Oxford: Oxford University Press, 2008).

perceive one object just alike, then they are but as one eye, and make but one perception' (*OEP* 183). When rational parts perceive in unison they fuse into a single mind. In this situation, the parts of rational matter don't matter.³⁶

³⁶ For helpful discussion of this material, I am grateful to students at Temple University, Harvard University, and the University of Rochester, as well as audiences at the Tokyo Forum for Analytic Philosophy, the New York City Workshop in Early Modern Philosophy, and the members of the COVID Early Modern Philosophy Workgroup. For incisive comments and advice, I would especially like to thank Marcy Lascano, Becko Copenhaver, Alison Simmons, Alison Peterman, Brooke Sharp, Eli Alshanetsky, Paul Audi, Marleen Rozemond, Ed Slowik, Elliot Paul, and Donald Rutherford.