



Material through and through

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Abstract Materialists about human persons think that we are material through and through—wholly material beings. Those who endorse materialism more widely think that everything is material through and through. But what is it to be wholly material? In this article, I answer that question. I identify and defend a definition or analysis of ‘wholly material’.

Keywords Materialism · Dualism · Substance dualism · Property dualism

1 Introduction

Materialists about human persons think that *we* are material through and through—wholly material beings. Those who endorse materialism more widely think that *everything* is material through and through. But what is it to be wholly material? In this article, I answer that question. I identify and defend a definition or analysis of ‘wholly material’.

It’s easy to poke fun at analytic philosophers and their definitions. But—luxurious though it may be—let us not get too comfortable in the seat of the scornful. Philosophical definition is more than mere bookkeeping. It can accomplish interesting tasks. A definition can illuminate theoretical options. It can clarify what the consequences of a given view are (or are not). And a carefully crafted definition can also answer the critic who peters out and claims not to understand key terms of a debate. These are all ways to make progress through definition. They are, in fact, among my goals in this article. I hope to clarify what the theoretical options are in debates concerning materialism about human persons (and by extension,

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materialism about other kinds of things). I hope to clarify what the consequences of materialism are (or are not). And I hope to answer the critic who insists that she does not understand materialism in the first place. In service of these goals, I'll first suggest constraints on a definition of 'wholly material', develop a definition that satisfies those constraints, and then show what follows.¹

2 Constraints

One constraint I'll obey may be expressed as this threefold Chisholm Rule: (a) define an open sentence, not a term (and especially not an abstract noun), (b) in the definiens, use no free variables save those that appear in the definiendum, (c) if you must deploy an 'ism', specify what the ism is with a definition of the form '*x*-ism is the thesis that such-and-such', where 'such-and-such' is a declarative sentence. To get a feel for how the rule might inform philosophical definition, consider these instances: do not define 'knowledge'. Instead, define '*s* knows that *p*' (and let only '*s*' and '*p*' appear free in the definiens). Do not define 'free will'. Instead, define '*s* is free with respect to *x*'. Do not define 'the mental'. Instead, define '*x* is a mental property'. And so on.²

Another constraint I shall respect—call it the Building Rule—goes like this: *offer definitions that can be easily used to build a useful stock of corollary definitions*. Some concepts are more useful than others. Some, for example, appear more centrally in philosophical debates. The Building Rule recommends that we first define elementary concepts that can be, in turn, used to cook up and understand the more complicated concepts that figure in the philosophical debates that spark our interest.

A final rule—call it the Understanding Rule—may be expressed as follows: *use only primitive elements that you and your intended audience understand*. One thing a definition promises to do is to help us see what is going on when people deploy the definiendum; but this promise can be fulfilled only if the elements of the definiens are themselves understood.

If the Chisholm Rule is a stern and formal constraint on proper definition, the Building and Understanding Rules are more like informal and practical bits of advice. I shall try to take them all to heart.

In deference to the Chisholm Rule, my target definiendum is this open sentence: '*x* is wholly material'. To see how this choice of definiendum might respect the Building Rule, I note that a great many corollary definitions—definitions of both conditions and theses—may be constructed using 'wholly material'. For example:

¹ I will freely deploy property-talk. I invite nominalist readers to supply whatever paraphrases are necessary to understand or affirm what I say without objectionable commitment. I'll mostly stick to talk of offering a "definition", rather than an "analysis" since, as we'll see, there may be a stipulative aspect to my project.

² Alert readers will recognize this way of putting things from Peter van Inwagen's work. See his (2008) for more extensive discussion of proper definition and for defense of the Chisholm Rule.

1. x is wholly immaterial iff: no part of x is wholly material
2. x is an amalgam iff: x has at least two proper parts, one of which is wholly material and the other of which is not.
3. Wide materialism is the thesis that: every (concrete) thing is wholly material.
4. Materialism *de dicto* is the thesis that: necessarily, everything is wholly material.
5. Materialism *de re* is the thesis that: everything is necessarily wholly material.
6. Materialism about F s is the thesis that every F is wholly material.
7. Materialism about human persons is the thesis that every human person is wholly material.

A basic element appearing in all of these definitions is ‘wholly material’. If we could get a grip on ‘wholly material’, then, we could make progress in understanding all of the above definitions. This would in turn, one hopes, facilitate debate about their proper extent (in the case of definitions 1–2) or their truth (in the case of definitions 3–7). Understanding ‘wholly material’, in short, promises to unlock various philosophical riches, including key expressions in central philosophical debates (more on this below).

I have elected to define ‘ x is wholly material’ rather than ‘ x is wholly physical’. Some will scowl at this choice; they find it important to distinguish materiality from physicality (perhaps something must be sufficiently large to count as material, in which case electrons and other too-small-to-be-material items might be physical but not material).³ If you are among those who scowl, feel free to read this article as offering a definition of ‘ x is wholly physical’ or perhaps of ‘physicalism is true of x ’.

Philosophers have already emptied a few swimming pools of ink in defining or analyzing some closely related, but distinct, vocabulary. Many have focused on defining ‘physicalism’.⁴ These excursions in philosophical definition are valuable, I think, and I will help myself later to a few resources from them. But current offerings are lacking on a few dimensions.

To begin, note that ‘physicalism’ typically expresses a *global* doctrine—physicalism is a thesis about the world and all its inhabitants. But there are other doctrines we might wish to explore or argue about, especially doctrines restricted only to particular kinds of objects.⁵ Even with a suitable definition of ‘physicalism’ in hand, it isn’t obvious how to say of a restricted class of items that *they* are, somehow, physicalistically acceptable or full-blooded denizens of the natural world.

³ In this connection, see van Inwagen (1990): 17. “A thing is a material object if it occupies space and endures through time and can move about in space (literally move about, unlike a shadow or a wave or a reflection) and has a surface and has a mass and is made of certain stuff or stuffs. Or, at any rate, to the extent that one was reluctant to say of something that it had various of these features, that that extent one would be reluctant to describe it as a material object. Few philosophers would be perfectly happy about calling a quark or a proton or even a large organic molecule a material object, for one has to be very careful in ascribing any of the features in the above list to such things: and talk about the surfaces of submicroscopic objects, or about the stuffs they are made of tends to verge on nonsense.”

⁴ The literature is deep and wide. Ney (2008) offers very helpful survey and criticism. For even more thorough coverage, see Stoljar (2010, 2015).

⁵ It is natural to suppose that only *objects* (as opposed to, say, *properties*) can satisfy ‘ x is wholly material’. For more on what this category might come to see Rettler and Bailey (2017).

Similarly, various *mixed* views resist easy understanding or categorization on the usual definitions; the usual definitions are too course-grained for that task. Consider:

- (a) everything is wholly material
- (b) there is a wholly immaterial thinking spirit (a god), but everything *else* is physical
- (c) there is a mighty host of immaterial thinking spirits (gods, ghosts, and more besides), but *we* are wholly material
- (d) we are not wholly immaterial beings; but everything else is wholly material

Typical definitions of ‘physicalism’ rule that proponents of (a) are physicalists, while proponents of (b), (c), and (d) are not.⁶ That is all well and good. But there are important *differences* between (b), (c), and (d). A suitable definition of ‘wholly material’ would, in contrast to extant definitions of ‘physicalism’, allow us to limn these important differences. It would allow us to note, with precision, various important dimensions of similarity and contrast between the views. If we understood what ‘wholly material’ meant, for example, we could say that, though (a)-ists think that *everything* is wholly material, (b)-ists and (c)-ists think that only of various and restricted classes of things.

Doctrines like (b)–(d) are, to be clear, are neither unclaimed nor uninteresting regions of logical space. A growing class of theists, for example, endorse something like (b) or (c); they think that, though there are immaterial thinking substances, we are not among them.⁷ Such theists are, in *some* sense or other, materialists or physicalists. But extant definitions of ‘physicalism’ are of no help in saying as much with any precision, nor do they aid in understanding the *content* or the *consequences* of those theists’ views.

Extant debates about ‘physicalism’ focus on the *physical* aspect of physicalism, as it were—characterizing, say, the notion of a physical property. This is a valuable project, but even if successful it is incomplete. For it leaves untouched the question of what it is for something to be *fully* or *entirely* physical or material *through and through*. To be sure, some philosophers have reflected at length about what it is for a *world* to be fully or entirely physical.⁸ But this leaves untouched the interesting and important question of what it is for some *individual within a world* to be fully or entirely physical or material through and through. I will fill this lacuna shortly.

A lexicon containing ‘wholly material’ would offer expressive resources to identify, explore, and argue about a wider range of philosophically interesting views. There is good reason to try to define ‘wholly material’. That is the task to which I’ll now turn.

⁶ This is most obvious in the cases of supervenience and grounding definitions of physicalism, of which more below. Suppose that the mental lives of immaterial thinking spirits are not grounded in their physical goings-on, and that they may vary in their mental lives without variation in the goings-on of physical things. Then the grounding of everything in the physical would fail, as would the supervenience of the mental on the physical.

⁷ I have in mind philosophers like Lynne Rudder Baker, Kevin Corcoran, Hud Hudson, Nancey Murphy, Trenton Merricks, and Peter van Inwagen.

⁸ See, for example, Jackson (1999) and subsequent literature.

3 ‘Wholly material’ defined

Rocks are wholly material if anything is. Rocks are, to be sure, not direct subjects of fundamental physics. But they are made (and only made) of items themselves treated by fundamental physics (electrons, upquarks, and downquarks, for example). If you made a list of all the parts of a rock at some level or other, you’d find on that list only items like electrons, upquarks, downquarks, and the like—no souls, no spirits, and no ghosts will appear on that list. No items with a *mental life* will appear on that list. And, furthermore, if there were something it is like to be an electron, if electrons were themselves thinking things, this would tell against the view that our target rock is, after all, wholly material. So, more generally, to be wholly material is to be, at some level or other, made of items themselves treated by fundamental physics, provided that those items do not exhibit mentality themselves. And, of course, *simple* items treated directly by fundamental physics are themselves wholly material, provided that they do not exhibit mentality.

That is the rough idea. Let’s slow down and work through a proper definition (don’t worry; I haven’t forgotten the Rules!).

Since the definition I’ll propose speaks of parts of things at various levels, some mereological definitions are in order. Let us begin with *decomposition*. As usual, I assume that x overlaps y just in the case that there is a z such that z is a part of both x and y :

The ds are a complete decomposition of x iff: everything among the ds is a proper part of x , and every part of x overlaps at least one of the ds .

Note that some things may have more than one complete decomposition. Two rock halves may be a complete decomposition of a rock. And four rock quarters may also be a complete decomposition of the same rock. One way of making sense of this observation is that there are *levels* of decomposition. We could, accordingly, speak of the ds as being a *final* level of decomposition when every one of the ds is *simple*; and we could then say something is wholly material when the items within its final decomposition enjoy some condition or other. But what if rocks do not enjoy a final level of decomposition? What if it’s parts all the way down? To accommodate this scenario, I shall, instead, deploy the notion of a *relative level* of decomposition:

Where the ds are a complete decomposition of x and where the es are a complete decomposition of x , the ds are lower than the es iff: for every y among the ds , there is a z among the es such that y is a proper part of z .

A key component of the intuitive definition sketched above is that the items within the relevant decomposition of a wholly material thing are not themselves thinking. They exhibit no mental properties. But what is a mental property? That is a complicated and vexed question. And I will not give a complete answer to it. But I will say this much, at least: to have a mental property is either to believe, or doubt, or hope, or desire that something or other (in other words, to be in a propositional state) or to be *conscious* (in other words, to be in phenomenal state—a state such that there is something it is like to be in that state). Accordingly:

p is a mental property iff: necessarily, for every x , if x exemplifies p , then x is in some propositional or phenomenal state or other.

The final component we'll need is that of a *narrowly physical property*. This one is tricky. It may seem that by helping ourselves to this notion we are engaged in circular definition or something very close to it—defining 'material' in terms of 'physical', say. But that is not what I propose to do. Instead, I'll define a narrowly physical property in terms of *physics*:

A property p is narrowly physical iff: p is treated by current or future (in the limit of inquiry, ideal) versions of fundamental physics, p is not a locative property, and p is not a mental property.

Locative properties (or *spatial/temporal* properties) are properties like *being four meters from Samwise*, *exactly occupying region r* , and *beginning to exist at t* . It is unclear whether locative properties will appear in any ideal fundamental physics (perhaps *only* locative properties—*being at location l within such-and-such a statespace* will show up); but I'll want to leave open for the moment the possibility that something not treated by physics might nonetheless be situated in space and time, and so set aside locative properties for now (more on that scenario below).

There are, of course, difficulties with appealing to the shape of fundamental physics, and even deeper worries about appealing to *ideal* fundamental physics. I don't have much to add to extant debates about the difficulties. But I can enthusiastically refer interested readers to Jessica Wilson's careful (and convincing, to my mind) explication and defense of this style of 'physics-based' definition that imposes a 'no mentality' constraint.⁹

The elements are in place. Let's combine them to form a definition of our target phrase. It'll have two main clauses: one for the simple cases, the other for composite.

WHOLLY MATERIAL

x is wholly material iff:

Simple clause: if x is simple (has no proper parts), then x exhibits a narrowly physical property and exhibits no mental properties
and

Composite clause: if x is not simple (has proper parts), then there are some ys that are a complete decomposition of x such that: (a) every one of the ys exhibits a narrowly physical property, (b) none of the ys exhibits any mental properties, and (c) for any zs that are a complete decomposition of x and lower than the ys , every one of the zs exhibits a narrowly physical property and none of the zs exhibits any mental property.

I have already explained how WHOLLY MATERIAL obeys the Chisholm and Building rules. It also respects the Understanding rule. I do not claim not that its primitives are entirely without difficulty. But some of us, at least, understand what they come

⁹ Wilson (2006).

to. Some of us, that is, understand basic mereological vocabulary, the notion of a property treated by fundamental physics, and the notion of mentality broadly construed. What this article's discussion of WHOLLY MATERIAL demonstrates is that, if we understand *those* things well enough, we can in turn and in terms of them understand complete materiality (you may, if it would help, read the article as arguing only for that conditional). We can say with some clarity and precision what it is for something to be material through and through.

4 Verdicts

One way to get a feel for WHOLLY MATERIAL is to consider cases and the verdicts it renders in each. That's what I'll do in this section. But first a word about the very project of definition or analysis. One may well wonder what the project is. Are we looking for a definition of 'wholly material' that *captures* (now there's an interesting bit of metaphor!) some intuitive and pre-theoretical notion, or perhaps a post-theoretical notion? Or is it purely stipulative, in which case, well, what's the point in doing *that*?

These are decent questions. I answer as follows. I hope to supply a definition of 'wholly material' that is a bit *stipulative*, a bit *intuitive*, but most of all, *useful* in doing philosophy. Accordingly: I will try to show that WHOLLY MATERIAL accurately tracks some *obvious* judgments about which kinds of things are wholly material and which are not. In difficult cases, I'll admit the difficulty and declare WHOLLY MATERIAL to be a bit stipulative. But most importantly, I will later argue that using WHOLLY MATERIAL is of some theoretical use.

Some easy cases¹⁰:

Simple Soul: I am a thinking substance; I have a perspective on things, and there's something it's like to be me. I have no proper parts, and am not to be found in space or time.¹¹

Simple Particle: I am simple and very very small. I have some narrowly physical properties, but no mental properties.

Entangled Soul: I am a thinking substance. I have no proper parts, and bear no narrowly physical properties (I don't have a mass, for example). But I live and move and have my being in the world of space and time.¹² In particular, I am tied to a particular organism in the following sense: there can be no difference in what I'm thinking without a difference in what its very small parts are up to (the fancy way of saying this is that my mental properties supervene on the narrowly physical properties of its parts).

¹⁰ For ease of presentation, I'll put the cases in the first person singular: imagine these as little speeches given by the subject of each case.

¹¹ On Simple Soul and one case for the view, see Bailey (2014a).

¹² On Entangled Soul and whether souls could be in space or time, see Bailey et al. (2011), §4.

Union: I have two immediate proper parts: a body and a soul. My soul exhibits mental properties, and I in turn exhibit mental properties in a derivative sense (I inherit them from my soul). Similarly, my body exhibits various physical properties, and I in turn exhibit physical properties in a derivative sense (I inherit them from my body). My body enjoys a decomposition into very small parts, all of which exhibit narrowly physical properties, and none of which exhibit any mental properties.¹³

Some verdicts, care of WHOLLY MATERIAL: Simple Soul, Entangled Soul, and Union are not wholly material. Simple Soul and Entangled Soul are (using the corollary definitions suggested above), instead, *wholly immaterial*; Union is an *amalgam*. Simple Particle is, by contrast, wholly material. These are the easy cases, and WHOLLY MATERIAL gets them right; I'm thus inclined to put some points on the board for WHOLLY MATERIAL.

Some harder cases:

Thinking Parts: I enjoy a decomposition into very small parts, all of which exhibit narrowly physical properties, and none of which exhibit any mental properties. But I also enjoy a decomposition into various medium-sized parts, some of which exhibit mental properties (my head, for example, is thinking all and only the things I'm thinking).¹⁴

Tiny Thinking Parts: I enjoy a decomposition into very small parts, all of which exhibit narrowly physical properties, and at least some of which have a perspective on things (they are 'proto-conscious', if you will).

Gunk: I enjoy a decomposition into very small parts, all of which exhibit narrowly physical properties, none of which have a perspective on things. Every one of my parts is itself composite: it's parts all the way down. At some level or other, neither the parts at that level (nor those at any lower than it) exhibit any mentality.

Some verdicts Thinking Parts is wholly material. So is Gunk. Tiny Thinking Parts is not. In general, WHOLLY MATERIAL imposes no ban on thinking parts; but it does require that those thinking parts themselves decompose into non-thinking parts. These are, as I've said, slightly harder cases. To the extent that I have judgments about them at all, WHOLLY MATERIAL gets them right. A few more points on the board.

Two more hard cases:

Alternating Gunk: I enjoy a decomposition into very small parts, all of which exhibit narrowly physical properties, and none of which have a perspective on things. But those very small parts are, in turn, composed of even smaller parts, some of which have a perspective on things. And those even smaller parts, in

¹³ On Union, see Bailey (2015a), §4.2.

¹⁴ I discuss a number of issues relevant to Thinking Parts in Bailey (2014a, b, 2016a).

turn, decompose into *yet smaller* parts, none of which have any perspective on things... and so on.

Chisholm Particle: I am simple and very very small. I have some narrowly physical properties. And, oddly enough, I have some mental properties too.

It is not at all *obvious*, I concede, what to say about Alternating Gunk. What WHOLLY MATERIAL says is this: Alternating Gunk is wholly material. And if push comes to shove, I'll concede that this verdict is a matter of stipulation. WHOLLY MATERIAL expresses what I *mean* by 'wholly material', and so as I use those words, Alternating Gunk is not wholly material. Next up is Chisholm Particle. Chisholm floated a view like this, long ago, as a version of materialism.¹⁵ With a nod to Chisholm—and a concession that the move may be purely a matter of stipulation—I note that Chisholm Particle is not, on WHOLLY MATERIAL, wholly material after all.

Finally:

Organism: I am an organism—a living, thinking thing—and I exhibit a wide and intriguing range of conscious mental properties. I enjoy a decomposition into very small parts, all of which exhibit narrowly physical properties, and none of which exhibit any mental properties. But here's the catch: just about everything David Chalmers has ever said about conscious mental properties is true. So at least some of mental properties I exhibit are neither identical to nor metaphysically supervene on any narrowly physical properties. Accordingly, I have zombie twins—physical and psychological duplicates who enjoy no conscious mental properties at all—in other worlds.¹⁶

When it comes to endorsing WHOLLY MATERIAL, Organism may seem to be a stumbling block. For WHOLLY MATERIAL would have it that Organism is wholly material. And yet Organism passes a number of 'dualist' tests. 'Property dualism' is true of Organism's mental and physical properties, for example, in at least two ways (non-identity and supervenience failure). Is Organism, then, a counterexample to WHOLLY MATERIAL? Does it present us with an item that is obviously not wholly material but that nonetheless satisfies WHOLLY MATERIAL?

I do not think so. A couple of points. First, there is clearly *a* sense in which Organism is more 'physicalistically acceptable' and less 'dualistic' than Simple Soul or Union. Organism has no soul or ghostly parts (not so, Simple Soul or Union). Organism is entirely composed of electrons and upquarks and things like unto them (not so, Simple Soul or Union). It does not follow that Organism is as materialistic as can be. Second, there is clearly *a* sense in which Organism is less 'physically acceptable' and more 'dualistic' than, say, Thinking Parts. It really does pass some dualistic tests. It does not follow that Organism is as dualistic as can be. A little nuance is, instead, in order. Third (and uniting points one and two), there is a clear and important metaphysical difference between, on the one hand, Organism, and on the other, cases like Simple Soul or Union. Noting that

¹⁵ Chisholm (1978); see also Quinn (1997).

¹⁶ I discuss and defend Organism and related views in Bailey (2015b, 2016b, 2017).

‘property dualism’ holds in all three cases does not illuminate what this difference might be. To helpfully illuminate that difference, we need the right vocabulary. In particular, we need some vocabulary by which we may express some ‘materialistic’ condition that Organism satisfies but that Simple Soul and Union do not. I submit that WHOLLY MATERIAL is a very plausible candidate for that office. Organism is more ‘materialistic’ than Simple Soul or Union in precisely this sense: it satisfies WHOLLY MATERIAL even when they do not. Organism, then, is no counterexample to WHOLLY MATERIAL. It is, instead, a helpful illustration of just why a definition like WHOLLY MATERIAL is needed and of the theoretical work that such a definition can do.

Put slightly differently: the old distinction between *property* and *substance* dualism is a good one, exactly because cases like Organism contrast with cases like Simple Soul and Union. The distinction is worth using if it can be given precise content. A definition of WHOLLY MATERIAL is a welcome help in that worthy task.

I am not the first philosopher to propose a definition of ‘wholly material’ or cognate phrases. It may be helpful to compare what I’ve said to one proposal already on the table.

Ned Markosian has suggested that ‘a physical object is an object with a spatial location’.¹⁷ One worry about this suggestion is that it doesn’t obviously illuminate the notion of something’s being material or physical *through and through*. It offers, in other words, an analysis of ‘*x* is material’ but not of ‘*x* is wholly material’. So here’s a charitable extension of Markosian’s account:

LOCATION. *x* is wholly material iff: every part of *x* has a spatial location.

I think LOCATION falters on Entangled Soul. Entangled Soul exhibits no narrowly physical properties (nor do any of its proper parts; it hasn’t got any). And yet it has a location in space and time. There is *some* important sense, then, in which Entangled Soul is not wholly material; it is importantly different in this dimension from, say, electrons and rocks. LOCATION does not mark this important difference. But WHOLLY MATERIAL does. So, at the very least, it would be wise to add WHOLLY MATERIAL to our vocabulary.

Markosian is well aware of difficulties in this neighborhood. Indeed, he thinks they present a “serious objection” to LOCATION. He offers some possible replies: (a) perhaps Entangled Soul is, after all, wholly material, though perhaps it lacks properties material objects usually have, (b) perhaps it’s impossible for Entangled Soul to, after all, enjoy spatial location, or (c) perhaps we should simply resort to stipulation here, and note that stipulative definitions need not match intuitive and pre-theoretical judgments.¹⁸ I am unconvinced. It is far from obvious to me that Entangled Soul is, as described, not possible, or that items like Entangled Soul would simply be an exotic sort of material object, but material objects nonetheless. I don’t want to rest too much weight on these judgments, though. So, like Markosian, I’ll help myself to a little stipulation here, and note that expanding our vocabulary can help us say with some precision the way in which Entangled Soul is material (it

¹⁷ Markosian (2000), §3. See §4–8 for other styles of definition (and objections to each).

¹⁸ Markosian (2000): 390ff. I’ve put the replies in my own terms.

satisfies LOCATION) and the way in which it is not (it does not satisfy WHOLLY MATERIAL). My suggestion, then, is irenic and friendly: even if there is no one, true, canonical definition of ‘wholly material’ that gets all of the cases right, there is nonetheless room for another (perhaps stipulated) expression; and adding this expression to our vocabulary will enable us to say some useful things we’d not otherwise be able to say.

Thus a few remarks on the content of WHOLLY MATERIAL and the verdicts it offers in a few cases. WHOLLY MATERIAL passes some intuitive tests. So we have something of an argument that it is correct. But I will now show that it has deeper theoretical utility; this will furnish us with a much more powerful argument.

5 Consequences

Some recent debates over defining physicalism concern questions like:

1. Must physicalists commit to *fundamentalism*, according to which there is a most fundamental level?¹⁹
2. Must physicalists commit to a *supervenience thesis*, according to which all properties supervene on narrowly physical properties?²⁰
3. Must physicalists commit to a *grounding thesis*, according to which all phenomena are grounded in or dependent on narrowly physical phenomena?²¹

These questions are fascinating and a little vexing. I’ll not answer them. But I will suggest a way to make progress in thinking about them.

Consider again *wide materialism* (or *wide physicalism*), the thesis that every (concrete) thing is wholly material (where ‘wholly material’ is understood in line with WHOLLY MATERIAL). One of the more interesting features of using WHOLLY MATERIAL in this way is that it leaves open both negative and affirmative answers to all three of the above vexing questions. This is, I’ll argue, a virtue.

First, it aids in marking an important divide—the divide between those who are physicalistic (in spirit, as it were) and those who are not. There is *something* philosophers that who are physicalistic in spirit have in common. And it is not just a hard-nosed affection for science or confidence in some naturalistic program or other. It is, plausibly, a *thesis*—something that could be true or false. There is, then, a theoretical role waiting to be filled by some thesis or other. I think wide materialism is a good candidate for the job. Wide materialism, I propose, is what proponents of grounding and supervenience definitions of physicalism have in common, even though they may disagree about the status of grounding or supervenience theses.

Second, the framework at hand allows us to think about a *degreed* phenomenon with some precision. Let me explain. Commitment to physicalism need not be a binary affair; there may, instead, be a gradient of physicalist doctrines, some more

¹⁹ Montero (2006) and Nagasawa (2012).

²⁰ Montero (2013).

²¹ Dasgupta (2015).

physicalistic than others. Here's how to think about the gradient using the vocabulary of this article. Someone's physicalistic credentials or her place on the gradient are a function of how many (kinds of) things she thinks are wholly material. So wide materialism is *more* physicalistic, for example, than is the thesis that only *most* things are wholly material, which in turn is *more* physicalistic than the thesis that very few things are wholly material.

Third, my framework suggests a new defensive maneuver for physicalists. Let 'supervenience and grounding theses' name those supervenience and grounding commitments the physicalist is commonly supposed to have (that the mental is grounded in and supervenient on the physical, for example). Many of the leading arguments against physicalism take this form:

- (a) Supervenience and/or grounding theses are false.
- (b) If supervenience and/or grounding theses are false, then physicalism is false
- (c) Therefore, physicalism is false.

Physicalists have typically denied (a). But if the central argument of this article is correct, there is another move. Physicalists may, instead, deny (b). They may decline to endorse supervenience and grounding theses (or perhaps even join the anti-physicalist in denying them). And they may do all that without renouncing physicalism. I imagine the proponent of the above anti-physicalist argument replying with this little speech:

You insist that physicalism is true. I'd like to know what that might come to, though. I thought we could define physicalism in terms of supervenience or grounding theses. But now I learn that you decline to endorse (and may even deny!) those theses. So I must know what you think physicalism *is*. Put another way: if you don't affirm the supervenience or grounding theses, what are your physicalist credentials? May I please inspect your membership card in the physicalist club?

A fine speech. Some physicalists may nod along. Here is another speech in reply:

I say every concrete thing is wholly material. Every concrete thing, then, has a decomposition into parts at some level or other, all of which display narrowly physical properties and no mental properties (for the details, see *WHOLLY MATERIAL*). On this point, I am firm. Supervenience and grounding theses are interesting add-ons to my view. But I do not endorse the suggested add-ons (my reasons why are another story for another day: perhaps the add-ons are obscure; perhaps they are false; perhaps they should be left open as a matter for empirical discovery). But my physicalistic credentials are plain and well-documented.

The first speech raises good questions. The second speech answers them. If the physicalist can, as I have argued, make sense of 'wholly material', she can formulate her view without obvious commitment to controversial or obscure supervenience and grounding theses. Even if such theses turn out to be untrue, physicalism in some sense or other may yet be true. I thus bring tidings of comfort

and joy to physicalists who'd otherwise lose sleep over, say, cases of supervenience failure. "Hold on to your physicalism", I advise, "but drop any allegiance to the offending add-on theses. And if pressed to explain what your physicalism amounts to, use feel free to use WHOLLY MATERIAL. It is my gift to you—free of charge".²²

There is another task that WHOLLY MATERIAL can facilitate. It can help us more precisely classify and understand the elusive doctrine of *hylomorphism*. Hylomorphism is an aged view; it goes back at least as far as Aristotle, who famously held that objects are comprised of form and matter. The doctrine is alive and well; it has a large and growing number of prominent living adherents.²³ Even so, it is not always easy to connect hylomorphic views to the vocabulary of (late twentieth and early twenty-first century, analytic, Anglophone) metaphysics and philosophy of mind. Hylomorphists sometimes seem to think this is a virtue.

With apologies to those good folks, I'll now suggest a way of drawing together the aged and contemporary.

Focus first on *us*. What *are* we? According to the hylomorphist, we are compounds of matter and form. That may satisfy some. But those who've cut their teeth on contemporary metaphysics and philosophy of mind will need more. In particular, they'll want to know whether we compounds of matter and form are wholly material. They'll want to know whether hylomorphism about human persons is compatible with materialism about human persons. And they might want to know whether it is compatible with yet more general materialist commitments (like wide materialism).

We have the means to answer these questions. We need only ask the hylomorphist whether we hylomorphic compounds satisfy WHOLLY MATERIAL. To answer *that* question, it would behoove the hylomorphist to specify whether (a) we have forms, literally, as parts, (b) whether our forms have narrowly physical properties, and (c) whether our forms have mental properties. There will be no agreement on the proper answers to these questions, I suspect. Some hylomorphists are quite clear, for example, that objects have forms, literally, as parts.²⁴ Others are equally clear (and vehement) in denying that claim.²⁵ Yet others don't seem to want to speak to the question at all.

There is no One True Hylomorphism. But we can still classify hylomorphic views by the answers they give to those three questions. The hylomorphist who says 'yes' to (a) and (b) while saying 'no' to (c), for example, could consistently affirm that we are wholly material in the sense specified by WHOLLY MATERIAL. By contrast, the hylomorphist who insists on an affirmative answer to (c) could not consistently affirm that we are wholly material in the sense specified by WHOLLY MATERIAL.²⁶

²² My advice here also supplies the physicalist with an easy rejoinder to arguments purporting to show that free will and supervenience theses are incompatible. The physicalist may freely jettison those theses without thereby giving up on physicalism altogether. See Bailey (forthcoming) for more discussion of this strategy and application to recent literature.

²³ See Bailey and Wilkins (2018) for discussion and citations.

²⁴ Most notably Koslicki (2008).

²⁵ Marmodoro (2013).

²⁶ I'm supposing that, on this kind of hylomorphism, no form itself satisfies WHOLLY MATERIAL.

Some forms of hylomorphism, then, will count as variations on materialism about human persons, while others will not. To limn these differences and draw out a precise classification, we need only apply WHOLLY MATERIAL.

I have approached most of the issues so far from the perspective of a materialist about human persons who is keen on defending and developing that doctrine. Non-materialists of various stripes, though, may also find my project helpful. In offering a precise definition of materialism about human persons, I have given those who deny materialism about human persons a *target*. They may specify in their arguments exactly which element of WHOLLY MATERIAL we human persons fail to satisfy, and in so doing more clearly state the contents of their own views. We might also classify various non-materialist views according to which elements of WHOLLY MATERIAL they say we fail to satisfy. So materialists and non-materialists alike benefit from the project of this article.

WHOLLY MATERIAL is a gift that keeps on giving.

6 Reconciling materialism and property dualism

An upshot I've claimed for WHOLLY MATERIAL is that one may consistently embrace materialism about human persons and property dualism. One may, that is, consistently hold that we are wholly material beings *and* that we have mental properties that do not metaphysically supervene on our physical properties. This may be shocking or incredible. It'll initially sound to some, I imagine, as though I'm saying you can consistently embrace materialism and reject it too. I have, I hope, already done a fair bit to mitigate this initial shock factor. To recap: one may consistently hold that we are wholly material and also endorse property dualism because something may satisfy WHOLLY MATERIAL even if property dualism is true. The truth of property dualism only implies the falsity of some kinds of materialism (those committed to the relevant supervenience theses, for example). But it does not imply the falsity of the thesis that we are wholly material beings, which is, as I've argued, a kind of materialism as well.²⁷

I have thus uncovered some positive reasons to think that the materialist about human persons need not embrace the supervenience of the mental on the physical. To put the point a little differently, I've uncovered positive reasons to think that property dualism need not entail substance dualism, the thesis that we are at least

²⁷ The shock factor may be further mitigated by reflecting on other cases of alleged supervenience failure. Montero (2013) offers this example: "... if the properties, entities and laws of chemistry did not supervene on the properties, entities and laws of physics, we might need an extra law that guarantees that every time that, say, a certain quantum configuration occurs, a certain event occurs at the chemical level... what is the argument that such linking laws, in and of themselves, are incompatible with physicalism?" Montero is exactly correct, I think. The failure of chemical phenomena to metaphysically supervene on physical phenomena would not be evidence against the truth of physicalism. It would, instead, be evidence that physicalism does not entail a metaphysical supervenience thesis at all.

partly immaterial beings. The materialist about human persons may safely endorse property dualism without fear of sliding into the heresy of substance dualism.²⁸

I'll now examine some recent and challenging arguments (care of Susan Schneider), each purporting to show that property dualism implies substance dualism.²⁹ I'll contend that Schneider's arguments are not sound. This section is no mere diversion. First, Schneider has identified arguments that, if sound, undermine the philosophical upshot I've claimed here. To vindicate that philosophical upshot is to vindicate the main claims of this article. Second, rebutting Schneider's arguments can further blunt the shock factor discussed above. It is helpful, I think, to turn that initial resistance into *argument* and then evaluate. That is what I shall do.

6.1 The constituent argument

Schneider's first argument begins with *constituent ontologies*, according to which objects have an internal metaphysical structure. These views say that in addition to the various parts that are constituents of Yuna the dog (atoms, cells, legs, a tail), properties like *doghood* and *being furry* are constituents of Yuna as well. Bundle theories stop there. Bare particular theories add that every ordinary object also has as a constituent a bare particular, an item to which those properties somehow attach.³⁰

The basic thought behind Schneider's Constituent Argument is this: if property dualism is true, then mental properties are not identical to (and do not supervene on) physical properties. Given the bundle theory of substance, certain substances, certain bundles—namely, the bundles that we are—have as members or parts non-physical items—namely, the non-physical mental properties we exemplify. Whether these items are tropes or universals, they are not physical. And so, given the bundle theory of substance, property dualism implies that we are not wholly material beings. The bare particular theory of substance has this same consequence. Schneider concludes that property dualism implies substance dualism:

Is the conjunction of property dualism and the bundle theory even compatible with substance physicalism? The following problem concerns me: according to the bundle theory, substances are just bundles of the properties they possess.

²⁸ I've focused in this section on supervenience theses. But similar remarks apply to grounding theses too. Another upshot of this article's main line of reasoning, then, is that it is possible that we are wholly material beings even if the mental is not grounded in the physical.

²⁹ Schneider (2012, 2013); I'll focus on the arguments as presented in (2012), which are a little more closely connected to my present purposes. For illuminating discussion of Schneider and, in particular, a very helpful argument that materialistic versions of animalism are compatible with property dualism, see Yang (2015).

Schneider is not the first to argue that property dualism entails substance dualism. See also Francescotti (2000) and especially (2001), in which he argues that on any suitable definition of 'physical particular', property dualism implies that the subjects of mental properties are not themselves physical particulars. My rebuttal to Francescotti is this: I've found a suitable definition of 'physical particular' (though I favor 'wholly material') that does *not* have this untoward consequence.

³⁰ This classification originates in Wolterstorff (1970). For extremely helpful discussion, see also van Inwagen (2011). I argue against bare particular views in Bailey (2012).

So why is your mind, which is constituted by irreducible non-physical properties, really a physical substance at all? ... Given that non-physical properties are constituents of the bundle, why would the bundle be physical? Why is the mind not, instead, a “hybrid” substance—one which consists in both physical and qualitative properties?³¹

I offer two independent replies to this Constituent Argument.

First, constituent ontologies are not the only game in town. There are, let us not forget, also the so-called *relational* ontologies. According to these views, properties are not parts of objects at all and in any sense.³² My humanity is no more a part or constituent of me than it is a part or constituent of the desk in front of me. And the same goes with my mental properties (and yours too).³³

Second, the Constituent Argument trades on a subtle equivocation. The Constituent Argument presupposes that if mental properties are not physical properties then they are not physical, and thus that, were they to show up in the world, they would not be amenable to any thoroughgoing materialism (whether about us or everything). But this is a mistake. In this context, when a property counts as physical, it is not so not because it exemplifies features like *charge* or *spin* or *mass* itself, or because it satisfies WHOLLY MATERIAL. Rather, it is physical because, of necessity, anything that has it exemplifies the property *being physical*. van Inwagen puts the point with usual clarity:

A physical property, therefore, is not a property that has the property being physical, which is a property no property could have. To call a property physical is to speak not of its nature but of the natures of the things it could possibly be true of. We call a property physical not because it has the property being physical but because it entails that property³⁴

So, even if a constituent ontology is true and our mental properties are parts of us—and even if those mental properties are, as per property dualism, not physical, it doesn’t follow that we have, *in the relevant sense*, non-physical parts.

6.2 The modal argument

Schneider’s second argument:

³¹ Schneider (2012): 65.

³² See van Inwagen (2004, 2007) for a fine example of a relational ontology in action. It is striking that Schneider does not even mention (much less argue against) the relational alternatives to the bundle and bare particular views. This oversight is perhaps best explained (but not excused) by the near-hegemony that constituent views have enjoyed in recent years—at least amongst metaphysicians who work on substance.

³³ Notice that the intramural details don’t matter here. On *any* relational view (according to which properties are, say, classes of possible objects, Platonic exemplars, unsaturated assertibles, or something else besides), our mental properties are not parts of us, and so the view that no mental property is a physical property does not support the view that we are less than wholly material.

³⁴ van Inwagen (2007): 211–212.

Property dualism holds that mental properties nomologically supervene on physical properties. But property dualism rejects supervenience in worlds that are physical duplicates of ours where our psychophysical laws fail to hold. For consider zombie worlds... Zombies have brains, but, ex hypothesi, they are incapable of having phenomenal properties. Question: do zombies have *minds*? I doubt the property dualist will want to say that they do: remember, for the property dualist, consciousness is the mark of the mental. But now, consider: brains have different modal properties than minds do, for brains can exist even if they are incapable of having phenomenal properties—or so the property dualist contends. But not so with minds... But if the property dualist allows that minds and brains differ in this way, surely they cannot be identical.³⁵

Similar arguments would show that if property dualism is true then minds are distinct from any wholly material object at all. This would imply, again, that if property dualism is true then substance dualism is true.

There's a lot going on in the passage I've quoted. I submit two points of disagreement.

Focus first on the conditional that if zombies are possible then we are not essentially minds. This conditional seems to be at the heart of Schneider's Modal Argument. But I do not think that the antecedent entails the consequent, and so I reject that conditional. Zombies are physical duplicates of us that are not conscious. Property dualists maintain that zombies are possible. Must one also think that, if zombies are possible, that *we* could have been zombies? No. It simply does not follow.

And indeed, the general principle at play here—namely, if x has a physical duplicate that does not have property F , then x is not essentially F (let's call this the Duplicate Essence Premise)—is false. To see why, consider two chairs A and B (from the Rockit and Westwood factories, respectively), each a physical duplicate of the other. Suppose origins essentialism is true in at least this sense: these chairs have their factory origins essentially. So: Chair A could not exist without originating from the Rockit factory, and Chair B could not exist without originating from the Westwood factory. But then we have a counterexample to the Duplicate Essence Premise. For Chair B is a physical duplicate of Chair A, and Chair B does not have the property *originating from the Rockit Factory*. Chair A *does* have that property. The Duplicate Essence Premise is false.

Second, I note that Schneider has assumed that minds are *essentially* (phenomenally) conscious. This assumption is questionable. 'Mind' is, of course, a notoriously slippery word. I shall suppose that here it just means 'thinking thing'. We are thinking things; we are minds. Is there any reason to think that we are *essentially* phenomenally conscious? I don't see one. And indeed, the opposite seems true; it seems possible that one of us enters a deep and dreamless sleep, for example, never to wake up. Schneider might here concede even if not every mind is essentially conscious, every mind is at least *capable* of being conscious. But is far

³⁵ Schneider (2012): 67.

from obvious. For could not one of us thinking beings have been stillborn, and thus never (not even for a moment) capable of being conscious? That such a scenario is possible is, I think, a plausible hypothesis. The prospects for the Modal Argument are not good.

6.3 Lingering worries and the extra step

Despite all this, worries about the compatibility of materialism about human persons and property dualism may linger still. Schneider nicely expresses some of these worries as follows:

Another way to see the property dualist's hidden commitment to substance dualism is to ask whether minds are something "over and above" brains... question: but what does God need to do to make it the case that our world has minds? Property dualist answer: God must make it the case that the world has irreducible qualia. After all, according to property dualism, consciousness is the mark of the mental if anything is. If anything is to characterize the nature of mind, wouldn't it be phenomenal properties? This latter point is in fact the very kernel of property dualism. For according to the property dualist, in order to explain the fundamental nature of mind we must posit consciousness as a basic ingredient of the universe, alongside the fundamental physical properties. But no genuine substance physicalist can venture this answer. If God needs to add mental properties to the world to create minds, minds are surely not physical substances.³⁶

Since the worries here are presented as a story of what steps God must take in order to make us conscious, I reply by presenting a story of my own:

There are psycho-physical laws guaranteeing that physical beings with certain physical properties (e.g., with certain neurological properties) have certain mental properties (e.g., conscious mental properties). The order of creation is as follows. First, God fixes the physical facts. In doing this, he endows certain creatures with various neurological properties. Then, God settles on a class of psycho-physical laws. Finally, God presses "play" and certain privileged creatures—the ones with just the right neurological properties—"light up" with the gift of consciousness.

Facts about consciousness, on this story, are not purely physical facts in at least this sense: the purely physical facts do not, by themselves, fix or necessitate or ground the consciousness facts. God cannot skip the middle step. And yet, after fixing the purely physical facts, God need not create any *concrete particulars* to ensure that we enjoy consciousness.³⁷ Even after God has performed the middle step, we still satisfy WHOLLY MATERIAL and are thus wholly material beings. One might object that

³⁶ Schneider (2012): 67.

³⁷ My model assumes that the psycho-physical laws are not themselves concrete particulars; and this is well and good. For as I'm thinking of things, such laws are propositions—prime candidates for an abstract office if ever such there were.

the very need for this middle step is evidence that the model at hand is not as physicalistic as can be. I grant this point. It is, after all, a model on which property dualism is true. But it is also a model on which a rigorous and thorough-going form of materialist condition holds, and we can (using WHOLLY MATERIAL) say with some precision exactly what that condition is.

I conclude, then, that Schneider's arguments purporting to show that property dualists must be substance dualists too do not succeed, and one of the main upshots I've claimed thus far is intact. The thesis that we are wholly material beings is compatible with property dualism.

7 Conclusion

Thus some philosophy. Now some metaphilosophy. This article develops a definition or analysis. This is not a fashionable project. These days analysis gets more sneers than cheers. Yet the definition I've proposed has proven fruitful on several dimensions. In getting clear about what 'wholly material' means, we've also made headway in classifying various views, opened up a few underexplored regions of logical space, discovered a new style of reply to an important family of arguments against physicalism, and found new reason to think that materialism about human persons is compatible with property dualism.

Maybe analysis isn't such a silly pastime after all.

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