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# Absolute Generality Reconsidered

Agustín Rayo

Years ago, when I was young and reckless, I believed that there was such a thing as an all-inclusive domain.<sup>1</sup> Now I have come to see the error of my ways.

The source of my mistake was a view that might be labeled ‘Tractarianism’. Tractarians believe that language is subject to a *metaphysical* constraint. In order for an atomic sentence to be true, there needs to be a certain kind of correspondence between the semantic structure of the sentence and the ‘metaphysical structure’ of reality. The purpose of this paper is to explain why I think Tractarianism is mistaken, and what I think an anti-Tractarian should say about absolutely general quantification.

## 1 The Plan

‘Just is’-statements will be important in what follows, so let me start by giving you some examples:

1. SIBLING

For Susan to be a sibling *just is* for her to share a parent with someone.

2. WATER

For the glass to be filled with water *just is* for it to be filled with H<sub>2</sub>O.

3. PHYSICALISM

For such-and-such a mental state to be instantiated *just is* for thus-and-such brain-state to be instantiated (and for the environment to be thus-and-so).

4. PROPERTIES

For Susan to instantiate the property of running *just is* for Susan to run.

5. DEATH

For a death to take place *just is* for someone to die.

6. TABLES

For there to be a table *just is* for there to be some things arranged tablewise.

7. DINOSAURS

For the number of the dinosaurs to be Zero *just is* for there to be no dinosaurs.

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<sup>1</sup> Relevant texts include [Rayo \(2002\)](#), [Rayo \(2003\)](#) and [Rayo and Williamson \(2003\)](#).

Statement 1 is utterly uncontroversial. Statement 2 should be pretty uncontroversial too, at least if we ignore certain complications (such as the possibility of impurities). Statement 3 is not totally uncontroversial ([Chalmers \(1996\)](#)), but it seems to be the dominant view amongst philosophers.

Statements 4–7, on the other hand, are all highly controversial metaphysical theses. My own view is that they are all true, but I won't try to convince you of that here. The aim of this paper is to argue that they shouldn't be rejected on general linguistic or metaphysical grounds. I will proceed by defending a conception of language I call *compositionism*, and showing that it makes room for Statements 4–7. I will then argue that a compositionalist who accepts Statements 4–7 is left with an attractive metaphysical picture of the world.

The plan for the paper is as follows. I will start by explaining how I think the 'just is' operator should be understood (section [2](#)). I will then introduce my foil: Tractarianism. I will explain why I think Tractarianism is bad philosophy of language (section [3](#)), and develop compositionism as an alternative to Tractarianism (section [4](#)). Attention will then turn to metaphysics. I will argue that compositionism does not lead to untoward metaphysical consequences, even if one accepts 'just is' statements such as 4–7 (section [5](#)). I will conclude by addressing the problem of absolute generality from the perspective of the compositionalist (section [6](#)).

## 2 The 'Just is' Operator

Before mounting my defense of compositionism, it will be useful to say something about how I will be understanding the 'just is' operator, as it occurs in Statements 1–7.

Consider SIBLING as an example. What it takes for SIBLING to be true is for there to be *no difference* between Susan's having a sibling and Susan's sharing a parent. If Susan is a sibling it is *thereby* the case that she shares a parent, and if she shares a parent it is *thereby* the case that she is a sibling. More colorfully: when God created the world, and made it the case that Susan shared a parent, there was nothing *extra* She had to do, or refrain from doing, in order to ensure that Susan was a sibling. She was already done. And when God created the world, and made it the case that Susan was a sibling, there was nothing *extra* She had to do, or refrain from doing, in order to ensure that Susan shared a parent. She was already done.

In the special case in which Susan is, in fact, a sibling, there is an additional way of clarifying the meaning of SIBLING. For SIBLING to be true is for ‘Susan is a sibling’ and ‘Susan shares a parent’ to be full and accurate descriptions of the *same* feature of reality.

Other ‘just is’-statements should be understood in the same sort of way. For DEATH to be true is for there to be *no difference* between someone’s dying and a death’s taking place. When someone dies it is *thereby* the case that a death takes place, and when a death takes place it is *thereby* the case that someone dies. The feature of reality that is fully and accurately described by saying ‘A death took place’ is also fully and accurately described by saying ‘Someone died’.

It is useful to compare SIBLING and DEATH with an identity statement such as ‘Hesperus is Phosphorus’. If you accept ‘Hesperus is Phosphorus’, you believe that there is no difference between traveling to Hesperus and traveling to Phosphorus. Someone who travels to Hesperus has *thereby* traveled to Phosphorus, and someone who travels to Phosphorus has *thereby* travelled to Hesperus. The feature of reality that is fully and accurately described by saying ‘A Soviet spaceship traveled to Hesperus’ is also fully and accurately described by saying ‘A Soviet spaceship traveled to Phosphorus’.

Since ‘just is’-statements are treated as equivalent to the corresponding ‘no difference’ statements, the ‘just is’ operator is treated as *symmetric*. There is a different reading of ‘just is’ on which it fails to be symmetric. One could suggest, for example, that a ‘just is’ statement should only be counted as true if the right-hand-side ‘explains’ the right-hand-side, or if it is in some sense ‘more fundamental’. This is *not* the reading that will be relevant for present purposes. If you find the asymmetric reading more natural than the symmetric reading, please substitute a suitable ‘no difference’-statement for each ‘just is’-statement in the text.

There is a lot more to be said about ‘just is’-statements.<sup>2</sup> But we had better plunge ahead. Otherwise we’ll never get to absolute generality.

### 3 Tractarianism

In this section I will introduce my foil: a view that will be referred to as *Tractarianism*.<sup>3</sup> It makes no difference for present purposes whether there are any actual Tractarians. The point of

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<sup>2</sup> See [Rayo \(typescript\)](#). For a different way of thinking about ‘just is’-statements, see [Bennett \(2009\)](#).

<sup>3</sup> For further discussion of Tractarian conceptions of language, see [Heil \(2003\)](#). For criticism, see [Eklund \(2009\)](#).

introducing Tractarianism is that it'll make it easier to explain what compositionality amounts to, and why it is an attractive thesis.

A Tractarian believes that in order for an atomic sentence to be true, there needs to be a certain kind of correspondence between the semantic structure of the sentence and the 'metaphysical structure' of reality. Consider 'Susan runs' as an example. Let us agree that in order for this sentence to be true, it must supply a full and accurate description of some feature of reality. As long as one is suitably deflationary about fact-talk, one might think of the relevant feature of reality as a *fact*: the fact that Susan runs. What is distinctive about Tractarianism is the claim that 'Susan runs' can only supply an accurate description of the fact that Susan runs if the semantic structure of 'Susan runs' is in sync with the particular way in which the world's metaphysical structure carves up the fact that Susan runs. In particular: metaphysical structure must have carved up the fact into an object and a property such that 'Susan' refers to the object and 'runs' expresses the property.

More generally, Tractarianism is the view that in order for an atomic sentence  $\lceil F(t_1, \dots, t_n) \rceil$  to constitute a full and accurate description of a given feature of reality, the following three conditions must hold:

1. The world's metaphysical structure carves up the relevant feature of reality into the objects  $a_1, \dots, a_n$  and the property  $P$ .
2. For each  $i$ , the singular term  $\lceil t_i \rceil$  refers to  $a_i$ .
3. The predicate  $F$  expresses  $P$ .

Tractarianism is a substantial view. Notice, in particular, that Tractarians are immediately barred from accepting certain 'just is'-statements. Consider 'for Socrates's death to take place *just is* for Socrates to die'. The embedded sentences are both atomic, but they have different semantic structures. Suppose for *reductio* that they both describe the same feature of reality, as the 'just is' statement would have it. How does the relevant feature of reality get carved up by the world's metaphysical structure? At most one of the following can be true:

- It gets carved up into Socrates and the property of dying.
- It gets carved up into Socrates's death and the property of an event's taking place.

If the former is true, then the relevant feature of reality can be accurately described by 'Socrates is dying', but not by 'Socrates's death is taking place'. If the latter is true, then the relevant feature of reality can be accurately described by 'Socrates's death is taking place', but not by 'Socrates is dying'. Either way, the 'just is' statement turns out to be false.

Here I am taking for granted that the logical form of a sentence can be read off more or less straightforwardly from the sentence's surface grammatical structure. This is a non-trivial assumption. Say you believe that proper logical analysis of 'Socrates is dying' reveals it to have the same logical form as 'Socrates's death is taking place'. Then you should think that the Tractarian could accept 'for Socrates's death to take place *just is* for Socrates to die' after all. Contemporary linguistics does suggest that there are certain cases in which there is a real mismatch between surface structure and semantically operative lower-level syntactic structure. But, as far as I can tell, it is not the sort of mismatch that would offer much comfort to the Tractarian. (See, for instance, the treatment of semantics in [Heim and Kratzer \(1998\)](#).) If this is right, then the assumption that logical form can be read off more or less straightforwardly from grammatical structure is a harmless simplification in the present context.

There are certain 'just is'-statements that the Tractarian *is* in a position to accept. She is free to accept 'for Susan to be a sibling *just is* for Susan to share a parent', for example. For, as long as she is happy to identify the property of being a sibling with the property of sharing a parent, she will be in a position to claim that the semantic structures of *both* 'Susan is a sibling' and 'Susan shares a parent' are in sync with the metaphysical structure of the fact that Susan is a sibling. For similar reasons, the Tractarian is free to accept WATER and PHYSICALISM, from section [1](#).

The Tractarian is, however, barred from accepting PROPERTIES. And, on reasonable assumptions about the treatment of non-atomic sentences, she is also barred from accepting DINOSAURS and TABLES. As I noted above, these are all controversial metaphysical theses. What is striking about Tractarianism is that it rules them out merely on the basis of *syntactic* considerations.

### **Metaphysical Structure**

Tractarianism is a hybrid of linguistic and metaphysical theses. It deploys a metaphysical assumption—the existence of metaphysical structure—to impose a constraint on linguistic theorizing. I suspect that the notion of metaphysical structure is not in good order, and I would like to make a few remarks about why I think this is so.

Let me start by talking about objectivism. Most of us are objectivists about truth. We believe that it makes sense to speak of what is objectively the case, as something over and

above what is true *according* to one person or another. Many philosophers, but not all, are objectivists about morality. They believe that it makes sense to speak of what is objectively good, as something over and above what would be good *with respect to* some value system or other. Few philosophers, if any, are objectivists about fashion. You may think that ascots are fashionable. But it would be preposterous to suggest that they are *objectively* fashionable: fashionable over and above the tastes of some community or other.

Objectivism comes at a cost. An objectivist about fashion, for example, would be faced with the awkward task of elucidating a non-trivial connection between what is objectively fashionable and what various communities take to be fashionable. She would also have to choose between coming up with an explanation of what it takes for something to be objectively fashionable and burdening her picture of the world with the view that there are brute facts about objective fashion. And the rewards for her efforts would be decidedly meager. For it is not clear what theoretical advantages fashion objectivism could bring. As far as I can tell, interesting theoretical questions concerning fashion can all be addressed by using a community-relative notion of fashionability.

When the price of objectivism is not worth paying, one should do more than simply deny that the relevant objectivist notion has any instances. One should deny that the notion *makes sense*. Someone who claims to understand the notion of objective fashionability faces the burden of elucidating the connection between objective and community-relative fashionability, whether or not she thinks the world happens to contain any instances of objectively fashionable outfits. For what gives rise to the explanatory burden is the *concept* of objective fashionability, not the assumption that it has any instances.

In some cases, of course, the price of objectivism *is* worth paying. The notion of objective truth is fruitful enough that few would feel unduly burdened by the need to explain the connection between objective truth and truth according to an agent, or by a picture of the world whereby there are brute facts about what is objectively true and what is not.

Metaphysics is filled with objectivist views. There are metaphysicians who believe that it makes sense to speak of objective similarity, as something over and above what might strike an agent as similar.<sup>4</sup> There are metaphysicians who believe it makes sense to speak of objectively fundamental vocabulary, as something over and above the role a piece of

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<sup>4</sup> See [Lewis \(1983\)](#) and [Lewis \(1984\)](#).

vocabulary plays in some scientific theory or other.<sup>5</sup> And—most relevantly for present purposes—a metaphysician might think that it makes sense to speak of the objectively correct way of carving up reality into objects, as something over and above the syntactic properties of the various representations one might use to describe the world.

Before embracing a form of metaphysical objectivism, it is important to be mindful of the costs. My own view is that when it comes to metaphysical structure, the price is not worth paying. For I suspect that many of the most interesting metaphysical questions can be addressed without having to appeal to the notion of metaphysical structure. Because of this, the need to elucidate the connection between an objectively correct way of carving up reality and the ways in which reality gets carved up by our representations strikes me as too high a price to pay for the resulting theoretical benefits. (At the same time, I don't think it would be irrational to think otherwise.<sup>6</sup>)

### **Bad Philosophy of Language**

Even though I suspect that the notion of metaphysical structure makes no sense, I will not be relying on this assumption anywhere in the paper. My argument against Tractarianism will be based on the claim that Tractarianism is bad philosophy of language.

As the name suggests, Tractarianism is a close cousin of the 'picture theory' that Wittgenstein advocated in the *Tractatus*.<sup>7</sup> And it ought to be rejected for just the reason Wittgenstein rejected the picture theory in his later writings. Namely: if one looks at the way language is actually used, one finds that usage is not beholden to the constraint that an atomic sentence can only be true if its semantic structure is in suitable correspondence with the metaphysical structure of the world.

It is simply not the case that ordinary speakers are interested in conveying information about metaphysical structure. The sentences 'a death took place' and 'someone died', for example, are used more or less interchangeably in non-philosophical contexts. An ordinary speaker might choose to assert one rather than the other on the basis stylistic considerations, or in order to achieve the right emphasis. But it would be tendentious to suggest that her

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<sup>5</sup> See [Fine \(2001\)](#), [Schaffer \(2009\)](#) and [Sider \(typescript\)](#).

<sup>6</sup> See, for instance, [Schaffer \(2009\)](#) and [Sider \(typescript\)](#). For a critique of certain forms of metaphysical objectivism, see [Hofweber \(2009\)](#).

<sup>7</sup> Here I have in mind a traditionalist interpretation of the *Tractatus*, as in [Hacker \(1986\)](#) and [Pears \(1987\)](#). See, however, [Goldfarb \(1997\)](#).



choice turns on her views about metaphysical structure. It is not as if an ordinary speaker would only be prepared to assert 'a death took place' instead of 'someone died' if she has a certain metaphysical view about *events*: that they are amongst the entities carved out by the world's metaphysical structure. Think about how inappropriate it would be to respond to an assertion of 'a death took place' in a non-philosophical context by saying "I am certainly prepared to grant that someone died, but I just don't think that the world contains events amongst its ultimate furniture." One's interlocutor would think that one has missed the point of her assertion, and gone off to a different topic.

If ordinary *assertions* of 'a death took place' are not intended to limn the metaphysical structure of the world, what could be the motivation for thinking that the truth-conditions of the *sentence asserted* play this role? As far as I can tell, it is nothing over and above the idea that semantic structure ought to correspond to metaphysical structure. Remove this idea and there is no motivation left. To buy into Tractarianism is to start out with a preconception of the way language ought to work, and impose it on our linguistic theorizing from the outside—from beyond what is motivated by the project of making sense of our linguistic practice.

### **Moderate Tractarianism**

There is a *moderate* form of Tractarianism according to which the constraint that there be a correspondence between semantic structure and metaphysical structure applies only to assertions made by philosophers in the 'ontology room'. When I use the term 'Tractarianism' here, the view I have in mind is always *non-moderate* Tractarianism. My arguments for the claim that Tractarianism is bad philosophy of language do not apply to moderate Tractarianism. For all I know, there is a special convention governing discourse in the ontology room, which demands correspondence between semantic and metaphysical structure. If you are sympathetic towards moderate Tractarianism, that's fine. Just make sure you don't interpret me as a moderate Tractarian.

A moderate Tractarian is free to accept a 'just is'-statement such as 'for a death to take place *just is* for someone to die'. All she needs to do is insist that at most one side of the 'just is'-statement is taken in an ontology-room spirit. To avoid confusion, moderate Tractarians might consider introducing a syntactic marker for ontology-room discourse, as in [Fine \(2001\)](#). They could then say

What it *really* is for a death to take place is for someone to die  
or

What it is, *in fundamental terms*, for a death to take place is for someone to die to indicate that the feature of reality described by ‘a death takes place’ gets carved by the world’s metaphysical structure in a way that corresponds to the semantic structure of ‘someone dies’.

Just to be clear: this is *not* what I intend when I use ‘just is’ statements here.

## 4 Compositionism

I will now defend an alternative to Tractarianism: the view I shall refer to as *compositionism*.

Suppose you introduce the verb ‘to tableize’ into your language, and accept ‘for it to tableize *just is* for there to be a table’ (where the ‘it’ in ‘it tableizes’ is assumed to play the same dummy role as the ‘it’ in ‘it is raining’). Then you will think that what would be required of the world in order for the truth-conditions of ‘it tableizes’ to be satisfied is precisely what would be required of the world in order for the truth-conditions of ‘there is a table’ to be satisfied. In both cases, what would be required is that there be a table (equivalently: that it tableize). So you will think that—for the purposes of stating that there is a table—object-talk is *optional*. One can state that there is a table by employing a quantifier that binds singular term positions—as in ‘there is a table’—but also by employing an essentially different syntactic structure—as in ‘it tableizes’.

If object-talk is optional, what is the point of giving it a place in our language? The right answer, it seems to me, is “compositionality”. A language involving object-talk—that is, a language including singular terms and quantifiers binding singular term positions—is attractive because it enables one to give a recursive specification of truth-conditions for a class of sentences rich in expressive power. But there is not much more to be said on its behalf. In setting forth a language, we want the ability to express a suitably rich range of *truth-conditions*. If we happen to carry out this aim by bringing in singular terms, it is because they supply a convenient way of specifying the right range of truth-conditions, not because they have some further virtue.

A proponent of this sort of view will disagree with the Tractarian about what it takes for a singular term to succeed in referring. Whereas the Tractarian would insist that a singular term can only succeed in referring if it is paired with one of the objects carved out by the

world's metaphysical structure, proponents of the present view will claim that all it takes is a suitable specification of *truth-conditions* for sentences involving the term.

More specifically, we shall let *compositionality* be the view is that all it takes for a singular term  $t$  to refer is for the following three conditions to obtain:

1. Truth-conditions have been specified for every sentence involving  $t$  that one wishes to make available for use.
2. The assignment of truth-conditions respects compositionality, in the following sense: If  $\phi$  is a syntactic consequence of  $\psi$ , then the truth-conditions assigned to  $\psi$  impose at least as strong a requirement on the world as the truth-conditions assigned to  $\phi$ .
3. The world is such as to satisfy the truth-conditions that have been associated with the sentence ' $\exists x(x = t)$ '.

Compositionality is a substantial view. The best way to see this is to imagine the introduction of a new family of singular terms ' $\ulcorner$  the direction<sup>\*</sup> of  $a$  $\urcorner$ ', where  $a$  names a line. The only atomic sentences involving direction<sup>\*</sup>-terms one treats as well-formed are those of the form ' $\ulcorner$  the direction<sup>\*</sup> of  $a$  = the direction<sup>\*</sup> of  $b$  $\urcorner$ ', but well-formed formulas are closed under negation, conjunction and existential quantification. A sentence  $\phi$  is said to have the same truth-conditions as its nominalization  $[\phi]^N$ , where nominalizations are defined as follows:<sup>8</sup>

- $[\ulcorner$  the direction<sup>\*</sup> of  $a$  = the direction<sup>\*</sup> of  $b$  $\urcorner]^N = \ulcorner a$  is parallel to  $b$  $\urcorner$ .
- $[\ulcorner x_i$  is the direction<sup>\*</sup> of  $a$  $\urcorner]^N = \ulcorner x_i$  is parallel to  $a$  $\urcorner$ .
- $[\ulcorner x_i = x_j$  $\urcorner]^N = \ulcorner x_i$  is parallel to  $x_j$  $\urcorner$ .
- $[\ulcorner \exists x_i(\phi)$  $\urcorner]^N = \ulcorner \exists x_i([\phi]^N)$  $\urcorner$ .
- $[\ulcorner \phi \wedge \psi$  $\urcorner]^N =$  the conjunction of  $[\phi]^N$  and  $[\psi]^N$ .
- $[\ulcorner \neg \phi$  $\urcorner]^N =$  the negation of  $[\phi]^N$ .

It is easy to verify that every condition on the compositionalist's list is satisfied. Notice, in particular, that since  $[\ulcorner \exists x(x = \text{the direction}^* \text{ of } a)\urcorner]^N$  is ' $\exists x(x \text{ is parallel to } a)$ ', and since every line is parallel to itself, all that is required for the truth-conditions of ' $\exists x(x = \text{the direction}^* \text{ of } a)$ ' to be satisfied is that  $a$  exist.

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<sup>8</sup> It is worth noting that the nominalizations of open formulas turn out to be open formulas, and therefore lack truth-conditions. Fortunately, all that is required for present purposes is an assignment of truth-conditions to well-formed *sentences*.

Accordingly, the compositionalist will claim that the existence of  $a$  is enough to guarantee that the singular term ‘the direction<sup>\*</sup> of  $a$ ’ has a referent. Moreover, by employing the newly introduced vocabulary in the metalanguage, the compositionalist will claim that the referent of ‘the direction<sup>\*</sup> of  $a$ ’ is the direction<sup>\*</sup> of  $a$ , and therefore that the existence of  $a$  is enough to guarantee the existence of the direction<sup>\*</sup> of  $a$ .<sup>9</sup>

How is this possible? How could a linguistic stipulation, together with the existence of lines, guarantee the existence of *directions*<sup>\*</sup>? There is nothing deep or mysterious going on. As a result of the linguistic stipulation, the fact that is fully and accurately described by saying ‘ $a$  is parallel to  $b$ ’ can now also be fully and accurately described by saying ‘the direction<sup>\*</sup> of  $a$  = the direction<sup>\*</sup> of  $b$ ’. Similarly, the fact that is fully and accurately described by saying ‘ $a$  is parallel to  $a$ ’ can now also be fully and accurately described by saying ‘the direction<sup>\*</sup> of  $a$  = the direction<sup>\*</sup> of  $b$ ’. So *of course* the existence of lines is enough to guarantee the existence of *directions*<sup>\*</sup>: for the direction<sup>\*</sup> of  $a$  to be self-identical (equivalently: for the direction<sup>\*</sup> of  $a$  to exist) *just is* for  $a$  to be self-parallel (equivalently: for  $a$  to exist).

Needless to say, the Tractarian would insist that such a linguistic stipulation is inadmissible. She would insist, in particular, that ‘ $a$  is parallel to  $b$ ’ and ‘the direction<sup>\*</sup> of  $a$  = the direction<sup>\*</sup> of  $b$ ’ cannot be full and accurate descriptions of the *same* fact. For they are atomic sentences with distinct semantic structures. So they cannot both be in sync with the way in which the fact that  $a$  is parallel to  $b$  gets carved up by the world’s metaphysical structure. According to the Tractarian, there can’t be *directions*<sup>\*</sup> unless some fact gets carved up into *directions*<sup>\*</sup> by the world’s metaphysical structure. And even if the existence of lines is taken for granted, no stipulation can tell us that *directions*<sup>\*</sup> are amongst the objects carved out by the world’s metaphysical structure.

The compositionalist, on the other hand, believes that an atomic sentence can be true even if there is no correspondence between semantic structure and metaphysical structure. So there is no immediate obstacle for atomic sentences with different semantic structures to deliver full and accurate descriptions of the same fact. We needn’t check whether *directions*<sup>\*</sup>

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<sup>9</sup> For closely related views, see [Frege \(1884\)](#), [Wright \(1983\)](#) and [Rosen \(1993\)](#). Discussion of compositionism amongst contemporary metaphysicians in the United States has tended to focus on the work of Eli Hirsch, who draws on earlier work by Hilary Putnam. (See, for instance, [Putnam \(1987\)](#) and [Hirsch \(2002\)](#); for criticism, see [Eklund \(2008\)](#) and [Bennett \(2009\)](#).) It is worth keeping in mind, however, that some of Hirsch’s linguistic theses go significantly beyond anything defended here, and that his general attitude towards metaphysics is profoundly different from my own (see, in particular, the discussion in section 4.1 of the present text).

are amongst the objects carved out by the world's metaphysical structure in order to determine whether there are any directions<sup>\*</sup>. It is enough to observe that 'a is parallel to a' and 'the direction<sup>\*</sup> of a = the direction<sup>\*</sup> of a' are full and accurate descriptions of the same fact, and that a is indeed parallel to itself. (Notice, incidentally, that it is no part of compositionism that there is no such thing as metaphysical structure. The point is simply that the notion of metaphysical structure does not figure in a proper account of the reference of singular terms.<sup>10</sup>)

It is important to be clear that compositionism does not entail any interesting 'just is'-statements unless it is supplemented with further claims. Notice, in particular, that compositionism does *not* entail that all it takes for the direction of a (as opposed to the direction<sup>\*</sup> of a) to exist is for a to exist. In order to get that conclusion we would need a substantial hypothesis about the truth-conditions of sentences involving the ordinary word 'direction'. In particular, we would need to help ourselves to the claim that the ordinary sentence 'the direction of a exists' has the same truth-conditions as 'a exists'. And this is non-trivial assumption. We would, in effect, be assuming that for the direction of a to be identical to the direction of b *just is* for a to be parallel to b, which a controversial metaphysical claim. It is true that we made the analogous assumption in the case of directions<sup>\*</sup>. But back then we were introducing a new term, and were therefore free to introduce truth-conditions by stipulation.

Although compositionism does not commit one to the acceptance of any interesting 'just is' statements, it does *eliminate an obstacle* for the acceptance of 'just is'-statements. One is no longer barred from accepting a 'just is'-statement merely on the basis of syntactic considerations. But there is substantial work to be done before one can make a case for accepting any particular statement.

#### 4.1 'Just is' Statements in Metaphysics

Some of the 'just is'-statements a compositionist is in a position to accept constitute interesting metaphysical theses: for the number of the dinosaurs to be *Zero just is* for there

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<sup>10</sup> It is also worth noting that compositionism is not in tension with the view—first suggested in Lewis (1983) and Lewis (1984)—that problems of referential indeterminacy can sometimes be resolved by attending to metaphysical naturalness. Compositionism is a view about what it takes for a singular term to be in good order, not about the sorts of considerations that might be relevant to fixing the reference of singular terms. There is room for thinking that Lewis himself was a compositionist: see Lewis (1980).

to be no dinosaurs; for Susan to instantiate the property of running *just is* for Susan to run. Let me say something about the sorts of considerations that might be relevant to deciding whether to accept ‘just is’-statements such as these. (My discussion is very much indebted to [Block and Stalnaker \(1999\)](#) and [Block \(2002\)](#).)

When one accepts a ‘just is’ statement one closes a theoretical gap. Suppose you think that for a gas to be hot *just is* for it to be have high mean kinetic energy.<sup>11</sup> Then you should think there is no need to answer the following question: “I can see that the gas is hot. But why does it also have high mean kinetic energy?” You should think, in particular, that the question rests on a false presupposition. It presupposes that there is a *gap* between the gas’s being hot and its having high kinetic energy—a gap that should be plugged with a bit of theory. But to accept the ‘just is’ statement is to think that the gap is illusory. There is no need to explain how the gas’s being hot might be correlated with its having high mean kinetic energy because there is no difference between the two: for a gas to be hot *just is* for it to be have high mean kinetic energy.

The decision whether to treat the gap as closed is partly a terminological issue. (How should we use the word ‘heat?’) But in interesting cases the terminological issue is tied up with substantial theoretical issues. (Is the thermodynamic theory of heat superior to the caloric theory of heat?) And it isn’t always easy to separate the two.

Rejecting a ‘just is’ statement comes at a cost, since it increases the range of questions that are regarded as rightfully demanding answers (why does this hot gas have high kinetic energy?), and therefore the scenarios one treats as intelligible (there is a hot gas with low mean kinetic energy). But having extra scenarios to work with can also prove advantageous, since it makes room for additional theoretical positions, some of which could deliver fruitful theorizing. (A proponent of the caloric theory of heat, for example, would want to make room for a scenario in which a substance is hot because it contains high quantities of caloric fluid, even though it is not made up of particles with high kinetic energy.) Disagreement about whether to accept a ‘just is’ statement is best thought of as disagreement about whether the additional theoretical space would be fruitful enough to justify paying the price of having to answer a new range of potentially problematic questions.<sup>12</sup>

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<sup>11</sup> This is a badly inaccurate statement of the thermodynamic theory of heat. Fortunately, the inaccuracies are harmless in the present context.

<sup>12</sup> For a more detailed discussion of these matters, see [Rayo \(typescript\)](#).

We have been focusing on an example from the natural sciences, but our conclusions carry over to ‘just is’ statements in metaphysics. One has to balance the cost of rejecting the relevant statement—an increase the range of questions that are regarded as rightfully demanding answers—with the cost of accepting the statement—a decrease in the range of theoretical resources one has at one’s disposal.

There is no quick-and-easy criterion for determining whether the extra theoretical space is fruitful enough to justify paying the price of having to answer a new range of potentially problematic questions. The only reasonable way to proceed is by rolling up one’s sleeves and doing metaphysics.<sup>13</sup>

Suppose we are considering whether to accept ‘for a time to be present *just is* for it to have a certain relational property’. By accepting the ‘just is’ statement one would eliminate the need to answer an awkward question: what does it take for a time to be present *simpliciter*, as opposed to present relative to some time or other? But there is a price to be paid, because it is not immediately obvious that one will have the theoretical resources to explain the feeling that there is something special about the present. By rejecting the ‘just is’ statement, on the other hand, one would be left with a gap to fill—one needs to explain what it is for a time to be present *simpliciter* as something over and above being present relative to some time or other. One could try to fill the gap by saying something like ‘to be present *simpliciter* is to be at the edge of objective becoming’, and thereby introduce a new theoretical resource. It is not immediately obvious, however, that such a move would lead to fruitful theorizing, or be especially effective in explaining the feeling that there is something special about the present. The decision whether to accept the ‘just is’ statement is a decision about how to best negotiate these competing theoretical pressures.

Here is a second example. Suppose we are considering whether to accept ‘to experience the sensation of seeing red *just is* to be in a certain brain state’. What sorts of considerations might be used to advance the issue in an interesting way? Jackson’s Knowledge Argument immediately suggests itself:<sup>14</sup>

Mary is confined to a black-and-white room, is educated through black-and-white books and through lectures relayed on black-and-white television. In this way she learns everything there is to know about the physical nature of the world... If physicalism is

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<sup>13</sup> Here I am indebted to Andrew Graham’s PhD thesis.

<sup>14</sup> See [Jackson \(1982\)](#) and [Jackson \(1986\)](#); for a review of more recent literature, see [Byrne \(2006\)](#).

true, she knows all there is to know. For to suppose otherwise is to suppose that there is more to know than every physical fact, and that is just what physicalism denies... It seems, however, that Mary does not know all there is to know. For when she is let out of the black-and-white room or given a color television, she will learn what it is like to see something red, say ([Jackson \(1986\)](#)).

What Jackson's argument brings out is that physicalists face a challenge. They must somehow accommodate the fact that it seems like Mary acquires information about the world—information she did not already have—when she first experiences the sensation of seeing red, even though physicalism appears to entail that she does not. My own view is that the challenge can be met.<sup>15</sup> But someone who thinks that the challenge cannot be met might see the argument as motivating the introduction of possibilities that a physicalist would regard as unintelligible. According to the physicalist, to experience the sensation of seeing red *just is* to be in a certain brain state. So it makes no sense to consider a scenario in which someone is in the brain state but lacks the sensation. If, however, one were to give up physicalism and countenance the intelligibility of such a scenario, one might be able to relieve some of the pressure generated by Jackson's argument. For one could claim that, even though Mary knew all along that she would be in the relevant brain state when she was first shown a ripe tomato, she did not yet know if she would *also* experience the relevant sensation. It is only after she is actually shown the tomato, and experiences the relevant sensation, that she is in a position to rule out a scenario in which she is in the brain state without having the sensation. And this ruling out of scenarios substantiates the claim that Mary does indeed acquire information about the world when she is first shown the tomato.

I think there are good reasons for resisting this way of addressing the puzzle. (See, for instance, [Lewis \(1988\)](#).) But suppose one takes it to work. Suppose one thinks that by creating a gap between being in the relevant brain state and experiencing the relevant sensation—and thereby making room for the possibility of being in the brain state without having the sensation—one can adequately account for a case like Mary's. Then one will be motivated to give up the 'just is' statement that keeps the gap closed ('to experience the sensation of seeing red *just is* to be in a certain brain state'). But doing so comes at a cost because it opens up space for awkward questions. For instance: "I can see that Mary is in the relevant brain state. What I want to know is whether she is also experiencing the relevant

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<sup>15</sup> See [Rayo \(typescript\)](#) ch. 4.



sensation. I would like to understand, moreover, how one could ever be justified in taking a stand on this issue, given that we would find Mary completely indistinguishable from her zombie counterpart, or from someone with ‘inverted’ sensations.”

Consider nomological essentialism as a final example: the view that part of *what it is* to be our world is to instantiate the actual laws of physics. The sorts of considerations that might ground the adoption such a view are the same sorts of considerations that might ground the adoption of ‘just is’-statements in general: one should weigh the benefit of closing off awkward questions against the cost of depriving oneself of an increase in theoretical resources. The benefits of accepting nomological essentialism are clear enough: one can rule out as illegitimate the question of *why* the laws of fundamental physics obtain—a question which science has little hope of giving an illuminating answer to. But the costs are also clear. Without scenarios in which the actual physical laws fail, we would have to give up on fruitful philosophical theorizing. For instance, one would have to give up on accounts of counterfactuals that rely on the availability of scenarios where the actual laws of physics fail to obtain. My own view is that in this case the costs outweigh the benefits, and that one should reject the idea that part of what it is to be our world is to instantiate the physical laws.

## 4.2 Avoiding the Tractarian Legacy

The Tractarian can be expected to reject statements 4–7 from section [1](#). But it seems to me that they are all cases in which the advantages of accepting the ‘just is’-statement far outweigh the disadvantages. Consider TABLES. By accepting the claim that for there to be a table *just is* for there to be some things arranged tablewise, one eliminates the need to address an awkward question: what would it take for a region that is occupied by some things arranged tablewise to also be occupied by a table? It is true that one also loses access to a certain amount of theoretical space, since one is no longer in a position to work with scenarios in which there are things arranged tablewise but no tables. It seems to me, however, that this is not much of a price to pay, since the availability of such scenarios is not very likely to lead to fruitful theorizing. (Not everyone would agree; see, for instance, [van Inwagen \(1990\)](#).)

For similar reasons, it seems to me that PROPERTIES, DEATH and DINOSAURS are all eminently sensible ‘just is’-statements. Again, not everyone will agree. But I hope to have convinced you that these statements shouldn’t be rejected merely on the basis of *syntactic*

considerations. They should be rejected only if one thinks that the resulting theoretical space leads to theorizing that is fruitful enough to pay the price of answering awkward questions.

And the relevant questions can be very awkward indeed. By rejecting DINOSAURS, for example, one is forced to concede that the following is a legitimate line of inquiry:

I can see that there are no dinosaurs. What I want to know is whether it is *also* true that the number of the dinosaurs is Zero. And I would like to understand how one could ever be justified in taking a stand on the issue, given that we have no causal access to the purported realm of abstract objects.<sup>16</sup>

If, on the other hand, you accept DINOSAURS you will think that such queries rest on a false presupposition. They presuppose that there is a *gap* between the non-existence of dinosaurs and dinosaurs' having Zero as a number—a gap that needs to be plugged with a philosophical account of mathematical objects. DINOSAURS entails that the gap is illusory. There is no need to explain how the non-existence of dinosaurs might be correlated with dinosaurs' having Zero as a number because there is no difference between the two: for the number of the dinosaurs to be Zero *just is* for there to be no dinosaurs.<sup>17</sup>

Of course, you won't see the closing of this theoretical gap as a real benefit unless you think that the resulting theory is consistent with a sensible metaphysical picture of the world, and unless you think that it gives rise to a sensible philosophy of mathematics. The remainder of this paper will be devoted to addressing the first of these two challenges: I will argue that a compositionalist incurs no untoward metaphysical commitments by accepting a 'just is' statement like DINOSAURS.<sup>18</sup>

## 5 Life as an anti-Tractarian

Let an *anti-Tractarian* be a compositionalist who accepts some metaphysically contentious 'just is' statements. (Like Tractarianism, but unlike compositionism, anti-Tractarianism is a hybrid of linguistic and metaphysical theses.<sup>19</sup>)

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<sup>16</sup> That this is a legitimate line of inquiry is famously presupposed by Benacerraf (1973).

<sup>17</sup> For an account of mathematics along these lines, see Rayo (2009) and Rayo (forthcoming).

<sup>18</sup> I address the second challenge in Rayo (typescript), where I develop a semantics for mathematical discourse and an account of mathematical knowledge.

<sup>19</sup> Tractarianism and anti-Tractarianism are incompatible with each other, but they are not contradictories. A compositionalist who accepts no metaphysically contentious 'just is'-statements would reject them both. So would someone whose views of reference fall somewhere between Tractarianism and compositionism.

Anti-Tractarianism has a distinguished provenance. When Frege claims that the sentence ‘there is at least one square root of 4’ expresses the same thought as ‘the concept *square root of 4* is realized’, and adds that “a thought can be split up in many ways, so that now one thing, now another, appears as subject or predicate” ([Frege \(1892\)](#) p. 199), it is natural to interpret him as embracing the ‘just is’ statement:

For the concept *square root of 4* to be realized *just is* for there to be at least one square root of 4.

And when he claims, in *Grundlagen* \_64, that in treating the judgement ‘line *a* is parallel to line *b*’ as an identity, so as to obtain ‘the direction of line *a* is identical to the direction of line *b*’, we “carve up the content in a way different from the original way”, it is natural to interpret him as embracing the ‘just is’ statement:

For the direction of line *a* to equal the direction of line *b* *just is* for *a* and *b* to be parallel. More recent texts with broadly anti-Tractarian sympathies include [Parsons \(1974\)](#), [Wright \(1983\)](#), [Rosen \(1993\)](#), [Stalnaker \(1996\)](#) and [Burgess \(2005\)](#).<sup>20</sup> My impression is that many contemporary metaphysicians are nonetheless suspicious of anti-Tractarianism. The purpose of this section is to get clear about what the view entails, and what it does not.

## Realism

A Tractarian might be tempted to complain that if anti-Tractarianism were correct, there would fail to be a definite fact of the matter about how the world is. I have sometimes heard arguments such as the following:

Say you believe that for the number of the dinosaurs to be *Zero* *just is* for there to be no dinosaurs. You believe, in other words, that a single fact can be described fully and accurately by asserting ‘the number of the dinosaurs is *Zero*’ and by asserting ‘there are no dinosaurs’. This presupposes that a single fact can get carved up into objects and properties in different ways. When the fact is described by asserting ‘the number of the dinosaurs is *Zero*’, it gets carved up into an individual (the number *Zero*), a first-order property (the property of being a dinosaur), and a second-order function (the function taking first-order properties to their numbers); when it is described as ‘there are no dinosaurs’, it gets carved out into a first-order property (the property of being a dinosaur) and a second-order property (non-existence).

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<sup>20</sup> Hirsch is a compositionalist (see [Hirsch \(2002\)](#)). But it is not clear to me that he is also an anti-Tractarian.

But if this is so, there can't be an objective, language-independent fact of the matter about whether there are numbers. It all depends on how we choose to describe the world.

I am happy to grant everything in the first paragraph of this argument (as long as the metaphor of fact-carving is spelled out properly; see section [6](#)). The argument's second paragraph, on the other hand, strikes me as deeply misguided.

The anti-Tractarian is certainly committed to the view that a single feature of reality can be fully and accurately described in different ways. But this does not entail that there is no fact of the matter about how the world is. On the contrary: it is strictly and literally true that the number of the dinosaurs is *Zero*, and therefore that there are numbers. And this is so independently of which sentences are used to describe the world—or, indeed, of whether there is anyone around to describe it. The point is simply that the relevant feature of the world could also be fully and accurately described in another way: by asserting 'there are no dinosaurs'.

*Moral:* If realism is the view that there is a definite, subject-independent fact of the matter about how the world is, then anti-Tractarianism is no less of a realist position than Tractarianism.

### **The world as a structureless blob**

"Wait a minute!"—you might be tempted to reply—"Isn't the anti-Tractarian still committed to the view that the world is a structureless blob?"

Absolutely not. The anti-Tractarian believes that it is strictly and literally true that there are tables, that a death took place, that the number of the dinosaurs is *Zero*, and so forth. So if the strict and literal existence of tables, deaths and numbers is enough for the world not to be a structureless blob, then it is no part of anti-Tractarianism that the world is a structureless blob.

Perhaps what you mean when you say that the world might be a structureless blob is that the world might fail to be endowed with metaphysical structure. In that case, you should think that anti-Tractarianism is *neutral* with respect to the question of whether the world is a structureless blob. It is compatible with anti-Tractarianism that reality be carved up by the world's metaphysical structure. The point is simply that such a carving is not presupposed by ordinary language.

A brief aside: I don't really understand what Putnam has in mind when he talks about Internal Realism. But perhaps one could interpret some of what he says as an endorsement of an anti-Tractarian form of realism. (See, for instance, [Putnam \(1987\)](#) pp. 18–19.)

### **Comprehensivism**

Comprehensivism is that view that it is in principle possible to give a comprehensive description of the world—a description such that: (1) there is precisely one way for the world to be that would satisfy the description, and (2) the world, as it actually is, satisfies the description.

A critic might be tempted to think that anti-Tractarianism is incompatible with comprehensivism. “According to anti-Tractarianism”—the critic might argue—“the same fact can be described in many different ways. One can say that there is a table, or that some things are arranged tablewise, or that the world tabelizes, or that tablehood is instantiated, or that two half-tables are put together in the right sort of way, and so forth, with no natural end. But one hasn't given a exhaustive description of the world until one has described it in all these ways. So the anti-Tractarian could never give a comprehensive description of the world.”

To see where the critic goes wrong, it is useful to consider an example. Suppose I hand you a box and ask you to give me a comprehensive description of its contents. You examine it and say: “There is a hydrogen-1 atom in such-and-such a state, and nothing else.” It would be inappropriate for me to respond by complaining that your answer is incomplete on the grounds that failed to mention at least two objects: a proton and an electron. Such a response would be guilty of double-counting. Part of what it is for there to be a (non-ionized) hydrogen-1 atom is for there to be a proton and an electron. So when you mentioned that there was a hydrogen-1 atom, the presence of protons and electrons was *already included* in the information you gave me. It is true that you never mentioned protons and electrons explicitly. But that was not required for your description to be comprehensive. All that comprehensiveness requires is that there be precisely one way for the contents of the box to be such that it would satisfy your description.

*Moral:* Anti-Tractarianism does not entail that comprehensivism is false. What it entails is that there could be more than one way of giving a fully comprehensive description of the world.

## Paraphrase

It is tempting to think that in accepting a ‘just is’-statement one commits oneself to the availability of a *paraphrase-method* for translating vocabulary that appears on one side of the statement into vocabulary that appears on the other. Consider, for example, an anti-tractarian who accepts every instance of the following schema:

NUMBERS

For the number of the Fs to be *n just is* for there to be exactly *n* Fs.

It is tempting to think that she should also be committed to the claim that arbitrary arithmetical statements can be paraphrased as statements containing no mathematical vocabulary.

It seems to me that this would be a mistake. The availability of a suitable paraphrase-function depends on the expressive richness of one’s non-mathematical vocabulary. And the decision to accept NUMBERS should be based on a cost-benefit analysis of the sort suggested above, not on whether one has access to a powerful enough stock of non-mathematical linguistic resources.

It is easy to overestimate the importance of paraphrase when one sees things from the perspective of a *nominalist*: someone who thinks that numbers don’t exist. For a nominalist might think that non-mathematical paraphrases are needed to give an adequate statement of our best scientific theories, and of the real content of our mathematical accomplishments. But a friend of NUMBERS is no nominalist, and would see little advantage in stating our scientific theories or mathematical accomplishments in a non-mathematical language. Suppose, for example, that ‘there is an even number of stars’ can be paraphrased as a non-mathematical statement,  $\phi$ . In all likelihood,  $\phi$  will be significantly more cumbersome than its mathematical counterpart. And a friend of NUMBERS will think that its truth-conditions impose no less of a demand on the world, since she will think that for  $\phi$  to be the case *just is* for there to be an even number of stars.<sup>21</sup> She will therefore see little point in reformulating her scientific or mathematical theorizing in terms of  $\phi$ .

The question of whether it is possible to paraphrase arbitrary mathematical statements as statements containing no mathematical vocabulary is an interesting one, and I take it up in [Rayo \(typescript\)](#). The present point is simply that one should not confuse NUMBERS with the view that a suitable paraphrase-function exists. Accepting a ‘just is’-statement is one

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<sup>21</sup> For a related point, see [Alston \(1957\)](#).

thing; committing oneself to the availability of paraphrase-functions relating vocabulary on either side of the statement is another.

## 6 Absolute Generality

In this section I will consider the question of whether an anti-Tractarian should think that there is such a thing as an all-inclusive domain.

The first thing to note is that there are several different ways of cashing out the claim that there is such a thing as an all-inclusive domain:

- *First Reading* [Realism + Comprehensivism]

There is a definite fact of the matter about how the world is, and it is in principle possible to give a fully comprehensive description of its contents.

- *Second Reading* [Metaphysical Absolutism]

There is a ‘fundamental domain’—a domain consisting of the entities that are carved out by the world’s metaphysical structure.

- *Third Reading* [Recarving-Absolutism]

There is a ‘maxi-domain’—a domain consisting of the entities that result from every possible way of carving up the world into objects.

What should the anti-Tractarian say about the existence of an all-inclusive domain, on each of these readings?

We have seen that anti-Tractarianism is compatible with both Realism and Comprehensivism. So, on the first of the three readings, there is no tension between anti-Tractarianism and the existence of an all-inclusive domain.

What about the second reading? Anti-Tractarianism is *neutral* with respect to the existence of a ‘fundamental domain’. To address the issue of a fundamental domain would require deploying the notion of metaphysical structure, and anti-Tractarianism does no such thing.

Let us therefore turn our attention to the third reading. The anti-Tractarian believes that there are tables. So a ‘maxi-domain’ would have to include tables. But according to the anti-Tractarian, the fact that there are tables could also be described by saying that there are half-tables put together in the right sort of way, or that the property of tablehood is instantiated, or that some mereological simples are arranged tablewise, or that the set of tables is non-empty, or that the number of tables is greater than Zero. So the maxi-domain would also

have to include half-tables and instantiated properties of tablehood and mereological simples arranged tablewise and non-empty sets and numbers greater than Zero and Zero itself, and so forth.

Could such a list ever be completed? It seems to me that anti-Tractarians should be skeptical about the claim that it could. It is not that an anti-Tractarian should think that the world is somehow *incomplete*. The problem is that there is no reason to think that our concept of ‘carving the world into objects’ is determinate enough to allow for a final answer to the question of how it might be possible to carve up reality into objects. Let me explain.

### Unpacking the ‘carving’ metaphor

As I understand it, a ‘carving’ of the world is nothing more than a compositional system of representation for describing the world. In the most familiar case, a carving is a compositional system of *linguistic* representation: a language in which the truth-conditions of sentences are generated recursively from the semantic values of a restricted set of basic lexical items. To say that a subject carves the world into *objects* is simply to say that she represents the world using a language that contains *singular terms*, or variables that take singular term positions. Similarly, to say that a subject carves the world into *properties* is simply to say that she represents the world using a language that contains *predicates*, or variables that take predicate positions.

*Carving up the world is not like carving up a turkey.* For the purposes of spelling out the carving-metaphor, one is not to think of the world as a big object—the mereological fusion of everything there is—and of a carving as a way of subdividing the world into smaller parts. The world, for these purposes, is to be thought of as ‘the totality of facts, not of things’, and a carving is to be thought of as a compositional system for describing these facts.<sup>22</sup>

When the carving-metaphor is spelled out in this way, the existence of a maxi-domain would require a final answer to the question of what counts as a possible system of compositional representation. And I see no *prima facie* reason to think that our notion of representation (and our notion of linguistic representation, in particular) are constrained enough for this question to have a definite answer. From the perspective of Tractarianism, the range of admissible compositional languages is restricted by metaphysical structure, since only languages whose semantic structure is in correspondence with the metaphysical

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<sup>22</sup> Compare [Eklund \(2008\)](#).



structure of the world are potential vehicles for truth. From the perspective of anti-Tractarianism, on the other hand, the only constraint on semantic structure is that it deliver an assignment of truth-conditions to sentences from the semantic values of basic lexical items. So it is hard to say in advance what would count as a possible compositional language. Whenever we dream up a new mechanism for representing reality, the potential for a new compositional language—and hence for a new way of carving up the world—will be in place.

### **An analogy**

An analogy might be helpful. Suppose you are told that the ORDINALS are built up in stages. One starts with a ‘base’ ORDINAL, and at each stage one gets a new ORDINAL by pooling together all the ORDINALS that have been constructed so far. The process is to be carried out indefinitely.

In the absence of further constraints, your understanding of ‘ORDINAL’ will be hopelessly incomplete. It will be consistent with taking the ORDINALS to be isomorphic with the natural numbers. But it will also be consistent with taking the ORDINALS to be isomorphic with the natural numbers followed by an additional copy of the natural numbers—or two additional copies, or three, or as many copies of the natural numbers as there are natural numbers. In fact, one’s understanding of ‘ORDINAL’ will be consistent with taking the ORDINALS to be isomorphic with any limit von Neumann ordinal.

Notice, moreover, that assuming that there is a definite plurality of von Neumann ordinals wouldn’t bring a natural end to the process. For although your understanding of ‘ORDINAL’ is consistent with taking the ORDINALS to be isomorphic with the von Neumann ordinals, it is also consistent with taking the ORDINALS to be isomorphic with the von Neumann ordinals, followed by an  $\omega$ -sequence of additional objects—or two  $\omega$ -sequences of additional objects, or an additional  $\omega$ -sequence for each von Neumann ordinal. And so on.

If you give me a definite characterization of ‘ORDINAL’, I can use it to supply a significantly more generous one. (I can say, for instance, “the ORDINALS are isomorphic to the structure you just articulated followed by a copy of the structure you just articulated for every point in the structure you just articulated”.) And, crucially, I am *not* able to say anything definite about what it would mean to continue this sort of process ‘all the way up’—anything

significantly more illuminating than the original invitation to carry on the process ‘indefinitely’. The upshot is that there is no sense to be made of an absolutely general ORDINAL-quantifier. But this is not because of some dark metaphysical thesis about the nature of ORDINALS, and it is not because of some mysterious limit on our referential abilities: it is simply that the notion of ORDINAL is not well enough defined.<sup>23</sup>

I think something similar holds for our general notion of linguistic representation. If you give me a definite characterization of ‘linguistic representation’, I suspect I’ll be able to use it to supply a significantly more generous one. If you give me a first-order language, I can give you a second-order language. If you give me an  $\alpha$ -level language for some ORDINAL  $\alpha$ , I can give you an  $\alpha + 1$ -level language.<sup>24</sup> But I’m not able to say anything very informative about what it would mean to iterate this process ‘all the way up’—anything significantly more illuminating than the vague idea that it could be carried out ‘indefinitely’. And, of course, the order of the quantifiers is not the only dimension along which the expressive power of a language might be expanded. If you give me a definite system of linguistic representation, there may be other ways in which I can use it to supply a significantly more generous one.

### **A light-weight conception of objecthood?**

You may be worried that my way of cashing out the carving-metaphor is too light-weight. “If the only relevant difference between asserting ‘there are tables’ and asserting ‘some things are arranged tablewise’ is to do with the system of compositional representation one chooses to employ”—you might be tempted to complain—“then someone who asserts ‘there are tables’ hasn’t *really* committed herself to the existence of tables. For what she says could be true even if there are *really* no tables.”

As far as I’m concerned, all it takes for there to *really* [table thump!] be tables is for an English sentence like ‘there are tables’ to be strictly and literally true. And all it takes for ‘there are tables’ to be strictly and literally true is that there be some things arranged tablewise (equivalently: that the property of being a table be instantiated; equivalently: that there be two half-tables put together in the right sort of way; equivalently: that there be tables).

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<sup>23</sup> For more on this sort of picture, see [Parsons \(1974\)](#).

<sup>24</sup> For more on languages of transfinite order, see [Linnebo and Rayo \(typescript\)](#).

Perhaps you mean something different by ‘really’. Perhaps what you have in mind is that in order for something to *really* exist, it must figure in a ‘fundamental’ description of the world. It must, in other words, be carved out by the world’s metaphysical structure. In this sense of real existence, the view defended in this paper is *neutral* on the issue of whether there is anything that exists but doesn’t ‘really’ exist.

### **A language-infused world?**

“Wait a minute!”—you might be tempted to complain—“Are you setting forth a view according to which the existence of objects is somehow constituted by language?”

Absolutely not. What is ‘constituted by language’ is the use of *singular terms*. If we had no singular terms (or variables taking singular term positions) we wouldn’t be able to *describe* the world in a way that made the existence of objects explicit. But there would be objects just the same. Speakers of a language with no singular terms can say things like ‘Lo, tableization here!’. But for it to tableize *just is* for there to be a table. So even without singular terms, they would be in a position to convey information about tables.

For the anti-Tractarian, the existence of tables depends entirely on how the *non-linguistic* world is. If there are things arranged tablewise (equivalently: if it tableizes; equivalently: if there are tables), then there are indeed tables. If no things are arranged tablewise (equivalently: if it fails to tableize; equivalently, if there are no tables), then it is not the case that there are tables. The Tractarians’ mistake is to conflate form and content. They think there is a difference in *content* (i.e. truth-conditions) between ‘there are tables’ and ‘some things are arranged tablewise’, when in fact there is only a difference in form (i.e. semantic structure).

## **7 Conclusion**

I have argued that a ‘just is’-statement like TABLES or DINOSAURS shouldn’t be rejected on general linguistic or metaphysical grounds.

I argued, first, that Tractarianism is bad philosophy of language, and suggested compositionism as a promising alternative. Compositionists are in a position to accept a number of interesting ‘just is’-statements. The possibility of accepting such statements can be extremely valuable, because by accepting a ‘just is’ statement one eliminates the need to address a certain kind of awkward question. (By accepting DINOSAURS, for instance, one

eliminates the need to answer a question that many philosophers have found troubling: ‘I can see that there are no dinosaurs, but why is it *also* true that the number of dinosaurs is Zero?’)

I then argued that anti-Tractarians—compositionalists who accept metaphysically contentious ‘just is’-statements—are not saddled with an unattractive metaphysics. They are not committed to anti-realism, or to the view that the world is a structureless blob, or to the view that the existence of objects is constituted by language. I noted, finally, that anti-Tractarians have reasons to resist the claim that there is such a thing as a maxi-domain—a domain consisting of the entities that result from every possible way of carving up the world into objects.<sup>25</sup>

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