

SENSE PERCEPTION AND MERELOGICAL NIHILISM

BY ANDREW BRENNER

In the debate over the existence of composite objects, it is sometimes suggested that perceptual evidence justifies belief in composite objects. But it is almost never suggested that we are perceptually justified in believing in composite objects on the basis of the fact that the phenomenology of our perceptual experiences enables us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise. But while the thought that the phenomenology of our perceptual experiences cannot enable us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise is commonly taken for granted, it requires some defence, both in light of its importance in shaping the debate and in light of its recently coming under attack by a prominent philosopher of perception. In this paper, I offer such a defence.

Keywords: special composition question, mereology, mereological nihilism, composition, perception.

I. INTRODUCTION

One prominent debate within metaphysics concerns the circumstances under which composition occurs.¹ One position in that debate contends that composition never occurs, so that nothing is ever a proper part of anything else. This position is ‘mereological nihilism’, or just ‘nihilism’. If nihilism is true, then many ordinary macroscopic objects do not exist, since, presumably, they would be composite objects if they did exist.² Here is a natural question to ask

¹ Van Inwagen (1990).

² By ‘ordinary’ macroscopic objects, I have in mind the sorts of macroscopic objects we interact with in daily life (if they exist)—e.g. computers, cars, trees, dogs, and rocks. I do not think that *any* possible macroscopic object would have to be composite, since it seems to be possible for there to be macroscopic extended simples. It just seems likely that the sorts of ordinary macroscopic objects we ordinarily interact with are composite, if those macroscopic objects exist in the first place. That being said, see, e.g. Contessa (2014) and Goldwater (2015) for the view that terms that seem to refer to composite objects actually refer to something else—lots of simples (Contessa), or an ‘arrangement’ of simples (Goldwater).

when one first considers whether nihilism is true: doesn't nihilism conflict with our perceptual experiences? Don't we *see* macroscopic objects all the time? A common response to this concern, among both proponents of nihilism as well as its opponents, is to contend that our perceptual experiences cannot settle the question of whether composite macroscopic objects exist, since our perceptual experiences would be just as they are whether or not composite macroscopic objects exist, as long as there are simples arranged composite object-wise where we normally take there to be composite macroscopic objects. (Here 'arranged composite object-wise' is shorthand for 'arranged as the parts of the composite objects in question are arranged if there are composite objects of that sort'.³) So, for example, while we might initially think that my perceptual experiences furnish me with very strong evidence that there is a tomato in front of me, we should acknowledge that matters are not so straightforward, since (mere) simples arranged tomato-wise will be perceptually indistinguishable from tomatoes. It is this thought that Trenton Merricks expresses when he writes that

whether atoms arranged statuewise compose something (a statue) is not straightforwardly empirical. In part this is because ... my visual evidence would be the same whether or not the atoms arranged statuewise composed something.⁴

Similarly, Gideon Rosen and Cian Dorr write:

Can you point to something in the perceptual scene which indicates, not just that the bricks are arranged house-wise on the corner, but that, in addition, composition has taken place in this case?' If the answer is 'no,' or 'I'm not so sure,' as we think it ought to be, then we find ourselves in the following situation...⁵

So, the thought goes, our perceptual experiences would be just as they are whether or not composition occurs, and so perception does not tell us whether composition occurs. The debate over the existence of composite objects has, accordingly, largely turned on non-empirical considerations—e.g. grounds related to the satisfaction of non-empirical theoretical virtues such as simplicity,⁶ concerns regarding overdetermination,⁷ or concerns regarding ontic vagueness.⁸

Even among those who think that our perceptual experiences *do* favor non-nihilism over nihilism, it is generally conceded (implicitly or explicitly) that

³ For discussion, see Brenner (2015a).

⁴ Merricks (2003: 9).

⁵ Rosen and Dorr (2002: 158). For my purposes, it doesn't really matter what the 'following situation' refers to. The important point to note is that Rosen and Dorr don't take there to be 'something in the perceptual scene that indicates' whether we have before us a house, or merely some things arranged house-wise.

⁶ As in Horgan and Potrč (2008): Ch. 7, Sider 2013, and Brenner 2015b, 2021.

⁷ Merricks (2003).

⁸ Horgan and Potrč (2008): Ch. 2.

just on the basis of the *phenomenology* of our perceptual episodes, we cannot discriminate between a setting in which there is a tomato and a setting in which there are merely simples arranged tomato-wise. For example, Thomas Hofweber⁹ concedes that a setting in which there is a tomato is phenomenologically indistinguishable from a setting in which there are merely simples arranged tomato-wise, and he contends that *prima facie* perceptual justification for belief in tomatoes is furnished by the fact that the *content* of our perceptual beliefs represents tomatoes. So too Daniel Korman¹⁰ thinks that we are justified in believing in ordinary macroscopic composite objects on the basis of the fact that the *contents* of our perceptual experiences represent ordinary macroscopic composite objects, rather than on the basis of the qualitative character of our phenomenal episodes. And while he argues that if the composite objects in question had not existed then the *contents* of our perceptual experiences would have been discernibly different, he does not argue that the phenomenal character of our perceptual experiences would have been discernibly different. Similarly, while Amie Thomasson¹¹ thinks that we can tell on the basis of empirical observation that there are composite objects, the justification for our perceptually formed beliefs regarding composite objects is not due to the fact that a situation where there are composite objects is phenomenologically distinguishable from a situation in which there are merely simples arranged composite object-wise. Rather, for Thomasson, the perceptual justification for our belief in composite objects is indirect: empirical observation informs us that there are things arranged, say, table-wise, and conceptual analysis informs us that if there are things arranged table-wise then there are tables. One more example: LeBrun¹² does not himself endorse the view that our perceptual experiences favor non-nihilism over nihilism, but his discussion of this issue is telling. LeBrun discusses the question of whether a theory according to which composite Fs exist would be empirically equivalent to an otherwise identical theory according to which there are, rather than Fs, merely simples arranged F-wise. LeBrun argues that the two theories would be empirically equivalent. LeBrun considers multiple senses in which it might be alleged that the theories would not be empirically equivalent—for example, he discusses the view that the contents of our perceptual experiences would be different were one theory true rather than the other. But LeBrun doesn't even consider the view that the theories in question would not be empirically equivalent in the sense that the *phenomenology* of our perceptual experiences would be discernibly different if one theory were true rather than the other. That the theories might not be empirically equivalent in that sense does not seem to occur to LeBrun.

⁹ Hofweber (2016): Sec. 7.3.1.

¹⁰ Korman (2015): 31, 198–202.

¹¹ Thomasson (2007, 2015).

¹² LeBrun (2021).

So, this assumption, that the phenomenology of our perceptual episodes would be the same whether or not nihilism is true, is very common in the debate over nihilism, and plays a crucial role in the debate (by, e.g. pushing the debate towards an evaluation of non-empirical theoretical virtues). But this almost ubiquitous assumption is generally given no defence, and so it is not entirely clear why we are supposed to think that it is true. What's more, the assumption has recently been questioned by a leading philosopher of perception, Alex Byrne.¹³ So, in this paper, I would like to clarify why it is that we are justified in believing that the phenomenology of our perceptual episodes would remain the same whether or not nihilism is true. I take vision as the paradigmatic sense faculty through which we would detect composite objects if they existed, since this is usually how the discussion is framed. But much of what I say could be adapted to other sense modalities, such as touch. While most philosophers will probably agree with my conclusion that the phenomenology of our perceptual episodes would remain the same whether or not nihilism is true, there will probably be less consensus about the argument I give in favor of this thesis. So, this is an additional motivation for my project: my diagnosis of *why* we are justified in thinking this thesis regarding sense perception and nihilism is true is non-obvious, philosophically interesting, and has not yet been addressed in the literature. What's more, while my focus is primarily on the question of whether nihilism is true, and so whether there are any composite objects, the issues discussed here have broader implications regarding the nature and scope of composition. For example, there is ongoing debate in the metaphysics of science regarding the question of what science has to tell us about the nature and scope of composition.¹⁴ This paper will have obvious ramifications for those debates in the metaphysics of science, insofar as it has ramifications for whether we should think empirical investigation is capable of telling us whether there are composite objects.

Before I continue: I say that the assumption that the phenomenology of our perceptual episodes would be the same whether or not nihilism is true is 'generally' given no defence. I am aware of one exception. Merricks¹⁵ argues that the causal effects of most composite objects are overdetermined by the parts of those composite objects.¹⁶ For example, if a baseball hits and breaks a window, the breaking of the window is caused by the impact of the baseball as well as the impact of the baseball's parts, and so the breaking of the window is causally overdetermined. The effects of most composite objects on our perceptual faculties are similarly overdetermined. For example, if, as a result of photons bouncing off a tomato into my eyes I experience a certain

¹³ Byrne (2019).

¹⁴ See, e.g. Healey (2013), Calosi and Graziani (2014), and Aizawa and Gillett (2016).

¹⁵ Merricks (2003, 2017).

¹⁶ 'Most' since Merricks thinks that composite conscious beings are an exception (see Merricks 2003: Ch. 4).

phenomenal episode, my having this experience is caused both by the bouncing of the photons off the tomato and by the bouncing of the photons off the tomato's parts, and so my having the phenomenal episode in question is causally overdetermined. If that's right, then the simples arranged tomato-wise are sufficient to cause me to have the phenomenal episode in question, and so presumably the phenomenology of my perceptual experience does not allow me to discriminate between there being a tomato and there merely being simples arranged tomato-wise. I'm sympathetic to this argument, and Merricks's argument complements the argument given in this paper. But one problem with Merricks's argument is that even those who are sympathetic with the idea that the phenomenology of our perceptual experiences does not allow us to discriminate between there being composites and there merely being simples arranged composite object-wise are often not sympathetic to Merricks's argument regarding overdetermination. In particular, Merricks's argument carries baggage, regarding the extent to which this overdetermination is problematic, or whether the overdetermination in question is 'genuine' overdetermination,¹⁷ which we might rather do without. In other words, Merricks's concerns regarding overdetermination are far more controversial than the thesis regarding phenomenology it is used to defend. It is better, then, to give that latter thesis a firmer and hopefully less controversial foundation, which is what I aim to do in this paper.

Here is my plan for the remainder of this paper. In Section II, I discuss two objections that have recently been given by Byrne to the idea that the phenomenology of our perceptual experiences does not allow us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise. I proceed in Section III to describe and discuss a thought experiment meant to motivate the idea that the phenomenology of our perceptual experiences does not allow us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise.

II. BYRNE'S OBJECTIONS

Byrne¹⁸ notes two potential difficulties with the idea that the phenomenology of our perceptual episodes would be the same whether or not nihilism is true. (I would like to stress I have encountered both difficulties in conversation, so Byrne's concerns are not idiosyncratic.) Both difficulties are directed specifically against the idea that our perceptual experiences of a tomato are caused merely by many simples arranged tomato-wise, rather than a tomato.

¹⁷ Yang (2013).

¹⁸ Byrne (2019).

The idea is that if our perceptual experiences *were* caused merely by many simples arranged tomato-wise, then the phenomenology of our perceptual experiences would be discernibly different from what they actually are. Here are the difficulties:

Difficulty 1: If our perceptual experience is caused (merely) by many simples arranged tomato-wise, then we should expect the experience to be plural rather than singular, in the sense that the perceptual episode would not seem to be of a single macroscopic object, a tomato, but would rather phenomenologically present itself as of a *plurality* of objects.¹⁹

Difficulty 2: ‘Moreover, when [perceptual] scenes *are* plural, as when one sees spilled rice on the kitchen floor, the objects are large enough for the visual system to detect—that is why it can extract the information from the retinal stimulus that there are *some things*. But the metaphysician’s atoms [i.e. simples] are undetectable by vision, just like the atoms of chemistry: when one is confronted by atoms, vision is in no position to tell as much’.²⁰ I take it that the difficulty here is that simples are too small to be detectable by vision, and so we would be incapable of perceiving them. Since we evidently do perceive many objects, nihilism must be false, since given nihilism the only things that exist are simples.

Byrne concludes that it is an ‘entirely unpromising strategy’²¹ for the nihilist to avoid the falsification of nihilism by perceptual evidence by contending that our tomato perceptual experiences are caused merely by simples arranged tomato-wise.

How should the nihilist respond to Byrne’s concerns?

Start with the first concern. If in perception we only come into contact with many simples, why do our perceptual experiences seem to present us with one tomato, rather than many simples arranged tomato-wise? It’s interesting to note that the non-nihilist presumably faces this very same concern. After all, the simples are *there* whether or not they compose a tomato. So even if the simples compose a tomato, we might wonder why our perceptual experiences seem to present us just with the one tomato, and not in addition the many simples arranged tomato-wise that compose the tomato. If this is a problem, it’s a problem for both the nihilist and the non-nihilist.²² But, in any case, it’s not a problem. Our perceptual experiences are not as of a plurality of simples simply because the simples are so small that our perceptual faculties cannot discriminate between them.²³ (But this is *not* to say that we cannot see simples at all—see below.) This seems to me to be an entirely sufficient response to Byrne’s first concern. But to underscore the point that the manner in which

¹⁹ Byrne (2019): 17.

²⁰ Byrne (2019): 17.

²¹ Byrne (2019): 17.

²² Thanks to an anonymous referee for suggesting this point to me.

²³ I make no assumption about whether simples are pointed sized, or simply very small.

our visual perceptual experiences put us in contact with the external world may not always accurately inform us of the *number* of objects in our visual fields, it is also worth mentioning in this context that our perceptual systems are often predisposed to represent the objects in our visual fields as single macroscopic objects, even when we *can* visually discriminate between the many parts of those macroscopic objects. This is because our visual systems are inclined to ‘chunk’ certain pluralities of objects into cohesive wholes—e.g. we see a *flock* of birds, rather than each of the individual birds making up the flock. Our brains process our perceptual experiences in this way because this reduces the burden on our perceptual and cognitive systems—e.g. it is easier to track a ‘flock’ of birds, represented as a single amorphous but somewhat cohesive object, rather than many individual birds.²⁴ And if *that’s* the reason why our visual systems ‘chunk’ the objects in our visual fields, then our visual systems will often ‘chunk’ many smaller objects into one larger macroscopic object *whether or not* those smaller objects really compose any such larger macroscopic object.

What about the second concern that simples are ‘undetectable by vision’? Again, I take the concern here to be that given nihilism we should not expect to be able to perceive anything, since simples are too small to be perceived, and given nihilism the only things that exist are simples. But we clearly *do* perceive all sorts of things, so, the objection goes, nihilism is false. Here is my response to this concern. There is a sense in which it is true that simples are undetectable by vision, but an important sense in which it is false. It is true in the sense described in the previous paragraph, insofar as we are unable to visually discriminate between simples. It is also true in the sense that our perceptual faculties cannot directly inform us whether the scene presented in our visual field contains simples rather than, say, gunk (objects such that every one of their proper parts has proper parts), stuff (describable by mass terms, rather than count nouns), or something else.

So, there *are* some senses in which simples are ‘undetectable by vision’, but these aren’t the senses in which, I take it, Byrne thinks that simples are ‘undetectable by vision’. If simples are undetectable by vision merely in the senses I’ve just described that would not have any tendency to show that nihilism is false. What *would* show that nihilism is false is if simples are undetectable in a stronger sense, where simples simply cannot be detected at all by our visual systems, presumably because they are too small to see. If simples are undetectable by vision in this stronger sense, then if the only things that exist are simples, then we shouldn’t expect to be able to detect any objects at all with our visual systems.

²⁴ For a relevant discussion of this subject, as well as its application to whether we are justified in believing in composite objects, see Osborne (2016) and Brenner (2018): 662.

But the suggestion that simples are undetectable by vision in this strong sense is, I think, clearly false. It *is* true that we cannot see simples *individually*, and that, if one is confronted with a *single* simple by itself then one wouldn't be able to detect the simple with one's visual system. But to conclude from that that simples are undetectable by our visual systems is like saying that since one cannot buy a house with a dollar bill, then one cannot buy a house with a million dollar bills. Simples can be *collectively* seen, and *collectively* detected by our visual systems, even if they are not seen individually (i.e., when they are by themselves). This is because many simples *together* are larger than simples taken *individually*, and so the fact that some individual simples are too small to see should not lead us to conclude that many simples together must also be too small to see.

It is easy to come up with examples where some detection device is incapable of detecting some object by itself, but is capable of detecting many such objects together. A scale might be unable to register the weight of a single simple placed on top of it, but able to register the weight of very many simples simultaneously placed on top of it. If one person whispers in a crowded stadium, you may not be able to hear it, but if everyone in the stadium whispers, then you will be able to hear it. You may be unable to smell or taste an individual molecule of some chemical, but able to smell or taste many such molecules together. I may not be able to see an individual locust flying in the distance, but I can see millions of locusts flying together in the distance. Examples can easily be multiplied.

I should clarify that it is not the case that simples *must* be so small that we cannot detect them individually with our perceptual faculties. I make no assumptions about what sizes it is metaphysically possible for simples to have—in other words, I make no assumption about whether simples must be point sized, or whether they can be extended, and if they can be extended how large they can be. In fact, I make no assumption about whether simples really *are* as small as Byrne assumes they are.²⁵ My response to Byrne is just that, even granting his assumption that simples are too small to see, in the sense that they cannot be detected individually, or by themselves, by our perceptual faculties, *many* tiny simples together may nevertheless be detectable by our perceptual faculties.

III. A THOUGHT EXPERIMENT

I've responded to two objections. But do we have any *positive* grounds for thinking that the phenomenology of our perceptual experiences does not

²⁵ Maybe, for example, human persons are macroscopic simples, (Lowe 1996), or the correct ontology of the physical world is one in which there are universe-spanning mereologically simple fields rather than particles. I have no idea.

allow us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise? The assumption that the phenomenology of our perceptual experiences works this way is widespread and influential in the debate over the existence of composite objects, but as we have just seen, it is not obvious to everyone.

So, by way of a positive argument, I will describe a thought experiment, and then say what I take to be the relevant insight we can derive from that thought experiment. Imagine a tomato, and suppose that it is composed of simples arranged tomato-wise. Suppose that God can decide when composition occurs. God now decrees that the simples composing the tomato will henceforth cease to compose anything. If I am looking at the tomato when God makes the decree, will my visual experience change when the simples cease to compose the tomato? In particular, will it seem to me as if the portion of my visual field that previously contained the tomato no longer contains anything? Will that portion of my visual field turn black? Or will light simply pass through the region of space that previously contained the tomato, so that the resulting visual experience will be indistinguishable from one in which the tomato becomes entirely transparent?²⁶ Presumably none of these things would happen. When the simples arranged tomato-wise cease to compose a tomato, they will continue to obstruct and reflect light in exactly the manner in which they obstructed and reflected light while they did compose a tomato, and so light will interact with my visual system in the same manner in which it did while the simples composed the tomato. To suppose otherwise would require gratuitous modifications to one or more of the physical processes involved in my perceiving a tomato, modifications that render the laws governing those processes needlessly complex. For example, it might require gratuitous modifications to those physical laws governing the behaviour of light, so that photons must first detect whether the objects with which they come into contact are composite before the photons decide how to behave as a result of

²⁶ The influential Yogācārin Buddhist philosopher Vasubandhu argued that this is precisely what we should expect if only simple physical objects exist. Vasubandhu argued that simple physical objects would be extensionless, and extensionless objects are unable to obstruct light. Notably, Vasubandhu was a mereological nihilist, so he didn't make these points as part of an argument against nihilism. Rather, since he was an idealist he made these points as part of his case against the existence of physical objects. The chief problem with Vasubandhu's argument is that it makes use of the false assumption that an object can only obstruct light if the light *bumps into* or *comes into contact with* the object, in the sense that it comes to occupy the location occupied by the object, or some location immediately adjacent to that object. This is why Vasubandhu thought that extensionless objects cannot obstruct light. If an object has no extension, and so is point-sized, then when light 'bumps into' the object it will simply come to occupy the location of that object, and since the object is point-sized there will be nothing to block the light from passing to the other side—in coming to occupy the point of space occupied by the object the light will *already* have accessed the other side. For a discussion of Vasubandhu's argument, and potential difficulties with this argument, see Kapstein (1988), especially pp. 42–3, and Siderits (2007): 163–5. I don't have anything interesting to add to previous discussions of this subject, which is why I only mention Vasubandhu's argument in passing.

their coming into contact with those objects. Or, to give a second example, it may require gratuitous modifications to the laws governing the interaction of light and the photoreceptor cells in my retinas,²⁷ so that photons reflected off tomatoes interact with those photoreceptor cells differently from photons reflected (merely) off simples arranged tomato-wise.

In a way, the issue with which we are dealing here is a scientific one at least as much as it is a metaphysical one. Those who think that the phenomenology of our sense experiences falsifies nihilism are putting forward a prediction regarding the observable behaviour of certain physical objects—i.e., a prediction regarding how we should expect light, or our photoreceptor cells, to behave in various circumstances. They claim that photons, or our photoreceptor cells, behave differently in the presence of composite objects than they do in the presence of mere simples. It is hard to test this prediction, precisely because we have no agreed upon way to tell whether photons, or photoreceptor cells, *are* in the presence of composite objects, rather than mere simples. If we *did* have an agreed upon way to detect the presence of composite objects, then we could just use *that* method to settle the debate over the existence of composite objects, and the debate regarding the phenomenology we can expect to experience if there are or are not composite objects would be redundant. So, I cannot put the opponent of nihilism's predictions to the test. But I *can* note that an endorsement of those predictions carries a theoretical cost, namely a commitment to gratuitously complex laws governing, say, the behaviour of light, or the behaviour of our photoreceptor cells. Calling the complexity 'gratuitous' is meant to indicate that it is (1) unnecessary, in the sense that we have no grounds for thinking that the relevant laws take this relatively complex form; and (2) a cost, since more complex theories (regarding, e.g. the laws governing the behaviour of light) are, other things being equal, less likely to be true.

Well, why should we think that more complex theories are, other things being equal, less likely to be true? Here I am, of course, appealing to the notion that simplicity is an (epistemic) criterion of theory choice. It is controversial whether simplicity really functions as a criterion of theory choice in the sense I've just described, and I don't have the space here to defend my assumption that it does.²⁸ It is somewhat more controversial that simplicity legitimately functions as a criterion of theory choice in metaphysics than it is that simplicity legitimately functions as a criterion of theory choice in science.²⁹ It is difficult to

²⁷ More carefully: it may require gratuitous modifications to the laws governing the interaction of light and the simples arranged photoreceptor cell-wise among those of my simples arranged retina-wise.

²⁸ For some defence of this sort of appeal to simplicity as a criterion of theory choice in metaphysics, see Paul (2012), Brenner (2017), and Bradley (2018).

²⁹ Some philosophers who think that appeals to simplicity in metaphysics, or philosophy more generally, are more problematic than similar appeals in science include Huemer (2009), Shalkowski (2010), Kriegel (2013), French (2014): 57–8, Willard (2014), Thomasson (2015): 15, Saatsi (2017), and Bryant (2020).

draw a sharp line between science and metaphysics. But, leaving that concern aside, the laws to which I am drawing your attention—e.g. those laws that would govern the behaviour of light, or the way that light interacts with our photoreceptor cells—are plausibly scientific/causal laws. We often recognize that laws of that sort should be kept simple wherever possible. This is why, for example, Kepler's laws of planetary motion were such an improvement over those laws that were previously thought to govern the motions of the heavenly bodies, laws that resulted in messy epicycles. So, while the debate over the existence of composite objects is a debate conducted within metaphysics, the relevant criterion of theory choice to which I appeal when I say that we should avoid gratuitously complex laws is plausibly the same criterion of theory choice at work when we aim to avoid gratuitously complex *scientific or causal* laws. What's more, gratuitous modifications to the laws governing light, or the behaviour of our photoreceptor cells, so that they behave differently in the presence of composite objects, are just the sorts of 'epicycles' (used in the metaphorical sense) we should aim to avoid when formulating scientific or causal laws.

So far I've focused on vision, and the visual phenomenology we can expect to have when we look at a tomato, or at some things arranged tomato-wise. My argument can be strengthened if we take into account sense modalities other than vision. Suppose that it is true of *multiple* sense modalities (not just vision) that the phenomenology of the sense experiences associated with those sense modalities allows us to discriminate between situations where there is a tomato and situations where there are merely things arranged tomato-wise. For that to be the case would require gratuitous complexity in those laws relevant to each of the sense modalities, not just in the laws governing the behaviour of light or our photoreceptor cells. That's a lot of gratuitous complexity!

I will end the paper by considering two objections to the case I've made in this section for the view that the phenomenology of our perceptual experiences does not allow us to discriminate between situations where there are composite objects and situations where there are merely simples arranged composite object-wise.

Objection 1: Above, I presented a thought experiment involving a tomato, one in which the parts of the tomato compose the tomato, but then with God's decree they cease composing the tomato. It might be objected that the scenario we are asked to imagine is a counterpossible: even with God's intervention, it is impossible that the simples arranged tomato-wise compose a tomato at one time, but do not compose a tomato at some other time. And it is doubtful that we can learn anything very valuable about the metaphysics of composition from reflecting on a counterpossible of this sort.³⁰

³⁰ Thanks to an anonymous referee for suggesting that I address this objection.

What sort of counterpossible are we dealing with here? You might think that the scenario described in the thought experiment is *logically* impossible (i.e., impossible insofar as it entails a contradiction), for the following reason. To say that some simples are ‘arranged tomato-wise’ is to say that they both have the properties and also stand in the relations upon which, if tomatoes existed, those simples’ composing a tomato would non-trivially supervene.³¹ But then there would be a contradiction in supposing that at one time some simples are arranged tomato-wise and compose a tomato, and at some other time those simples are arranged tomato-wise but do not compose a tomato.³² This problem is resolved by employing a somewhat different notion of what it takes for some simples to be ‘arranged tomato-wise’. The account I prefer is in terms of spatial arrangement rather than in terms of supervenience.³³ When I say that some simples are ‘arranged tomato-wise’, I mean that they are spatially arranged as they would be spatially arranged if they composed a tomato. They may be arranged in this manner without instantiating all of the properties or relations upon which, if tomatoes existed, those simples’ composing a tomato would non-trivially supervene. In the thought experiment, for example, whether some simples compose a tomato supervenes, in part, on whether God wills that the simples compose a tomato. And the simples might be arranged tomato-wise at some time at which God does not will that they compose a tomato. So, at that time the simples are arranged tomato-wise despite the fact that they do not instantiate all of the properties or relations upon which, if tomatoes existed, those simples’ composing a tomato would non-trivially supervene.

While my thought experiment does not, I think, involve a *logical* impossibility, it may nevertheless involve a metaphysical impossibility—i.e., it may involve an impossible scenario, but not in virtue of entailing a contradiction. Is the thought experiment therefore worthless?

Response: I have a few responses.

First, I am not sure why we should be so confident that the thought experiment I have described involves a counterpossible. Cameron³⁴ and Miller³⁵ both argue that the circumstances under which composition occurs may be contingent, rather than necessary. And if they *are* contingent, then I don’t see why it should be metaphysically impossible for the circumstances under which composition occurs to change over time. Brenner³⁶ argues that those who believe in composition, and especially those theists who believe in composition, have some good reasons to think that facts regarding the circumstances under

³¹ Compare Merricks (2003): 4.

³² Thanks to an anonymous referee for suggesting I address this concern.

³³ For much more on this topic, see Brenner (2015a).

³⁴ Cameron (2007).

³⁵ Miller (2010).

³⁶ Brenner (2022).

which composition occurs are under God's control. And if that's right, then presumably the scenario involved in my thought experiment would not involve a counterpossible.

Second, even if the scenario described in the thought experiment *is* a counterpossible, we may learn something worthwhile by thinking about it. In particular, we might learn something about the relationship between composition and sense perception. And that seems to me to be the case: by reflecting on this thought experiment, we can see what the laws regarding the behaviour of light would have to be like in order for the phenomenology of our visual experiences to change in response to changes in composition. And *that* helps us see what the relevant laws must be like if the phenomenology of our visual experiences can allow us to discriminate between a situation in which there is a tomato and a situation in which there are merely things arranged tomato-wise, even when there are no changes in the compositional facts over time.

Third, I think that we can derive the chief lesson I want us to derive from the thought experiment, without making use of a counterpossible that the non-nihilist will regard as objectionable.³⁷ Imagine a scenario in which, rather than composing a tomato at one time and then failing to compose a tomato at some other time, there are simples arranged tomato-wise that never compose a tomato. When we see these simples, the phenomenology of our visual experience assumes a certain character. And it seems that the phenomenology in question is precisely the phenomenology we actually experience when we look at (what we are pre-theoretically inclined to think are) tomatoes. To suppose otherwise, we would have to introduce gratuitous complexity into those laws governing the physical processes involved in our seeing simples arranged tomato-wise, of the sort discussed above in my discussion of my initial thought experiment. The gratuitous complexity would involve, e.g. those physical laws governing the behaviour of light, so that photons must first detect whether the objects with which they come into contact are composite before the photons decide how to behave as a result of their coming into contact with those objects.

But won't the non-nihilist think that this new scenario, in which some simples arranged tomato-wise never compose a tomato, is also a counterpossible? And won't that make this new thought experiment problematic for the same

³⁷ Then why did I present the thought experiment in the first place? Because it vividly illustrates the point I want to make about the relationship between the phenomenology of our perceptual experiences and the presence/absence of composite objects. There's a tomato, and then there are merely simples arranged tomato-wise. If the phenomenology of our perceptual experiences tracks the presence or absence of composite objects, then when the tomato goes away, we should expect a potentially radical shift in the phenomenology of our perceptual experiences. But it's unlikely that the phenomenology of our perceptual experiences would really change. These points are all easily grasped with the aid of the thought experiment. The lessons I go on to draw from that thought experiment regarding laws and theoretical simplicity are a bit more abstract, and not quite as easily grasped without the initial scene setting provided by the thought experiment.

reason that the initial thought experiment was problematic? Well, if the new thought experiment *does* describe a counterpossible, we can still work out what the phenomenology of our visual experiences would be like if the counterpossible were to obtain. At the very least, those who maintain that nihilism is incompatible with the phenomenology of our perceptual experiences must maintain that we can tell what the phenomenology of our perceptual experiences would be like in this (allegedly) counterpossible scenario. After all, they make a claim about what the phenomenology of our perceptual experiences would be like in this (allegedly) counterpossible scenario: they claim that the phenomenology we should expect to find in our visual experiences when we look at a tomato is different from the phenomenology we should expect to find in our visual experiences when we look at some mere simples arranged tomato-wise. This is precisely why they think that the phenomenology of our visual experiences refutes nihilism.

Objection 2: The points I make regarding the visual phenomenology we can expect to have when looking at a tomato, or at some mere things arranged tomato-wise, crucially appeal to the idea that simpler theories are, other things being equal, more likely to be true. While I said that I don't have the space here to defend this assumption, that's too bad, because it might be objected that the assumption is false. As a result, the objection goes, we have no reason to think that the laws governing the behaviour of light, or the manner in which light interacts with our photoreceptor cells, are more likely to be simple rather than complex.

Response: Suppose that simplicity does *not* legitimately function as a (epistemic) criterion of theory choice. If that's right, then it would actually undermine the case against nihilism from the phenomenology of our perceptual experiences. The nihilist could presumably avoid having their view falsified by the phenomenology of our perceptual experiences by introducing gratuitous complexity into their total theory. For example, the non-nihilist might claim that the phenomenology of our perceptual experiences shows that there are tomatoes, since were there merely things arranged tomato-wise, then the phenomenology of our perceptual experiences would be different than it actually is. The nihilist can simply respond that gremlins or aliens or secret agents are manipulating our brains to modify the phenomenology of our perceptual experiences, perhaps in an attempt to deceive us on the matter of whether tomatoes exist. This is, of course, a ridiculous way to avoid nihilism's falsification. But it is only ridiculous because the introduction of gremlins, aliens, and secret agents runs afoul of Ockham's razor and similar principles that encourage us not to introduce gratuitous complexity into our total theory. Absent a commitment to simplicity as a criterion of theory choice, the nihilist's ridiculous response is fair game.

Thanks to Renee Brenner, Justin Christy, Peter Finocchiaro, and anonymous referees for very helpful comments on earlier versions of this paper.

REFERENCES

- Aizawa, K. and Gillett, C., eds (2016) *Scientific Composition and Metaphysical Ground*. London: Palgrave Macmillan.
- Bradley, D. (2018) ‘Philosophers Should Prefer Simpler Theories’, *Philosophical Studies*, 175: 3049–67.
- Brenner, A. (2015a) ‘Mereological Nihilism and the Special Arrangement Question’, *Synthese*, 192: 1295–314.
- . (2015b) ‘Mereological Nihilism and Theoretical Unification’, *Analytic Philosophy*, 56: 318–37.
- . (2017) ‘Simplicity as a Criterion of Theory Choice in Metaphysics’, *Philosophical Studies*, 174: 2687–707.
- . (2018) ‘Science and the Special Composition Question’, *Synthese*, 195: 657–78.
- . (2021) ‘Mereology and Ideology’, *Synthese*, 198: 7431–48.
- . (2022) ‘How To Be A Mereological Anti-Realist’, in L. Buchak and D. W. Zimmerman (eds) *Oxford Studies in Philosophy of Religion*, vol. 10, 83–119. Oxford: OUP.
- Bryant, A. (2020) ‘Keep the Chickens Cooped: The Epistemic Inadequacy of Free Range Metaphysics’, *Synthese*, 197: 1867–87.
- Byrne, A. (2019) ‘Perception and Ordinary Objects’, in J. Cumpa and B. Brewer (eds) *The Nature of Ordinary Objects*, 6–26. Cambridge: CUP.
- Calosi, C. and Graziani, P., eds (2014) *Mereology and the Sciences: Parts and Wholes in the Contemporary Scientific Context*. Cham: Springer.
- Cameron, R. P. (2007) ‘The Contingency of Composition’, *Philosophical Studies*, 136: 99–121.
- Contessa, G. (2014) ‘One’s a Crowd: Mereological Nihilism Without Ordinary-Object Elimination’, *Analytic Philosophy*, 55: 199–221.
- French, S. (2014) *The Structure of the World: Metaphysics and Representation*. Oxford: OUP.
- Goldwater, J. P. B. (2015) ‘No Composition, No Problem: Ordinary Objects as Arrangements’, *Philosophia*, 43: 367–79.
- Healey, R. (2013) ‘Physical Composition’, *Studies in History and Philosophy of Modern Physics*, 44: 48–62.
- Hofweber, T. (2016) *Ontology and the Ambitions of Metaphysics*. Oxford: OUP.
- Horgan, T. and Potrč, M. (2008) *Austere Realism: Contextual Semantics Meets Minimal Ontology*. Cambridge: The MIT Press.
- Huemer, M. (2009) ‘When is Parsimony a Virtue?’, *Philosophical Quarterly*, 59: 216–36.
- Kapstein, M. (1988) ‘Mereological Considerations in Vasubandhu’s “Proof of Idealism”’, *Idealistic Studies*, 18: 32–54.
- Korman, D. Z. (2015) *Objects: Nothing Out of the Ordinary*. Oxford: OUP.
- Kriegel, U. (2013) ‘The Epistemological Challenge of Revisionary Metaphysics’, *Philosophers’ Imprint*, 13: 1–30.
- LeBrun, A. (2021) ‘What are Empirical Consequences? On Dispensability and Composite Objects’, *Synthese*, 199: 13201–223.
- Lowe, E. J. (1996) *Subjects of Experience*. New York: CUP.
- Merricks, T. (2003) *Objects and Persons*. Oxford: Clarendon Press.
- . (2017) ‘Do Ordinary Objects Exist? No’, in E. Barnes (ed.) *Current Controversies in Metaphysics*, 135–48. New York: Routledge.
- Miller, K. (2010) ‘The Existential Quantifier, Composition and Contingency’, *Erkenntnis*, 73: 211–35.
- Osborne, R. C. (2016) ‘Debunking Rationalist Defenses of Common-Sense Ontology: An Empirical Approach’, *Review of Philosophy and Psychology*, 7: 197–221.
- Paul, L. (2012) ‘Metaphysics as Modeling: The Handmaiden’s Tale’, *Philosophical Studies*, 160: 1–29.

- Rosen, G. and Dorr, C. (2002) "Composition as a Fiction", in R. Gale (ed.) *The Blackwell Guide to Metaphysics*, 151–74. Oxford: Blackwell.
- Saatsi, J. (2017) "Explanation and Explanationism in Science and Metaphysics", in M. Slater and Z. Yudell (eds) *Metaphysics and the Philosophy of Science*, 163–92. Oxford: OUP.
- Shalkowski, S. (2010) "IBE, GMR, and Metaphysical Projects", in A. H. Bob Hale (ed.) *Modality: Metaphysics, Logic, and Epistemology*, 167–87. Oxford: OUP.
- Sider, T. (2013) "Against Parthood", in K. Bennett and D. W. Zimmerman (eds) *Oxford Studies in Metaphysics*, vol. 8. Oxford: OUP.
- Siderits, M. (2007) *Buddhism as Philosophy: An Introduction*. Aldershot: Ashgate.
- Thomasson, A. L. (2007) *Ordinary Objects*. New York: OUP.
- . (2015) *Ontology Made Easy*. Oxford: OUP.
- van Inwagen, P. (1990) *Material Beings*. Ithaca, NY: Cornell University Press.
- Willard, M. B. (2014) 'Against Simplicity', *Philosophical Studies*, 167: 165–81.
- Yang, E. (2013) 'Eliminativism, Interventionism and the Overdetermination Argument', *Philosophical Studies*, 164: 321–40.

Hong Kong Baptist University, Hong Kong