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Why the debate about composition is factually empty (or why there's no fact of the matter whether anything exists)

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Abstract I argue in this paper that the debate over composition is factually empty; in other words, I argue that there's no fact of the matter whether there are any composite objects like tables and rocks and cats. Moreover, at the end of the paper, I explain how my argument is suggestive of a much more general (and much more radical) conclusion, namely, that there's no fact of the matter whether there are any material objects at all. Roughly speaking, the paper proceeds by arguing that (a) if there were a fact of the matter about whether composite objects exist, then it would be either a necessary fact or a contingent fact, and (b) both of these alternatives are implausible.

Keywords Composition · Mereology · Composite objects · Metaontology · Anti-metaphysics · Metametaphysics · Factual emptiness

1 Introduction

I will argue in this paper that the debate over composition is factually empty; in other words, I'll argue that there's no fact of the matter whether there are any composite objects like tables and rocks and cats. Moreover, at the end of the paper, I'll explain

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how my argument is suggestive of a much more general (and much more radical) conclusion, namely, that there's no fact of the matter whether there are any material objects at all.

The view developed in this paper is a kind of anti-metaphysicalism—the core idea is that debates about the ontology of material objects are factually empty—but as will become clear, my view is rather different from the anti-metaphysical views put forward by people like Carnap (1950), Putnam (1994), Sidelle (2002), Hirsch (2002), and Thomasson (2007).

By a *composite object*, I just mean an object with proper parts, or a mereological sum of other objects. And the debate I'm concerned with is the debate about whether there are any such things as composite objects. *Nihilism* is the view that there aren't. The most obvious way to develop a nihilist view is to say that the physical world consists of nothing but tiny little *simples* (where a simple is an object without proper parts) and that while there are no such things as composite objects like tables and cats, the following is true:

(S) There exist lots of (tiny[1]) simples; e.g., there are simples arranged tablewise and rockwise and catwise and so on.[2]

Now, of course, there are other views that nihilists can endorse that don't involve (S); e.g., they can endorse what Horgan and Potrč (2000) call *blobjectivism*, the view that there is exactly one physical object, namely, the entire universe (or the *blobject*), and that this object is just a great big simple with no proper parts. But for the sake of simplicity, I will assume throughout most of this paper (through Sect. 6) that the composition debate is premised on the assumption that (S) is true, so that the question is just whether there are any objects that are composed of the simples mentioned in (S). This simplifies things considerably, but I will eventually (in Sect. 7) discharge the assumption that (S) is true.

The main competitor of nihilism is *universalism*, the view that for any set M of physical objects, there's an object that's the mereological sum of the members of M. Now, by itself, this doesn't entail that there are composite objects, but if we combine it with the thesis that there are at least two physical objects, it does. And if we combine universalism with (S), we get the result that there are a great many composite objects, not just ordinary objects like tables and cats and rocks, but weird objects like trout-turkeys (where a trout-turkey is an object composed of an undetached half trout and an undetached half turkey).[3]

Let me pause here to address a nit-picky point. Strictly speaking, the conjunction of universalism and (S) doesn't entail the existence of tables. What it entails is that

[1] The word 'tiny' is being used here in an intentionally imprecise way; in particular, (S) is neutral on the question of whether the simples in question are unextended point-sized objects or tiny extended objects.

[2] (S)-style nihilism has been developed by, e.g., Rosen and Dorr (2002) and Sider (2013).

[3] Universalism has been endorsed by, e.g., Lewis (1991), Heller (1990), Hudson (2001), and Van Cleve (2008). This isn't the only alternative to nihilism. There are also views that lie between the two extremes; e.g., van Inwagen (1990) and Merricks (2001) hold that the only composite objects are animals, so that there are cats but no tables, and common sense seems to say that there are tables and cats but no trout-turkeys (see, e.g., Markosian (1998), Elder (2011), and Korman (2015) for views that are compatible with common sense).

there are table-like composite objects—i.e., composite objects that are composed of simples arranged tablewise. Moreover, some philosophers (e.g., Unger (1979), Heller (1990), and Van Cleve (2008)) think that while these composite objects exist, they don't count as *tables*—i.e., they don't satisfy the folk concept of a table. But whether these objects count as tables is, in the present context, irrelevant. I'm concerned here with the question of whether there are composite objects, not tables. Tables are just an example. So in order to sidestep this problem, let me just stipulate that when I use the word 'table' (or 'cat' or whatever), what I mean is *composite object that's composed of simples arranged tablewise (or catwise or whatever)*, so that on my usage, any table-like composite object counts as a table. And let me also stipulate that when I use the phrase 'simples arranged tablewise', I'm talking about *multiple* simples arranged tablewise, so that on my usage, a simple table-like object wouldn't count as simples arranged tablewise (or as a table). Given all this, it may be that I'm using expressions like 'table' and 'simples arranged tablewise' with slightly non-standard meanings; but no harm will come of this, and it will simplify things considerably.

One way to argue for the existence of composite objects (and, hence, against non-factualism) would be to endorse the view that composition is identity—or, for short, *CI*. If you held this view, you could maintain that if there are simples arranged tablewise, then there's definitely a table because the simples just *are* a table. But CI is extremely implausible because it entails that a single object can be identical to many objects, and this seems incoherent; the thesis that identity is always a one-one relation and never a many-one relation seems to be an obvious truism, and given this, it seems that CI is false. If this is right, then it seems that if there are any composite objects, then they are *extra objects*, numerically distinct from the simples that compose them.

I realize that this argument against CI is extremely quick, but unfortunately, I don't have the space to provide a more detailed argument. If you like, you can think of me not as having *argued* that CI is false, but as taking it as a working assumption that CI is false. (It's also important to note here that while CI is almost universally rejected by those who work in the area (see, e.g., van Inwagen (1990), Markosian (1998), Yi (1999), Merricks (2001), Cameron (2007), McDaniel (2008), Turner (2013), and Sider (2013)), it does have some defenders, most notably, Baxter (1988) and Wallace (2011).)

I'm going to argue that the debate about composite objects is factually empty by (a) arguing that the debate about *tables* is factually empty and then (b) generalizing to other kinds of composite objects. To get started, we need to define several terms:

> *Tableism*: There are simples arranged tablewise, and there are also tables, where the tables are *extra objects*, numerically distinct from the simples that compose them.
> *Anti-tableism*: There are no tables.
> *Necessitarian tableism*: Tableism is true, and the following sentence is (metaphysically[4]) necessary:

[4] In this paper, when I speak of things being necessary, unless I indicate otherwise, I will be speaking of metaphysical necessity. I will also make free use of the possible-worlds analysis of modal claims; thus, e.g., in my lingo, to say that A is necessary is to say that A is true in all possible worlds. (I don't think non-actual worlds really *exist*—I think the possible-worlds apparatus is just a useful fiction—but I can't defend this stance here.)

(if-TABLE) If there are simples arranged tablewise, then there's a table that's composed of those simples, and the table is an *extra object*, numerically distinct from the simples.

Necessitarian anti-tableism: Anti-tableism is necessary.
Necessitarianism (about the table debate, i.e., the debate about the existence of tables): One of the two necessitarian views just defined is true.
Contingentism (about the table debate): Either tableism or anti-tableism is contingently true, and necessitarianism is false.[5]
Factualism (about the table debate): Either tableism or anti-tableism is true.

My aim in the first part of this paper is to argue for non-factualism about the table debate—i.e., to argue that factualism is false. My argument proceeds as follows:

(1) If factualism (about the table debate) is true, then either necessitarianism is true or contingentism is true. But
(2) Necessitarianism is false. And
(3) Contingentism is false. Therefore,
(4) Factualism is not true.

Premise (1) is trivial, and so my argument really just boils down to arguments against necessitarianism and contingentism. Roughly speaking, my claim is that there isn't a fact of the matter here because there isn't a necessary fact and there isn't a contingent fact. I should say in advance, however, that I don't have knockdown arguments against necessitarianism and contingentism; my goal is just to make these two views seem less plausible than the non-factualist alternative. (I should also note that when I say in premise (2) that necessitarianism is false, this does not entail that necessitarian *non-factualism* is false. I'm using 'necessitarianism' here to denote the disjunction of necessitarian tableism and necessitarian anti-tableism; so premise (2) entails only that those two views are false.)

I argue for premise (2) in Sects. 2 and 3, and I argue for premise (3) in Sect. 4. In Sect. 5, I respond to the worry that while my conclusion forces me to reject the law of excluded middle, I continue to use that law in my own reasoning. In Sect. 6, I point out that the argument about tables can be run in connection with other kinds of composite objects so that we're led to non-factualism about the composition debate. In Sect. 7, I argue that if we drop the assumption that (S) is true, then we're led to an even more radical non-factualist conclusion, namely, that there's no fact of the matter whether there are any physical objects at all. And finally, in Sect. 8, I say a few words to make my view seem a bit less radical, or a bit less crazy, than it might otherwise seem.

2 Is the composition question trivial?

My argument for premise (2), i.e., for the falsity of necessitarianism, proceeds as follows:

[5] Most people engaged in the composition debate are necessitarians, but Cameron (2007), Miller (2010), and Parsons (2013) are contingentists (about composition, not just tables).

(2a) If factualism is true, then the question of whether there are any tables is a substantive ontological question (i.e., there's a substantive, factual question about whether tables actually exist, where these would be *extra objects*, numerically distinct from the simples that compose them).
(2b) If the question of whether there are any tables is a substantive ontological question, then necessitarianism is false. Therefore,
(2c) If factualism is true, then necessitarianism is false. But it's obvious that
(2d) If factualism *isn't* true, then necessitarianism is false. Therefore,
(2) Necessitarianism is false.

The two inferences in this argument are valid, and (2d) is trivial, so I just need to argue for (2a) and (2b). Now, the really controversial premise here is (2b); I'll argue for that premise in Sect. 3, but before I do that, I want to say a few words about (2a).

Premise (2a) might seem obvious. If factualism is true—if there's a fact of the matter about whether there are tables—then it might seem obvious that the question is an ontological one. But, in fact, we can reject (2a) by endorsing *trivialism*; this is the view that the question of whether there are any tables isn't a substantive ontological question because it can be answered solely on the basis of semantic facts (i.e., facts about what certain kinds of sentences mean) and uncontroversial empirical facts. Views in this general ballpark have been endorsed by, e.g., Carnap (1950), Putnam (1994), Sidelle (2002), Hirsch (2002), Thomasson (2007), and Rayo (2013).[6]

In order to motivate (2a), I would need to argue that trivialism is false. I think this can be done, but from the point of view of anti-metaphysicalism, it wouldn't matter if I were wrong about this. For if (2a) were false and trivialism were true, that would just lead us to a different kind of anti-metaphysicalism; in particular, it would lead us to the view that *there's no substantive ontological debate to be had about the existence of tables*.[7] Now, this is different from the non-factualist view that I'm trying to motivate in this paper, but it's still an anti-metaphysical view; thus, since my ultimate goal is to motivate anti-metaphysicalism, and since this paper is already rather long, I'm just going to take it as a working assumption that trivialist views are false—and, hence, that (2a) is true. If you like, you can think of this paper as arguing for the disjunction of trivialism and my version of non-factualism, but again, I think my arguments can

[6] The views of Carnap, Putnam, Sidelle, and Rayo are all a bit different from the trivialist view defined in the text. Rayo would want to replace talk of the *meanings of sentences* with talk of the '*just is*'*-statements that we should accept*; in particular, on Rayo's view, the crucial 'just-is'-statement (the one that, together with uncontroversial empirical truths, settles the table question) is this: For there to be a table *just is* for there to be some things arranged tablewise. Carnap, Putnam, and Sidelle, on the other hand, seem to endorse the view that (a) *if* the table question had a correct answer, then it would be settled by semantic facts (together with uncontroversial empirical facts), but (b) the table question doesn't have a correct answer because the facts about ordinary English don't succeed in settling the matter.

[7] Actually, Rayo's version of trivialism—and this may be true of the views of some of the other trivialists mentioned in the text as well—isn't so happily classified as a version of anti-metaphysicalism; for Rayo's view is compatible with there being a substantive ontological question about whether there are table-like composite objects (it's just that on his view, the existence of such things isn't needed for the truth of the ordinary sentence 'There are tables'). But for this very reason, Rayo's sort of trivialism isn't a threat to my argument. For as I pointed out above, I'm using 'table' in this paper to mean *composite object that's composed of simples arranged tablewise*.

be supplemented with reasons for rejecting trivialism and, hence, for endorsing my version of non-factualism.

In assuming that trivialism is false, one thing I'll be assuming—probably the *main* thing—is that sentences like 'If there are simples arranged tablewise, then there are tables' are *not analytic*, i.e., not true in virtue of meaning. According to certain versions of trivialism—or trivialist tableism—sentences like this *are* analytic; or to put the point differently, according to views of this kind, 'There are tables' is already made true by the existence of simples arranged tablewise. I'm not claiming that any of the trivialists listed above endorse this version of the view; I'm just saying that in what follows, I'll be assuming that this deflationary reading of 'There are tables' is false. More specifically, I'll be assuming that in order for 'There are tables' to be true, it needs to be the case that (a) there are tables, and (b) these tables are *extra objects*, numerically distinct from the simples that compose them.

Let me say one more thing about how my non-factualism differs from trivialism. Trivialist views usually involve the idea that the various theories about composite objects (e.g., universalism, nihilism, and so on) all provide acceptable ways of describing reality, so that if there's a fact of the matter about which of these theories is true, then it's a fact about *English*—about which of the various theories captures the ordinary meanings of English sentences. In contrast with this, on my view, all of these theories (i.e., universalism, nihilism, and so on) involve outright *mistakes* about reality; they all say things about the world that just aren't true. I'll say more about this in Sect. 8.

3 Against necessitarianism

Given that I'm assuming (2a), I just need to argue for (2b). (2b) is equivalent to this:

> If the question of whether there are tables is a substantive ontological question, then necessitarian tableism and necessitarian anti-tableism are both false.

I'll argue for the first part of this claim (the part about necessitarian tableism) in Sect. 3.2; then in Sect. 3.3, I'll argue very quickly that similar considerations can be used to motivate the second part (the part about necessitarian anti-tableism). But first I want to argue for a background point.

3.1 The non-necessity of genuine existence claims

It seems to me that no genuine existence claims—i.e., no sentences of the form '(∃x)Fx'—are necessarily true. In other words, for any kind K of object, there are worlds without Ks. Now, for most kinds of objects, this is obvious, but of course, some people think there are certain kinds of objects (e.g., numbers and Gods) that exist necessarily. It seems to me, however, that necessitarian views of this kind are implausible, and in this section, I'll say a few words against them. I'll focus on the case of necessitarian platonism, and I'll be fairly brief because this issue is an aside; it's going to be helpful to have run through the idea behind the argument against necessitarian platonism, but in the end, I don't need this result.

Let's define *platonism* as the view that there are abstract objects like numbers and *necessitarian platonism* as the view that such objects exist in all possible worlds. Given this, my argument against necessitarian platonism is based on the following two premises:

(I) Necessitarian platonists need to *argue* that there aren't any worlds without abstract objects—i.e., that there aren't any worlds where *nominalism* is true.
(II) Necessitarian platonists don't have any good argument for this claim.

My argument for (I) is based on the claim that nominalism *seems easily conceivable* to us. In other words, *prima facie*, it seems easy to imagine worlds where there are no abstract objects—where, say, there's just a pile of physical stuff. Now, of course, just because something seems conceivable doesn't mean it's genuinely possible (indeed, it doesn't even mean it's genuinely conceivable); but it seems fair to say that if something seems easily conceivable to us, then this gives us at least a defeasible *prima facie* reason to think it's possible. Thus, since nominalism seems easily conceivable, it seems to me that we couldn't rationally endorse necessitarian platonism—couldn't rationally claim that nominalism isn't genuinely possible—unless we had some *argument* for this. If platonists have *no reason* to think that nominalism isn't genuinely possible, then it would just be irrational to endorse necessitarian platonism. And this is why necessitarian platonists need to provide some way of motivating the alleged impossibility of nominalism.

Let's move on now to thesis (II), i.e., to the claim that platonists have no good argument for the alleged impossibility of nominalism. To fully justify this claim, I would need to run through all of the arguments for necessitarian platonism and explain what's wrong with them. I obviously can't discuss all of these arguments here, but I would like to discuss three of them. I'll start with the following:

> *Argument 1*: It seems obvious that '$2 + 2 = 4$' is necessarily true—we can't conceive of this not being true. But if '$2 + 2 = 4$' is true in all worlds, then the number 2 exists in all worlds, because '$2 + 2 = 4$' is a straightforward claim *about* the number 2—so it couldn't be true if the number 2 didn't exist.

We can see what's wrong with this argument by focusing on the following anti-platonist view:

> *Error-Theoretic Mathematical Fictionalism (ETMF)*: (a) The platonist semantics for mathematics is correct—that is, our mathematical sentences and theories are about (or at least purport to be about) abstract objects; but (b) there are no such things as abstract objects; and so (c) our mathematical sentences and theories are not true. (This view has been developed by, e.g., Field (1989), me (1998), and Leng (2010).)

As soon as we focus on ETMF, it becomes clear what's wrong with argument 1—it begins with the claim that we can't conceive of '$2 + 2 = 4$' not being true, but in fact, ETMF gives us a perfectly good way of conceiving of this. If there are no such things as abstract objects, and if (as platonists themselves insist) '$2 + 2 = 4$' is a claim about abstract objects, then that sentence just isn't true; it isn't true in this scenario for the same reason that 'Santa Claus is jolly' isn't true—because it's a claim about things

that don't exist. So we very well *can* conceive of '$2 + 2 = 4$' not being true. It might sometimes *seem* that we can't, but as ETMF-ists point out, this is just because we sometimes overlook the possibility of there being no such things as abstract objects—and, hence, no such things as numbers. (This also explains away the intuition we have that '$2 + 2 = 4$' is necessary; if we unwittingly assume that 2 and 4 exist, then the truth of '$2 + 2 = 4$' seems inescapable; but as soon as we think of the possibility of 2 and 4 not existing, we see how '$2 + 2 = 4$' could fail to be true.)

Here's another way to appreciate the problem with argument 1. Given the platonist semantics, we should say that whether '$2 + 2 = 4$' is true *depends on* whether abstract objects (in particular, numbers) exist. Likewise, given the platonist semantics, we should say that whether '$2 + 2 = 4$' is necessary depends on whether numbers exist necessarily—because if there are any nominalistic worlds (and if the platonist semantics is right), then '$2 + 2 = 4$' isn't true in those worlds. Thus, since necessitarian platonists obviously accept the platonist semantics, they cannot legitimately argue for their view by starting with the claim that '$2 + 2 = 4$' is necessary. For, again, by their own lights (i.e., by the lights of the platonist semantic theory), whether '$2 + 2 = 4$' is necessary depends on whether numbers exist in all worlds—i.e., on whether necessitarian platonism is true.

The suggestion that '$2 + 2 = 4$' isn't necessary might raise a red flag. In particular, one might object that part of what defines metaphysical necessity is that it's the sort of necessity that applies to mathematics. There are two different views that one might have in mind here. One of them can be characterized as follows:

> *The strong view*: A sentence is *metaphysically necessary* iff (a) it's true, and (b) it's a logical truth, or an analytic truth, or a mathematical sentence, or what might be called a Kripkean sentence (e.g., 'Water is H_2O,' 'Ali is Clay,' 'Ali is human,' etc.), or a metaphysical principle (e.g., mereological universalism), or…etc., etc., etc. So on this view, which kinds of truths count as metaphysically necessary is a matter of convention, and it's true by *definition* that '$2 + 2 = 4$' *is* metaphysically necessary. (Views like this have been endorsed by Sider (2003, 2011) and Cameron (2009).)

This is a pretty radical form of deflationism about modality. If this view is right, then necessity is wildly different from what we thought it was; indeed, it's very similar to shmecessity, where a sentence is *shmecessary* iff it's a truth about Paris or my nose. I don't think this view is tenable, but I can't argue against it here. I'm just going to assume that necessity is at least roughly like what we pretheoretically think it's like. I don't need to assume Lewisian modal realism, but I'll assume that necessity is at least somewhat interesting and non-disjunctive and that it involves some sort of *having to be true*, where 'has to be true' means at least roughly what it *seems* to mean.

But even if the strong view is false, there's another view that entails that it's true by definition that '$2 + 2 = 4$' is metaphysically necessary, namely, the following:

> *The weak view*: Metaphysical necessity is a genuine kind of necessity, or *having to be true*, but there are many kinds of necessity, and one of the defining traits of *metaphysical* necessity is that it's the kind of necessity that applies to mathematical truths like '$2 + 2 = 4$.' So it's true by definition that '$2 + 2 = 4$' is

> metaphysically necessary. If you give this up, then you're not talking about *metaphysical* necessity; you're talking about something else. (I think Schaffer (2010) and Kment (2014) might endorse this view; they both define metaphysical necessity in terms of metaphysical laws; perhaps they would lump the mathematical laws in with them.)

My response to this is similar to the response that Rosen (2006) gives to views like this. We can define 'metaphysically necessary' like this if we want to, but then we'll be giving up the view that metaphysical necessity is *absolute* necessity, i.e., that it's truth in *all* possible worlds. The laws of physics are nomologically necessary by definition, and because of this, nomological necessity isn't absolute necessity—the nomological necessities are the sentences that are true in a restricted set of worlds (namely, the worlds where the laws of nature are true). Likewise, if mathematical truths are metaphysically necessary by definition, then it would seem to follow that metaphysical necessity isn't absolute necessity; the metaphysical necessities would be the sentences that are true in the worlds where the laws of mathematics (and, I suppose, metaphysics) are true. If we want metaphysical necessity to be *absolute* necessity—i.e., truth in *all* possible worlds—then we can't stipulate in advance that mathematics is metaphysically necessary. On the contrary, we have to say that mathematics is metaphysically necessary only if it's true in all possible worlds. In the end, it doesn't matter how we define 'metaphysical necessity'. In this paper, I'm stipulating that it means *absolute necessity*, but this is irrelevant. What matters is this: (a) the sort of necessity that I'm concerned with here is absolute necessity (whether we call it "metaphysical necessity" or not), and (b) it's not true by definition that mathematics is absolutely necessary.

Let's move on now to a second argument for necessitarian platonism:

> *Argument 2*: (2i) For any possible world w, there's a sentence of the form 'There are n donkeys' that's true at w. Therefore, (2ii) for any world w, there's a sentence of the form 'The number of donkeys is n' that's true at w. Therefore, (2iii) for any world w, there's a sentence of the form 'The number n exists' that's true at w.

The problem with this argument is that (2i) doesn't entail (2ii). Let me argue for this by arguing for the more specific claim that

(*) There are (exactly) 2 donkeys

doesn't entail

(**) The number of donkeys is 2.

The first point to note here is that (*) can be true even if there are no such things as numbers—because we can read (*) as saying this:

$$(\exists x)(\exists y)(\text{DONKEY}x \,\&\, \text{DONKEY}y \,\&\, x \neq y \,\&\, (\forall z)(\text{DONKEY}z \rightarrow (z = x \,\text{V}\, z = y))).$$

The reason (*) can be true even if there are no numbers is that the expression '2' appears in (*) as an adjective (or as part of a quantifier, or something like that). But (**) is very different; '2' appears in that sentence as a *singular term*; in particular, the

logical form of (**) seems to be something like this: "n(the donkeys) = 2". So (**) is (or at least purports to be) *about* the number 2. So unlike (*), (**) can be true *only if the number 2 exists*. So if there are two donkeys and no numbers, then (*) is true and (**) isn't. So (*) doesn't entail (**). And for an exactly analogous reason, (2i) doesn't entail (2ii).[8]

Now, one might respond here by saying that there *couldn't* be two donkeys and no numbers—because numbers exist necessarily. But whether numbers exist necessarily is precisely what's at issue here. Necessitarian platonists can't just assert that there are no numberless worlds in the middle of an argument for necessitarian platonism. So argument 2 doesn't work—it doesn't give us any good reason to believe necessitarian platonism.

Let me say two more things about (*) and (**) before moving on. First, my point here isn't just that (*) doesn't strictly *entail* (**); it's that (*) doesn't give us any good reason at all to believe (**). This is because (*) and (**) are about completely different kinds of things—(*) is about donkeys, and (**) is (at least partially) about a number. So there just isn't a good inference here at all. Second, you might think that my analysis of (*) is wrong and that that sentence already involves a reference to the number 2. But in the present context, this wouldn't matter. For if (*) already involves a reference to the number 2, then argument 2 fails for the same reason that argument 1 fails—because you can't start an argument for necessitarian platonism by just asserting without argument that sentences about abstract objects (in particular, numbers) are true in all possible worlds.

Finally, I want to consider a strategy that one might use to come up with an argument for necessitarian platonism. The strategy can be put like this:

> *Argument 3*: We can construct an argument for necessitarian platonism out of our arguments for ordinary platonism. For if these arguments show that abstract objects exist in the actual world, and if they don't rely on any specific claims about the actual world, then they show that abstract objects exist in *all* worlds.

In order to respond to this in full, I would need to run through every argument for platonism, and I obviously can't do that here. But it seems to me that there's one argument for platonism that stands out as the *best* argument, and I'd like to say why I think the above reasoning doesn't work in connection with that argument. The argument I have in mind is based on the following three premises:

(3i) Ordinary mathematical sentences like '3 is prime' are true.
(3ii) If sentences like '3 is prime' are true, then numbers (e.g., the number 3) exist.
(3iii) If numbers exist, then platonism is true.

I think there are good arguments for (3ii) and (3iii) but not for (3i). In order to argue for (3i), we would need to argue against ETMF—i.e., the Fieldian view that sentences like '3 is prime' are not true. A few arguments have been suggested here, but the only one that seems really promising is the Quine-Putnam indispensability argument.

[8] Trivialist platonists like Rayo (2013) would claim that (*) does entail (**) because these sentences say the same thing. But I'm ignoring trivialist platonism here for reasons that are analogous to the reasons (given in Sect. 2) for which I'm ignoring trivialist tableism.

Now, I don't think that argument succeeds, but in the present context, it doesn't matter. For the Quine-Putnam argument is based on specific claims about the actual world; in particular, it's based on the claim that mathematics is indispensable to our best theories of physical reality. So even if this argument succeeds, it doesn't establish necessitarian platonism.

(You might also try to motivate (3i) by claiming that it has Moorean status. But I don't think it's reasonable to dismiss anti-platonist views like ETMF in the way that Moore dismisses external-world skepticism. We have to remember that philosophical puzzles like the present one are generated by inconsistencies between things that seem obvious—e.g., in the present case, between (3i), (3ii), (3iii), and anti-platonism. To solve these puzzles, we have to reject things that seem obvious; in particular, we have to figure out *which* apparently obvious claims to reject. And I don't think we can make any progress in situations like this by claiming that the apparently obvious things that our opponents reject have Moorean status. Because everyone in the debate can accuse their opponents of rejecting things that seem obvious; e.g., ETMF-ists can accuse platonists of rejecting the apparently obvious claim that there's no platonic heaven—i.e., that there are no non-physical, non-mental, non-spatiotemporal objects. The question we should be asking is not which of the apparently obvious claims have "Moorean status" (whatever that means), but which of them can be supported by good arguments.)

Let me end by responding to a worry you might have about the argument of this section. The worry can be put like this:

> Your argument is based on the claim that nominalism seems *prima facie* possible. But we shouldn't trust this *prima facie* seeming because (a) platonism also seems *prima facie* possible, and (b) these two *prima facie* seemings can't both be true, because (c) platonism and nominalism are the kinds of theses that are necessary if they're true.

My response to this is that part of my point in this section has been that we should reject claim (c). In arguing against necessitarian platonism, I didn't mean to be arguing against contingentist platonism as well; I meant to leave that view open as a live option. In essence, what I take the argument of this section to suggest is that if we're going to endorse platonism, we should endorse contingentist platonism (I've argued for this claim before (1998), and so have Field (1989) and Rosen (2006)). Moreover, I think it can be argued (and, indeed, it has been argued—see, e.g., Field (1989), Hellman (1989), and my (1998)) that the same thing is true of nominalism, i.e., that contingentist nominalism is superior to necessitarian nominalism. So, again, I think that claim (c) is false, and so I think that the two *prima facie* seemings mentioned in the above objection—about platonism and nominalism both being possible—are perfectly compatible.[9]

[9] It's important to note that I haven't claimed here that platonism and nominalism *are* possible. I've argued elsewhere (1998) for a non-factualist view of the abstract-object debate, i.e., for the claim that there's no fact of the matter whether abstract objects exist. If this is true, then I think it's necessarily true, and it follows from this that neither platonism nor nominalism is genuinely possible. But this is perfectly consistent with what I've said here; all I've said is that *platonists* have no way of arguing that nominalism isn't genuinely possible. In contrast, I think that non-factualists do have a way of arguing for this claim.

I don't want to pretend that the brief remarks in this section refute necessitarian platonism. But since this whole discussion is an aside—since I don't really need the falsity of necessitarian platonism—I won't push the point any further. I'd like to point out, though, that the argument I've run here about abstract objects is an instance of an argument strategy that can be applied to *all* kinds of objects. Now, of course, I haven't shown that all of these arguments are *good* arguments, but if we could do that, we would have reason to think that no genuine existence claims are necessary.[10]

3.2 Against necessitarian tableism

Even if no existence claims are necessary, it doesn't follow that necessitarian tableism is false, because that view doesn't say that any existence claims are necessary. But it does say that a certain *conditional* existence claim is necessary. In particular, it says that the following is necessary:

(if-TABLE) If there are simples arranged tablewise, then there's a table that's composed of those simples, and the table is an *extra object*, numerically distinct from the simples.

Given this, I want to undermine necessitarian tableism with the following argument:

(A) If the question of whether there are any tables is a substantive ontological question, then tableists don't have any way of motivating the alleged necessity of (if-TABLE).
(B) If tableists don't have any way of motivating the alleged necessity of (if-TABLE), then necessitarian tableism is mysterious, unmotivated, and implausible. Therefore,
(C) If the question of whether there are any tables is a substantive ontological question, then necessitarian tableism is mysterious, unmotivated, and implausible.

This argument is valid, so I just need to argue for (A) and (B). I will start with (B).

3.2.1 The argument for (B)

If the question of whether there are any tables is a substantive *ontological* question, then *prima facie*, it seems that there should be two different possibilities here; in other words, it seems that the relevant objects (i.e., tables) could either exist or not exist. In particular, it seems at least *possible* that they *don't* exist. More precisely, as long as we assume that the question of whether there are tables is a substantive ontological question—a question about whether there really exist composite objects of a certain kind that exist over and above the simples that compose them—it seems easy for us to conceive of nihilistic worlds in which there are simples arranged tablewise but no

[10] It's worth noting that my argument strategy works even in cases where necessary existence is built into the *definition* of the given kind of object. For instance, if it's built into the definition of 'God' that She exists necessarily, then if we applied my argument strategy to the case of God, then what it would show (if it was cogent) is that God is *impossible*. Even if there was an omnipotent, omniscient creator of the universe, there wouldn't be a God because no creator exists necessarily. (Analogy: If a *nonkey* is a necessarily existing donkey, then nonkeys are not just non-existent but impossible.)

composite objects and, hence, no tables. Given this, it seems fair to say that the falsity of (if-TABLE) *seems easily conceivable to us*. Now, of course, it doesn't follow from this that the falsity of (if-TABLE) is genuinely possible; indeed, it doesn't even follow that it's genuinely conceivable. But given that the falsity of (if-TABLE) seems easily conceivable to us, we have at least a defeasible *prima facie* reason to think that it's possible. And given this, it seems that necessitarian tableists need to provide some way of motivating the idea that it's not possible. If we have *no reason* to think that the falsity of (if-TABLE) isn't genuinely possible, then it would simply be irrational to endorse necessitarian tableism. The view would be not just unmotivated, but mysterious and implausible. And so it seems to me that premise (B) is true.

You might think that even if necessitarian tableists can't argue that (if-TABLE) is necessary, if we couldn't argue that it's *not* necessary, then we'd be in a stalemate. But I just gave an argument for thinking that we *wouldn't* be in a stalemate; the argument is based on the idea that if a proposition P *seems easily conceivable* to us, then that gives us a defeasible *prima facie* reason to think that P is possible. Moreover, I think we can construct a second argument here (and a second argument for (B)) based on the idea that (in certain situations) the *seeming non-contradictoriness* of P brings with it a defeasible *prima facie* reason to think that P is possible. I won't fill in this second argument here, but see Rosen (2006).[11]

3.2.2 The argument for (A)

I turn now to premise (A)—i.e., the claim that if the question of whether there are any tables is a substantive ontological question, then tableists have no way of motivating the alleged necessity of (if-TABLE). Now, as I pointed out above, (if-TABLE) is not an existence claim; it's a conditional existence claim. And I want to start by pointing out that there are lots of conditional existence claims that are necessary. Consider, e.g., the following two sentences:

(if-Bachelor) If there's a bachelor, then there's an unmarried thing.
(if-Water) If there's a sample of water, then there's a sample of H_2O.

It's pretty obvious that these two sentences are necessary, and it's equally obvious that we know how to *argue* for this. For instance, we can argue that (if-Bachelor) is necessary by pointing out that its antecedent has an existential commitment and that the thing that needs to exist to make the antecedent true (namely, a bachelor) is already itself a thing of the kind that needs to exist to make the consequent true. This is because the concept *bachelor* already contains the concept *unmarried*, and so anything that's a bachelor is *ipso facto* unmarried. Similar points can be made about (if-Water): it's necessary because its antecedent has an existential commitment, and the thing that needs to exist to make the antecedent true is already itself an object of the kind that needs to exist to make the consequent true. This is because water just *is* H_2O (because

[11] Rosen claims that if P doesn't lead to contradiction—even when it's combined with all the truths about the natures of things—then P is possible. I more or less agree with this, but I would replace 'truths about the natures of things' with 'truths about the rigid designators of English' (and if there can be imprecise propositions, then I would also want to limit this to cases where P isn't so imprecise that there's no fact of the matter whether it's true).

we use 'water' as a rigid designator of H_2O), and so anything that's a sample of water is *ipso facto* a sample of H_2O.

But tableists can't argue for the necessity of (if-TABLE) in anything like this way. Here's an initial argument for this claim:

> The thing that needs to exist to make the consequent of (if-TABLE) true (viz., the table) couldn't be identical to the objects that need to exist to make the antecedent true (i.e., the simples) because composition isn't identity. And, of course, the table couldn't be identical to any *one* of the simples either.

Tableists might respond to this by claiming that the antecedent of (if-TABLE)—i.e., the sentence 'There are simples arranged tablewise'—commits to the existence of more than just simples. They might say that it already commits to the existence of a table. But unless they can *argue* for this claim, this would be unhelpful and question-begging. I'm asking here for an argument for the necessity of (if-TABLE). Tableists can't meet this challenge by just *asserting* that the antecedent of that sentence entails the consequent.

So tableists can't argue for the necessity of (if-TABLE) in anything like the way we argue for the necessity of (if-Bachelor) and (if-Water). How else might they do this? Well, they might try to argue that the necessity of (if-TABLE) follows from the following view:

> *The nothing-over-and-above view*: There's no more to the existence of a table than there is to the existence of simples arranged tablewise. In other words, the table is *nothing over and above* the corresponding simples.

People who believe in composite objects often say things like this, but it's hard to see how this view could be right. In particular, it's hard to see how tableists could endorse this view without collapsing into either (a) the view that composition is identity, or (b) the trivialist view that (if-TABLE) is analytic (or something like analytic). But we're presently assuming that both of these views are false, and as I pointed out above, once we reject these two views, it seems that tableists are committed to the idea that when simples compose a table, the table is an *extra object*, numerically distinct from the simples. But given this, tableists can't say that the table is nothing over and above the simples. If composition were identity, or if (if-TABLE) were analytic, then they *could* say this; but given the falsity of these two views, and given that tableists are committed to saying that the table is an extra object, numerically distinct from the simples, they can't say that the table is nothing over and above the simples.

Also, it's hard to see how tableists can endorse the nothing-over-and-above view and still maintain that there's a substantive ontological question about whether tables really exist. In order for there to be a substantive question here, there has to be *more* to the existence of the table than there is to the existence of the simples. Again, the table has to be an *extra object*, over and above the simples. But if so, then it can't be that the table is nothing over and above the simples.

You might claim that the reason the table is nothing over and above the simples—and, more importantly, the reason (if-TABLE) is necessary—is that composition is *very*

similar to identity.[12] But how is this supposed to motivate the claim that (if-TABLE) is necessary? I have no doubt that composition is similar to identity in various ways, but given that it's also different—that it's not literal identity—it's not clear how this is supposed to help. The whole reason that we can move from identity to necessity in cases like (if-Bachelor) is that the one object (e.g., the bachelor) is the *very same thing* as the other object (the unmarried thing). But with composition, this isn't true. The table is an extra object. And given this, it's hard to see how the fact that composition is similar to identity can be used to motivate the claim that (if-TABLE) is necessary.

Another suggestion (or pair of suggestions) that one might make here is that we can argue for the necessity (if-TABLE) by endorsing one of the following two claims:

(G) Whenever there are simples arranged tablewise, they compose a table, and in fact, the existence of the table is *grounded* in the existence of the simples.[13]

(L) It's a *law of metaphysics* that whenever there are simples arranged tablewise, there's also a table (or perhaps better, this follows from a more general law about when composition occurs).

Let me begin with (L). The first point I want to make here is that, by itself, (L) doesn't entail that (if-TABLE) is necessary. To get to that conclusion, necessitarian tableists would need to supplement (L) with the following:

> *Necessity-of-the-metaphysical-laws*: The laws of metaphysics are necessary—i.e., they're true in all possible worlds.

But as far as I know, no one has ever even tried to argue for this. Wilsch (2015) discusses this issue, but he doesn't argue the point. And Kment (2014), who also endorses a metaphysical-law sort of view, defines metaphysical necessity in terms of the metaphysical laws and clearly thinks that there are worlds where the metaphysical laws don't hold. So as far as I can see, there is nothing in the literature that gives us an (L)-based argument for the necessity of (if-TABLE), and I don't see how to construct a cogent argument of this kind.

I suppose you might think that necessity-of-the-metaphysical-laws is trivial, or true by definition. In other words, you might claim that it's built into the definition of 'metaphysical law' that a sentence counts as a metaphysical law only if it's true in all possible worlds—i.e., only if it's metaphysically necessary. I have no objection to defining 'metaphysical law' in this way, but if we do, then necessitarian tableists can't just *assume* that (L) is true—they need to *argue* that (L) is true. To do this, one thing they would need to argue (presumably not the only thing) is that (if-TABLE) is necessary. Thus, it doesn't seem that necessitarian tableists have helped their cause by appealing to (L). They needed to argue that (if-TABLE) is necessary; the suggestion was made that they can do this by taking (L) as a premise; but on the present suggestion about what 'metaphysical law' means, in order to argue for (L), they would need to argue that (if-TABLE) is necessary; and so no progress has been made. (You might think that it's at least epistemically possible that someone could come up with a good argument for (L) that didn't involve an argument for the necessity of (if-TABLE)—

[12] For views of this kind, see Armstrong (1978), Lewis (1991), and Sider (2007).

[13] This sort of view is defended by Cameron (2014).

even if necessity was built into the definition of 'metaphysical law'. But I have no idea how one might construct such an argument, and I don't think there are any arguments of this kind in the literature, and so the point remains that we just don't have an (L)-based argument for the necessity of (if-TABLE).)

Let's move on now to (G). Once again, the first point to note here is that if necessitarian tableists want to argue from (G) to the claim that (if-TABLE) is necessary, then they're going to have to supplement (G) with the following thesis:

> *Necessity-of-grounding*: If p and q are (true) propositions and [p] and [q] are the corresponding facts, then if [p] grounds [q], then p entails q (i.e., necessarily, if p then q).

This principle is widely assumed by people who work on grounding (see, e.g., Rosen (2010), Fine (2012), Audi (2012), and Dasgupta (2014)), but there aren't many *arguments* for it, and what's more, there are a few arguments *against* it—see, e.g., Dancy (2004), Leuenberger (2013), and Skiles (2015). Nonetheless, in contrast with necessity-of-the-metaphysical-laws, there are at least *some* arguments in the literature for necessity-of-grounding—see, e.g., Trogdon (2013) and deRosset (2010). If any of these arguments are sound, and if we can construct a sound argument for (G), then we'll have an argument for the necessity of (if-TABLE). Thus, it might seem that I need to determine whether any of the arguments for necessity-of-grounding are sound.

It seems to me, however, that the question of whether necessity-of-grounding is true is (in the present context) a red herring. To see why, notice first that there are presumably multiple notions that are at least "grounding-like" that one might have in mind when talking about grounding. In particular, it seems plausible that there are (a) grounding-like notions that imply necessitation (i.e., that imply that if [p] stands to [q] in the relevant grounding-like relation, then p entails q) and (b) grounding-like notions that don't imply necessitation. Let's call the former *type-N* grounding-like notions. Now, in order to determine whether necessity-of-grounding is true, we need to determine which of the various grounding-like notions are *genuine* kinds of grounding; in particular, we need to determine whether every grounding-like notion that counts as a genuine kind of grounding is a type-N notion of grounding. But in the present context, this is completely irrelevant. All that matters here is the following question: Which of the various grounding-like relations, if any, are actually at work in connection with the composition of tables? Or more precisely, since what we're concerned with here is whether (if-TABLE) is necessary, what matters is whether there's a *type-N* grounding-like relation that's at work in connection with tables. In other words, the question is whether the following thesis is true:

> (G_N) Whenever there are simples arranged tablewise, they compose a table, and the existence of the simples stands in a grounding-like relation to the existence of the table, and this grounding-like relation is a type-N grounding-like relation.

If necessitarian tableists can motivate (G_N), then they'll have an argument for the necessity of (if-TABLE). And to make things as easy as possible for necessitarian tableists, let's assume for the sake of argument that the following is true:

(G′) Whenever there are simples arranged tablewise, they compose a table, and the existence of the simples stands in a grounding-like relation to the existence of the table.

To get from (G′) to (G_N), what do necessitarian tableists need to argue? They need to argue for exactly what they've needed to argue for all along—namely, that (if-TABLE) is necessary. And they can't make any progress here by appealing to the intuition that many people have that the existence of tables is grounded in the existence of the simples that compose them. For this intuition doesn't take us all the way to (G_N). We don't have an *intuition* that the grounding-like relation that's at work in composition is a *type-N* grounding-like relation. So if necessitarian tableists want to claim that this relation is type-N, they need to *argue* for this claim. And to do this, what they need to argue is that there just *aren't* any nihilistic worlds where there are simples arranged tablewise but no composite objects. But this is just to say that they need to argue that (if-TABLE) is necessary—which, again, is precisely what they've needed to do all along. Moreover, if we look at the actual literature, there just isn't an argument there for the claim that the grounding-like relation that's at work in composition is a necessitating kind of grounding. So I don't see how necessitarian tableists can make any progress, in their hunt for an argument for the necessity of (if-TABLE), by appealing to the idea that the existence of tables is grounded in the existence of the corresponding simples.

You might respond here that we should forget about these so-called "grounding-like relations" and focus on *real* grounding—and, likewise, we should forget about (G_N) and (G′) and focus on (G) itself. But this wouldn't change anything important about the present dialectic. To see why, remember that if we focus on (G), then necessitarian tableists will need to argue for necessity-of-grounding. Now, it's not clear that they could produce a good argument for this claim, but if they could, then as a direct result of this, (G) would become much more controversial. We couldn't just assume that (G) was true in this scenario; on the contrary, if we had a good argument for necessity-of-grounding, we would need to *argue* for (G). Moreover, as of right now, we don't have an argument of the kind we would need. If it's really true that grounding is necessitating, then we don't have any reason at all to think that (G) is true, and this is precisely because we don't have any reason to think that (if-TABLE) is necessary. So, again, the problem here is that we just don't have a (G)-based argument for the necessity of (if-TABLE).

You might think we have an *intuition* that (G) is true, but if necessity-of-grounding is true, then we don't have a *reliable* intuition here. It may be intuitive to think that there's some grounding-like relation present in the composition of tables, but if grounding is necessitating, then we don't have good reason to think that *real* grounding is present here because we don't have good reason to believe necessitarianism about composition.

(There's a general point to be made here. It's dangerous to combine an intuition that some folk concept C applies in ordinary cases with a philosophical argument for thinking that the applicability of C requires the truth of controversial metaphysical thesis T. For if the argument is correct, that should undermine our confidence in the intuition. E.g., if conceptual analysis reveals that real free will requires indeterminism, then we should be worried about the truth of our intuition that we have free will. Likewise, if conceptual analysis reveals that real grounding is necessitating, then we

should be worried about the truth of our intuition that there's grounding present in cases of composition.)

At this point, necessitarian tableists might switch gears and argue as follows: "There are numerous arguments for the existence of composite objects like tables, and most of these arguments can be turned into arguments for the truth of (if-TABLE). Thus, if these arguments don't rely on any claims about the nature of the actual world (and if they're sound), then they give us reason to believe that (if-TABLE) is true in *all* possible worlds and, hence, that it's necessary."

This is right. So I need to address the arguments of this kind from the literature on composite objects. Now, it might seem that there are a lot of arguments here that I need to address—because there are a lot of arguments in the literature for the existence of composite objects. But, in fact, all of the arguments for composite objects (or at any rate, all of the arguments that I know of) are, for one reason or another, not relevant in the present context. I will argue for this by running through the most prominent arguments for composite objects and explaining why I don't need to address them in the present context.

First, I don't need to address arguments for trivialist versions of tableism—e.g., Hirsch's (2002) charity-based argument and Thomasson's (2007) application-conditions argument. For as I pointed out in Sect. 2, I'm assuming in this paper that trivialist views are false. Moreover, as we saw there, even if some version of trivialism were true, it wouldn't undermine my overall goal of arguing for anti-metaphysicalism. So the arguments for trivialist tableism aren't relevant in the present context.

Second, I don't (in the present context) need to address arguments for the existence of tables that assume that if a metaphysical principle like compositional universalism is true, then it's necessarily true—e.g., the early Sider's (1993) possible-gunk argument. Arguments like this are no help in the present context because the issue here is precisely whether metaphysical hypotheses are, if true, necessary.

Third, I don't need to address Lewis's (1986) vagueness argument. That argument is often used to motivate compositional universalism, so you might think it's an argument for the existence of composite objects. But, in fact, the vagueness argument doesn't give us any reason at all to believe in composite objects, and it only motivates universalism if we assume that nihilism and non-factualism are both false. What the vagueness argument really is is an argument *against* "some-but-not-all" views of composition—i.e., views that lie between nihilism and universalism. Thus, what this argument establishes, if it's sound, is the disjunction of nihilism, universalism, and non-factualism. And if it doesn't rely on any claims about the nature of the actual world, then it establishes the necessity of this disjunctive conclusion. But the necessity of this disjunction—i.e., the disjunction of nihilism, universalism, and non-factualism—is perfectly compatible with my argument. And so the argument from vagueness is not relevant in the present context.

(The reason my argument is compatible with the necessity of this disjunction is that it's compatible with necessity of non-factualism. Now, this might be surprising because one of the premises in my argument—namely, premise (2d)—says that if factualism isn't true, then necessitarianism is false. This might have given readers the impression that I'm committed to the falsity of necessitarian non-factualism. But this isn't right. The problem has to do with what the term 'necessitarianism' means in the context of

my argument. As I pointed out in Sect. 1, I'm using that term to denote the disjunction of necessitarian tableism and necessitarian anti-tableism. So necessitarianism is, by definition, a factualist view, and premise (2d) is an entirely trivial claim that's perfectly compatible with the truth of necessitarian non-factualism. Indeed, necessitarian non-factualism is compatible with everything in my argument—including the claim that necessitarianism is false (because by that claim I just mean that necessitarian tableism and necessitarian anti-tableism are false). Therefore, since my argument is compatible with the necessity of non-factualism, it's also compatible with the necessity of the disjunction of nihilism, universalism, and non-factualism. Thus, since the necessity of this disjunction is the most that the argument from vagueness could establish, it follows that even if that argument is sound, it's no threat to my argument.)

Fourth, I don't (in the present context) need to address arguments that rely on claims about the nature of the actual world—e.g., arguments based on the idea that we have perceptual evidence for the existence of composite objects like tables (see, e.g., Pryor (2000) and Hofweber (2016)) and arguments based on the claim that our best empirical theories make reference to composite objects. Since these arguments rely on claims about the nature of the actual world, they wouldn't establish the necessity of (if-TABLE) even if they established its truth, and so they're not relevant here. (Of course, these arguments are relevant to my thesis in a *different* way: if they're cogent, then my thesis (that there's no fact of the matter whether composite objects exist) is false. But this is just because they're arguments for an incompatible claim, and I obviously can't address all such arguments here. When I say that these arguments aren't relevant in the present context, what I mean is that they're not relevant to my positive claim that necessitarian tableists have no way of motivating the necessity of (it-TABLE). I admit that in order to fully establish my thesis, I would need to respond to the arguments from perception and empirical science; but I don't need to do this in order to run the argument that I'm running in this paper.[14])

For the same reason, I don't need to address the *cogito* (see, e.g., van Inwagen (1990) and Hudson (2001) for *cogito*-based arguments for composite objects). Now, of course, the *cogito* isn't an argument for the existence of *tables*, so it's also irrelevant (in the present subsection) for *that* reason; but insofar as I'm going to claim that my argument can be generalized from the case of tables to all composite objects, the *cogito* needs to be considered. But the *cogito* is obviously based on a specific claim about the actual world—namely, that I'm having experiences right now. So even if it's cogent, it's obviously just an argument for the claim that I *actually* exist; it can't be generalized to establish a claim about other worlds. (You might think that it can be generalized to cover all worlds where there are simples are arranged me-wise. But this is related to what I think is wrong with the *cogito*: for all we know, it could be that simples arranged humanwise can have experiences, and given this, the *cogito* doesn't give me a good reason to think that I exist. Similar points are made by Rosen and Dorr (2002) and Sider (2013).)

Also, for the same reason, I don't need to address the Moorean argument that we should believe in tables because it's common sense that there are tables (see Kelly

[14] For whatever it's worth, I think that Sider (2013) and Rosen and Dorr (2002) give convincing responses to the arguments from perception and empirical science.

(2008) for an argument like this) or the argument that we should believe in tables because we have an *intuition* that there are tables (see Markosian (1998) and Korman (2015) for arguments of this kind). These arguments seem to rely on assumptions about the nature of the actual world because the commonsense belief that there are tables, and the intuition that there are tables, seem to be based mostly in perceptual experience. If this is right, then even if these arguments give us good reason to believe that (if-TABLE) is true, they don't give us good reason to believe that it's necessary, and so they're not relevant in the present context.

Finally, I don't need to address arguments for composite objects that are based on arguments for the existence of gunk. This is because (if-TABLE) is about non-gunky situations, in particular, situations where there are simples arranged tablewise. Now, in Sect. 7, I'm going to drop the assumption that the world is made up of tiny simples, so it might seem that even if I don't need to address pro-gunk arguments in the present section, I eventually need to address them. But this isn't true. When I drop the assumption of tiny simples, I'm going to argue that if there are any extended physical objects (in particular, if there's an object made up of the entire universe), then there's no fact of the matter whether they have proper parts. If pro-gunk arguments were going to be relevant to my argument, they would be relevant there. But all of the arguments I know of for the existence of gunk just *assume* that the world has proper parts. For instance, the arguments in Arntzenius (2008) are best read as arguments not *for* the existence of gunk, but *against* the existence of extensionless point parts; he just assumes that the world has proper parts, and he doesn't really address the question of whether it has "chunky" parts (i.e., extended-simple parts). And to give a second example, the pro-gunk argument that Sider discusses in his (2013)—the argument based on the claim that physicists keep finding smaller and smaller particles—is really an argument *against* the existence of chunky parts.[15] None of these arguments have any force against people who deny that the world has any proper parts at all.

I don't see any other promising strategies that necessitarian tableists might use to argue for the alleged necessity of (if-TABLE), so I'm inclined to think that premise (A) is true, and if we combine this with (B), we get an argument against necessitarian tableism.

3.3 Against necessitarian anti-tableism

I just argued against necessitarian tableism. I would now like to suggest that we can undermine necessitarian anti-tableism in an analogous way. In particular, we can do this by arguing for the following two claims:

(i) If the question of whether there are any tables is a substantive ontological question, then anti-tableists have no way of arguing that there aren't any worlds containing tables.

[15] There's a similar argument in Schaffer (2003), but it's not an argument for gunk either; it is, rather, an attack on the idea that there's a good argument for mereological simples.

(ii) If anti-tableists have no way of arguing that there aren't any worlds containing tables, then necessitarian anti-tableism is mysterious, unmotivated, and implausible.

I don't have the space to run through the arguments for these claims here, but the arguments I would give are deeply analogous to the arguments for the corresponding claims in the argument against necessitarian tableism. Indeed, the argument for (ii) is more or less identical to the argument for the corresponding claim about necessitarian tableism. The argument for (i) isn't literally identical to the corresponding part of the argument against necessitarian tableism, but it's deeply similar. In a nutshell, the argument would proceed by undermining the various ways in which anti-tableists might try to argue for the alleged impossibility of tables. For instance, I would argue that the idea of a table (or of a composite object) isn't incoherent, or conceptually impossible; and I would argue that composite objects like tables are not impossible for anything like the reasons that married bachelors, non-H_2O water, and even primes greater than 2 are impossible; and I would respond to arguments for nihilism that don't rely on any claims about the nature of the actual world; and so on. But, again, I can't run through the details of this argument here.

(While I don't have the space to respond to the various arguments for nihilism, I'd like to say a few words about one of them, namely, Sider's (2013) argument from ideological parsimony. Roughly, Sider's argument is based on the following two premises: (i) in constructing our theory of the world, we don't need to make any ineliminable use of mereological terms like 'part'; and (ii) all else being equal, theories with fewer primitives are more likely to be true than theories with more primitives because they're simpler—in particular, they're simpler theories of the nature of reality. One worry about this argument is that premise (ii) is extremely controversial—it's plausibility seems to depend on a very strong version of metaphysical realism that one might very well reject.[16] But the main point I want to make about Sider's argument is that, strictly speaking, it's not an argument for nihilism; it is, rather, an argument for favoring nihilism over theories that commit to composite objects. But the argument doesn't give us any reason to favor nihilism over non-factualism. This is because, like nihilists, non-factualists don't need to make any ineliminable use of mereological terms like 'part'.[17,18] So if Sider's argument is sound, then what it establishes is the disjunction of nihilism and non-factualism (or if it doesn't rely on any claims about

[16] Why should we think that there's a single *right* way to choose our primitives, i.e., that there aren't multiple equally good ways, as there seem to be in mathematics? And why should we think that if T1 has different primitives from T2, then it *says something different* about the nature of reality? This seems to assume that reality is layered, or structured, in a way that corresponds to the ways in which we define our terms; but it might not be.

[17] Of course, in order to articulate and argue for non-factualism, we do need to use mereological terms; but that's true of nihilism as well. I take it that Sider's point is that when nihilists go to provide a positive description of reality (as opposed to when they go to articulate and argue for nihilism), they don't need to make ineliminable use of mereological terms; and this is what I'm saying is true of non-factualists as well as nihilists.

[18] Actually, if we assume premise (ii), then non-factualists seem to be better off than nihilists in this regard; for in addition to not needing to make ineliminable use of terms like 'part', non-factualists also don't need to make ineliminable use of terms like 'object'.

the nature of the actual world, then it establishes the necessity of that disjunction), and so it's no threat to my argument. I can't say any more about this here, but the Sect. 8 remarks about non-factualism are also relevant to this issue.)

If I'm right that an argument of the above kind can be run against necessitarian anti-tableism, then we have reason to reject both necessitarian tableism and necessitarian anti-tableism. More precisely, we have reason to endorse the following thesis:

> If the question of whether there are any tables is a substantive ontological question, then *tables could either exist or not exist*—or, more precisely, there are worlds that contain simples arranged tablewise but no tables, and there are also worlds that contain tables, where the tables are *extra objects*, numerically distinct from the simples that compose them.

But if this is true, then we have reason to believe premise (2b); i.e., we have reason to believe that if the table question is a substantive ontological question, then necessitarianism is false. And when we combine this with (2a), we get the falsity of necessitarianism.

4 Against contingentism

I will now argue against the contingentist view of the table debate. Before I give my main argument against contingentism, let me give the following "quick and dirty" argument:

> Contingentism entails that there are some physical facts out there in the world—facts about the existence or non-existence of physical objects—that we're currently unaware of and that we could use to settle the table debate if we could just discover them. But this is really counterintuitive; *prima facie*, it seems that, vis-à-vis the table debate, *all the physical facts are in*.

I think this argument has some force, but I won't pursue it here, because I don't want to just rely on the *intuition* that there are no physical facts here to discover; instead, I want to *argue* that there no physical facts of the relevant kind. To get at my argument, let's start with a definition; let's say that a *proto-table world* is a world that contains simples arranged tablewise. Given this, my argument against contingentism is based on the following claim:

> (NI) We have no idea what a proto-table world needs to be *like* in order to count as a world in which tables exist.

Later I will construct an argument that proceeds from (NI) to the falsity of contingentism, but for now, I just want to argue that (NI) is true.

Let me start by ruling out two quick responses to (NI). First, if necessitarianism were still a live option, then you could try to respond to (NI) by saying that tables exist in *all* proto-table worlds (or *no* proto-table worlds); but we've already dispensed with necessitarianism, and this sort of response is not available to contingentists—they're committed to saying that some proto-table worlds contain tables and some do not. Second, if we think of possible worlds as sets of sentences, then (NI) will obviously come out false because we'll be able to say that a world needs to *contain the sentence*

'Tables exist' to count as a world in which tables exist. But I'm not thinking of worlds as sets of sentences; I'm thinking of them in a roughly Lewisian way—as something like *factual situations*.[19]

But even if we focus on just Lewisian worlds, you might still think there's a quick response to (NI) that's available to contingentists; for you might think they can say this:

> We know exactly what a proto-table world needs to be like to count as a world in which tables exist; it needs to be the case that *tables exist* in that world.

I think that to some people this will seem *prima facie* like an acceptable thing to say and to others it will seem *prima facie* like an ostrich maneuver—i.e., a bury-your-head-in-the-sand-and-don't-think-about-it maneuver. I want to try to argue that it's an ostrich maneuver.

Let me start by pointing out that contingentists are committed to saying that in order for a proto-table world to count as a world in which tables exist, a *further fact* needs to obtain in that world, over and above the existence of simples arranged tablewise. Let's call facts of this kind *type-T facts*. (You can also call them *table-existence facts* if you want to, but I want a neutral term to make my point.) I think that type-T facts would be extremely *weird*. Indeed, I want to argue that we don't have any real idea what facts of this kind would be *like*. To motivate this claim, I want to start by bringing out three features of type-T facts that seem very odd. The first is the following:

> *Invisibility*: Type-T facts would be macro-level physical facts—in particular, facts about the existence of macro-level physical objects—but they would be empirically undetectable. E.g., despite being, so to speak, "right in front of us," they would be completely invisible.

Tableists might try to deny this—they might claim that we can see tables quite easily. But this misses the point. The point is that (given that there are simples arranged tablewise) we would have the exact same retinal stimulations regardless of whether tables existed. So if we knew there were simples arranged tablewise in world W, and if we looked around W, we wouldn't be able to tell whether there were tables there—i.e., whether there were type-T facts there. There is no test we could run to answer this question. This seems very odd—we're talking about macro-level physical facts that are right in front of us and, yet, completely undetectable.[20]

[19] As I pointed out in note 4, I don't actually believe in Lewisian worlds; I think they're just useful fictions for thinking about possibility; but I can't get into this issue here.

[20] You might respond as follows: "Whether there are type-T facts depends on whether there are compositional facts of a certain kind—in particular, on whether some simples compose a table; facts like this are similar in certain ways to causal facts; thus, since we're not very worried by causal facts being invisible, maybe we shouldn't be very worried by compositional facts being invisible either." But this stance is problematic. It suggests a picture in which there are two different kinds of facts—facts about composition and facts about the existence of composite objects—analogous to causation, where there are facts about causal processes and facts about causal effects. But this is the wrong picture of composition. Unlike causation, composition isn't a *process*; it's not something that *happens*. So there aren't two different kinds of facts here. If some simples compose a table, then there's no more to the fact that they compose a table than there is to the fact that there exists a table that's composed of them. (Also, even if there *were* two different facts here, it wouldn't be analogous to causation because *both* facts would be invisible.)

(Don't take me to be saying more than I am here. I'm not saying that there *couldn't* be physical facts that are empirically undetectable. I'm not a verificationist. I'm not saying that the idea of an empirically undetectable physical fact is meaningless. All I'm saying right now (more will come later) is that the idea of such a fact—a macro-level physical fact that's, so to speak, "right in front of us" but yet completely invisible and undetectable—seems weird.)

The second weird feature of type-T facts is this:

> *Non-supervenience*: Type-T facts would be macro-level physical facts, but they wouldn't supervene on micro-level physical facts together with the physical laws. More specifically, they would be facts about the existence of macro-level physical objects, but they wouldn't supervene on facts about the distribution of physical matter in the universe.

To appreciate this point, notice that contingentists are committed to the existence of pairs of possible worlds such that (a) the two worlds contain the exact same simples (and the exact same physical matter), arranged in the exact same ways, moving about in the exact same ways, obeying the exact same laws of nature, and (b) the two worlds differ in that one of them contains tables and the other doesn't—i.e., they differ in that there are type-T facts in one of the worlds but not the other.[21] And, again, contingentists are committed to saying that these type-T facts are *physical* facts—for they're facts about the existence of macro-level physical objects. But despite being physical facts, they float free from the micro-physical facts; in particular, they don't supervene on facts about the distribution of physical matter in the universe. This, I think, is extremely odd. It's much odder than denying that macro-level facts are *grounded* in micro-level facts, as Schaffer (2010) does. The idea that there are macro-level physical facts that don't even *supervene* on the micro-level physical facts (together with the physical laws) is extremely hard to make sense of.[22]

[21] Strictly speaking, what contingentists are committed to are pairs of worlds such that (a) both contain simples arranged tablewise and (b) one contains tables and the other doesn't. But this is just an artifact of the way I've set things up. If someone objected here on the grounds that contingentists aren't really committed to pairs of worlds of the kind described in the text, then I could just redo my argument so that it was about tables of a very specific kind—e.g., 4-legged coffee tables that obey the laws of quantum mechanics. I could get so specific about the kind of composite object I focused on that contingentists *would* be committed to pairs of worlds of the kind described in the text—i.e., pairs of worlds that are identical at the micro-level but different with respect to what composite objects exist.

[22] Contingentists might try to reduce the feeling of weirdness here by saying that facts about the existence of tables supervene on micro-physical facts together with the *laws of metaphysics*. But I don't think this view succeeds in making type-T facts seem less weird. To see why, notice that if the appeal to metaphysical laws is going to do anything here, then contingentists will have to endorse a non-Humean view of these laws; in other words, they'll have to say that there are metaphysical *forces*, or some such thing. E.g., they might say that in universalist worlds, there's a metaphysical force that *makes composite objects come into being* whenever some simples come into being. Given this, contingentists can say that the existence of composite objects supervenes on (and is *grounded* in) micro-physical facts together with facts about the metaphysical forces. But it's hard to see what these forces could *be*. They couldn't just consist in metaphysical necessitation because that would be inconsistent with contingentism. It seems that these forces would have to be *oomphy* in some sense but not *causally* oomphy (because composition isn't a process). This seems very odd, and so the appeal to metaphysical laws doesn't seem to alleviate the weirdness of type-T facts. It just seems to replace one mystery with another.

The fact that contingentists are committed to the existence of pairs of worlds of the above kind (i.e., worlds that are micro-physically identical but different with respect to the existence of tables) gives us a more vivid way of bringing out the first weird feature of type-T facts—i.e., Invisibility. Imagine that we had a God's-eye view and we were looking down on one of these pairs of worlds. The two worlds would look exactly the same. And they would feel, sound, smell, and taste the same as well. They would be like two little physical machines, running along next to each in the exact same ways, perfectly synchronized. No matter where we looked, and no matter how closely we looked, they would seem to be exact duplicates of one another. But according to the contingentist, they would be physically different. There would be type-T facts in one of the worlds but not the other. There would be no empirical test for the existence of these facts, but according to the contingentist, they would be there—macro-level physical facts, sitting right in front of us, but completely invisible. This seems very odd.

Finally, a third weird feature of type-T facts that I want to point to is the following:

> *Colocation*: Type-T facts would involve colocation; more precisely, every type-T fact would involve a physical object x and a plurality of distinct physical objects (the ys) being located in the exact same place at the same time.

I won't bother to argue that colocation would be weird. There's a long history of philosophers finding colocation weird, metaphysically dubious, hard to swallow, and so on. I think we can safely assume that, at the very least, colocation *seems* weird.

(Let me quickly respond to two worries you might have here. First, you might complain that while *one-one* colocation (e.g., between a statue and a lump of clay) is widely considered to be weird, *many-one* colocation (which is what's at issue here) is not. I agree that philosophers have worried less about many-one colocation, but this is just because the problem has been underappreciated; intuitively, many-one colocation is just as weird and puzzling as one-one colocation. Moreover, while the problem of many-one colocation has been less widely discussed, I'm certainly not the only one to notice it; e.g., Cameron (2014) says that those who are puzzled by one-one colocation "should also find it prima facie puzzling how an entity and *some* entities can be in exactly the same place at the same time." Second, you might complain that while many philosophers think that colocation is weird, there are other philosophers who *don't* think it's weird. This is obviously true, but it's important to remember that these people have some explaining to do; they have to explain *why* colocation isn't weird, and this is precisely because it *seems* weird, at least initially.[23])

So there are at least three features of type-T facts that seem very weird—Invisibility, Non-supervenience, and Colocation.[24] Given this, let's return to the idea that contingentists can respond to (NI) by saying this: "We know exactly what a proto-table world

[23] There are many philosophers who can be read as trying to explain why colocation is non-weird. See, e.g., Saenz (2015) for a recent and interesting attempt to do this. And see Cameron (2014) for an attempt to explain away the weirdness of *many-one* colocation.

[24] These aren't the only features of type-T facts that would be weird. For instance, it seems that type-T facts would be *brute* facts, and given that they would also be macro-level physical facts, this seems very weird. But bruteness is obviously deeply related to Non-supervenience, so I'm not listing it here as a separate source of weirdness.

needs to be like to count as a world in which tables exist; it needs to be the case that *tables exist* in that world." It seems to me that given the three weird features of type-T facts, this response is too quick. In fact, it seems like an ostrich maneuver. We're talking about facts that would involve Invisibility, Non-supervenience, and Colocation. To claim that we know exactly what facts of this kind would be like strikes me as just false. Indeed, it seems to me that we have no idea what such facts would be like. We've certainly never *encountered* any facts of this kind. After all, if they exist, they're empirically undetectable. So we don't have any sort of *acquaintance* with them. Now, of course, it's possible that someone could just *dream up* an account of what such facts would be like, but as far as I know, no one's ever done this. So it seems to me that (a) we have no acquaintance with facts of this kind, and (b) we have no descriptive account of what they would be like. And given this, it seems plausible to suppose that we don't have any real idea what facts of this kind would be like.

Let's go back to the thought experiment in which we're looking down at two worlds that are micro-physically identical. As I pointed out above, the two worlds appear to be exact duplicates of one another—no matter where we look, and no matter how closely we look, they seem identical. But then contingentists come along and tell us that they're physically different—that there are type-T facts in one of the worlds but not the other. There are no empirical tests for these facts, we're told, but they're still *there*. We're also told that while the facts in question are *physical* facts, they don't supervene on micro-level physical facts—again, the type-T facts are just *there*, floating above the micro-physical facts. And, finally, we're told that these facts involve colocation.

My response to this is not, "Wow, I wish I knew which world contained tables." My response is total befuddlement. I don't understand what sort of fact is being said to obtain in the one world but not the other. I can say the words, "Tables exist in W1 but not in W2," but given the above remarks about what type-T facts would be like, I don't know what these words are really saying about W1 and W2. Again, I don't know what sort of fact is being said to obtain in the one world but not the other. Or to put the point into the lingo of (NI), I don't know what either of these worlds needs to be *like* to count as the one in which tables exist. And I don't think I'm alone in this; I don't think any of us knows what a proto-table world needs to be like to count as a world in which tables exist. So I think that (NI) is true.

(You might try to respond to this argument for (NI) by linking type-T facts to something that's supposedly obvious. For instance, if there are simples arranged tablewise in region R, then you might claim that whether there's a type-T fact in R depends on whether the simples in question *compose a table* (or on *how many objects* are in R). And you might claim that insofar as we understand what composition is (and how to count), these things are clear; and so you might conclude that it should also be clear what type-T facts would amount to. But it seems to me that if my arguments suggest that it's *not* clear what type-T facts would be like, then they also suggest that these other things are unclear as well. More specifically, I think my arguments suggest that (a) we don't know what a proto-table world needs to be like to count as a world in which some simples *compose a table*;[25] and (b) if there are n simples in region R, and

[25] Another problem with the worry I'm addressing here is that it mistakenly assumes that facts about composition are distinct from facts about the existence of composite objects; for more on this, see note 20.

if those simples are arranged tablewise, then we don't know what R (and the stuff in R) needs to be like for it to be the case that there are *more than n objects in R*; and so on.)

I want to emphasize that I don't think that the argument I've given here for (NI) is a knockdown argument. Despite everything I've said, true-believing contingentists can dig in their heels and say: "We know exactly what a proto-table world needs to be like to count as a world in which tables exist; it needs to be the case that *tables exist* in that world." Now, I think that if contingentists say this, they're essentially burying their heads in the sand and ignoring the problem; but it's not as if they're contradicting themselves, and so I don't want to claim that I have a knockdown argument. Nonetheless, while I don't think my arguments succeed in forcing true-believing contingentists to give up their view, I think these arguments give the rest of us reason to scratch our heads and wonder what type-T facts could really *be*. I think they give us reason to think: "I don't get it; I don't understand the difference between the world that contains tables and the world that doesn't; and I don't know what a proto-table world need to be *like* to count as a world in which tables exist."

Let me now use (NI) to argue against contingentism. To this end, consider the following sentence:

(Table) There are tables.

Let's say that the *proto-table truth conditions of (Table)* is the set of proto-table worlds in which (Table) is true. Given this, my argument against contingentism proceeds as follows:

> (i) (NI) is true—i.e., we have no idea what a proto-table world needs to be like to count as a world in which tables exist. But (ii) if (NI) is true, then we have no idea what a proto-table world needs to be like to count as a world in which (Table) is true; and (iii) if we have no idea what a proto-table world needs to be like to count as a world in which (Table) is true, then our usage and intentions don't determine what a proto-table world needs to be like to count as a world in which (Table) is true; and (iv) if our usage and intentions don't determine what a proto-table world needs to be like to count as a world in which (Table) is true, then our usage and intentions don't determine proto-table truth conditions for (Table); and (v) if our usage and intentions don't determine proto-table truth conditions for (Table), then (Table) doesn't have proto-table truth conditions. Therefore, (vi) (Table) doesn't have proto-table truth conditions. But (vii) if contingentism is true, then (Table) does have proto-table-truth conditions. Therefore (viii) contingentism is not true.

Both of the inferences in this argument are valid, and I've already argued for (i), and (ii) and (iv) are trivial; so the only question is whether (iii), (v), and (vii) are true.

Premise (iii) seems pretty obvious to me. If we're as out of touch as I've been arguing with what a proto-table world needs to be like to count as a world in which (Table) is true, then it would seem that our usage and intentions don't determine what a proto-table world needs to be like to count as a world in which (Table) is true. After all, our usage and intentions come from *us*; if they determined what a proto-table world needs to be like to count as a world in which (Table) is true, then we would at least have some clue about this.

Premise (v) is also fairly obvious. Since (Table) is *our* sentence, it needs to get its truth conditions from us—in particular, from our usage and intentions regarding the meanings of our words. If you denied this, you'd have to say that the meanings of our words and sentences can come unglued from what we use them to mean. Imagine someone saying this: "I know you guys use 'Austin' to refer to that city in Texas, but you're actually wrong about this. 'Austin' really refers to Jupiter, not the capital of Texas." This is silly. Since 'Austin' is *our* word, it's meaning and reference are determined by *our* usage and intentions. If we use that word to refer to Austin, then that *makes it the case* that it *does* refer to Austin. Likewise, if (Table) is true in some set of proto-table worlds, that has to be because our usage and intentions *make it the case* that it's true in those worlds. (I'm not saying that we can never be mistaken or confused about the meanings and references of our words; but in such cases, the meanings and references of our words are still determined by our usage and intentions.)

Finally, (vii) is even more obvious than (iii) and (v). If contingentism is true, then some proto-table worlds contain tables and some don't, and (Table) is presumably true in the ones that do, so if contingentism is true, then (Table) has proto-table truth conditions. (Also, insofar as my real goal is to argue for non-factualism, I don't really need (vii) because (vi) already entails non-factualism by itself. Now, given this, you might wonder why I bothered to argue against necessitarianism—i.e., why I didn't just argue for (vi) straightaway. The reason I couldn't have done this is that I used the falsity of necessitarianism in my argument for (vi); in particular, I used it to motivate (NI).)

So that's my argument against contingentism. In a nutshell, the idea is that contingentism entails that (Table) has proto-table truth conditions, but in fact, this isn't the case—(Table) *doesn't* have proto-table truth conditions because the set of proto-table worlds can't be separated into the worlds that contain tables and the worlds that don't. To put the point into a slogan, there's only one pile of possible worlds here, not two.

Here's another way to think of the idea behind my argument: Given that the actual world is a proto-table world—i.e., given that there are simples arranged tablewise—contingentism entails that there are two different ways the world could be with respect to the table debate, but in fact, there aren't—there's only *one* way the world could be with respect to that debate.

Now, it might seem that this is inconsistent with what I argued in Sect. 3. For it might seem that I argued there that even if we assume that there are simples arranged tablewise, tableism and anti-tableism are both possible, so that there are two different ways the world could be with respect to the question of whether there are tables. But that's not what I argued in Sect. 3; what I argued was that *if* there's a substantive ontological question about whether there are tables (given that there are simples arranged tablewise, and where the tables would be extra objects, numerically distinct from the simples that compose them), *then* there are two different ways the world could be with respect to that question. And what I've argued in this section is that there just *aren't* two different ways the world could be with respect to the question of whether there are tables (given that there are simples arranged tablewise). Thus, far from being inconsistent, my two theses fit together perfectly to entail the conclusion that there *isn't* a substantive ontological question about whether there are tables. (By itself, this doesn't entail that there's no fact of the matter whether there are tables, but when we combine the no-substantive-ontological-question thesis with the assumption that

trivialist views are false, we do get the result that there's no fact of the matter whether there are tables.)

You might respond here by claiming that the argument of the present section undermines the argument of Sect. 3. For you might think that I've been assuming in the present section as well that there's a substantive ontological question about the existence of tables, so that the arguments of this section are relevant to the arguments of Sect. 3 and, indeed, undermine the style of reasoning that I employed there—i.e., the reasoning that used *prima facie* seemings as a guide to possibility. But, in fact, I haven't assumed in this section that there's a substantive ontological question about tables. My aim here has been to undermine that assumption, and I haven't relied on it in any way. So even in the light of the arguments of the present section, I stand by the conditional conclusion of Sect. 3—that if there's a substantive ontological question about the existence of tables, then there are two different ways the world could be with respect to that question. But, again, I don't think that there *are* two different ways the world could be here, and I don't think there's a substantive ontological question about the existence of tables.

Perhaps my stance here can be put like this: there's only one way the world could be with respect to the table debate, and the one way it can be (and *is*) is no closer to a table way than to a no-table way. This isn't to say that there's no mind-independent way that reality is; it's just to say that the way the world is isn't a table way or a no-table way. And on my view, this isn't the world's fault; it's *our* fault; the problem is that sentences like 'There are tables' (and 'There aren't tables') are semantically imprecise. 'There are tables' is supposed to say something about the nature of reality, over and above what 'There are simples arranged tablewise' says, but it's totally unclear what this extra something is supposed to be—it's unclear what the world needs to be like to make 'There are tables' true (and it's also unclear what the world needs to be like to make 'There aren't tables' true).

5 The law of excluded middle

One might object to my argument as follows:

> You seem to be committed to rejecting the law of excluded middle (or LEM), for you seem not to endorse the sentence 'There are tables or there aren't tables.' But you seem to rely on LEM in your own reasoning; in particular, when you say that premise (1) of the main argument is trivial, you seem to rely on LEM, because you assume that if factualism is true, then necessitarianism or contingentism is true.

Here's my response: LEM fails only in cases where there's semantic imprecision. Now, on my view, sentences like 'There are tables' *are* semantically imprecise; but if *factualism* is true, then these sentences *aren't* imprecise (or at any rate, they aren't imprecise enough to generate a failure of LEM, because factualism guarantees that either tableism or anti-tableism is true). Thus, *if* factualism is true, then LEM is applicable in connection with sentences like 'There are tables' and 'There aren't tables'. Thus, since the antecedent of premise (1) guarantees that factualism *is* true, we can in this context use LEM, and given this, (1) is trivial.

6 From tables to composite objects

I have now argued that there's no fact of the matter whether there are any tables. But nothing in my argument depended in any important way on the fact that I was talking about tables instead of composite objects of some other kind—e.g., cats or rocks. Thus, exactly analogous arguments can be used to argue that there's no fact of the matter whether there are any cats or rocks or trout-turkeys or whatever. And so we seem to have an argument for the claim that there's no fact of the matter whether there are any composite objects.

7 Pushing the argument further

I just argued that there's no fact of the matter whether there are any composite objects like tables and cats and rocks. But in arguing for this claim, I assumed the following:

(S) There exist lots of (tiny) simples; e.g., there are simples arranged tablewise and rockwise and catwise and so on.

I think that we can jettison this assumption and that when we do, we're led to a much more radical conclusion than the one that I've argued for so far. To see what I've got in mind here, let's drop the assumption that (S) is true and replace it with the following:

(B) The *blobject* (i.e., the concrete particular object that's identical to the entire universe) exists.

If we assume that (B) is true, the question arises whether the blobject has any proper parts. Blobjectivists like Horgan and Potrč say that it doesn't, that the blobject is the only physical object that exists; and anti-blobjectivists (e.g., universalists who endorse (S)) claim that the blobject does have proper parts. But it seems to me that we can run the argument of this paper in reverse to show that there's no fact of the matter whether the blobject has proper parts. First, we can argue (or assume, in the manner of Sect. 2) that if there's a fact of the matter in the debate between blobjectivists and anti-blobjectivists, then the question of whether the blobject has proper parts is a substantive ontological question—i.e., it can't be trivialized. Second, we can argue (a la Sect. 3) that if the question of whether the blobject has proper parts is a substantive ontological question, then the necessitarian versions of blobjectivism and anti-blobjectivism are untenable and, hence, blobjectivists and anti-blobjectivists should endorse contingentism, i.e., they should say that the relevant objects (i.e., proper parts of the blobject) could either exist or not exist. And finally, we can argue (a la Sect. 4) that the contingentist versions of blobjectivism and anti-blobjectivism are untenable as well because there's only one way the world could be with respect to the question of whether the blobject has proper parts.[26]

I obviously can't develop this argument in detail here, but it seems pretty clear that if the argument I've run in this paper is cogent, then this other argument is cogent as

[26] If this argument is correct, then it works for *all* extended physical objects; i.e., it can be used to show that for any extended physical object O, there's no fact of the matter whether O has proper parts and, hence, no fact of the matter whether O is a simple.

well. So we seem to have the result that (a) if the blobject exists, then there's no fact of the matter whether any other physical objects exist, and (b) if simples of the kind mentioned in (S) exist—i.e., if there are simples arranged tablewise and catwise and so on—then there's no fact of the matter whether any other physical objects exist.

Now, of course, this is all perfectly consistent with (S), and it's also consistent with (B). But if the arguments of this paper are correct, it can't be that (S) and (B) are *both* true, for my arguments suggest that if (S) is true, then there's no fact of the matter whether (B) is true, and vice versa. So given all of this, one might hold that (S) and (B) are competitors and that we need to choose between the following two views:

> *Smallism*: The fundamental objects of reality are simples of the kind mentioned in (S), and there's no fact of the matter whether any other physical objects exist because there's no fact of the matter whether there are any composite objects.[27]
> *Bigism*: The fundamental object of reality is the blobject, and there's no fact of the matter whether any other physical objects exist because there's no fact of the matter whether the blobject has any proper parts.

But I think it can be argued that there's no fact of the matter whether the fundamental objects of reality are simples of the kind mentioned in (S) or the blobject. I can't argue this point here, but I think that an argument similar to the one developed in this paper can do the trick. More specifically, I think it can be argued that (a) if there's a fact of the matter between smallism and bigism, then the debate between these two views is essentially an ontological one; and (b) given that the debate between smallists and bigists is an ontological debate, the necessitarian versions of these two views are untenable, and so smallists and bigists both have to say that there are pairs of distinct possible worlds that are exactly alike except that in one of them smallism is true, and in the other bigism is true; but (c) there just *aren't* pairs of worlds like this.

If this is right, then there's no fact of the matter whether (S) is true and no fact of the matter whether (B) is true. And if we combine this with the other arguments in this paper, we're led to the radical conclusion that for any kind K of physical object, there's no fact of the matter whether there are Ks. Thus, there's no fact of the matter whether there are tables or people or rocks or simples of the kind mentioned in (S) or a universe. Indeed, there's no fact of the matter whether there are any physical objects at all.

8 Un-crazy-ing the view (at least a little)

I set out to attack a metaphysical debate that seems a bit crazy, but I seem to have argued myself into a view that's crazier than any of the views endorsed by the people

[27] There are actually two different versions of smallism—one that takes the fundamental objects to be unextended point-sized simples, and one that takes them to be extended. On the latter view, it's actually a misnomer to call the fundamental objects "simples"; for if smallists of this kind accept the arguments of this paper, then they'll say that there's no fact of the matter whether these objects have proper parts and hence no fact of the matter whether they're simples. So strictly speaking, I shouldn't use 'simples' when talking about smallists; I should use 'small fundamental objects', or something like that; but I won't bother with this complication here.

engaged in the metaphysical debate. So I want to end by saying a few words to ease the blow and hopefully make the view I've argued for seem a bit less crazy.

I consider myself to be a sort of commonsense realist. I think there's a world out there—or, at any rate, there's some *stuff* out there, or some reality out there, or some such thing—and I think this stuff (or this reality) has a nature that's independent of us and our theorizing. Moreover, I think that our empirical theories and our commonsense beliefs (e.g., that there's a table in my dining room) are more or less accurate. But how is this commonsense realism consistent with the view that I've argued for in this paper?

Here's a quick attempt to make the two views compatible. Our way of conceptualizing the world is *thing*-based at its core. We want to carve the world (or the *stuff*, or however you want to put it) into *objects*. But there are multiple ways to do this. We can do it in an (S)-universalist way (i.e., a way that says that there are simples arranged tablewise and catwise and so on and also unrestricted compositions of these simples, so that there are tables and rocks and trout-turkeys and so on); or we can do it in an (S)-nihilist way (i.e., a way that says there are simples arranged tablewise and catwise and so on but no composite objects); or we can do it in a blobjectivist way, or a van Inwagen way, or…etc., etc., etc. But if my arguments are correct, then there's no fact of the matter as to which of these ways is correct. Now, one response to this would be to junk our whole thing-based conceptual framework and start over. That would be pretty hard to do, and in fact, we might be psychologically incapable of doing it. But there's another way of proceeding here. We can just pick one of the above ways of carving the world into objects and go with it. This is an acceptable way of proceeding because *all* of the above ways of carving up the world are OK. But note that when I say they're "OK", what I mean is that they're *pragmatically* OK. I *don't* mean that they're OK in the sense that they make our sentences come out literally true. Carnapians might endorse a view of the latter kind; they might say that we can just pick a way of carving the stuff into objects, and as long as we set things up right, our sentences will come out true. That doesn't seem right; it suggests that however we carve the stuff into objects—whether we do it in an (S)-universalist way or an (S)-nihilist way or whatever—we'll be *right*. That's not my view at all; on my view, *none* of the ways of carving the stuff (or reality) into objects is right, because there's no fact of the matter as to which objects really exist. So however we proceed here, our sentences won't be strictly speaking true, because we'll be engaged in a kind of fiction. But on my view, all of the above ways of carving reality into objects are *pragmatically* OK; for while they all involve the adoption of fictions, the various fictions here are all useful and harmless. It would take some doing to explain exactly how and why these fictions are useful and harmless, but the basic idea is that they provide us with easy ways of communicating with each other by giving us ways of uttering *near-truths*, or *for-all-practical-purposes truths*. (Some of them are more useful, i.e., easier to use, than others; but this doesn't matter here.)

So on my view, there's some stuff (or reality) out there, and it's pretty much like we think it is—science and common sense are more or less right—but our normal ways of thinking and talking involve useful and harmless fictions about how to carve the stuff (or reality) into objects. Hopefully, this way of describing my view makes it seem a bit less crazy.

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