

The intelligibility of metaphysical structure

Peter Finocchiaro¹ 

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Abstract Theories that posit metaphysical structure are able to do much work in philosophy. Some, however, find the notion of ‘metaphysical structure’ unintelligible. In this paper, I argue that their charge of unintelligibility fails. There is nothing distinctively problematic about the notion. At best, their charge of unintelligibility is a mere reiteration of previous complaints made toward similar notions. In developing their charge, I clarify several important concepts, including primitiveness, intelligibility, and the Armstrong-inspired “ontologism” view of the world. I argue that, ultimately, their charge is best understood as an objection whose central premise is that the notion of ‘structure’ runs contrary to an important presupposition of contemporary metaphysics. But that central premise is, on closer inspection, implausible. I respond to the objection by identifying three popular metaphysical theories that violate the alleged presupposition but are still generally regarded as intelligible. The objection thus fails to show that a theory that posits metaphysical structure is unintelligible.

Keywords Metametaphysics · Ideology · Ontologism · Primitiveness · Definability · Quantification · Modal actualism · Stuff

1 Introduction

Talk of the world’s structure is nigh unavoidable in recent work in metaphysics.¹ The credit for this belongs to Sider (2011), who offers us a realist metametaphysical position that is impressive in its ambition. At the heart of the position is

¹ And elsewhere in philosophy. See Dougherty (2014), Ludwig (2015), and McPherson (2015).

✉ Peter Finocchiaro
pfinocch@nd.edu

¹ University of Notre Dame, 100 Malloy Hall, Notre Dame, IN 46556, USA

metaphysical structure. It is in virtue of the world's structure, for instance, that we are able to meaningfully talk about the world. Likewise, it is in virtue of the world's structure that some disputes are substantive and others are not. And it is in virtue of the world's structure that us metaphysicians have jobs.

Since so much rides on the notion of 'structure', it would be devastating to the aforementioned recent work if the notion were untenable. Many have claimed that this is the case. The most potentially devastating version of this claim is the charge that a theory that posits non-ontic structure is literally unintelligible. In this paper, I give the unintelligibility objection some much needed precision and argue that it fails.²

In Sect. 2, I briefly discuss two salient features of contemporary accounts of structure. First, I discuss why they employ the term 'structure' as a primitive. Second, I discuss how any account that posits non-ontic structure is inconsistent with an intuitively appealing picture of the world. In Sect. 3, I develop this intuitively appealing picture, one where the world is a collection of objects and their properties. Any theory that posits non-ontic structure is incompatible with this picture and therefore unintelligible. Call this the *objection from ontologism*. I end the section by introducing a precise sense in which a claim can be shown to be incompatible with ontologism.

In order to properly evaluate the objection, I need to establish what the charge of intelligibility amounts to. In Sect. 4, I delineate different accounts of intelligibility and evaluate the extent to which they can generate an effective version of the objection. I settle on a sociological account of intelligibility, one where proposed theories must be consistent with certain "conversational" presuppositions. Then, in Sect. 5, I evaluate whether or not a theory that posits non-ontic structure meets this sociological standard. I explore three extant views in the literature: plural quantification, modal actualism, and stuff ontology. These three views are each incompatible with ontologism but nevertheless typically regarded as intelligible. On the sociological standard, then, the objection from ontologism fails.

2 The sorry state of structure

One recently popular condition on theory choice is that a theory's ideology corresponds to the features of the world.³ I agree. Though I won't argue for the claim here, a theory should only include ideology that corresponds to the features of the world. Following Sider (2011), these corresponding features are the

² I am not arguing in this paper that structure is justifiable as a posit, or that knowledge of structure is easily gained, or anything particularly positive about the role of structure in theorizing. I happen to think that it plays a crucial role and has great value in its applications. That conversation, however, is much further downstream. A reasonable prerequisite for discussing the tenability of a posit is its intelligibility. So before we can properly evaluate structure's role in metametaphysics we must first show it to be intelligible.

³ Though largely beside the point here, I identify the ideology of a theory with the stock of undefined (relative to the theory) expressions used to state the theory, including terms like quantifiers and logical operators. Others identify ideology along semantic lines (i.e. "meanings"). These differences won't affect what follows.

metaphysical structure of the world.⁴ Structure comes in two varieties. First, there is ontic structure, structure that is intimately connected to predicates and names as well as properties and individuals. There is also non-ontic structure. Non-ontic structure is less widely recognized, but arguably includes the features of the world that correspond to quantifiers and sentential tense operators (i.e. quantificational and temporal structure). By definition, non-ontic structure is not a thing nor an entity. Proponents of non-ontic structure might also think that it cannot be counted (e.g. “The world contains many structures.”) but can be measured (e.g. “The world contains much structure.”).

Yet criticism, skepticism, and outright confusion about structure, especially the non-ontic variety, are widespread.⁵ This is all perfectly understandable. New metaphysical posits should be handled with caution. The question is what to do to improve structure’s reputation as part of the metaphysician’s toolkit.

One popular method for introducing some new term is to define it using more familiar notions. Anachronistically, I might introduce the modal operators ‘ \Box ’ and ‘ \Diamond ’ via quantification over possible worlds in the style of Lewis (1968). Then, whenever someone asks what I mean by ‘ $\Box\exists xFx$ ’ I can give the appropriate translation. Similarly, I might introduce the notion of a duplicate by defining it in terms of shared perfectly natural properties.

One way to make structure respectable is to provide a similar sort of explanation. Start with a position (much like that developed in Lewis (1983)) where a theory’s primitive predicates are intended to have as meanings the natural properties of the world. Now expand this sort of Lewisian realism so that it maintains a correspondence between all primitive expressions and natural properties. Metaphysical structure can then be introduced as follows. The world consists of individuals, properties, and objective facts of the matter about the naturalness of properties. The property *greenness* is more natural than the property *grueness*. According to the offered reduction, to say that the world is structured is to say that some properties are more natural than others. For instance, to say that the world is structured with respect to color is to say that some color properties are more natural than others. Similarly, to say that the world is structured with respect to quantification is to say that some existence properties are more natural than others.⁶ Because the methodology of metaphysics involves identifying and employing the ideology that correctly characterizes structure, we should strive to use expressions that have these natural properties as their meanings.

There is nothing wrong with this Lewisian reduction of structure so far as intelligibility is concerned. If natural properties are intelligible, then structure, understood this way, is intelligible. So long as structure serves a useful purpose, it earns its place in the toolkit.

⁴ The metaphysical notion of structure is distinct from other extant notions of structure, e.g. the ontic structural realism of Ladyman and Ross (2009).

⁵ For a sampling of the different flavors, see: Schaffer (2014), Donaldson (2015), Warren (2016). See also Wilson (2014), especially Dogma 3.

⁶ Such a realist might, but need not, modify the Fregean approach to existence and understand existence properties as second-order properties like *having an instance*. See McDaniel (2013).

Yet I reject the Lewisian reduction. I reject it in part because I prefer an account that allows for correspondence to non-ontic features. Since properties are ontic and can be counted, a reduction based on them would fail to satisfy my preference. I also reject the reduction because I think that a global metaphysics that leaves ‘structure’ as *primitive* is more attractive.

One argument for this second reason is that a metaphysics that leaves ‘structure’ as primitive is highly unifying. Structure underlies our understanding of (just to name a few things) intrinsicality, reference, induction, and substantivity. But this unification is valuable only if it is structure doing the heavy lifting. Suppose I introduce some new term, ‘genergy’. ‘Genergy’ partially unifies physics and biology. How? Well, genergy comes in two varieties. First, there is energy-genergy. Energy-genergy determines how much force something can apply. Second, there is gene-genergy. Gene-genergy determines which traits organisms display. *Voilà!* Unification!

‘Genergy’ so defined is worthless. To be truly unifying, it cannot be defined in terms of ‘energy’ and ‘gene’. ‘Electromagnetism’, in contrast, is truly unifying precisely because it is *not* defined in terms of ‘electricity’ and ‘magnetism’. The same is true of metaphysical terminology. Insofar as we should prefer unifying theories, we should prefer a theory that leaves ‘structure’ as primitive.⁷ Reduction is to be avoided even if it is in principle available.

So what *is* structure? Structure is a fundamental category of reality and is therefore difficult to characterize. But this difficulty is not unique to structure. How should someone answer the question, “What *is* an entity?” She could answer the question by providing a reduction. But how should she answer if she thinks entity is a fundamental category of reality? It seems like all she can do is provide a functional characterization of the category of entity, perhaps by describing its connections to other fundamental categories or by offering formal tools for discussing it. So, too, for the category of structure.

Those of us who leave ‘structure’ as a primitive thus ought to provide as thorough a characterization of structure as we can manage. But in so doing we face an immediate problem. Anyone who posits non-ontic structure thereby abandons an intuitively appealing picture of the world, what Sider (2011) labels *ontologism*. Ontologism “insists that fundamental metaphysical commitments be ontic” (94). Someone who posits non-ontic structure rejects ontologism because she posits something of the world without saying anything about the things in the world.

This rejection of ontologism is nicely articulated in the following passage from Sider. Here, Sider explains how to interpret his new ideological device to discuss structure: ‘ \mathcal{S} ’. Syntactically, ‘ \mathcal{S} ’ behaves as an operator that attaches to any expression of any grammatical category to form a sentence. Such a sentence can be used to make assertions about the structure of the world. As Sider puts it:

To say \mathcal{S} (and) is not to say something about an alleged object Conjunction. It is not to say anything about any thing at all. It is nevertheless to say something true, something objective, something about reality. Nowhere is it written in stone that all facts must be entity-involving. In Graham Nerlich’s phrase,

⁷ See Sider (2011: 16).

“realism need not be ontic.” To be sure, the entity-based ideology of predicate logic is simple, beautiful, and well-behaved, and it’s best to stick to it whenever possible. But the realist about structure, it would seem, cannot live by predicate logic alone (Sider 2011: 109).

In other words, by using ‘ \mathcal{S} ’ we can formulate claims about the structure of the world that are true or false independently of the things in the world. Since ontology is about the things there are, structure falls outside of its purview. Structural truths are not tied to ontological truths.

This issue concerning the relationship between ontology and objective truth is rarely explicitly acknowledged. But Nerlich and Sider are not the only ones to realize that realism need not be ontic. Much of Henry Laycock’s work tries to make room for a picture of the world that goes beyond identifying and counting discrete things. He finds the presumption of ontologism perplexing and notes that “there would appear to be a common tendency within reflective thought to be influenced, and even gripped, by a conception of the world as intrinsically ‘divided’ into discrete bodies” (Laycock 2006: 3). This tendency manifests itself as a demand that any expression be understood in explicitly singular terms.⁸

There are two senses in which a theory that posits non-ontic structure defies the tendency Laycock identifies. Distinguish between *methodological* ontologism and *metaphysical* ontologism. Methodological ontologism, as Sider puts it, claims that it’s “conceptually confused to think of a fundamental metaphysics as being given by anything other than a list of entities” (94). Metaphysical ontologism admits the conceptual possibility of non-ontic metaphysics and instead claims that the correct picture of the world is one that is entity-based (95).

My focus in this paper is on the objection generated from a commitment to methodological ontologism; my subsequent use of ‘ontologism’ should be understood as referring to the methodological variety. There is, of course, an equally interesting version of the objection that comes from metaphysical ontologism. But that objection does not concern intelligibility and so is beyond the scope of this paper.

3 The objection from ontologism

Call the view that the world contains fundamental non-ontic structure *metaphysical structuralism*. The objection from ontologism has two central premises. First, metaphysical structuralism is incompatible with ontologism. Second, any claim that is incompatible with ontologism is unintelligible. Therefore, metaphysical structuralism is unintelligible, as is any theory committed to metaphysical structuralism.

Despite its intuitive plausibility, the objection from ontologism is in desperate need of precision. I will start with three instances of it in the literature. I will then provide some formal machinery that will be useful highlighting the point of

⁸ Adam Sennet’s NDPR review of *Words Without Objects* calls this tendency “singularitis.” See also van Cleve (2016) for a closely related project.

disagreement. Finally, I will develop the critical assumption behind premise one into its most plausible form.

3.1 “But what could it be?”

Metaphysical structuralism is incompatible with ontologism because it makes claims about the world that are not intended to be about some thing in the world. In his review of *Writing the Book of the World*, Eli Hirsch acknowledges that Sider defends such a position. But he struggles to properly understand it:

It seems as if Sider is trying to give us a form of Tractarian metaphysics (“language matches the structure of the world”) minus language-shaped facts. That’s a hard trick to pull off. The idea seems to be that truth is not enough, because the structure of our true sentences ought also to conform to “the structure of the world”, even though the world contains no structured items that correspond to the structured sentences. This is, for me, hard going. Sider’s “structure of the world” may seem to be intelligible only as something-we-know-not-what that plays the role of somehow imposing a metaphysical constraint on language beyond truth (Hirsch 2013: 712).

Hirsch’s confusion is understandable. In attempting to make sense of the notion of structure, Hirsch tries to identify what entity in the world makes structural claims true. But every candidate for this role is ruled out by Sider.⁹

Gabriele Contessa has a similar difficulty. He is sympathetic to the idea that structure plays a role in determining the meaning of predicates like *being green* or *being a rabbit*. But he denies that structure undergirds the meanings of all linguistic expressions:

For example, take ‘either...or...’ and ‘it is not the case that’ in the sentence ‘Either every even number greater than two is the sum of two primes or it is not the case that every even number greater than two is the sum of two primes’. If their correct interpretation is classical, then that sentence expresses a tautology, for, on that interpretation, to assert that disjunction is to assert that at least one of its disjuncts is true and, since, on its classical interpretation, one of the disjuncts cannot be false unless the other one is true, the proposition expressed by that sentence must be true. If the correct interpretation of ‘either...or...’ and ‘it is not the case that’ is intuitionistic, however, to assert the above disjunction is to assert that there is a proof of at least one of the disjuncts and, since in this case (as well as other cases) this is not true, we are

⁹ Hirsch (2009) raises a similar though distinct intelligibility objection: “Sider often says that the quantifier-like expressions in a language answer to the world’s logical joints only if they express *Existence* (capitalized and italicized). This is evidently less an explanation than an invitation to accept “logical joints” and “Existence” as primitive notions. Can they be explained ostensively, by citing examples? Apparently not, since there is no agreement on what the examples are. I think one must feel some skepticism about the intelligibility of an allegedly primitive notion when there is no agreement as to what examples come under the notion” (244). What follows will also address this objection, since I will highlight some agreement about examples.

not in a position to assert that sentence. *But what in the world* could make one of these candidate meanings of ‘either...or...’ and ‘it is not the case that’ more eligible than the other (other than linguistic use, conventions, philosophical considerations or some combination of these and other factors, that is)?

As far as I can see, the answer is ‘Nothing!’ (Contessa 2013: 717, emphasis mine).

Jonah Goldwater offers a similar line of reasoning. In response to Sider’s claim that ‘ $\mathcal{S}(\text{and})$ ’ is non-ontic, he says:

...[I]f the sentence ‘ $\mathcal{S}(\text{and})$ ’ is true, then one wonders what makes it true. Sider’s answer is that there is conjunctive structure in the world, or, as he also puts it, that the world has a conjunctive “aspect”. And though Sider does not intend to “reify aspects”, his intention may be moot: for if aspects are that in the world which make statements about structure true, then aspects are a kind of entity (Goldwater 2014: 104).

As I see it, all three of the above passages appeal to ontologism. They assume that any view which says there are some truths about the world must also say that there are some things in the world that support those truths. There simply isn’t any logical space for non-ontic realism. Consequently, metaphysical structuralism is unintelligible—as is any theory that relies on metaphysical structuralism.

3.2 Defining ontological sentence

I think the objection made by Hirsch, Contessa, and Goldwater can be made more precise (though perhaps at the expense of otherwise laudable rhetoric). And because the stakes are so high, precision here is important. One issue is in specifying exactly when a claim is “about the things in the world” and when it is not. Though the distinction seems intuitive enough, some metaphysical claims are surprisingly difficult to sort along these lines. It will be useful to have formal machinery to guide us through the jungle.¹⁰

An *ontological sentence* is a sentence that is “about the things in the world,” by trying to characterize how some thing is or how some things are.¹¹ What follows is an attempt to formally capture the notion of an ontological sentence:

- If F is an n -place predicate and $a_1 \dots a_n$ are constants, then $\ulcorner Fa_1 \dots a_n \urcorner$ is an ontological sentence.

¹⁰ Thanks to Alex Rausch and Geoffrey Hall for help in developing the following formalizations.

¹¹ My formalization of an ontological sentence and my formalization of the ontologism thesis are both intended to be compatible with rival ontological schemes—e.g. a “standard” ontology of individuals and properties and a nominalist ontology of just individuals. At times, however, I will talk in a way that presupposes the “standard” ontology. This is for two reasons: (1) it greatly simplifies my discussion of ontologism, (2) ontologism and the “standard” ontology seem quite symbiotic. Thanks to an anonymous referee for pressing this issue.

This covers particularized sentences like ‘Widget is a cat.’ Clearly such a sentence is about what things in the world are like.

- If ϕ is an ontological sentence, then $\lceil \neg\phi \rceil$ is an ontological sentence.

Intuitively, if something makes a claim about the world, the negation of that claim just makes the opposite claim about the world. So negation preserves being ontological.

- If ϕ and ψ are both ontological sentences, then $\lceil (\phi \wedge \psi) \rceil$ is an ontological sentence.

I count a complex sentence as ontological just in case its components are ontological. In other words, an ontological sentence is completely about what things in the world are like. A sentence that has a non-ontological conjunct contains non-ontological content and so is itself non-ontological.

Since conjunction and negation are expressively adequate for propositional logic, there is no need to give constraints for disjunction, conditionals, etc. However, the move to first-order conditions requires me to introduce the notion of a *pseudo-ontological sentence*. An open sentence of the form $\lceil Fx \rceil$ is not, in a literal sense, about anything in the world. It is analogous to the sentence fragment ‘__walks’ in that it doesn’t assert anything at all. It is instead the raw material from which an ontological statement could be formed.

- If F is an n -place predicate and $x_1 \dots x_n$ are variables, then $\lceil Fx_1 \dots x_n \rceil$ is a pseudo-ontological sentence.
- If ϕ is a pseudo-ontological sentence, then $\lceil \neg\phi \rceil$ is a pseudo-ontological sentence.
- If ϕ and ψ are pseudo-ontological sentences, then $\lceil (\phi \wedge \psi) \rceil$ is a pseudo-ontological sentence.
- If ϕ is an ontological sentence and ψ is a pseudo-ontological sentences (or vice versa), then $\lceil (\phi \wedge \psi) \rceil$ is a pseudo-ontological sentence.

Now quantificational sentences can be checked by checking pseudo-ontological sentences:

- If ϕ is a pseudo-ontological sentence and x occurs freely in ϕ , then $\lceil \exists x(\phi) \rceil$ is an ontological sentence.¹²

Finally, adding a quantifier to the beginning of an ontological sentence generates a new ontological sentence:

- If ϕ is an ontological sentence, then $\lceil \exists x(\phi) \rceil$ is an ontological sentence.

A sentence that uses universal quantification can be checked by being translated, in the standard way, into a sentence that uses existential quantification.

¹² By this definition, a sentence like ‘ $\exists x(x = y)$ ’ is ontological despite containing a free variable. I’m genuinely ambivalent on whether or not this is a bad result. The sentence does seem to be saying *something* about x , even if it is in some sense incomplete. At any rate the problem could be avoided by requiring there to be only one free variable.

My use of the pseudo-ontological sentence allows for increased flexibility concerning what counts as properly ontological. To see this, consider an alternative way of defining an ontological sentence that takes all open sentences and closed sentences as ontological. On the assumption that both closed *and* open sentences are ontological, it's natural to say that ϕ has to be ontological for $\lceil \exists x\phi \rceil$ to be ontological. However, this approach will sometimes preemptively rule against sentences containing extra ideology. Consider a theory that includes the standard modal operators ' \square ' and ' \diamond '. Many deny that some sentences employing modal operators are ontological, namely those where the operator takes wide scope. But they think such sentences produce ontological sentences when bound by the appropriate variable—e.g. ' $\exists x\diamond Fx$ '. My definition of an ontological sentence makes room for such a position.¹³

A sentence that satisfies the above definitions is a sentence that tries to characterize how some thing is or how some things are and is therefore an ontological sentence. A *truth* is a sentence contained in a true theory. An *ontological truth* is, of course, an ontological sentence that is also a truth.

Alternative kinds of quantification threaten to complicate the story. So far, I've addressed only "ordinary" objectual quantification. But there are other forms of quantification, most saliently plural quantification and second-order quantification. Should sentences involving such forms of quantification count as ontological, as contributing to "a list of entities"? I say that they should not. Systems of quantification earn their merits individually. Unless there is good reason to do otherwise, different kinds of quantification should be treated separately.

Furthermore, alternative kinds of quantification seem to go against the list-conception of the world. Take plural quantification. As I will discuss further in Sect. 5, one motivation for including plural quantification is to better formulate ordinary language claims that first-order quantification struggles with. Take the sentence "Two raptors flank a game warden." Someone might formalize this claim with the predicate 'F' which reads "__together flank__". In first-order logic the English claim would be formalized as something like ' $\exists a, b, c(Ra \wedge Rb \wedge a \neq b \wedge Gc \wedge abFc)$ '. Because three raptors are just as capable of flanking a game warden as two, the predicate 'F' would have to be variably polyadic. But now note that "Two raptors flank a game warden," and "Three raptors flank a game warden," independently entail the sentence "Some raptors flank a game warden." It's difficult to see how this last claim can be formulated in a way that preserves these apparent logical relations.¹⁴

¹³ I also use the proposed definition of a ontological sentence because it excludes sentences that pose merely technical problems. Assume that there is at least one necessarily true ontological sentence—assume that it is the claim that something exists, ' $\exists x(x = x)$ '. Now take any purportedly non-ontological sentence ϕ . ϕ is true just in case $\lceil \exists x((x = x) \wedge \phi) \rceil$ is true. If this complex sentence is included in the class of ontological sentences then supervenience ontologism becomes trivially true. But the recursive account I provide rightly excludes such sentences. So supervenience remains an open question. There's a further issue about world-essential ontological truths like " w_1 is actual." Sadly I do not have the space to fully address that technical issue here.

¹⁴ For more on the differences between plural and singular quantification, see McKay (2006: 19–22).

My point here is not that first-order logic is entirely incapable of formalizing these claims. My point is that it's not *obvious* that it can. Plurally quantified sentences at least *seem* to express something more than what is expressed by singularly quantified sentences. Plurally quantified sentences *seem* to do more than just expand the list of entities. So as to not prematurely settle the matter, the initial definition of an ontological sentence should remain neutral. Thus, only first-order objectual quantifiers contribute (at this stage) to a sentence being ontological.

3.3 Formulating ontologism

Ontologism claims that everything bottoms out in ontology. There are many different ways to formulate this claim using the machinery just developed. Here are some of the more interesting options:

| | |
|--------------------------|---|
| Reductive Ontologism | All truths just are ontological truths. |
| Dependence Ontologism | All truths are grounded in ontological truths. |
| Intentional Ontologism | All truths have the same content as ontological truths. |
| Supervenience Ontologism | All truths supervene on ontological truths. |
| Logical Ontologism | All truths entail ontological truths. |

Some versions of ontologism are quite difficult to defend. Reductive ontologism, for example, suggests that we must restrict ourselves to first-order ideology. Those who are committed to sentential operators, plural quantification, or second-order quantification will want to deny this. So will those who think there are “purely logical” truths without quantification or predicates, like ‘ $p \vee \neg p$ ’. On the other hand, logical ontologism seems true but uninteresting. If there are ontological truths that are logical necessities, then all sentences entail such ontological truths. Suppose that every predicate F produces a logical truth $\lceil \forall x(Fx \rightarrow \neg(\neg Fx)) \rceil$. Every sentence entails each instance of the schema. So every truth entails them as well. Logical ontologism is therefore true. Such a claim doesn't seem to capture anything important about how the world is, though, so it is not too interesting a version of ontologism.

I suggest that the objection from ontologism employ the supervenience thesis. Supervenience is a relatively weak relation, and so an argument that uses it to formulate a premise is more compelling than an argument that uses a stronger relation like grounding. Yet supervenience ontologism also articulates an important claim about how the world is, namely that the ontological domain is sufficient to bring about everything else in the world. As some might put it: once you provide the list including each individual and the properties it instantiates, the rest comes for free.

Though I think supervenience ontologism is an interesting and compelling thesis, as stated it is trivially true. Consider some non-ontological sentence S and the proposition p it expresses. The sentence $\lceil p \text{ is true.} \rceil$ is according to my definitions ontological. In addition, this sentence is true just in case S is true. So supervenience ontologism is true. Denying the existence of propositions won't avoid the problem.

A weaker version of this argument can be run using S itself. I think this argument works, more-or-less, and for this reason I think that supervenience ontologism as stated is true.¹⁵

Most, though, would agree that propositions, sentences, and the like are not as ontologically significant as substances and properties. These representational entities are just along for the ride. Supervenience ontologism should therefore be modified in a way that preserves its original appeal but avoids the above argument. Roughly, the modification is this: call a sentence a *substantive* ontological sentence just in case it is an ontological sentence that is not about any representational entity.

Supervenience ontologism is best understood as the claim that all truths supervene on substantive ontological truths. The intuitive idea here is the same as that behind other supervenience theses: there cannot be variation in truth without variation in (substantive) ontological truth. But because precision is important, I'd like to state the idea as precisely as I can.

Suppose *being a truth* and *being a substantive ontological sentence* are properties, and suppose *being a substantive ontological truth* is a conjunctive property of those two. To avoid as best as possible controversial claims regarding the distribution of these properties and the things that instantiate them, I'll use global supervenience instead of individual supervenience. I define supervenience ontologism as:

Supervenience Ontologism For any worlds w_1 and w_2 , every isomorphism between w_1 and w_2 that preserves *being a substantive ontological truth* is also an isomorphism that preserves *being a truth*.¹⁶

In other words, the property *being a truth* strongly globally supervenes on the property *being a substantive ontological truth*. The objection claims that metaphysical structuralism is incompatible with Supervenience Ontologism. It entails:

Supervenience Denial For some worlds w_1 and w_2 , some isomorphism between w_1 and w_2 that preserves *being a substantive ontological truth* does not preserve *being a truth*.

In other words, there's at least one pair of possible worlds where they vary with respect to their truths without also varying with respect to their substantive ontological truths. (What these are will depend on the particular first-order metaphysics adopted. I'll return to this shortly.)

Here's how all the jargon in this section fits together. The objection from ontologism starts with the claim that everything bottoms out in ontology. I listed several different versions of this claim and chose supervenience ontologism—the claim that truth globally supervene on substantive ontological truth—as the official formulation of the ontologist's picture of the world. The denial of this

¹⁵ Thanks to Jeff Speaks for discussion on this issue.

¹⁶ A preserving isomorphism is just an isomorphism that maps objects that have a certain property only onto objects that also have that property. My formulation of Supervenience Ontologism is based on definition (3') in Stalnaker (1996). See Sider (1999) for an alternative though equivalent definition of strong global supervenience (see his footnote 10).

supervenience, according to the ontologist, is unintelligible. The more precise objection then states that metaphysical structuralism is incompatible with supervenience ontologism. So it is intelligible—as is any theory that relies on metaphysical structuralism.

4 Defining intelligibility

The objection from ontologism claims that metaphysical structuralism is unintelligible because it entails some claims are objectively about the world without supervening on claims about things in the world. Despite the rhetoric of those who make this objection, it's not clear what the upshot is. In this section, I characterize a few different accounts of what it takes to be intelligible and explore their implications for metaphysical structuralism. I argue that a sociological account—one where proposed theories must be consistent with certain presuppositions—is the only one that might show metaphysical structuralism to be a distinctively problematic. Thus, it is the only account that gives the objection from ontologism any dialectical efficacy.

To show this, I first develop a case in which someone employs the concept of non-ontic structure to characterize a contingent feature of the world. With this example in hand, I go through the different accounts of intelligibility and show to what extent they find it unintelligible. There are many other cases available, however, so not much rests on this particular case working the way I suggest it does.

Consider a hypothetical metaphysician who posits non-ontic structure to develop a theory of time.¹⁷ As a presentist, this metaphysician believes that only the present is real. As an A-theorist, she believes that the world is temporally oriented and that there is genuine passage of time. She might characterize her commitments by appealing to non-ontic structure, as follows:

Given all the scientific, phenomenological, and philosophical evidence we have, we are justified in believing that our world is one where (i) only the present is real and (ii) time “flows”. To give weight to these claims, I assert that the world contains non-ontic temporal structure. I characterize this temporal structure using tense operators. Some who assert ‘ $P(\exists x(x \text{ is a dinosaur}))$ ’ mean to say that there is a past time at which a dinosaur exists. But I assert it to say something about the world’s presently-existing temporal structure.

I do not believe that these claims are metaphysically necessary, though. The temporal structure of the world could have been different; it could have lacked temporal structure and been quite literally a static universe. That is, I admit that there is a possible world exactly like the actual world in terms of what presently exists and what is categorically true of those things. But this other

¹⁷ What follows is a variation of the presentism characterized in Sider (2011: 284–288). It is (arguably) a version of what Tallant and Ingram (2015) call “upright presentism” and bears some resemblance to the brute past presentism defended in Kierland and Monton (2007).

world is timeless. There are therefore no positive truths about its past or about its future.

To get a clear violation of supervenience ontologism, let's make an assumption on the presentist's behalf. Let's assume that there are no "temporal entities"—no abstract times, facts, or properties that "tensed" worlds have that "static worlds" do not. This is less controversial than it might seem at first. Our presentist uses tense operators to characterize the temporal nature of the world. She thereby posits some non-ontic temporal structure that, plausibly, fills the role temporal entities ordinarily occupy. The presentist denies that there is such a property as *being in the past* and instead appeals to the past-oriented temporal structure of the world. Likewise, the presentist denies that facts and properties are intrinsically tensed and analyzes their apparent tense in terms of the temporal structure of the world.¹⁸

If what the presentist says is correct, then some possible worlds differ in their temporal structure. Among these worlds there are two that are present duplicates—that have duplicate temporal segments located at the present moment. These two worlds agree on all matters ontological; whatever exists now in the one world exists now in the other. An ontology that accurately characterizes one world will also accurately characterize the other world. But the worlds are structurally distinct. Since one exhibits temporal structure and the other does not, an ideology that accurately characterizes one world will fail to accurately characterize the other. Thus, according to this non-ontic presentist, supervenience ontologism is false.

I now turn to different standards of intelligibility and how they judge non-ontic structure.

4.1 Intelligibility as internal consistency

Someone might take a claim to be unintelligible just in case it is internally inconsistent. To illustrate, consider the following passage from Peter van Inwagen. Here, he is discussing a theory that posits temporal parts (what he is calling a Lewis-part).

Since I understand all these words, I understand 'Lewis-part' and know what Lewis-parts are. In a way. In the same way as the way in which I should understand talk of "propertyless objects" if I were told that 'propertyless object' meant 'object of which nothing is true'; in the same way as that in which I should understand talk of "two-dimensional cups" if I were told that 'two-dimensional cup' meant 'cup that lies entirely in a plane'. These phrases would not be what one might call "semantical nonsense" for me; they would not be like 'abra-cadabara' or 'machine that projects beams of porous light' or '*Das Nichts nichtet*'. But I should hardly care to say that I understood what someone was talking about (even if it were he who had given me these definitions) who talked of propertyless objects or two-dimensional cups, and who, moreover, talked of them in a way that suggested that he supposed there

¹⁸ The presentist's approach is analogous to a soft B-theory detenser. See Zimmerman (2005: 411).

were such things. For I cannot see how there could be any such things. In fact, I think I can see clearly and distinctly why there could not possibly be any propertyless objects or two-dimensional cups (so defined). And this is very nearly the position I am in with respect to Lewis-parts (van Inwagen 2000: 445).

Clearly, van Inwagen thinks that any theory of temporal parts like the one Lewis articulates is necessarily false. But the problem isn't merely one of impossibility. Van Inwagen would agree that a theory denying the existence of God is not in the same boat as Lewis' theory of temporal parthood despite them both being, by his lights, necessarily false. The problem is that Lewis' theory seems to refute itself by positing something internally inconsistent. Cups are rounded objects, usually with handles, and used for containing liquid. Cups can't be cups if they are two-dimensional. And so a theory that posits two-dimensional cups can be shown to be necessarily false merely by showing that it posits an object with incompatible properties. Likewise, objects are (according to van Inwagen) things of which something is true. No extensive work is required to know that there are no propertyless objects. *Mutatis mutandis* for temporal parts.

Someone might say that the non-ontic presentist has an internally inconsistent theory. This is because she posits objective and modally flexible temporal structure that is not an object. But, so the objection goes, that's impossible. For something to be objective just is for it to be an object of the mind-independent world. Furthermore, for something to be modally flexible just is for it to exist in another possible world and to instantiate, in that world, different properties. "Non-objects" can't instantiate properties at all, let alone instantiate different properties in different worlds. The A-theory presentist posits something with incompatible features. Thus, her theory is unintelligible.

A proponent of the objection from ontologism should not buy into the internal consistency account of intelligibility. First, it is a somewhat question-begging way to put the objection. The A-theory presentist knowingly flouts ontologism when she develops her theory. The argument establishing that her theory is internally inconsistent rests on a prior commitment to ontologism (or something quite like it). Otherwise, why think that only objects can be objective and modally flexible?

Second, the internal consistency account of intelligibility should be avoided because it says too much. Many disputes in metaphysics involve theories with conflicting presuppositions. Take, for instance, the dispute between compatibilists and libertarians about free will. According to libertarians, what it is for an agent to act freely is (in part) for her action to not be causally determined.¹⁹ Compatibilism has no such presupposition.²⁰ When the compatibilist says, "An agent can act freely even if her action is causally determined," she says something that, from the vantage point of the libertarian, is necessarily false. But the libertarian knows that the compatibilist has a different understanding of what it is for an agent to act freely and so does not declare the compatibilist's view unintelligible. And the

¹⁹ See van Inwagen (1975).

²⁰ See Lewis (1981).

compatibilist returns the favor. This shows that a dispute can involve two views with importantly different presuppositions. It would be infelicitous to judge one of the views unintelligible by the standards of the other.

Few think the free will dispute should be dismissed because it involves an unintelligible position. But our presentist and her opponent are in a structurally similar dispute. Some would consider the presentist to be offering an internally inconsistent theory of time. But the theory is inconsistent only if we combine it with a metaphysical view that our presentist very clearly rejects. Thus, this version of the objection fails to show that there is anything distinctively wrong with metaphysical structuralism.

4.2 Intelligibility as definability

Another standard by which to measure intelligibility is in relation to already intelligible terminology. In order for some claim to be intelligible, it must be equivalent to a claim already taken to be intelligible. That is, where ϕ is an arbitrary sentence employing some new posit α , there must a sentence ψ free of α such that ψ is intelligible and ϕ is true just in case ψ is true. The intelligibility of ψ requires, at a minimum, that it employ already accepted terminology.

The definitional account is intuitive and suggest a clean version of the objection. ‘Structure’, as a term, is best understood not in relation to other terminology. Sider emphasizes this when he says he wants to, “use [structure] as the foundation of ‘metametaphysics’, and reconceptualize metaphysics in terms of it” (Sider 2011: 6). ‘Structure’ is intentionally *not* given definitional constraints.

Consider, again, our presentist. She claims that the world has non-ontic temporal structure. But her claim is not equivalent to any claim about the instantiation of A-theoretic properties or relations holding between abstract times—otherwise, her claim wouldn’t be about non-ontic structure. If intelligibility is definability, her theory comes out as unintelligible. So this account of intelligibility successfully identifies an aspect of her theory that is reportedly problematic.

But the intelligibility account as stated can’t be right. Definitions are useful in securing the intelligibility of some new term. But it would be unreasonable to demand that *every* expression be defined non-circularly. The ultimate consequence of such a demand is that everything is unintelligible. Something, at the end of the day, must be taken as primitive.

A more promising standard is one that requires any new term to be defined by a chain of definitions that ends with a sentence that uses only natural language expressions.²¹ This constraint still successfully targets structure. The presentist might say that the tense operator ‘*P*’ carves the world closer to its joints than does the dyadic predicate ‘is earlier than’, or that the world is tensed. But such characterizations are not truly definitions and are more like illustrative metaphors.

²¹ See the discussion of Chisholm-style definitions in van Inwagen (2014a: 25). I set aside the difficult question of what constitutes natural language as such and what constitutes so to speak unnatural or artificial language. I think the question raises many interesting issues, but ones that do not impact the dialectic of this paper.

The presentist's theory still fails to meet this weaker and more plausible definability standard.

Nevertheless, an objection based on the natural language standard will still show too much. Many technical terms in metaphysics resist being defined with natural language. Some plausible examples are: 'substance', 'essence', 'possible world', so-called tenseless verbs, and temporal parthood relations. The objection from ontologism is no more effective against our presentist's theory than against theories that use these other notions. To be sure, some metaphysicians are happy to declare those theories unintelligible as well. But many more are not. Many acknowledge that they can come to use primitive notions that resist definition in natural language terms, even though a full understanding of these terms requires at times some patience and hard work. Again, it turns out that metaphysical structuralism faces no special problem of intelligibility.

Furthermore, indispensable terms from other domains also resist natural language definitions. Set theory cannot be explained through natural language despite its otherwise praiseworthy clarity. Particle physics can at best be metaphorically characterized through natural language. It's not obvious why metaphysical terms should be held to a higher standard than scientific terms. Someone might argue that scientific terms are linked, albeit at times indirectly, to empirical observation. That might be true. But so are metaphysical terms. When I observe my cat walk across the room and into her nap-box, I observe (according to the B-theorist) a series of time slices all connected by the temporal parthood relation. Of course there are *other* theories of time whereby that is false, and it is quite likely that no empirical observation can differentiate between these rival theories. But given that the B-theory is true, time slices are no less linked to observation than are quarks.

4.3 Intelligibility as graspability

The first two accounts of intelligibility are often implicitly used when discussing metaphysical theories. But the fact that they have little to do with our mental lives might strike some as strange. Surely, they might say, intelligibility has to do with how we think. Take set theory. The notion of a set is intelligible because we readily grasp it when it is explained to us. Along these lines, someone might claim that any plausible account of intelligibility must be analyzed using some state or attitude of agents. Because this approach involves a relation to an agent's mental life, call this the *graspability* account of intelligibility.²²

Graspability, if it is to be of use to the ontologist, cannot be a purely subjective or phenomenological notion. Suppose someone feels as if she lacks an adequate understanding of the account of time presented at the beginning of this section. Short of her having a privileged perspective, her sense of being lost at sea cannot be justifiably extended to others. It would be disingenuous to attribute a lack of understanding to our presentist—let alone to real-life proponents of non-ontic structure. At best, the objector can say that to some people non-ontic structure seems

²² I am indebted to Kate Finley and Benjamin Rossi for discussion on this account of intelligibility.

unintelligible. Yet it is unclear how much this failure should move the proponent of structure.

The ontologist needs a more robust notion of graspability. I'll develop one that I find compelling but ultimately ineffective. I leave it to future ontologists to develop a notion of graspability that helps generate an effective version of the objection from ontologism.

In the spirit of Wittgenstein's later work, the ontologist might say that there are some propositions such that entertaining them is literally impossible.²³ This fact can be explained by the presence of what can be called *hinge* propositions. The collection of an agent's hinge propositions serves as a framework within which all other propositions are evaluated. In turn, a belief in a hinge proposition is not open to doubt; any potential grounds for doubt is by definition more susceptible to doubt than the original belief in the hinge proposition. So an agent's belief in a hinge proposition is something that she holds with certainty.

Yet such a belief is not certain in that it has strong justificatory support. Ordinarily, we think that an agent is making a mistake of some sort when she believes something in the absence of reasons for belief. For example, we might question Sarah's belief that *kafir* is gross if she has never tasted it before, has never asked what others think about it, and has no analogous experiences to draw on—in short, if she has no reason to believe that *kafir* is gross. But on this Wittgensteinian line not all of an agent's properly held beliefs need be supported by reasons in this way. Just as a belief in a hinge proposition is not open to doubt, so too is it not open to justification. Reasons cannot be brought to bear on it because the belief itself is not held on the basis of reasons.²⁴

For the ontologist, the relevant hinge proposition is the supervenience thesis articulated in Sect. 3, namely:

Supervenience Ontologism For any worlds w_1 and w_2 , every isomorphism between w_1 and w_2 that preserves *being a substantive ontological truth* is also an isomorphism that preserves *being a truth*.

Because this hinge proposition is not open to doubt, any metaphysical theory that calls it into question can be dismissed as unintelligible. The A-theory presentist's account is just such a theory.

The Wittgensteinian graspability objection in some ways resembles the flat-footed subjective objection from above. Yet it is arguably more dialectically powerful. On the subjective objection, there was no reason to privilege the ontologist's sense of confusion over the putative sense of understanding had by Sider et al. But the Wittgensteinian approach offers a way to privilege the ontologist. Consider the following scenario where someone tries to call into question a hinge proposition:

²³ See Wittgenstein (1969). And see Wright (2004), Pritchard (2005) for some relevant discussion. While I do my best here to avoid difficult exegetical issues, I follow Pritchard's interpretation when necessary.

²⁴ Because it is beyond the scope of the paper, I set aside the challenging transmission problem for this Wittgensteinian account. See Pritchard (2012) for more.

Suppose some adult had told a child that he had been inside a black hole. The child tells me the story, and I say it was only a joke, the man hadn't been in a black hole; no one has ever been in a black hole; the nearest black hole is incredibly far away and it is impossible to travel to one or to survive in one. If now the child insists, saying perhaps there is a way of getting there which I don't know, etc. what reply could I make to him? What reply could I make to the adults of a community who believe that people sometimes go into black holes (perhaps that is how they interpret their dreams), and who indeed grant that there are no ordinary means of traveling to or surviving within one? ...

"But is there then no objective truth? Isn't it true, or false, that someone has been inside a black hole?" If we are thinking within our system, then it is certain that no one has ever been inside a black hole. Not merely is nothing of the sort ever seriously reported to us by reasonable people, but our whole system of physics forbids us to believe it. For this demands answers to the questions "How did he live long enough to reach the black hole?" "How did he escape the event horizon?" and a thousand others which could not be answered. But suppose that instead of all these answers we met the reply: "We don't know how one gets to a black hole, but those who get there know at once that they are there; and even you can't explain everything." We should feel ourselves intellectually very distant from someone who said this.²⁵

The metaphysician who rejects ontologism is like the adult who claims to have been inside a black hole. To be sure, this does not prove that they are mistaken or even that their beliefs are less justified than the ordinary beliefs. But it is quite reasonable to regard them with suspicion.

The idea that supervenience ontologism is rightly considered a hinge proposition is not entirely without merit, but I believe the case to be less compelling than it might initially seem.

I admit that many philosophers from Quine to today seems to hold something like supervenience ontologism as a hinge proposition, as evidenced by the powerful quotes given in Sect. 3. And if any one person can speak on behalf of the "neo-Quineans", it is Peter van Inwagen. In a discussion of modes of being he says: "Relations are vastly different from tables, yes, but that's just to say that the members of one of those two classes of objects have vastly different natures from the members of the other—that the *properties* of relations are vastly different from the *properties* of tables...But when you've described the radically different properties that relations and tables have, you have not only done everything that *is needed* to describe the vast difference between relations and tables, you have done everything that *can be done* to describe it" (van Inwagen 2014b: 23, original emphasis). Generalizing slightly, it seems that the manifest variation we observe in reality can only be described by variation in individuals and properties. Every change can be—has to be—describable in these terms.

²⁵ This is an adaptation of Wittgenstein (1969: N106–108).

Yet this tendency toward individuals and their properties is a relatively new phenomenon. Many historical figures seem to reject it. Consider the doctrine just mentioned, that there are distinct modes of being. On one interpretation of this doctrine, to say that there are multiple ways of being is not to say that there are these things, ways of being, that exist. To put it as Heidegger would: *being* is not *a* being.²⁶ Arguably, this non-ontic understanding of being was also held by Aristotle and many Medieval philosophers.²⁷ On the reasonable assumption that the world's modes of being can be empty, these historical figures can be understood as offering a view potentially incompatible with supervenience ontologism.

Proponents of non-ontic structure can hardly be faulted for stepping outside the “neo-Quinean” tradition. In addition to having historical allies, they do not obviously challenge common sense. I doubt that “the folk” agree with the ontologist with respect to supervenience ontologism. Most likely they have no view on the matter. But if they did, I would bet they side with the so-called intellectual giants of history as opposed to contemporary neo-Quineans. Perhaps this is regrettable. But nonetheless it undercuts the ontologist's claim that supervenience ontologism is a broadly-held hinge proposition.

4.4 Intelligibility as sociological familiarity

None of the notions of intelligibility I have discussed so far are suitable for the objection from ontologism. The deficiency of the first two (internal consistency and definability) was in trying to hold ‘structure’ to a higher standard than other posits. The deficiency of the third (graspability) was in suggesting structure is more alien than it in fact is. A notion of intelligibility that would give the objection weight must split the difference. How can structure be differentiated from other primitive posits in a way that makes it uniquely problematic?

The best account for this purpose is one that is, so to speak, sociological. Such an account takes into consideration the landscape of metaphysics to determine which positions are seen by the community to be live options. An unintelligible view, on the sociological account, is a view that is so removed from the present conversation so as to be irrelevant or even absurd.

There are a host of problems with the sociological account. For starters, it presupposes that there is some way of discerning a larger community from the sundry philosophers that are for one reason or another called “metaphysicians”. It also abandons any robustly objective sense of intelligibility. Unless coupled with radical and implausible views about the progression of philosophy, the sociological account allows for a metaphysical posit to be intelligible at one time and

²⁶ See McDaniel (2009) for a fuller discussion of this non-ontic interpretation of Heidegger. Note, though, that McDaniel ultimately embraces a fully ontic account where a way of being is identified with a particular second-order property.

²⁷ See, e.g., Aquinas' *Summa Theologica* I, Question 13 (especially his discussion of equivocal predication in article 5).

unintelligible at another. More worrisome, it allows for two distinct metaphysical communities to reasonably disagree on what is intelligible.²⁸

Despite its pragmatic nature, the sociological account of intelligibility is well-suited for the objection from ontologism. The structure of the world is partially contingent in a way that goes beyond what is in the world and how those things are. So a theory of structure is inconsistent with ontologism. But, so the objection goes, contemporary metaphysics starts from the assumption that the world is nothing over and above its ontology. Ontology is, after all, the study of being. And the study of being is just the study of beings. Many metaphysicians disagree, of course, about what the world contains. It might be, as Hobbes claims, nothing but corporeal substances. Or it might contain universals and their exemplifying substances. Or it might be nothing but the spatio-temporal instantiations of natural properties. But every view on the table is one where a complete description of the world is exhausted by a (perhaps intricately organized) list of things that can be formalized into ontological sentences. Once you have explained what there is and how those things are you have done all that there is to do. Any suggestion there is more to do calls into question a presupposition of the current conversation. The suggestion is therefore rightly ignored.

I think this is the best version of the objection from ontologism. It highlights how a theory that posits non-ontic structure is in tension with recent efforts in metaphysics. It claims that structure is incompatible with a crucial presupposition, a presupposition that is allegedly reflected in extant metaphysical theories.

5 Intelligibility by way of analogy

Now the objection is precise enough to be evaluated. And here's the evaluation: the objection fails. This is because metaphysical structuralism is sufficiently similar to other views that metaphysicians already demonstrate a willingness and ability to take seriously. More precisely, many metaphysicians already acknowledge theories that make a distinction between ontological truths and non-ontological truths. Thus it seems that the the second main premise of the objection from ontologism—that any view that is incompatible with ontologism is unintelligible—is false.

In this section I discuss three theories (plural quantification, modal actualism, and stuff ontology) that reject ontologism. I suspect that there are many others out there. But these three examples should be enough to show that ontologism isn't the unquestionable presupposition it originally seemed to be. Since compatibility with ontologism is not a prerequisite for intelligibility, and since the alleged unintelligibility of metaphysical structuralism stems from its incompatibility with ontologism, metaphysical structuralism might in fact be intelligible. The objection from ontologism fails.

²⁸ In discussion, Michael Rea has noted that this has almost certainly already happened. The terminology employed by medieval scholastics is widely regarded today as unintelligible. Presumably, though, the scholastics weren't spouting literal nonsense.

One final point before I discuss the three cases. I take it that on the sociological account the intelligibility of a position that denies ontologism is somewhat independent of its precise formulation. I see no reason, for instance, for someone to find a theory that denies supervenience ontologism unintelligible but not find a theory that denies dependence ontologism—the view that all truths are grounded in (substantive) ontological truths—unintelligible. The former can be explicated in terms of the latter plus some supplemental modal notions that are presumably intelligible. There might be very good reasons to think that one version is true but not the other. But here I restrict myself to the more modest goal of arguing for the sociological intelligibility of structure.

In Sect. 3, I gave a first-order account of what claims are ontological. But many will want to include additional ideology into their theories. It is an open question which sentences employing the new ideology are ontological and which are not. One useful heuristic for discerning between the two, though, is to determine if there is an available translation that all parties would be willing to accept that generates only ontological sentences.²⁹ If there is one, then plausibly sentences involving the new ideology are themselves ontological.

A contentious case comes from plural quantification. Consider the sentence: “Some individuals admire only one another.” This natural language sentence can be regimented into plural quantification as:

$$\exists x \forall y \forall z (\text{If } y \text{ is among the } x\text{s and } y \text{ admires } z, \text{ then } z \text{ is among the } x\text{s and } z \neq y)$$

Some, like Quine (1982), would translate this sentence into one with ordinary first-order quantification over some sort of “aggregative” entity, like sets:

$$\exists S \forall y \forall z (\text{If } y \in S \text{ and } y \text{ admires } z, \text{ then } z \in S \text{ and } z \neq y)$$

Others would reject this translation. Interestingly, one reason commonly given for rejecting the translation is that the translation changes the topic. The sentence “Some individuals admire only one another,” is about the individuals, not about the set of those individuals. As Thomas McKay puts it, “[such] approaches distort the facts about the true subjects of predication...The fact that some individuals are surrounding a building does not semantically imply that some single individual (of any kind) surrounds the building” (McKay 2006: 22). In other words, plurally quantified truths are truths about things, but not truths about particular things.

This objection to the set-translation suggests that some proponents of irreducible plural quantification reject intentional ontologism. They think that no first-order sentence adequately captures the meaning of a plural sentence. Now, philosophers might disagree on the upshot of the difference in meaning. Someone might take it to suggest that the same world can be described in two distinct yet independently adequate ways. For her, the fact that plural sentences are not reducible to first-order sentences says very little about how the world itself is. In contrast, someone might take the first-order inadequacy to indicate that plural sentences are uniquely suited

²⁹ Cf. Sider (2011: 9.13).

to characterize some aspects of the world. This second, more serious, pluralist thinks that some metaphysical difference undergirds the difference between plural and first-order quantification.

Given that primitive plural quantification is regarded as intelligible, we have an example of a dispute in philosophy where all parties take seriously a theory that rejects ontologism.

But perhaps there are good reasons to consider plural quantification properly ontological. Let's turn to a theory that more clearly rejects ontologism. The sentence:

$$\Box \forall y \exists x (x = y)$$

is *prima facie* not ontological because the modal operator takes wide-scope. Many metaphysicians, though, would be happy to translate this sentence into one that eliminates the modal operator:

$$\forall P (\text{If } P \text{ is a possible world, then according to } P, \forall y \exists x (x = y))^{30}$$

This sentence is ontological. Yet some reject translations like this. Arthur Prior, for instance, eschews talk of possible worlds and takes modal expressions as primitive. In Prior and Fine (1977), Kit Fine calls this view *modal actualism* and is inclined to endorse it as well.

They both are also inclined to endorse the temporal analogue of modal actualism, where sentences employing tense operators are not to be translated into quantification over instants. Prior says that, “tense logic is for me, if I may use the phrase, *metaphysically fundamental*, and not just an artificially torn-off fragment of the first-order theory of the earlier-later relation” (37). What Prior means by this is hard to say. Yet it seems clear that he is rejecting some form of ontologism. Given that he is reluctant to include abstract times into his ontology and given that he is inclined to think that only present objects exist, he may even be taken to reject supervenience ontologism.³¹ Insofar as Prior's position is intelligible, ontologism is not mandatory.

Now consider theories that distinguish between *things* and *stuff*. The category of things includes: this football, the coffee mug, and my cat Widget. The category of stuff (according to some) includes: the air in the football, the coffee in the mug, and the matter that constitutes my cat Widget. The distinction itself is supposed to be primitive but there are some strategies we can employ to differentiate between things and stuff. First, things are typically denoted by count nouns and can be in principle individuated and thereby enumerated; stuff is typically denoted by mass nouns and cannot be counted—instead of asking “How many?” we ask “How much?” Along similar lines, quantification over things is expressed using terms like

³⁰ This translation should be acceptable to both modal realists like Lewis (1986) and ersatzers like van Inwagen (1986). Modal realists can understand the sentence in mereological terms. Ersatzers can understand the sentence in whatever truth-invoking terms they prefer. For ease of exposition, I use the locution ‘according to P’ to dodge the in/at distinction.

³¹ For more, see Prior and Fine (1977), especially chapter 6 and the postscript. See also Merricks (2007).

‘every’ and ‘many’. Quantification over stuff is expressed using terms like ‘all of’ and ‘so much’.³²

Markosian (2004, 2015) identifies three views about the relationship between things and stuff. According to the Thing Ontology, the most basic facts of the world are facts about things; stuff talk can be translated into thing talk. According to the Stuff Ontology, the most basic facts of the world are about *stuff*, and it is instead thing talk that can be eliminated. According to the Mixed Ontology, the most basic facts of the world include both thing facts and stuff facts; neither notion can be eliminated from our vocabulary without detracting from the accuracy of our descriptions.

As I see it, both the Stuff Ontology and the Mixed Ontology deny some version of ontologism. Markosian himself endorses the Mixed Ontology. Although he thinks facts about stuff supervene on facts about things, he also thinks facts about things supervene on facts about stuff. This suggests that he denies dependence ontologism.³³

Whether or not stuff-truths are ontological depends on how we formulate expressions about stuff in our theory. Clearly, there are quantificational truths about stuff. For example:

Some wine is more tannic than other wine.

But should quantification over stuff employ the same quantifier as quantification over things, or should it employ a unique quantifier as (I’ve suggested) plural quantification does? Markosian prefers to formulate stuff-truths using the ordinary quantifier. He would formulate the above sentence as:

$$\exists x \exists y (x \text{ is wine, } y \text{ is wine, } x \neq y \text{ and } x \text{ is more tannic than } y)$$

Formulated like this, the sentence counts as ontological. Markosian is not altogether opposed to formulating stuff-truths with a special-purpose quantifier, though. Using the symbol ‘ \mathcal{H} ’ to express stuff-quantification we could formulate the claim as:

$$\mathcal{H}s_1 \mathcal{H}s_2 (s_1 \text{ is wine, } s_2 \text{ is wine, } s_1 \neq s_2 \text{ and } s_1 \text{ is more tannic than } s_2)$$

where ‘ $\mathcal{H}s_1$ ’ is more felicitously expressed as “Some s_1 stuff is such that...” Plausibly, then, there can be variation in facts about stuff without variation in facts about things.³⁴ So some theories that posit stuff are inconsistent with ontologism.

In this section, I’ve presented three views in metaphysics that deny some version of ontologism. These views are often regarded as intelligible. According to the sociological account of intelligibility, a view is unintelligible when it deviates from accepted presuppositions. Many do not reject these three views (though to be sure

³² For more on the differences between things and stuff, see Laycock (1979). For comparison, see Cartwright (1979) and Zimmerman (1995).

³³ For similar reasons, McKay (2015) also denies ontologism about stuff.

³⁴ For what it’s worth, I think Markosian is mistaken to think that stuff-truths should be represented with the same quantifier used to represent thing-truths. This is because stuff-quantification varies axiomatically from thing-quantification. Following McDaniel (2010), this is good reason to think that the expressions are analogous at best. See, also, Laycock (2006, chapter 4).

some do) even though the views are incompatible with ontologism. Thus, on the sociological account the denial of ontologism is intelligible. That metaphysical structuralism is incompatible with ontologism is thus not an issue. Non-ontic structure might be problematic for other reasons. But it is at least in this sense intelligible.

As a final note, there seem to be other views less obviously counted as metaphysical that nevertheless reject ontologism, though I am less qualified to identify them as such. Hilary Putnam endorses a view on which some ethical truths are objective but not descriptive. For instance, the claim “Terrorism is criminal,” is, according to Putnam, true despite not being about any thing in the world.³⁵ Certain theories of physics do not mesh well with the neo-Quinean conception of ontology. As far as I understand, some interpretations of quantum field theory violate standard assumptions about the individuation of objects. While arguments are given against such interpretations, they are recognized as legitimate contenders.³⁶ And some versions of ontic structural realism deny the existence of all entities.³⁷

6 Conclusion

In this paper, I’ve attempted to develop the most viable version of the objection from ontologism. This version claims that metaphysical structuralism problematically breaks with metaphysical orthodoxy. While the objection might not show metaphysical structuralism to be essentially unintelligible, it does attempt to put a greater burden of proof its proponents.

I also argued, however, that the belief that metaphysical structuralism marks a radical departure from orthodoxy is mistaken. There are several extant metaphysical theories that, in one way or another, deviate from ontologism. Given that these theories are not in general seen as unintelligible, metaphysical structuralism shouldn’t be either—at least so far as the objection from ontologism is concerned.

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³⁵ See Putnam (2004, Lecture 4, 72–73 and 77–78).

³⁶ See French (1989), Dorato and Morganti (2013), French and Krause (2006), and Howard et al. (2011).

³⁷ See Ladyman (1998) and Ladyman and Ross (2009). But see Chakravartty (1998) for an argument against ontic structural realism that parallels some of what is said against metaphysical structuralism.

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