

Plotinus' Self-Reflexivity Argument Against Materialism

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Abstract

Plotinus argues that materialism cannot explain reflexive cognition. He argues that mere bodies cannot engage in the *self-reflexive activity* of both cognizing some content and being cognitively aware of cognizing this content. Short of outright denying the cognitive unity underlying this phenomenon of self-awareness, materialism is in trouble. However, Plotinus bases his argument on the condition that material bodies are capable of a spatial unity at most, and while this condition has purchase on ancient materialists, it would be rejected today. After considering objections based on our contemporary understanding of a material body, I amend Plotinus' argument to focus instead on the core materialist commitment to external efficient-causal relations. This amended argument regains its urgency for materialism, while retaining the spirit of Plotinus' view.

Keywords: Plotinus, Intellect, reflexive cognition, materialism, efficient causation, external relations

1 Introduction

Plotinus has a string of arguments against materialism.¹ One of these arguments is that self-reflexive cognition—our reflexive awareness of the content of our occurrent cognitive activity—is inexplicable under materialism.² Plotinus takes self-reflexive cognition to require a *cognitive unity* between cognition and cognitive awareness of this cognition. Sometimes we both cognize some first-order content and are aware of the content of this cognition as it is happening: these two cognitive acts are intimately united.³ Plotinus argues that materialism cannot explain this cognitive unity. This is because material bodies amount to a spatial unity at most. Bodies are aggregates: their activity is nothing above the independent activity performed by each of their parts. However, no merely aggregated unity can amount to the kind of genuine, cognitive, unity necessary for self-reflexive cognition.⁴ Hence, it cannot be that material being exhausts all being.

There are two major joints in this argument on which we may press Plotinus: (a) why suppose

¹I use materialism as a synonym for the contemporary term *physicalism*.

²Though Plotinus typically does not name the targets of his anti-materialist arguments directly, his arguments are plausibly aimed at Stoic materialists as well as those among his contemporary Platonists that are reconciling their view with materialist commitments (Kalligas 2005, p.98). For a discussion of the full range of arguments that Plotinus makes against stoicism in general see Gerson 2016.

³More specifically, reflexive awareness grants us access to *narrow* content; I will bracket here externalist concerns about access to wide content (Putnam 1975). However, see Burge 1996 for an alternative view on which self-reflexive access to some of our own cognitive activity is not limited to narrow content alone.

⁴Plotinus' anti-materialist argument from reflexive cognition was developed further by the later Platonist, Proclus (Gerson 1997a, p.19). It may be that Plotinus is here following Aristotle and Alexander of Aphrodisias in arguing against materialism from the genuine unity of reflexive cognition (Gerson 1994, p.111).

that only a condition of *cognitive unity* explains self-reflexive cognition and (b) why suppose materialism lacks the metaphysical resources to explain this unity? In this paper, I focus specifically on contemporary materialist responses to (b) (though I touch briefly on (a) as well below). My intention is to examine the degree to which we can import Plotinus' arguments to bear on contemporary views of material bodies. Although materialists could block Plotinus' argument by rejecting the requirement of cognitive unity, my concern here is with putative materialist explanations for this phenomenon. Moreover, as I discuss below, there are significant difficulties in denying cognitive unity.

In what follows, I present Plotinus' argument for why materialism cannot explain cognitive unity (namely, his response to question (b) above). Plotinus argues that—because of his notion of *megethê*, on which bodies are indefinitely divisible⁵—the activity of a body is merely the distinct activities of its parts juxtaposed together. His anti-materialist conclusion follows from the claim that bodies are capable of a spatial unity at most; what I call his *Extensional Condition* on bodies. However, a contemporary materialist will reject this condition. They can point to the discoveries of both sophisticated biological functions and fundamental subatomic particles, among other things, as examples of material bodies whose complex activity is not distributed across their parts. Moreover, the condition seems intuitively false: my desk is both supporting the weight of my laptop as well as warming in the sunlight at the same time. This does not seem to require any special metaphysical apparatus to explain: this body is enjoying a form of unity of two independent activities simultaneously. These are examples of bodies more than mere aggregates; they are counterexamples to the *Extensional Condition*. Why then ought we suppose, along with Plotinus, that the dual joint activity of cognition and cognitive awareness of this cognition is *in principle* inexplicable under a materialist metaphysics?

I argue that these counterexamples can be handled if we update Plotinus' argument—namely, by targeting instead the core materialist view that a material body is only capable of entering into *efficient causal* relations. I call this the *Causal Condition* on bodies. As I argue below, on this condition, causal relations are exclusively external. But self-reflexive cognition is an *internal* relation that a cognitive state has to itself. I argue that cognitive unity is just as inexplicable on this updated condition of materialism, thereby reviving Plotinus' argument that materialism cannot explain cognitive unity. The materialist commitment to external, efficient causal relations provides us with an appropriate alternative condition to plug into Plotinus' argument against materialism. I finish by showing how

⁵*Megethê* may alternatively be glossed as having parts outside of parts, which amounts to the claim that there is no ultimate mereological level—every material body can always be divided further into *independent* parts at any level of investigation (4.7.6.35, 4.1.1.11-17, 4.1.1.60, all references to *The Enneads* come from the 2019 translation).

this alternative maintains the spirit of Plotinus' metaphysics.

2 Plotinus' self-reflexivity argument against materialism

Plotinus' metaphysics begins, as always for a Platonist, from the top. Platonist metaphysics has an explicit top-down structure: unlike a materialist metaphysician, Plotinus locates explanations in a generative principle from above rather than a constitutive structure from below.⁶ Plotinus' metaphysical system is, among other characterizations, one of descending *principles of explanation* from the first Hypostasis, the One, through the second, Intellect, and down from the third, Soul (5.1.3-5), into the sensible world of bodies in which intelligible being is reflected as a kind of shadow (6.2.7.13).⁷ Hence, for Plotinus, what explains the cognitive unity of self-reflexive cognition is our *participation* in the Intellect, because our cognition is an embodied instance of the *paradigmatic cognition* of the Intellect: this is how it plays this particular role as an explanatory principle for our cognition. If our participation in Intellect does not explain cognitive unity, then we would be left in the unenviable position of either denying this unity or positing an anemic metaphysics of mind. This is the problem Plotinus develops for materialism.

Thus, the argument requires both a defense of how reflexive cognition is paradigmatically performed by Intellect and reasons for why the materialist alternative is unsatisfactory. I start with the positive component of this thesis. Plotinus characterizes the reflexive cognition of the Intellect as follows:

Intellect's thinking that it is thinking should be included in its primary act of thought as a single being; in the intelligible world, thinking is not even conceptually double. (2.9.1.51)

Plotinus here draws a distinction between the 'primary act of thought' and the awareness of thinking ('thinking that it is thinking') while suggesting that they have a *single being*. That is to say, an item

⁶For an example of the materialist focus on bottom up explanations see Dennett 2013. For the opposite, Platonist position, the canonical expression of preference for a top down explanation is Socrates' autobiographical passage by Plato in the *Phaedo* 96a-102a. For discussion see Sharma 2009 and Gerson 2020, ch.3.

⁷As Gerson argues, the metaphysical system requires these three Hypostases in the intelligible world to play the role of explanatory, causal, and paradigmatic principles. Insofar as they are explanatory they serve as explanations for core philosophical problems. Insofar as they are causal, they are genuine causes for the phenomena we encounter. And, insofar as they are paradigmatic they serve—just as only forms do for Plato—as models for images that participate in them (1994, p.2-3). In this latter role, D. M. Hutchinson takes this to mean that "Intellect stands in a model-image relation to all forms of thinking...below itself. In the case of human beings, this means that all forms of embodied cognition are ultimately images of Intellect's contemplation" (2018, p.120).

of first-order cognition and the awareness of that thought, as it is being thought, are in a cognitive unity: they cognize the very same *content* in different ways, as a single being.

Here is a simple example of the idea: if I think the thought that it is *warm in this room* then my awareness of this occurrent thought has the very same content as the thought itself. However, my awareness is a different act of cognition from the first-order cognition involved in forming the thought. How is it that these are two separate acts of cognition that nevertheless share the same content? One might, reasonably, suppose here that if the second act is the *awareness* of the first cognition, that this will come along with its own *additional* content. However, the difference between the two acts is not a difference in content but a difference in how they *relate* to the same content. The first-order cognition is the cognitive activity of *representing* the content. The cognitive awareness of this cognition is the cognitive activity of *consciously apprehending* this cognition.⁸ As an analogy we may suppose that the cognitive awareness of cognition is a *spotlight* upon what passes before our conscious arena. The first-order cognitive act then is the site, or *vehicle*, of content. That is, we shine a spotlight upon the vehicles of content that pass before our mind: this is the taking up in awareness of the very same content of the first-order act of cognition. Hence, these two acts are performed towards the very same content, but involve different relations to this same content. And given that not every piece of first-order cognition passes before our conscious arena, these are two separate yet united acts whenever we are aware of our thinking.⁹

For Plotinus, the Intellect is always cognitively aware of its thinking as it is thinking; the cognitive unity underlying these two cognitive acts is what ‘primary thinking’ is (5.6.2). But, moreover, according to Plotinus, not only is the Intellect’s thinking ‘primary thinking’ but it is also ‘*self-thinking*’ (5.3.5.3). That is, the Intellect thinks—and thinks that it thinks—*itself*. Plotinus suggests that the actuality of Intellect is the activity of *intellection* and that the intelligibles (the forms) are identical to this activity (5.3.5.36–9). This is Plotinus’ famous idea that the intelligibles are internal to, and indeed identical to, the Intellect itself (5.5.1). As he says:

All will be simultaneously one; Intellect, intellection, and intelligible. If, then, its intellection is that which is intelligible, and the intelligible is it, it will, therefore, be thinking itself,

⁸While the language of *representation* is appropriate for our mundane cognition, it is important to bear in mind that the Intellect does not represent its content, but instead has direct non-representational knowledge of its thinking. See Gerson 2009, p.139–140 on why intellection is non-representational—this follows from Plotinus’ argument that the objects of cognition for the Intellect, the Intelligibles (or forms), are *internal* to the Intellect and so are not mediated through a representation. More on this below.

⁹I return below to discuss this idea in the context of Armstrong’s arguments against cognitive unity (Armstrong 1968). Armstrong’s view only has room for one kind of cognitive relation towards content. This is precisely what Plotinus denies, and what causes trouble for Armstrong’s materialism.

for it will think by its intellection, which it is, and it will think that which is intelligible, which it is. In both ways, therefore, it will think itself (5.3.5.44-9)

For our purposes, we can understand Plotinus' view as follows. The Intellect cognizes all that is thinkable. The content of its thought is all of intelligible being (namely, all of the forms) which just is genuine being.¹⁰ But its cognition must be reflexive (we might say, in a motto: *no cognition without recognition*), because it has to grasp itself in order to grasp all of intelligible being. The Intellect is metaphysically identical to intelligible being and so its reflexive cognition, its self-awareness, entails infallible *self-knowledge*. In other words, to do its paradigmatic work of thinking the intelligibles it will turn out that the Intellect's eternal self-aware thinking of all that is thinkable amounts to self-knowledge.¹¹ This is why, even though the Intellect thinks itself in two different ways—namely, firstly, *by its intellection* as a reflexive self-awareness of intelligible being and secondly, as a resulting self-knowledge *by thinking what is intelligible*—there is not even the conceptual possibility of the Intellect's cognition *doubling*.

There are vexing questions here about how it is that the Intellect's self-thinking amounts to self-knowledge. Briefly, the argument is that intelligibles cannot be external to the Intellect, because its encounter with them cannot be mediated through an external source, which would undermine its knowledge. But then they must be internal, and indeed, identical to the Intellect, amounting to infallible self-knowledge (5.5.1.20-3).¹² However, because self-thinking amounts to self-knowledge, there is a conceptual gap here: the former *entails* the latter but they are not identical. This will become important below in determining the scope of reflexive cognition in our own cognitive activity.¹³

It is worth paying attention to Plotinus' explicit denial that the Intellect's cognition could be

¹⁰This is keeping in mind that while sensible being has a kind of being as well, its being is that of a shadow or image of genuine, i.e., intelligible being (6.2.7.13, 6.2.22.40). For more on why bodies do not amount to the genuine being reserved for forms alone see Hutchinson 2022, p.307-8. Plotinus explicitly makes the identity claim in any case: "Being and Intellect are, then, one nature. For this reason, so are the Beings and the actuality of Being and an Intellect of this sort. And so acts of intellection are the Form or shape of Being, and its actuality. They are considered by us as one before the other, since they are divided by us. For the dividing intellect is one thing, but the undivided Intellect does not divide and *is Being and all things*" (5.9.8.17-22) (my emphasis).

¹¹For a detailed discussion of the Intellect's paradigmatic thinking both including all the intelligibles (forms) as well as including its own awareness of its thought see Hutchinson 2018, p.132-5. The idea that the Intellect is *thinking thinking* goes back to Aristotle (*Metaphysics* XII.7). For a discussion of the differences between Plotinus and Aristotle in how they characterize the Intellect see Nyvlt 2011.

¹²On this issue see Menn 2001, Crystal 1998 and Gerson 2013. See also Clark 1997 who discusses the internality of the intelligibles to Intellect in the context of an argument for what it would take to reason at all, which Plotinus makes in 5.1.11. For discussion on how the originality of Plotinus' views on the "unity-in-duality" of Intellect and intelligibles—such that they were identified with each other—differed from other Platonists (most notably his own student Porphyry) see Armstrong 1960, p.393. However, this issue is tangential to our purposes here: we need not settle the issue of exactly how self-thinking amounts to self-knowledge for Plotinus, only that self-thinking follows from a form of cognitive unity that, it will turn out, materialism cannot explain.

¹³See Gerson 1997a, p.15-16 for discussion of the conceptual gap between self-thinking and self-knowledge.

treated as conceptually double. This is because it clarifies that what Plotinus has in mind here is not *introspection* but *reflexive cognition*.¹⁴ The Intellect does not think about its own thinking as if through some second-order, and merely contingently connected, thought:

Does Intellect, then, with one part of itself observe another part of itself? But in that case, one part will be seeing, and one part will be seen; this is not, however, 'self-thinking' (5.3.5.1-3)

That is to say, the Intellect does not *reflect* on its own thinking by introspecting it, but rather, the Intellect is *reflexively aware* of its own thinking as it is happening. Indeed, to treat the Intellect's self-thought as a second, removed thought from its first-order cognition would be to introduce the very gap between Intellect's thinking and its self-knowledge that Plotinus is aiming to deny. Notice that this is another way of putting the point that the content of both cognition and being cognitively aware of this cognition has to be the same. For instance, Plotinus says:

And surely one cannot attempt to produce more than one Intellect by saying that there is one Intellect that thinks and another Intellect that thinks that it thinks...Indeed, it would be ridiculous to make this assumption of the true Intellect; rather, the Intellect that was supposed to be thinking will certainly be identical with the one thinking that it is thinking. Otherwise, the one will only think, and the other that thinks that it is thinking will belong to something else and not to the one that was supposed to be thinking (2.9.1.34-41)

Hence, we cannot separate the act of cognition from the act of being cognitively aware of the cognition as if the latter is a second, independent, cognitive act *introspecting* on the former. Moreover, this distinction is important because we might think that there are passages in Plotinus that tell against the cognitive unity thesis here. For instance, Plotinus recognizes that it may be better for us to not be introspectively grasping that we are being brave when we are being brave, for this way we can perform the activity without getting in our own way (1.4.10.26). However, what is crucial here is that Plotinus is not saying that we are better off without reflexive cognition in such cases, only that introspection can be a hindrance to action.

For Plotinus, constant introspection on our own activities is a way of alienating ourselves from them: an obviously deficient state to be in. And so, it makes sense for Plotinus to warn against such

¹⁴For a detailed examination of the distinction between introspection and reflexive cognition as it develops through the history of greek philosophy see Gerson 1997a.

self-involvement. But this state is principally different from reflexive cognition, because even in situations in which we are not introspecting we still retain a level of minimal reflexive awareness.¹⁵ The key point here is that reflexive awareness— ‘primary thinking’—is not itself an object of thought before us; it is the means by which we apprehend. While introspection then is a deficient state to be in—where we make ourselves our object of thought—reflexive cognition cannot be.

It is also important to notice that, according to Plotinus, primary thinking includes both cognition and cognitive awareness of cognition as *activities*. That is to say, they are both acts being performed by the Intellect at the same time. Hence, while it is right that the Intellect is not even conceptually double, it nevertheless is a *multiplicity* of activities (5.3.11.30, 5.3.12.2). After all, on Plotinus’ view, only the One is absolutely simple. So, while its thinking amounts to a cognitive unity, the Intellect is nevertheless not simply *one thing*. It is a multiplicity of Intellect, intellection, and intelligibles.¹⁶

The vast majority of our own cognition, however, does not rise to the infallible knowledge of Intellect. Though we partake of Intellect, we are limited by our contingent condition of being embodied cognizers engaging typically in discursive diachronic thought that operates upon representations of sensible reality. Plotinus says that we are only rarely in the position of “kings”, that is, in the position of gaining direct, non-representational knowledge of the intelligibles through intellection (5.3.4.1). For Plotinus, when we achieve this Intellection, “...it is not as a human being that [we do] so, but as having become something else completely and dragging [ourselves] into the higher region, drawing up only the better part of the soul, which alone can acquire the wings for intellection” (5.3.4.11-14). Indeed, when we achieve Intellection, our thinking becomes *identical* to the thinking of the Intellect itself (4.4.2.23-33). Here Plotinus is explicating his theory of the Undescended Soul, according to which part of our soul remains always in Intellect, with the rest descending into a sensible body (5.3.3.22-9).¹⁷

So, if at least some of the time our thinking is identical to the thinking of the Intellect, then

¹⁵In fact, without introspection getting in the way, our minds become self-transparent, in which we are not “developing a conception of what it is to be a knower” but rather are uncovering our true nature—participants in Intellect—by awareness of the fact that we are not related to our own cognition as we are related to objects: “the mind or self is not an object of any kind” (Rappe 1996, p.258). See also Remes 2007, p.122 for discussion of the minimal self-reflexive awareness we enjoy. With thanks to an anonymous referee for raising this question.

¹⁶Hence, it will not do to characterize the cognitive unity of cognition and cognitive awareness of cognition as a distinction between an active and a passive cognitive element. For Plotinus, both thinking and awareness of thinking are *active*; they are joint activities of the Intellect and thus neither can be treated as passive. While it is right that the distinction between active and passive elements of an action is recognized by Plotinus (3.8.2), this distinction is not applicable in the case of reflexive cognition where both cognition and cognitive awareness of cognition are *active* elements.

¹⁷On this specific issue, Plotinus is at odds with both Proclus and Iamblichus, who deny that our souls inhabit the intelligible and sensible realms simultaneously. Instead they argue for an intermediate position for the soul suspended between the intelligible and the sensible. For discussion on this issue see Menn 2001, p. 240.

we also enjoy the cognitive unity of self-reflexive cognition. But reflexive cognition is not just exhibited in such cases. We are also reflexively aware of our own cognition when we are engaged in discursive reasoning.¹⁸ Accordingly, we can raise the issue of reflexive cognition in discursive reasoning over sensible reality as well. It should be noted however that sensible reality is external to discursive cognition (Plotinus is not a subjective idealist) and so the content of such cognition can fail to match its external object. Hence, the analogous infallibility in our own discursive reflexive cognition amounts only to infallible awareness of the *content* of our occurrent thought. There is a chasm between the discursive version of reflexive thinking and the paradigmatic thinking of the Intellect. In other words, when I discursively cognize S and am cognitively aware that I am cognizing S this does not mean that S is the case, it only means that I am infallibly self aware of a thought *as if* S.¹⁹

Discursive reasoning then also involves a phenomenology of *recognition*, regardless of its fidelity to an external world. In such cognitive activity, I am securely aware of what I am cognizing for as long as I am attentive to it—I am cognitively aware of the content of my occurrent thought. And what explains this security is the *cognitive unity* underlying such reflexive cognition. To deny this is to think we are related to our own cognition the way we are related to external objects. Indeed, we can even see reflexive cognition in operation in sense-perception as well. Even our awareness that we are cold or hungry is self-reflexive: it is not a further mental act that takes our sense-perception as its object. Rather it is just the infallible awareness of the content of sense-perception as it is occurring.²⁰ Hence, reflexive cognition need not be thought of as being instantiated only in cases of intellection; it is instantiated across our mental activity, from intellection all the way down to sense-perception.

One might raise the following complication at this juncture. If it is right that ‘primary thinking’ entails self-knowledge for the Intellect, then how could we enjoy ‘primary thinking’ without also engaging in intellection? Perhaps then reflexive cognition is not operative in discursive reasoning or sense-perception.²¹ This is a difficult issue but we can make progress by recalling the conceptual gap,

¹⁸It is probable that Plotinus is basing this distinction between intellection and discursive reasoning on the divided line simile in Plato’s republic (Tornau 2022, p.193).

¹⁹For a detailed discussion of how discursive reasoning may also have a reflexive element see Gerson 1997b, p.160–3 and Remes 2007, p.171–2.

²⁰On the point that reflexive self-awareness extends to sense-perception as well, such that even sense-perceptual awareness requires an explanation for cognitive unity, see Gerson 1994, p.130–1 and Remes 2007, p.109.

²¹Emilsson argues that self-thinking requires not just reflexive awareness but actual self-knowledge, and so it is only instantiated in cases of genuine intellection (Emilsson 2007, p.118f53). This is because, the Intellect does not just recognize the truth as the truth, but also recognizes *itself* as the truthmaker of that truth. Our cognition is rarely, if ever, of this kind. Nevertheless, there is a sense in which we are reflexively aware of our occurrent thinking, not as a *truthmaker* of its content, but as having infallible access to its content. In my discussion here I have followed Gerson and Remes in suggesting that both discursive reasoning and sense-perception are also reflexive cognitive activities.

discussed above, between ‘primary thinking’ and self-knowledge for Intellect. Indeed it would be strange for Plotinus to make an argument for the latter given the former if they were just the same. As Plotinus clarifies, the Intellect thinks itself in two ways: as intellection and as the intelligibles. It is plausible for us to take the former as an adequate explanation for our reflexive cognition: our cognition is an image of ‘primary thinking’ insofar as we are reflexively self-aware. It is a further feature of the Intellect’s own cognition, and not of our images of its cognition, that its cognition amounts to self-knowledge.

Plotinus’ (rhetorical) question about the cognitive reach of discursive reasoning suggests just such a view:

Is it actually the case that the faculty of discursive thinking does not see that it is the faculty of discursive thinking, and that it acquires comprehension of externals, and that it discerns what it discerns, and that it does so by internal rules, rules which it derives from Intellect, and that there is something better than it that seeks nothing but rather, in fact, has everything? (5.3.4.15-19)

And again: “So, it belongs to the faculty of discursive thinking to know that it knows the things which it sees by itself and that it knows what it is speaking about” (5.3.6.22). There are two crucial points to notice here. Firstly, Plotinus claims that the faculty of discursive reasoning *sees* itself and *knows* itself as this faculty. This is, most plausibly, an indication that discursive reasoning is a (derived) form of primary thinking in which we are cognitively aware that we are cognizing. This is what it would be for discursive reasoning to see itself and know itself as discursive, by reflexively grasping it. Secondly, however, Plotinus makes clear that this faculty only achieves this reflexive cognition via *internal rules* that it derives from Intellect. This suggests both that this form of cognition is an image of the paradigmatic cognition of the Intellect, but also, that because it is merely a *derived* form of the Intellect’s cognition, it is deficient in some manner. How is it deficient? Precisely in the sense that the self-reflexive cognition of discursive reasoning does not amount to self-knowledge, as it does for Intellect.²² Hence, it is perfectly consistent for Plotinus to treat our mundane forms of cognition as reflexive as well.²³

²²See Remes 2022, §3 for a nuanced discussion of the different interpretations available of the power of the soul to self-think—for Plotinus, the soul is the faculty of discursive reasoning (5.3.6.20)—and whether this discursive reasoning is discontinuous from the ‘primary thinking’ of the Intellect.

²³For a fuller discussion of how it is that discursive reasoning is nevertheless a form of reflexive cognition see Gerson 1997b, pp. 160–7.

Besides, if our participation in Intellect only explained the reflexive awareness we enjoy when we achieve intellection, but failed to explain the reflexive awareness we obviously also enjoy in discursive reasoning, then this would be an incomplete explanation. Plotinus thus *requires* an explanation for reflexive cognition in discursive reasoning. Otherwise, Plotinus has not offered a complete theory of this phenomenon. As it is, Plotinus does offer an explanation: namely, discursive reasoning is reflexive insofar as it is a *derived* version of the self-thinking that the Intellect eternally enjoys. In this way, Plotinus is able to offer an explanation for all types of reflexive cognition.

Moreover, Plotinus insists that the alternative—a bottom-up, materialist, explanation—is untenable.²⁴ To see why, we need to understand Plotinus' notion of a material body. Plotinus' metaphysical system involves the reflection of the intelligible realm into the sensible. More specifically, this involves the combination of a *form* with *prime matter*. Matter is the receptacle of intelligible being, a pure potentiality upon which images of intelligible being are displayed (2.4.1.1-4).²⁵ On Plotinus' view, a body is a combination of some form (as a *qualitative state*) with some *magnitude* of matter (2.4.12.2, 3.6.7.5).²⁶ Plotinus says: "any given magnitude is divisible into unlimited parts" (4.7.6.35). This means that any body is merely an extended unity of its parts because bodies are *megethê*: essentially *divisible* into those parts (4.1.1.11-17, 4.7.5.25).²⁷ Moreover, Plotinus takes it that:

...when bodies are divided, the form in them becomes divided as well, yet exists as a whole in each of the divided parts, becoming many and yet staying identical, while each of the many separates entirely from any other, inasmuch as it has become completely divided. It is even so with colours and all qualities and each shape, which can exist simultaneously as

²⁴Of course, Platonist and materialist metaphysics do not exhaust all options. Plotinus also considers and rejects Aristotle's theory of hylomorphism as an explanation for cognition (see Pfeiffer 2021 for discussion on Aristotle's theory and Gerson 1994, p.115-7 on Plotinus' rejection).

²⁵Plotinus takes the notion of a receptacle here—via Aristotle's updated notion of matter, *hylê* (*Physics* 4.209b)—from Plato (*Timaeus* 48e-53b). Plotinus says of matter, in terms of being pure potential, that "we know [matter] by taking away all form; that in which this is not present, we call matter" (1.8.9.17). Hence, matter is outside of intelligible grasp, and we know it by abstraction alone (see for instance Long 2016 on this point). Plotinus also identifies matter with evil, for which he was criticized by Proclus. For discussion on this see Opsomer 2001, 2022, and Corrigan 1996. However, Plotinus' challenging characterization of matter as a quality-less and evil substrate is tangential for our purposes here, because our focus is on *bodies*, the combination of matter with form.

²⁶See, however, O'Keefe 2021 for discussion of whether it is the *logos*, rather than matter, that explains the magnitude of bodies. This issue is tightly bound with whether matter is generated by the One or if it is outside of its explanatory reach (see the following for discussion of this issue: O'Brien 1991, Phillips 2009, O'Brien 2011a, O'Brien 2011b, and O'Brien 2012).

²⁷For discussion on the notion of bodies as *essentially* indefinitely divisible, see Emilsson 1988, p.147. The essential divisibility of bodies has been a key target in anti-materialist arguments through history. For instance, many centuries later, Descartes appeals to the essential divisibility of bodies against the *indivisibility* of minds to motivate his dualism (Descartes 2008). Leibniz also makes an argument from the merely aggregated unity of bodies that is remarkably similar: "that which can be divided into many is constituted, i.e., aggregated, from many...[and] things that are aggregated from many are not one thing except from a mind, and they have no reality except that which is borrowed, i.e., that is from the things from which they are aggregated" (Leibniz 2013, p.285). Leibniz may be referring to Plotinus, among others, when discussing these ideas in his *Monadology*: "... each portion of matter is not only divisible to infinity, as the ancients have recognized, but is also actually subdivided without end, each part divided into parts having some motion of their own" (2019, §65, my emphasis).

a whole in many separated things, while having no part that is affected in the identical manner any other part is affected; for which reason indeed this, too, is to be reckoned entirely divisible (4.1.1.35-40)

Hence, any apparent unity of activity or quality in a body is merely an *extended* unity. Take a simple example: a red body reflects the *form* of redness in matter. But this form is not *unified* across the body, it is wholly in each numerically distinct part of the body. So there is no genuine identity between the qualities or activities of a body, even if they are exemplifying the same form, and so they cannot be treated as a genuine unity. Plotinus puts this point like this: “a body is one by its continuity, while each of its parts is different from another and in a different place” (4.1.1.60).

We may wonder here about Plotinus’ characterization of a body as an extended unity, a magnitude, and a continuity.²⁸ In particular, it may seem puzzling how a continuity can have distinguishable parts. There are two points to note here. Firstly, while Plotinus uses these different terms, it is plausible that he intends them to capture the same idea: that a body is extended across three dimensions, with a certain magnitude upon measurement, and where the extension is a (deficient) kind of merely aggregated unity—“is one”—insofar as its parts are juxtaposed *continually* across this magnitude. Secondly, Plotinus holds that “bodies, inasmuch as they are bodies, have magnitude, and so are liable to being cut up and broken into little pieces” (4.7.1.18). Hence, Plotinus holds that a body, as a continuity, is vulnerable to dispersal; it is, as mentioned, *essentially divisible*. So, even if we accept the intuitive force of the worry that parts are difficult to distinguish in a continuity, this does not mean that a body is not ultimately an extended collection of parts, for these parts are that to which a body naturally disperses (4.1.1.12). That is, we ought interpret this as an epistemological, rather than metaphysical, worry.

However, if a body is only such as to be an aggregated unity across its extension, how can it instantiate cognitive unity? Plotinus says that such genuine unity “is impossible for a body—to be identical in many places as a whole, that is, for the parts to be identical to the whole” (4.7.5.38). This claim follows from the nature of a body. Each body part has its own singular activity or quality, and a collection of these parts across an extension has no capacity to unify these separate, numerically distinct, qualities into a genuine unity (4.7.3.5).

But why think that each body part has a singular activity? Plotinus argues as follows:

²⁸See O’Keefe 2021, p.16-19 for an extended discussion of Plotinus’ use of these varying characterizations for a body.

For a body must be hot or cold, hard or soft, liquid or solid, black or white – and so on for all qualities of bodies, which differ according as they are present in one body or another. And if it is simply hot, it will heat things; if simply cold, it will chill them; and the light will make things light, when it is applied to them and present in them, and the heavy will make them heavy; and the black will make them black, and the white white. For it is not the role of fire to cool, nor is it of the cold to make things hot. (4.7.4.23-30)

This is the so-called doctrine of the ‘battle of places’.²⁹ Each part of a body has either the quality of being hot or cold. Or, to put it a different way, each such part performs the activity of heating or chilling.³⁰ What is crucial however is that no body (or part, thereof) could be both hot and cold at the same time, unless it too distributed these qualities across its own parts. Simply: it is nonsense to think that the activities of heating and chilling could be unified in the very same body or body-part, without separating them between further parts. This entails then that any allegedly complex activity across a body must be due to the singular activities of each of its parts—this complexity is distributed across its parts. This means that a body engaging in complex activity—call it a *compound* body—is only capable of performing multiple activities at the same time by dividing this labour between its parts performing singular activities—call them *single* bodies—merely juxtaposed together into an extended unity. The result is that to explain reflexive cognition using only bottom-up materialist resources requires us to divide the complex activity of cognitive unity across the singular activities of each of its parts. It is *one* part of a compound body that has the first-order cognition, and *another* part that is cognitively aware of this cognition as it is occurring.³¹ But this is to fail to explain the *unity* that these two acts enjoy. Plotinus sums up the argument as follows:

[I]n general, thinking seems to be a self-awareness of the whole when many parts come together in the identical thing, that is whenever something thinks itself, which is actually thinking in the principal sense. (5.3.13.13-15)

What is needed for reflexive cognition to occur is for many parts to *come together* in a genuine unity, but a body *just is* a mere juxtaposition of parts, each with its own separate, and singular, activity. That

²⁹For discussion of this doctrine see Kalligas 2011, p.767. For discussions of how this doctrine figures into an argument against treating the soul as the aggregation of a body, see Emilsson 1988, p.103 and Gurtler 2008, p.115.

³⁰While qualities (or states) are conceptually distinct from activities, Plotinus here runs the quality of hot and cold alongside the activities of heating and chilling together in the argument. I follow Plotinus in this and makes the argument using these notions interchangeably.

³¹There is a complication to this because Plotinus will deny that a body can even perceive or cognize without an immaterial soul employing the body for these purposes (4.3.26). However, even if we grant, contra Plotinus, that a body is capable of first-order cognition or perception by itself, the point here is that the materialist will still fail to explain reflexive cognition.

is, a body is just an aggregate of its parts. They cannot come together because each is an independent and local matter of fact, always divisible. But cognitive unity is, and must be, *indivisible*; it is a complex activity performed together. Hence, because reflexive cognition requires cognitive unity, it cannot be explained by either a compound body—because the complexity of such bodies is distributed across their juxtaposed parts—or a single body—because it only has singular activity. The only kind of unity available for a body is as an extended unity: a juxtaposition of parts collected across an extension. And bodies are the only entities available in the materialist’s ontology. It follows then that materialism fails to explain cognitive unity. Plotinus’ conclusion then follows from the following key condition:

Extensional Condition: for any body, it can only amount to a unity as an extended (or spatial) unity—all complex activity is due to the independent, singular, activities of its parts juxtaposed across its extension³²

The second clause here explains the first: it is because all complexity is due to the independent activities of parts, that a bodily unity only ever amounts to a spatial unity. Hence, just as long as materialism is committed to this condition, materialism cannot account for cognitive unity.

We might initially wonder whether this is a tautologous argument. After all, Plotinus’ conclusion follows almost analytically from this *Condition*. But Plotinus is working with the notion of a material body proposed by the materialist Stoics, who are thus the natural targets of his argument here.³³ Plotinus also makes a structurally similar argument against stoic materialism from the unity of sense-perception, because sense perception also evinces a genuine unity that goes beyond mere extensional unity. That the Stoic position is vulnerable in this way then is a common form of argument for Plotinus.³⁴ Hence, while contemporary materialists may reject this *Condition*, and I consider reasons why below, this is a perfectly acceptable proposal in Plotinus’ own setting.

I distinguished two questions above, with a plan to focus on (b) in this paper—namely, assessing

³²In the context of a related argument about the permanence and actuality of Intellect, Clark surmises that Plotinus is working from the following relevant background principle: “extension cannot itself create unity” (1997, p.426). This is just another way to put the Condition I have extracted above.

³³The Stoic position is that bodies are extended entities across three dimensions, making their view a natural target for Plotinus (Diogenes Laertius *Lives*, 7.135). To be sure, the Stoics proposed a theory of *blending* to explain how mixtures (compound bodies) can interpenetrate to produce unities, just as “a little wine thrown in the sea” will soon spread through it (*Lives*, 7.151). However, the doctrine of the ‘battle of places’ (4.7.4.23–30) mentioned above, can be plausibly taken as one of Plotinus’ arguments against genuine blending, which, if successful, leaves mere juxtaposition of parts outside each other as the only option for uniting complex activity together in a compound body. Plotinus offers further arguments to reject the theory of blending in 2.7 and 4.7.8². For more on the Stoic claim that bodies can combine into unities see Long 1982. Plausibly, Epicurus’s corporealist position is another natural target for the argument (Gerson 1994, p.111–2). In general then, the *Condition* goes beyond tautology because it captures the common materialist problem of failing to offer anything beyond aggregation to explain unity.

³⁴See for instance Emilsson 1988, p.102–3 for discussion of Plotinus’ structurally similar arguments.

the explanatory resources of materialism. However, a natural thought at this dialectical juncture might be to question (a): must an explanation of reflexive cognition take on the burden of explaining cognitive unity? Perhaps reflexive cognition only requires two independent parts of a body to be related in the right way; perhaps, that is, we need not deny that bodies are just aggregates.

David Armstrong accepts the *Extensional Condition* but denies cognitive unity.³⁵ I offer a brief response to this view here, before returning to a discussion of (b). Armstrong rejects cognitive unity as the explanation for reflexive cognition because it would require a single entity to self-monitor. But, he says “a machine can scan itself only in the same way that a man can eat himself. There must remain an absolute distinction between the scanner and the scanned” (p.107). Cognitive unity then is just as incoherent a position as supposing a body can self-eat. What is monitored (or eaten) must be *outside* of, external to, the monitor. Armstrong’s incredulity here that a *machine* can undertake such activity—perform two different cognitive acts at once—is telling. After all, only if materialism is true would self-monitoring be as impossible as self-eating. But Plotinus would agree that a body (or *machine*) cannot self-monitor—he will just deny that we are mere bodies. In other words, Armstrong’s incredulity does not furnish him with reasons to reject cognitive unity, it just re-states what is at issue in the first place.³⁶

Nevertheless, even if the very idea of cognitive unity is not incoherent, Armstrong’s alternative may obviate its need. His alternative is a *simple-monitoring system*. He takes reflexive cognition to be like the operation of a thermometer: just as one part of it monitors and reports the temperature (using a display) of some other part (variations in mercury), so too do instances of awareness monitor and report on a different part of the brain undergoing first-order cognition. Thus, one part of the brain performs cognition, and a different part of the brain monitors and reports this change. We do not require a body (or, more specifically here, a brain state) to perform two different activities at once; we can distribute this labour between parts of the brain that each perform a single cognitive operation. Armstrong thus agrees with Plotinus that materialism is committed to the *Extensional Condition*. For him, monitoring our own cognition is in principle no different to monitoring an external item like a clock. Thus, reflexive cognition requires nothing any more metaphysically exotic than cognizing changes in the sensible world.

³⁵I am focusing here on Armstrong’s version (1968), but others share it. Peter Carruthers (2011) as well as Nichols and Stich (2003) defend similar models of cognition. What unifies these views is their insistence that our awareness of our own thoughts and the thoughts themselves are not in a genuine unity, thereby rejecting a metaphysical, rational, or epistemic, connection between cognition awareness of cognition and cognition.

³⁶It is instructive to note that Armstrong is anxious to offer this alternative because he concedes that if cognitive unity is required then materialism is *false* (p.103).

Another way to put this is: all cognition is of the same first-order kind, it just so happens that some cognition, i.e., cognitive awareness of cognition, takes our own cognition, from a different part of us, as its content. Hence, Armstrong's view amounts to a rejection of the distinction between introspection and reflexive cognition. And this is because Armstrong rejects the distinction I drew above between different ways of relating to the same content: *qua* awareness and *qua* representation. Armstrong is here opting for a view on which there is only one way to relate to content: representation. This may explain his credulity at self-reflexive cognition. However, his attempt to explain reflexive cognition without needing cognitive unity faces two significant challenges.

Firstly, it gets the epistemology wrong. If reflexive access to our own thoughts is only due to mechanical relations between separate parts, then there is always the logical possibility of error because no mechanism is infallible. But this is to deny what requires explanation: our infallible access to the contents of our own thoughts. Again, putting aside externalist concerns of reference, if I am thinking of something, then I am aware of it as I think of it. It would be absurd to suggest that though I am aware of thinking that this room is warm, I might not be thinking this. I might be wrong about the state of the room, but I cannot be wrong about the occurrent thought I am having as I am having it. There cannot be a gap producing a slippage between my awareness of my thinking and the thinking itself because to be reflexively aware of cognition *just is* to have immediate infallible access to it as it is occurring.³⁷

Notice that the claim here is not that introspection itself is infallible. We do, in fact, find that many instances of introspection are unreliable.³⁸ The point here however is that there is a fundamental difference between our access to the *content* of our occurrent thought and our access to the *veracity* of our occurrent thought. Even if it is right that we are prone to error when introspecting, our awareness of what we are introspecting cannot be in error. Our occurrent thought is not something we introspect itself, it is the means *by which* we introspect ourselves. Hence, there is no room for an error—no gap—in our occurrent awareness, even if we are wrong about that of which we are aware. But a simple monitoring system on which these two activities are performed by merely mechanically related parts is egregiously vulnerable to failures produced by this gap.

Secondly, the simple monitoring system gets the metaphysics wrong. Armstrong's model denies cognitive unity and posits only cognitive representation. One part of the brain represents its reception of an input, and another part represents the cognition of the first part by reporting on its status. But

³⁷Along similar lines, Shoemaker has argued for an immunity-from-error thesis for first-personal statements (1968).

³⁸See for instance Williamson 2000 and Schwitzgebel 2008.

how does this second representation amount to awareness? If I need yet another representation to become aware of this second cognition, then this leads to a vicious regress. The crucial point here is that either my awareness has its own content, and thus enjoys a cognitive unity with what I am aware of, or it has no content at all, but then it is *not* awareness, and some other, further, representation is needed to explain awareness. And so the regress begins. Compare how it is just simply not the case that—however detailed its representation may be—the thermometer is *aware* of the temperature.

Without cognitive unity, all we have are representations representing other representations but no explanation of how *awareness* is possible, which is cognition *reflexively* grasping itself *from the inside*. This is why it is crucial to recognize that we enjoy two different cognitive relations to the same content, united together in cases of reflexive awareness. Representation alone will not do. In other words, at some point in the chain of cognitive operations, there must be an operation that is able to reflexively grasp the inputted representation from the chain for awareness to occur. And even arbitrarily designating some one operation out of the chain as the site of awareness to stop the regress does not explain why it, and not the others, is the point at which this occurs. Indeed, it is not even clear what could bear the explanatory burden here except for cognitive unity.

These remarks on Armstrong's approach to this problem are admittedly brief, but I will bracket this issue for the rest of this paper. Cognitive unity is a plausible starting point for any theory that wants to explain reflexive cognition: it will not do to try to separate this activity across independent parts of a body. Nevertheless, a materialist may reject the *Extensional Condition* above and insist that bodies are not just aggregates. I turn to these objections next.

3 Contemporary materialist objections

Our contemporary notion of a body is far more sophisticated than just an extended magnitude that is indefinitely divisible.³⁹ It might be then that the *Condition* I adduced out of Plotinus' argument has counterexamples: materialists may produce examples of bodies, and bodily unity, that contradict it. There are two routes open here. The *Condition* after all makes two predictions. Firstly, that every *single body* will only have singular activity. Secondly, that every *compound body* engaging in allegedly

³⁹Indeed, the contemporary notion of a material body is so malleable that this may suggest a fundamental problem for materialism altogether (Crane and Mellor 1990). Without a clear definition, it becomes entirely unclear what one is committed to if one is a materialist (beyond the expectation that a future physics will answer this question).

complex activity is to be explained by distributing these activities across its parts.⁴⁰ So, if there are examples of single bodies with complex activity, or examples of compound bodies which cannot have their complex activity explained away by distributing it across the singular activity of its parts, then I take it the *Condition* fails. As it is, materialists can produce counterexamples to both of these predictions.

The first kind of counterexample then picks up on the first prediction: that a single body has singular activity. It is reasonable to suppose that because fundamental physics confirms an ultimate mereological level, whatever is at this fundamental level ought to be treated as a single body. For example, the class of subatomic particles called leptons—that includes electrons and positrons—have no further parts: they cannot be split into more basic constituents. However, a lepton has complex activity: its concurrent gravitational, electromagnetic, and weak-force interactions. And given that this is a single body, this complexity of activity is not divisible across its extension. It enters into multiple states of spin, charge, velocity etc, simultaneously and there is nothing into which this activity can be divided. Such complex activity performed by a single body is an obvious counterexample to the first prediction of the *Condition* above. If Plotinus was right, then particles with such complex activity ought to be aggregates; but these are fundamental particles that cannot be divided further. So the first prediction of the *Condition* fails.

Materialists can also produce counterexamples to the second prediction. For instance, complex activity is ubiquitous across the compound bodies of the organic world. Consider the heart: it both pumps blood around the body and it makes thumping sounds. These traits are separable in counterfactual conditions: we can imagine worlds in which hearts pump blood without making thumping sounds and worlds in which hearts make thumping sounds without pumping blood. Indeed, these traits are separated by natural selection: the heart was *selected for* its pumping blood around the body, whereas the thumping sounds it makes is a free-riding trait that is co-extensive with the fitness-enhancing trait.⁴¹ These counterfactual and natural-selection considerations suggest that pumping blood and making thumping sounds are *separate* activities. And yet plausibly they are performed by the very same biological function: the compound body that is the muscular mechanism of the heart. Given the sheer volume of free-riding traits across the organic world, this gives us another significant counterexample to the *Condition* above. This is a case in which a compound body

⁴⁰According to Emilsson, Plotinus' structurally similar argument from the unity of sense-perception targets compound bodies as well: "[Plotinus] holds for bodies generally that if a body performs distinct acts at the same time, these acts are to be ascribed to its distinct parts severally" (1988, p.103).

⁴¹This is a distinction between *selection for* and *selection of* (Sober 1984, p.99-100).

engages in complex activity without distributing this complexity across different parts of a body: it is, after all, the very same heart that pumps blood and makes thumping sounds, two counterfactually separable activities. Hence, the second prediction fails across many such biological cases.

Even without recourse to these results of contemporary science, the second prediction of the *Condition* seems intuitively false. Consider again my desk: it is both supporting the laptop on it, as well as warming in the sunlight. But these activities are not due to separate parts; it is the same compound body in both cases. After all, it takes the whole desk to support the items on it, and to be warming. It might be thought that perhaps the activity of supporting contents is performed by the formal feature of the *shape* of the desk, whereas the activity of changing temperature is performed by its *material constitution*. But this is to draw a distinction between formal features—it is not to explain complex activity by dividing it between numerically distinct *extended* parts merely juxtaposed together, as Plotinus claimed. It would be strange to deny that this is a compound body with complex activity where this activity is not distributed across merely juxtaposed parts.

Even so, this intuitive thought might be misleading. After all, it may just be loose talk to say that a desk can change temperature uniformly, because this denies an obvious truth of thermodynamics: what seems like a uniform spread of thermal energy is in fact an amalgamation of multiple local interactions of energy transfer. These local interactions cannot occur at once, so all energy transfer is a stochastic process, which is just to say, uniformity is illusory. But even if change is non-uniform, the desk can be in a steady state. After all, if the whole desk has been brought up to a consistent temperature, then it is in the state of *just being that warm*. And of course it need not stay at this temperature constant for an extended period of time—even an instantaneous dual activity of both being at a certain temperature, while supporting a laptop, will be counterexample enough to the second prediction of the *Condition*. Indeed, even having a variable temperature while performing certain other simultaneous activities is enough of a counterexample.

These three reasons taken together undermine, in two ways, the *Condition* above. It is neither true that a single body cannot engage in complex simultaneous activities nor is it true that a compound body's complex activity is always a mere juxtaposition of singular activities performed by its parts separately. Bodies are not indefinitely divisible given fundamental physics, organic compound bodies perform multiple activities simultaneously, and even intuitive examination supports non-distributable complex activity for a compound body. However, if all this complexity is possible *and explicable* within a materialist metaphysics, then it would be puzzlingly arbitrary to nevertheless

insist that the complexity of cognitive unity is inexplicable. What Plotinus needs then is a principled distinction between the complexity involved in these examples and the complexity of cognitive unity. That is to say, Plotinus requires an alternative means of support for his argument that cognitive unity cannot be explained under a materialist metaphysics. In what follows, I offer a principle that can bear this burden.

4 A causal principle of activity

We require an alternative basis for Plotinus' argument because the *Extensional Condition* above will not do. This alternative must show why the complex activity of cognitive unity, required for reflexive cognition, has no explanation under a materialist metaphysics. I first propose the alternative basis and explain why it ought not be rejected by materialists. That is, there are no analogous counterexamples. Then, I explain why this alternative shows that there is no materialist explanation for cognitive unity. The alternative is:

Causal Condition: for any body, its activity is exclusively due to the efficient-causal relations it bears to other bodies⁴²

No materialist should have qualms about this condition.⁴³ It is a core, non-negotiable, materialist commitment. The *Extensional Condition* states that a body's activity is always divisible among its parts; the *Causal Condition* instead specifies that a body's activity is always due to the efficient causal relations it bears.⁴⁴ I develop the argument that materialism lacks explanatory resources not from what a body *is* but from how a body *acts* given the causal structure into which it is embedded.⁴⁵

⁴²This condition is consistent with, but not equivalent to, the principle of *causal closure*. On that principle, if some event has a cause, then it has a sufficient material cause. The condition here states that a body can only enter into efficient causal relations, leaving open the ontological nature of the causal source. For discussion on causal closure see Papineau 2009.

⁴³This principle might also be acceptable to the Stoics. Zeno of Citium, for instance, tightly links the concepts of body and causation (SVF I.89 in Inwood and Gerson 1997, p.169). Indeed, the stoics believe that "...everything which acts or has effects is a body", which tracks the *Causal Condition* closely, though it treats causal activity as a sufficient condition for a body, while the principle I am proposing treats it as a necessary condition (SVF 2.387, *ibid.*, p.170). For further discussion on the development of the view that the "the ability to act and be acted upon [is] a strict criterion of corporeal existence" see Brunschwig 1994, p.116. With thanks to an anonymous referee for suggesting this connection.

⁴⁴Notice that the *Causal Condition* is pitched at a level of generality such that it remains neutral between rival materialist theories of causation. Hence, the *Condition* is consistent with theories that understand causal relations counterfactually (Lewis 1973, Mackie 1980), as regularities (Hume 2020, Mill 1843), as the instantiation of nomic necessities (Armstrong 1984, Tooley 1987), or as the triggering of dispositional powers (Bird 2005). These theories neatly divide into broadly Humean regularity views (for which see Ehring 2014 for an overview) or into more substantive neo-Aristotelian views (for which see Mumford 2014 for an overview). The *Condition* captures the commitments of all of these views. However, given that the target here is the materialist conception of causation, I take it nothing is lost by bracketing non-materialist theories of efficient causation such as, for instance, Aristotle's own view on which the immaterial soul is the efficient cause of the body (see Code 1987).

⁴⁵My strategy here is not novel. As Bertrand Russell pointed out, contemporary materialists also relegate the question of the internal constitution (or *nature*) of material bodies and instead focus on the structural—*causal*—relations into which bodies enter (1919).

However, the *Causal Condition* does tell us at least this much about the nature of a body: given that its activity is always sourced from its causal relations, its activity is contingent upon those relations. On this condition, a body has inputs of the efficient-causal kind, that exclusively explain a state change it undergoes, where this state change is outputted as an efficient causal effect: its *activity*. Complex activity can then be understood as the claim that a body undergoes multiple concurrent state-changes given the multiple, independent, efficient-causal relations that it bears with other bodies. Cognitive unity itself is then presumably explicable, if it is, as an instance of some such array of simultaneous efficient causal relations acting upon a body.

It might be thought that the higher sciences of economics or psychology complicate matters. These sciences, presumably on a continuum with core natural sciences, make use of *folk psychological* categories of *belief and desires* to explain the activity of agents. While this is right, it is not a counterexample to the *Causal Condition*: after all, for most materialists, the appropriate way to account for behavior *caused* by desires or beliefs is to *subsume* that cause under an equivalent, but alternatively described, notion of efficient causation, namely, our neural activity. Hence, beliefs and desires only figure as causes *insofar* as they are alternatively describable in efficient-causal terms.⁴⁶ It would be a strange materialism that allowed for relations beyond the efficient-causal.

Notice that a non-reductive materialism is also bound by this condition. Even if it is right that, for instance, wetness is an emergent property of water that cannot be reduced to the properties of individual water molecules, the interactions between those molecules are nevertheless *efficient-causal*. This is so regardless of whatever emerges from such interactions; moreover, even on a view on which the causal powers of the emergent body are autonomous, they are nevertheless exercised in an efficient causal manner.⁴⁷ Non-reductive materialism is just a view about conceptual opacity as we go up or down mereological levels: it does not have room for an alternative kind of relation between bodies.

While a Platonist like Plotinus will presumably find difficulty in the notion of a non-reductive materialism (and I return to discuss this in more detail below), this kind of materialism then is also within the scope of this proposal. This is important to specify because it might be objected that the *Causal Condition* treats bodies as inert until acted upon by other bodies, a view rejected by many non-reductive materialists. Bodies may not be inert, but even so, their causal powers—if they have any—are typically theorized as *dispositions* to act in response to specific *causal* conditions. Moreover,

⁴⁶ See for instance Kim 2008 and Arnold 2012, ch.3

⁴⁷ For discussion on emergent bodies with causal autonomy see Wilson 2015 and 2021.

it will not do to draw distinctions between kinds of bodies, and individuate activities across this plurality of kinds, because differences in kinds of bodies are themselves ultimately explained by the causal relations their parts bear to each other. After all, wetness is explained by causal relations between molecules; but these relations are themselves general properties that any molecules with the right causal profile may have. And ultimately, there are few differences once we get to fundamental physics. Hence, this kind of materialism then does not give us reason to doubt the *Causal Condition*.

Another objection to the *Causal Condition* may question why efficient causal relations must be to *other* bodies. We may wonder if, for example, a thermostat system that turns off at a set temperature is *internally* reacting; that is, this is a case of a body causing its own activity. These kinds of closed loop feedback systems are common. But a closer look reveals that any suggestion of an internal, self-cause of activity is illusory. After all, how would such a system operate? It will, and must, operate via its *distinct* parts each performing separate operations with none self-causing its own activity. Hence, within this system, a thermometer will monitor its surrounding temperature. So its activity is dependent on something *external* to it. Upon hitting a set trigger, it will output a signal to the processor controlling the heat source. This again is one body acting on a different body. Finally, the heat source will switch off upon receiving this input. Nowhere in this chain of causal activity is there ever an effect that is genuinely *self-caused*. For sure, some of these causal operations are the result of one part of the system causing an effect in a different part of the same system, but there is no difference in kind between such proximate causes and other more distal causes. All efficient causal sources must be of the same kind: external to the affected body. That is, even the proximate relations within a compound body, or a mechanical system, are nevertheless interactions between parts *external* to each other. This is why all activity is explained by reference to efficient causal relations to *other* bodies.

Such cases are not then counterexamples to the *Causal Condition* because none involve genuine self-causation. Moreover, the materialist ought not pursue this line of objection: because there could not even be any room for self-caused activity within a materialist metaphysics. If a body is capable of self-causing its own activity then this would place it outside the causal order, as if its activity is entirely *spontaneous*. But this is flatly incompatible with any plausible materialism.⁴⁸ As Armstrong noted above, the materialist is committed to an absolute distinction between cause and effect, requiring separate bodies.

⁴⁸We may put this point in Aristotelian terms: no potential can actualize itself. Instead, it will require some *other* actuality, an actual efficient cause, to actualize this potential.

I take it then that the *Causal Condition* ought not be rejected by materialists. But why is the *Causal Condition* capable of doing the work that Plotinus requires? The problem for the materialist is this: if all activity for a body is due to the efficient causal relations it bears to other bodies, then the materialist can only explain activity through such external relations. This is significant because, contrary to this picture, the relation between cognition and awareness of cognition is *entirely internal*. Awareness cannot be externally sourced because it both begins and ends within the cognitive state itself. Awareness is the grasping of first-order cognition from within that cognition. A cognitive state that is reflexively grasped is a loop onto itself. Indeed, not only is the relation between cognitive awareness and cognition an internal relation, but it is plausibly not even a *causal* relation—there is no causal *mediation* between them, because awareness has *immediate* infallible access to cognition. The immediacy of awareness, after all, was the moral of rejecting the simple-monitoring system proposed by Armstrong.⁴⁹

Suppose we attempt a materialist explanation for cognitive unity, given the *Causal Condition*. Now, cognitive states bear sophisticated relations to each other and other parts of the brain. However, even if we treat these relations as a complex of inputs for each such state, they are nevertheless necessarily *external* relations. All of this sophistication will only explain how a cognitive state receives its causal input. It might be that these causal relations explain the content of a cognitive state.⁵⁰ But awareness is not related to cognition in this way. That is, what we need explaining is not just how a cognitive state receives its content as causal input, but how it is possible for a cognitive state to be cognitively *aware* of itself—an internal, non-causally-mediated, relation. To put this another way: variations in causal input to a cognitive state only amount, plausibly, to variations in content. They do not explain how awareness arises. But variations in causal input are the only explanatory resources available under the *Causal Condition* to explain activity.

Recall the analogy of the thermometer above. Even if the rising mercury undergoes many complex state changes, each of which is from a metaphysically independent cause, the mercury cannot report on its own state changes. The display of the thermometer is, and must be, a *second* body that is

⁴⁹For this reason, the problem will not be solved by adopting a substantive view of agent causation on which an agent is the causal source of their own actions (see, for instance, Lowe 2012). The internal relation between cognition and cognitive awareness of cognition is not under the causal control of an agent, because it is plausibly not even a causal relation. Even leaving aside the significant difficulty in combining materialism with such a view of agent causation (for which see Wilson 2021), it would be mistaking the phenomenon of reflexive cognition to treat it as either the result of a causal power or as an *action willed* by agents.

⁵⁰There is the difficult problem here of naturalizing mental content such that the intentional properties of a cognitive state are explicable in causal terms. For discussion see Fodor 1990, Ryder 2009, Rupert 2008. The point here is just that even if we were to assume that this particular problem is solved, it will not help with the problem I am developing here, on which the relation between awareness and cognition is not even causal.

externally related to the mercury. But what we needed to explain here was how a body can *monitor itself*. This is what it would take to explain reflexive cognition. We can increase the complexity of external inputs all we like, but the kind of explanation we require is still missing. Indeed, we can even suppose, as above, that this thermometer is a component within a closed loop feedback system. But all such feedback loops are nevertheless just distinct parts of a system causing effects in each other. This is not *self-monitoring*. That is, such feedback operations do not amount to awareness, no matter how complex these feedback systems may be. After all, even the most robust cognitive feedback subsystem would nevertheless be causally separated from the cognitive state to which it reports, allowing for errors and misreports. This, of course, does not explain cognitive unity. Again, being aware that the room is cold cannot be causally separated from cognizing that the room is cold, because it is just this infallible, immediate relation of awareness that needs explanation. Placing these two cognitive operations in two separate parts of the cognitive system, where one part monitors the feeling and another part feels it, is to fail to account for *reflexive* cognition.

Something, after all, must explain why our cognition is reflexive, and the representations of thermometers or the operations of feedback systems, do not rise to the awareness of reflexive cognition. But under the *Causal Condition* all activity is explained by reference to something external—some *outside* source—and this just is where explanation runs out. That is, materialist explanations are constrained to external, causal relations alone. But reflexive awareness is not an external relation between independent parts of a body; it is an internal relation that a cognitive state has to itself. So, if the only explanations that materialism can offer are explanations in terms of external causal relations, then it cannot account for what is not a relation of this kind. Hence, cognitive unity is principally inexplicable under materialism.

It turns out then that the *complexity* of activity is irrelevant: what is really at issue is the *internality* of cognitive unity, unaccounted for by the *Causal Condition*. Under materialism, bodies only change upon the reception of causal input (even if complex) and this change creates an output. This external ledger of activity is all the activity that materialism can explain. It therefore has no explanation for activity that is *entirely internal* to a cognitive state. The *Causal Condition* then secures Plotinus' conclusion. Without a means of explaining cognitive unity, because its explanatory resources amount to only external, efficient causal relations, materialism fails principally to explain how reflexive cognition is possible (even if it can explain other forms of complex activity).

This brings out the principle distinction between the kind of complex activity required for cogni-

tive unity and the counterexamples I raised in §3 above. Those counterexamples, from fundamental physics, biology, and intuition, all relied on external causes to fully explain each of their multiple activities. Hence, the desk both warming and supporting its contents is explained completely by accounting for the causal relations it bears, namely, by what is external to the desk. Similarly, a fundamental particle's complex activity is explained by its causal relations, because the complexity does not involve an *internal* relation the way cognitive unity does. These examples are not, then, counterexamples to the *Causal Condition*, because this principle adequately captures materialist commitments. However, reflexive cognition remains inexplicable. And this is why the *Causal Condition* bears the burden of supporting Plotinus' argument against materialism.

But why is it that awareness itself cannot be sourced externally—that is, why can the two cognitive acts not be causally related? Because then we fall back into denying cognitive unity. If awareness too is sourced externally from cognitive activity then cognition and cognitive awareness of cognition are *outside* of each other, and related as any other two independent bodies are related. This is just the position in which we find simple monitoring and feedback systems. But reducing cognitive unity to a causal relation between parts is not to explain cognitive unity, it is to deny it. Such a position would face again the epistemological and metaphysical problems that Armstrong faces above. So, it would be unwise for a materialist to give up either cognitive unity or the *Causal Condition*. Perhaps then a materialist will object not to cognitive unity but to reflexive cognition itself, to strike at the root of the problem. If there just is no such thing as reflexive awareness then there is no need for materialists to scramble to explain how cognitive activity can have an internal, reflexive relation to itself. This is an untenable option. Reflexive awareness is a real phenomenon, which requires explanation. Any such elimination requires independently strong reason to endorse (and, needless to say, eliminating awareness to save materialism is not a strong reason).

Might a non-reductive approach sidestep this problem? Recall that on this form of materialism, much that seems inexplicable is categorized as an emergent feature of bodies, to be discovered *a posteriori*. The materialist's inability to explain how cognitive unity is possible—under the *Causal Condition*—might then be nothing especially damning. The internal relation between awareness and cognition might just be yet another emergent phenomenon that cannot be reduced to, or derived from, its constitutive base. On this view, this constitutive base *grounds* the emergent phenomenon, even if we suffer conceptual opacity as we go up or down mereological levels. Hence, it might just be the case that reflexive awareness, the capacity to *self-monitor* under a condition of cognitive unity, is also due to some combination of external causal relations, which produces this internal, immediate

relation within a body undergoing first-order cognition. Crucially, however, there is no need for an explanation for how this occurs, or of which such causal relations give rise to reflexive cognition. Indeed, this may just be a brute fact about some bodies.

What is crucial here is that to offer this response is to already have conceded the substantive point to the argument of this section. What Plotinus requires for his anti-materialist argument is the premise that materialism cannot explain reflexive cognition. To offer a non-reductive account of this phenomenon, such that it is an emergent property of some bodies, is to concede that there is no explanation. And this is all Plotinus needs.⁵¹ To see this, notice the following.

Firstly, while the non-reductive materialist may mitigate this brute emergent phenomenon by pointing to the complexity of bodies in which it is instantiated, this is not an *explanation*. What is it, after all, about complexity that gives rise to an internal relation? The best the materialist can say here is that there is a strongly supported correlation between the complexity of a body and the emergence of internal relations. But all of this complexity is just the complexity of parts relating to other parts. There is no denying that the human brain just is such a complex assemblage of parts. It is a *further fact beyond* a complete account of the causal interaction of these parts that this complexity gives rise to this emergent feature.

That is, reflexive cognition has to be accommodated as a *strongly* emergent phenomenon, which cannot be deduced from the features of the constitutive base.⁵² Compare this to wetness, which is a *weakly* emergent phenomenon, principally deducible from the properties of its constitutive parts. What we require is the same kind of principled explanatory bridge in this case: from the complexity of a body to the kind of internal, non-causally mediated, relation of reflexive cognition. Complexity by itself is not an explanation, because, as argued above, no matter how complex the relations may be between parts of a body, they are nevertheless causal relations between parts external to each other. Such relations delimit the explanatory reach of materialist metaphysics. What the non-reductive materialist is offering then is a view on which such complexity gives rise to reflexive cognition as a brute *further fact*. Far from an explanation, this is rather a concession that there is no explanation available within this metaphysics.

Here is another way to put this point. The non-reductive materialist does not have access to an

⁵¹In fact, it might be that we can adduce Plotinus' arguments that a body is merely parts juxtaposed together across their extension as an anti-emergentist argument directly. On this point see Clark 1996, p.278-9.

⁵²See Chalmers 2006 for the distinction between strong and weak emergence and discussion of the condition that a strongly emergent feature is not deducible from its material base. For discussion on the scope of emergentist solutions within materialism see Strawson 2006.

additional class of explanations that go beyond the *Causal Condition*. They are also bound by the condition that all activity is to be explained via external causal sources. This is why they suggest that we can accommodate whatever is not an *explicable* causal relation as the emergent *result* of causal relations arising—given the correlation—from a complex enough body. So, to take this route just is to accept the substantive point that reflexive cognition has no materialist explanation.

Recall also the example of the heart, in §3 above, performing two separate activities simultaneously. We explain this using the distinction between biological traits that enhance fitness and other, free-riding, coextensive traits. This is a successful reply to Plotinus' *Extensional Condition* because it provides a genuine explanation for complex activity in material bodies, *deducible* from an independently motivated distinction within evolutionary biology. We may ask here of the non-reductive materialist: if not for our own example of reflexive cognition, what *independent* reason is there to support the correlation between complexity of bodies and their ability to perform non-causally-mediated, internal activities? But there is no such reason provided: all we are offered is an emergentist solution. This is not a successful reply. Indeed, proposing an emergentist solution would have been no more successful against Plotinus' *Extensional Condition* than it is now against the *Causal Condition*.

It will not do to mitigate this problem by appealing to a non-reductive, dispositional relation between awareness and cognition. After all, dispositions can fail: they are only instantiated *ceteris paribus*.⁵³ But, again, there is no possibility of failure for awareness—it cannot be that we can have the awareness of cognition that S and yet not cognize that S. These two cognitive activities cannot be merely dispositionally linked. If awareness occurs then cognition *must* occur as well. Perhaps instead the claim might be that we are only occasionally disposed to be aware of our cognition. After all, not every thought passes before the spotlight of our awareness. Even so, it is not a dispositional failure to not be aware of some particular cognitive activity; rather, this just evinces our attentional capacity.⁵⁴ We cannot treat first-order cognition and cognitive awareness as separate activities merely disposed to come together. Such a view misses the *internal* unity that these two acts enjoy. The most plausible claim here has to be that the unity itself comes together as a package: cognitive unity is a dispositional response to causal input that some (complex) bodies enjoy. But this returns us to the problem above: namely, that we can call this an emergent phenomenon or a disposition if

⁵³See for instance Drewery 2001 and Lange 2002 on the use (and misuse) of dispositions in metaphysical explanations.

⁵⁴To be clear, as argued above in footnote 50, this is not the claim that we *will* the relation between awareness and cognition, as if this relation itself is under agential control. Rather, this is just the mundane point that as we direct our attention from moment to moment, our awareness comes already *united* with whatever it is that we are cognizing at that moment.

we like, but we are nevertheless proposing something brute and inexplicable.

The unperturbed non-reductive materialist may just stand their ground at this juncture. The lack of an explanation here does not defeat their position. This, after all, is the whole point of offering a non-reductive account: to be able to accommodate, without an explanation, challenging phenomena within a materialist metaphysics. On their view, there just is some external causal source for reflexive cognition, perhaps arising from the complexity of the body in question, even if we cannot—now or ever—understand why this gives rise to cognitive unity. This might just be a brute emergent fact. Our failure to understand this brute fact—how an internal, non-causally-mediated, relation can emerge out of external, causal relations alone—is an *epistemological* problem. It would be precipitous however to draw metaphysical conclusions from an epistemological premise.

However, we need to separate two independent lines of thought here. The first is the argument that materialism cannot explain the cognitive unity underlying reflexive cognition. It has been the burden of this section to provide Plotinus with an alternative argument towards this conclusion, one that is premised on the *Causal Condition* in place of Plotinus' own *Extensional Condition*. If the non-reductive materialist concedes that cognitive unity is an emergent phenomenon, not deducible from the causal relations of a body, then this argument has been made. A second line of thought takes the argument that materialism cannot explain cognitive unity and plugs this as a premise into an argument that *materialism is false*. That is of course Plotinus' ultimate goal. However, it is not the burden of this section (or this paper) to defend *that* argument.

Even so, I imagine Plotinus will be unimpressed with a non-reductive response. By failing to offer a genuinely rival explanation for reflexive cognition, retreating instead to admitting brute facts, this view can neither be directly objected to nor defended. We are instead being directed towards a discussion over the permissibility of brute facts within fundamental metaphysics. Besides, as Plotinus will point out, we have no reason to think that explanations for reflexive awareness are otherwise unavailable. The Platonist after all has an explanation (as does the substance dualist or even the panpsychist). It is only the non-reductive materialist that is treating this problem as inexplicable in principle. Materialism may not have been shown to be false, but its plausibility rests on the admission of brute facts, an explanatorily *incomplete* metaphysics on any view. Materialism then is left with this challenging disjunction: either it is false, if it denies such internal relations; or it is explanatorily incomplete, if the best it can offer is accommodating them as brute facts.

I have argued that given materialists ought not reject the *Causal Condition*, their explanatory

resources are delimited by external, causal relations alone. Any other kind of relation is, in principle, outside of the explanatory scope of materialism. This is just the case with reflexive cognition—an internal, non-causally-mediated, relation between awareness and cognition. Once we amend Plotinus' argument, by replacing his focus on the inability of bodies to have genuinely complex activity, with the *Causal Condition*, then his argument regains its urgency for materialists. Moreover, this amendment is consistent with Plotinus' views, as I show below.

5 Plotinus on internal activity

Plotinus' argument against materialism viewed bodies as merely spatially united entities divisible into parts outside other parts at any point across their extension. He took cognitive unity to be inexplicable under a materialist metaphysics just as long as the materialist conception of a body could not explain a genuine unity between multiple simultaneous activities performed by the same body. But contemporary materialists have the resources to show how bodies can engage in such complex activity. By proposing the *Causal Condition* instead, I have argued that what really requires explanation is not how a body can perform complex activity, but how a body can have an entirely *internal*, that is, non-causally-mediated, relation to itself. Under the *Causal Condition* such a relation is inexplicable because external, causally-mediated, relations exhaust the range of materialist explanations. This is how Plotinus' argument retains its troubling conclusion for materialists. However, it might be thought that my amendment is inconsistent with Plotinus' own views. I disagree.

Firstly, recall that Plotinus argued from his notion of a body as *megethê*. I characterized this as a notion of essential divisibility—every body can be further divided into parts separate of, and *outside*, each other. But notice that this is consistent with the *Causal Condition* insofar as it also only has room for causal relations for bodies *outside* of each other. Bodies act by affecting, and being affected by, other bodies. In other words, Plotinus denies that bodies have any internality: all bodies are just parts within parts; my argument is weaker insofar as I do not deny internality but argue that materialist explanatory resources are exhausted by *external* causal relations. And while Plotinus does not put the argument this way, it is the fact that materialism cannot explain, or have access to, internal relations *within* a body that it cannot explain cognitive unity. Whatever internality there may be is at best posited as a brute, emergent feature under contemporary non-reductive materialism. This then places my weaker notion here on a continuum with, and in the spirit of, Plotinus' own view.

Secondly, Plotinus' own notion of causation is consistent with my amendment. Plotinus takes it that bodies are subject to *affections* and *alterations* (3.6.6). However, he denies that the soul is subject to affection, because the soul is moved by an internal activity of *self-motion*.⁵⁵ He is drawing here then a distinction between external affection—or causally-sourced—motion and internal self-motion. Plausibly, this distinction maps on to the distinction I have been drawing between external causal relations and internal non-causal relations within cognitive awareness. To see this, consider the following passage from Plotinus:

For [Soul] serves as 'principle of motion', providing motion to all other things, while is itself moved by itself, bestowing life on the ensouled body, while possessing it of itself, which it never loses, inasmuch as it has it from itself. For indeed it is not the case that everything enjoys a life sourced from outside—that would lead to an infinite regress—but there must be some nature that is primarily alive. (4.7.9.6-14)

Plotinus argues here that the Hypostasis Soul explains life, because if life were only the result of being *sourced from the outside* then this would lead to an infinite regress.⁵⁶ Hence, some further metaphysical principle is required to explain how bodies are alive. Plotinus assumes that, if not for a top-down metaphysical explanation for self-movement, then bodies are otherwise at the mercy of *external sources* to live.⁵⁷ Hence, Plotinus' views on the limits of causation match neatly with the *Causal Condition*.

Above, I argued that if not for an internal relation of reflexivity then a body would be at the mercy of external sources to explain their cognitive capacities. Plotinus will point out: this is because external sources are incapable of explaining either self-motion or self-reflexivity. What is needed is an explanation that goes beyond a mere collation of causal input, or, as he puts it above, activity *sourced from the outside*.⁵⁸ In addition, as discussed above, Plotinus' explanation of our access to 'primary thinking' i.e., reflexive cognition where we both think and think that we are thinking concurrently,

⁵⁵See for instance Noble 2016 for discussion of Plotinus' notion of the unaffected soul.

⁵⁶It is important to note that the source of life is the third Hypostasis Soul and not the World Soul, which is an individual soul no different to other individual souls. The World Soul is the source of motion, i.e., efficient causation, for the sensible world because it permeates the sensible world; just as our souls are the source of our motion because our souls permeate our bodies. All such individual souls are only sources of motion insofar as they participate in the Hypostasis Soul. Hence, the World Soul cannot be the source of our *self-motion* because, as Plotinus argues in 3.1.4, this view would rob us of causal responsibility for our own actions. Fittingly, this is yet another anti-Stoic argument, for they argued that the World Soul is causally responsible for all actions, even our own. For discussion on the argument of this passage see Caluori 2015, p.22-4. For more on the (controversial) distinction between the Hypostasis Soul and the World Soul see Helleman-Elgersma 1980.

⁵⁷For more on Plotinus' notion of self-motion and why it is required to avoid a regress, see Horn 2012, p.220.

⁵⁸Moreover, this is not a tenuous connection to make for a Platonist. An explicit connection between self-motion and self-reflexivity was drawn by Proclus (Gerson 1997a).

is due to our participation in Intellect as undescended souls. This is an explicit commitment to a top-down explanation in which the explanatory burden for this cognitive capacity is borne by our *internal* nature as participants in Intellect and not via some external, causal, relation. Hence, while life is explained by our participation in Soul, and awareness by our participation in Intellect, in both cases we have a non-materialist, top-down explanation, just as Plotinus argued. That is to say, in both cases, a principle of *internal* activity bears the explanatory burden: a kind of explanation to which materialism, both ancient and contemporary, has no access.

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