

Why I am not an Absolutist (or a First-Orderist)

Reply to Menzel and Pickel

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1 Introduction

Menzel and Pickel’s contributions to this volume share a common core, which consists of two claims:¹

Absolute Generality There is sense to be made of an “absolutely general” (first-order) quantifier—a quantifier ranging over “absolutely everything”.

First-Orderism Higher-order quantifiers should be thought of as (restricted) first-order quantifiers.

Menzel and Pickel’s views are interesting and nuanced. Here, however, I will not be concerned with the details. Instead, I will discuss a general philosophical picture based on Absolute Generality and First-Orderism, pointing to some of the picture’s inherent limitations and sketching an alternative.

¹Menzel and Pickel were each kind enough to confirm their commitment to these principles in correspondence. Although Menzel’s text is not explicitly committed to Absolute Generality, it relies on the principle implicitly. For example, Menzel endorses “the view that properties are not only *things*, but *things among all other things* that we talk about and quantify over within a single universe of discourse” (p. XX, his emphasis). And it’s hard to make sense of his treatment of the paradoxes without a tacit commitment to absolute generality (e.g. his argument for the inconsistency of the property comprehension principle labelled C¹ (p. XX) presupposes a first-order quantifier unrestricted enough to include all properties).

2 Absolute First-Orderism

The conjunction of Absolute Generality and First-Orderism can be used as the basis for an exceptionally tidy metaphysics and a straightforward connection between our language and the world. Here is one version of the relevant view:

Absolute First-Orderism The world is built up from the items in one’s “absolutely general” domain. Roughly speaking: (1) an atomic fact is what you get when an n -place property in the “absolutely general” domain applies to a sequence of n objects in the domain, and (2) non-atomic facts are generated from atomic facts on the basis of compositional rules exactly parallel to the compositional rules of a first-order language.²

There is a straightforward connection between a first-order language and the world it represents: (1) a non-empty singular term refers to an item in the “absolutely general” domain, (2) an atomic predicate refers to a property in the “absolutely general” domain, and (3) a true sentence corresponds to a fact whose compositional structure mirrors the sentence’s logical form.

Absolute First-Orderism goes beyond the conjunction of Absolute Generality and First-Orderism. But it is a natural theoretical framework within which to embed those claims and it appears to be the picture that Menzel and Pickel have in mind in their contributions to this volume. It is therefore the view I will be focusing on here.³

In this section we will see that the philosophical tidiness of Absolute First-Orderism comes at a cost. The first point I’d like to make is that Absolute First-Orderism calls for metaphysical considerations where none should be needed. Consider, for example, a physicist who introduces talk of atomic orbitals as a way of modeling the behavior of electrons. It is good scientific practice to think hard about whether the newly postulated

²The formal system described in section 2.3 of Menzel’s chapter is one way of spelling out the details.

³Absolute First-Orderism is closely related to the view I call “metaphysicalism” in Rayo 2013.

entities could serve as the basis of a theory that is both highly explanatory and broadly consistent with empirical observations. But it is not good scientific practice to worry about whether entities of a certain kind—atomic orbitals—happen to be present in the world’s “absolutely general” domain.

And, of course, it’s not just theoretical physics. Mathematicians are, by and large, happy to work with whichever structures they find interesting, and they are happy to postulate mathematical objects as needed. Such methodological standards don’t leave much room for the idea that one’s mathematical theory should only be taken at face value in the presence of a metaphysical assumption: that the “absolutely general” domain turns out to be capacious enough to contain the requisite mathematical entities.⁴

Absolute First-Orderism also brings unwelcome metaphysical considerations into everyday contexts. Suppose, for example, that a hospital patient dies. After confirming that the patient is dead, the attending physician checks the time: 7:42. Is she justified in thinking that the patient’s death occurred at 7:42? For the absolute first-orderist, the matter is not straightforward. For even if the “absolutely general” domain contains the patient and the property of dying, there is no immediate guarantee that it also contains deaths, or the property of taking place.

A further reason for being skeptical of Absolute First-Orderism is that it opens the door to a questions that appear to lack good answers. For instance: “how many entities are there in the ‘absolutely general’ domain?”.

If the “absolutely general” domain were taken to consist entirely of physical objects, a good answer might not be so hard to find, since it might be grounded in, e.g. the number of particles created in the Big Bang. But proponents of Absolute Generality, including

⁴Balaguer 1998, 2021 suggests a “maximalist” picture on which there are as many mathematical objects as they could have consistently been. (See also Eklund 2006, 2008.) Notice, however, that a maximalist version of absolute first-orderism is not enough to address our current concern. For we want more than a reassurance from metaphysicians that their additional constraint on successful theorizing turns out to be satisfied. We want to be able to work with the usual scientific standards, which require no reassurances from metaphysicians.

Menzel and Pickel, take the “absolutely general” domain to contain abstract objects. And that makes it harder to see how one could answer our question in a way that is both stable and principled. However many mathematical objects are supposedly contained in the “absolutely general” domain, one could easily characterize more (e.g., one could characterize a “superset” corresponding to each subdomain of the “absolutely general” domain). There is no obvious mathematical reason to cut off the ever-increasing hierarchy of mathematical objects at any given point. And it is hard to imagine a metaphysical reason that would seem truly principled.⁵

Now consider an absolute *first-orderist*, who not only thinks there is sense to be made of an “absolutely general” domain but also takes the domain to include properties. She faces the problem in spades. For however many properties she takes to be included in the “absolutely general” domain, one can use those very properties to characterize more; as it might be: a property true of all and only entities in the “absolutely general” domain that don’t apply to themselves. The newly characterized property would appear to correspond to a way for something to be. So it ought to be legitimate, on the natural assumption that a property is just a way for something to be. The upshot is that any hypothesis about the contents of the “absolutely general” domain will not only be unprincipled—in the sense that there are alternatives that would appear to be equally justified—but also contrary to a natural understanding of properties as ways for something to be.

3 Anti-Absolutism

I have been discussing some disadvantages of Absolute First-Orderism. But all philosophical views come with costs. The real question is whether one could develop a viable alternative. In this section I will try my best.

The first thing to note is that the denial of Absolute Generality is not the claim

⁵For relevant discussion see Hawthorne & Uzquiano 2011.

that there couldn't be a quantifier ranging over "absolutely everything". (That is a view of dubious coherence, since it presupposes the very notion it takes to be unavailable.) Instead, the denial of Absolute Generality is the claim that there is no sense to be made of the absolutist's talk of "absolute generality". Just like one might treat a philosophical theory that presupposes the coherence of "tonk" as defective rather than false, so *Anti-Absolutism*—as I shall refer to the view—treats claims that presuppose an "absolutely general" domain as defective rather than false. (Throughout the text I use "absolutely everything" in quotes to indicate that the term is being used to give voice the absolutist, rather than express a well-defined notion.)

But how can one make sense of ontology if there is no sense to be made of a domain of "absolutely everything" there is?

Start with an analogy: units of measurement. It is strictly and literally true—it is an objective fact about the world—that the desk in my office is two meters long ($\pm 1\%$). And yet it would be a mistake to think that the units of measurement I just used in describing this objective fact are somehow metaphysically privileged (e.g., that one only "carves the world at the joints" when one uses meters as one's unit of measurement). When one says truly that something is two meters long, one describes an objective fact using a parochial tool.⁶ If I were instead to say "my desk is 6.56167979 feet long ($\pm 1\%$)", I would be describing the same objective fact using a different but equally parochial tool.

Metaphorically speaking: when God made the world she did not decide on a unit of measurement. She left it to us to describe her creation using whichever units of length we found most useful. On the anti-absolutist picture I would like to defend, a similar metaphor applies to objects: when God made the world she decided *how* the world would be, but she left it to us to describe her creation using whichever "ontological units" we found most useful.⁷

⁶Although the official definition of the meter makes use of objective features of the physical world, it also involves a fair amount of arbitrariness and is the outcome of decidedly human-centered considerations.

⁷The view I would like to defend has been defended by many philosophers over the years, including

A less metaphorical statement of the view is based on two claims. The first is a form of realism: the claim that there is a definite fact of the matter about how the world is. The second is a substantive assumption about the relationship between our language and the world: that a single way for the world to be can be fully and accurately described using sentences with very different logical forms. For example, the objective feature of the world that is fully and accurately described by saying “Socrates died” might also be fully and accurately described by saying “Socrates’s death took place” (or “dying occurred Socratically”).

I will now spell out each of these claims a little more precisely. We’ll do so by working with a space of worlds $\mathcal{W}$ and assuming that exactly one world in $\mathcal{W}$ is actualized. We’ll presuppose that each world in $\mathcal{W}$ is a way for the world to be but we won’t presuppose every way for the world to be is metaphysically possible.⁸ Nor do we presuppose that the worlds in $\mathcal{W}$ are “maximally specific”: we assume only that they are pairwise incompatible and jointly exhaustive.⁹

The first of our two anti-absolutist claims can now be spelled out as follows:

Realism There is a definite fact of the matter about which world in $\mathcal{W}$ is actualized.

Let us now turn to the anti-absolutist second claim: that a single way for the world to be can be fully and accurately described using sentences with different logical forms.

Some preliminaries: a *proposition*, as I will understand it here, is just a way for the world to be; a *fact*, as I will understand it here, is just a true proposition. (In other words: a fact is a way for the world to be such that the world is, in fact, like that.) We

Frege (1884), Dummett (1981), Wright (1983), Rosen (1993), Stalnaker (1996), Burgess (2005), Sidelle (2002), Glanzberg (2004), Chalmers (2009), Eklund (2009), Hirsch (2010), Thomasson (2015), and Linnebo (2018). My preferred variant of the view is developed in Rayo 2013, Rayo 2017, Rayo 2021 and, especially, Rayo forthcoming.

⁸In fact, I believe the two notions coincide. But this needn’t be assumed in the present context. For additional discussion, see Rayo 2013, 2020.

⁹For two ways for the world to be incompatible is for the world’s being both of those ways to constitute an absurdity. For the ways for the world to be in $\mathcal{W}$ to be jointly exhaustive is for any way for the world to be to be entailed by some element of $\mathcal{W}$. For way for the world to be to entail another is for the world’s being the former way without being the latter to constitute an absurdity.

will model a proposition as a subset of $\mathcal{W}$ and let a proposition count as true just in case it contains the actualized world in $\mathcal{W}$. (Realism entails that there is a definite fact of the matter about which propositions are true.) To keep things simple, I shall focus on a first-order language L . An *interpretation* $\llbracket \dots \rrbracket$ of L is a function that assigns a proposition $\llbracket \phi \rrbracket$ to every sentence ϕ of L that one wishes to have available for use.¹⁰

Our second anti-absolutist claim can then be spelled out as follows:

Legitimacy All it takes for $\llbracket \dots \rrbracket$ to count as a *legitimate* interpretation of L —all it takes for it to constitute a fully adequate and maximally robust connection between our language and the world it represents—is for it to respect logical entailments.¹¹

An example should be helpful. Suppose Reginald Tripplehorn believes that there is no difference between Socrates’s dying and Socrates’s death taking place: for Socrates to die *just is* for his death to take place. Accordingly, Tripplehorn thinks that there is a single feature of the world that can be exactly described using either “Socrates died” or “Socrates’s death took place”. An absolute first-orderist would, of course, see Tripplehorn’s position as wrong-headed. For she thinks that a true sentence corresponds to a fact whose structure mirrors the sentence’s logical form. Since “Socrates died” and “Socrates’s death took place” have different logical forms, it follows that they can’t correspond to the same fact. In contrast, Legitimacy allows for interpretations that assign the same proposition to “Socrates died” and “Socrates’s death took place” (or their first-order analogues). Tripplehorn might model the relevant proposition as the subset $\mathcal{D}$ of $\mathcal{W}$ consisting of worlds w such that, at w , Socrates died—which he thinks is just the set of worlds w such that, at w , Socrates’s death took place.

¹⁰ L may be a multi-sorted language, which treats certain applications of predicates to names as syntactically ill-formed. I assume that L governed by a negative free logic.

¹¹ $\llbracket \dots \rrbracket$ respects entailments iff whenever $\Phi \vdash \Psi$ (where “ $\vdash$ ” expresses syntactic entailment in a negative free logic), the following condition is met for any world w : if for every $\phi \in \Phi$, $w \in \llbracket \phi \rrbracket$, then for some $\psi \in \Psi$, $w \in \llbracket \psi \rrbracket$. (Taking entailment to be a relation between sets of sentences is crucial. It implies, for example, that an interpretation that pairs every sentence with the universal proposition $\mathcal{W}$ will fail to respect logical entailments, since we have $\{“p \wedge \neg p”\} \vdash \{\}$ and therefore $\llbracket “p \wedge \neg p” \rrbracket = \{\} \neq \mathcal{W}$.)

On the resulting picture, it is natural to think of objects and properties as akin to units of measurement. To see this, go back to the fact that my desk is $2m$ long (equivalently: the fact that it is 6.56167979 ft long) and suppose I wish to single out this particular feature of the world to you. If I assert “my desk is $2m$ long”, thereby using meters as my unit of measurement, I provide you with a particular framework for relating the length of my desk with the length of other objects. For instance, I make it easy for you to infer that my desk is about twice as long as the old prototype meter in Paris. If I instead assert “my desk is 6.56167979 ft long”, thereby using feet as my unit of measurement, I provide you with a different framework for relating the length of my desk with the length of other objects. For instance, I make it easy for you to infer that one could line up about six men’s shoes on my desk. And, crucially, in providing you with different relational frameworks, I do not vary the feature of the world that the framework is being used to describe: an objective fact about the length of my desk.

Now consider the fact that Socrates died (which Tripplehorn thinks is just the fact that Socrates’s death took place) and suppose I wish to single out this particular feature of the world to you. If I assert “Socrates died”, thereby using Socrates and the property of dying as my “ontological units”, I provide you with a particular framework for relating the relevant feature of the world to others. For instance, I make it easy for you to find commonalities between the fact that Socrates died and the fact that Hypatia died, or the fact that Socrates was snub-nosed. If I instead assert “Socrates’s death took place”, thereby using Socrates’s death and the property of taking place as my “ontological units”, I provide you with a different framework for relating the relevant feature of the world to others. For instance, I make it easy for you to find commonalities between the fact that Socrates died (which, recall, Tripplehorn thinks is just the fact that Socrates’s death took place) and the fact that WWII took place, or the fact that Socrates’ death was tragic.

The requirement that $\llbracket \dots \rrbracket$ respects logical entailments is important because it guarantees an assignment of propositions to sentences that can be generated compositionally,

from an assignment of objects to singular terms and properties to atomic predicates.¹² In other words: an interpretation $\llbracket \dots \rrbracket$ that respects logical entailments delivers an *ontological* framework for conceptualizing the propositions $\llbracket \phi \rrbracket$ ($\phi \in L$), by treating them as applications of properties to objects (or Boolean combinations thereof).

To return to our analogy: there are many different ways of characterizing a unit of length, but a purported unit of length will only play its intended theoretical role if it constitutes a *measure*—if it yields an additive assignment of non-negative real numbers to properties. Similarly, there are many different ways of describing a fact using a compositional language, but the anti-absolutist thinks that the language will only deliver an ontology—it will only characterize the world on the basis of “ontological units”—if it is able to deliver an articulation of the world into objects and properties. That is exactly what Legitimacy guarantees.

4 Reference

An absolute first-orderist will complain that respecting logical entailments is not enough to guarantee genuine reference. “For a singular term to *really* refer”—she might claim—“it has to be paired with an *object* (i.e. an object in the absolutely general domain) and there is no guarantee that an entailment-respecting assignment of sentences to propositions will deliver that result because there is no guarantee that the logical form of a true sentence will end up mirroring the structure of the fact it is meant to pick out.”

Such a complaint would be question-begging in the present context. For it would rely on a non-neutral notion of reference. In particular, the anti-absolutist would deny that reference has anything to do with a pairing of expressions with items in an “absolutely general” domain. Instead, she accepts a broadly Fregean conception of objects and properties.

¹²See Rayo typescript for details. To get the right results in an intensional setting, one must assume that $\llbracket \dots \rrbracket$ treats identity statements as non-contingent.

For reasons that will become apparent in section 6, we will restrict our attention to the special case in which our metalanguage includes the object language L , as interpreted by a given interpretation $\llbracket \dots \rrbracket$, as a proper part. With that restriction in place, we can set forth the following anti-absolutist conception of reference for singular terms:

Singular Term Reference All it takes for a singular term c of L to *refer* as interpreted by $\llbracket \dots \rrbracket$ —in a fully fledged and maximally robust sense of reference—is for there to be some atomic sentence $\lceil F(c, d_1, \dots, d_n) \rceil$ such that $\llbracket \lceil F(c, d_1, \dots, d_n) \rceil \rrbracket$ contains the actualized member of $\mathscr{W}$.

Since the way the world is determines which member of $\mathscr{W}$ is actualized, the world may need to cooperate for this condition to be met. But such cooperation is compatible with thinking that there is no need for the world to supply an “absolutely general” domain for singular terms to latch on to.

The anti-absolutist’s account of predicate reference is similar:

Predicate Reference All it takes for a predicate F of L to *express a property* as interpreted by $\llbracket \dots \rrbracket$ —in a fully fledged and maximally robust sense of property expression—is for there to be some atomic sentence $\lceil F(d_1, \dots, d_n) \rceil$ such that $\llbracket \lceil F(d_1, \dots, d_n) \rceil \rrbracket$ is well-defined.

The resulting view is naturally described using a Fregean metaphor (Frege 1892, 1884): facts—or, more generally, propositions—are “carved up” into objects and properties by a compositional language. This metaphor is helpful in some ways but misleading in others. It is misleading because it suggests that the world doesn’t “really” contain objects and properties, which are, in some sense, brought about by our use of language. That would be a misunderstanding of Anti-Absolutism.

The anti-absolutist thinks that there *really* are objects and properties, in the strictest and most literal sense. She also thinks that their existence is language and mind independent. For example, she thinks that Venus is an object and that it would have been

an object even if there had been no minds or languages and therefore nothing to do the “carving up” of the fact that Venus is a planet into objects and properties.

This is because the anti-absolutist thinks of an object as an *aspect* of a way for the world to be. For example, Venus is an aspect of the fact that Venus is a planet—an aspect that we take it to share with the fact that Venus has a rocky core but not with the fact that Mars is a planet. So, in claiming that a fact is “carved up” into objects and properties by our use of language, the anti-absolutist should be understood as claiming that certain aspects of the fact are *rendered salient* by the relevant language, as opposed to claiming that objects and properties are being *created* by language.

Generally speaking, a compositional language renders aspects of ways for the world to be salient by using a shared piece of vocabulary to pick out those ways for the world to be. For instance, by using “Venus” to describe a certain collection of facts—that Venus is a planet, that Venus has a rocky core, etc.—the language renders Venus salient, as a shared aspect of the relevant facts. Similarly, by using “is a planet” to describe a certain collection of facts—that Venus is a planet, that Mars is a planet, etc.—the language renders the property of being a planet salient, as a shared aspect of the relevant facts. Accordingly, objects and properties might be thought of as *nodes* in a network of connections between ways for the world to be, connections that are rendered salient by the compositional features of our language.

Whether a fact—or, more generally, a way for the world to be—enjoys a certain aspect does not generally depend on our mind or language. It is for this reason that the anti-absolutist thinks that objects and properties are not generally mind and language dependent. At the same time, the anti-absolutist thinks that the *salience* of a given aspect of a way for the world to be *does* depend on our representational practices. If we don’t decide what aspects of the world to focus on, metaphysics won’t help. Venus is there to begin with, but whether or not it is included in the domain of discourse of an astronomical language will depend on the syntactic categories of the language, and

on the connections between ways for the world to be that are rendered salient by lexical items falling under those categories.

5 Open-Endedness

In the previous section I suggested that the anti-absolutist might think of objects and properties as aspects of ways for the world to be. The absolute first-orderist might wonder whether this conception of objects and properties opens the door to “absolutely general” quantification. “Why don’t you just think of the absolutely general domain as consisting of every aspect of every way for the world to be?”, she might ask. But the anti-absolutist would reply that there is no sense to be made of “all aspects”, as intended by the absolutist. This is because the anti-absolutist thinks that aspects are subject to a certain kind of *open-endedness*: if you give her some aspects, she can use them to characterize more.

Consider the special case of objects. The anti-absolutist takes herself to have a procedure such that if you give her some objects, she can use her procedure to characterize more. For example, she has a procedure that can be used to characterize a Russell set R consisting of those of the given objects that do not have themselves as members. On pain of contradiction, if R exists, it must be distinct from any of the given objects. “But why grant the assumption that R exists?”, the absolute first-orderist might object. Her own view, of course, is that R ’s existence requires the world to cooperate by providing the “absolutely general” domain with the right contents. But the anti-absolutist denies that R ’s existence requires the world to cooperate in that way. She thinks that to expand our domain of discourse to contain R all we need to do is set up the right sort of *language* by introducing a singular term “ R ” and using it to articulate a suitable theory of sets for the initially given objects. As long as the details are spelled out in the right sort

of way,¹³ Legitimacy will guarantee that the expanded language is in good order and Singular Term Reference will guarantee that “ R ” is referential.

I hasten to add that the anti-absolutist does *not* think that we can expand our domain of discourse to include arbitrary objects. I cannot, for example, stipulate myself a sister into existence by introducing the term “Sara” and interpreting the resulting language in the right kind of way. For even if I succeed in setting up a language in which “Sara” refers to *something*, it won’t refer to a sister of mine unless my assignment of propositions to sentences captures “Sara”’s intended theoretical role. And there can

¹³Here is one of several options. Let L be a two-sorted first-order language. Variables of the first sort ($x_0, x_1, \dots$) are intended to range over the given objects; variables of the second sort ($\alpha_0, \alpha_1, \dots$) are intended to range over sets of the given objects. L includes a family of predicates restricted to variables of the first sort, along with an identity predicate, restricted to variables of either sort, and the two-place predicate “ $\in$ ”, which is intended to express membership and takes a variable of the first sort in its first argument place and a variable of the second sort in its second. To characterize our interpretation $\llbracket \dots \rrbracket$ of L we work within a plural metalanguage and (for the sake of simplicity) assume necessitism in the metatheory. We treat the objects σ as constituting a variable assignment iff: (1) among them there is exactly one pair $\langle \ulcorner x_i \urcorner, z \rangle$ ($i \in \mathbb{N}$) and (2) any pair $\langle v, z \rangle$ among them is such that z is amongst the given objects. We let $\sigma(\ulcorner x_i \urcorner)$ be the unique z such that $\langle \ulcorner x_i \urcorner, z \rangle$ is amongst σ ($i \in \mathbb{N}$), and we let the objects $\sigma(\ulcorner \alpha_i \urcorner)$ include all and only objects z such that $\langle \ulcorner \alpha_i \urcorner, z \rangle$ is amongst σ . We let $\sigma[z/\ulcorner x_i \urcorner]$ constitute the variable assignment that is just like σ except that $\langle \ulcorner x_i \urcorner, z \rangle$ is among $\sigma[z/\ulcorner x_i \urcorner]$ and let $\sigma[zz/\ulcorner \alpha_i \urcorner]$ constitute the variable assignment that is just like σ except that all and only objects z amongst zz are such that $\langle \ulcorner \alpha_i \urcorner, z \rangle$ is amongst $\sigma[zz/\ulcorner \alpha_i \urcorner]$. We assume that L contains the singular term “ R ” of the same sort of $\alpha_0, \alpha_1, \dots$ and use the metalinguistic term variables $\tau_0, \tau_1, \dots$ to refer to either “ R ” or the variables $\alpha_0, \alpha_1, \dots$. In lieu of a denotation function, we stipulate that $\sigma(\text{“}R\text{”})$ consists of those of the given objects z such that $z \notin z$. We then characterize a function $\llbracket \dots \rrbracket_\sigma$ from formulas of L to subsets of $\mathscr{W}$:

- $\llbracket \ulcorner F(x_{i_1}, \dots, x_{i_n}) \urcorner \rrbracket_\sigma = \{w \in \mathscr{W} : \text{at } w, F \text{ applies to } \sigma(\ulcorner x_{i_1} \urcorner), \dots, \sigma(\ulcorner x_{i_n} \urcorner)\}$
- $\llbracket \ulcorner x_i \in \tau_j \urcorner \rrbracket_\sigma = \{w \in \mathscr{W} : \sigma(\ulcorner x_i \urcorner) \prec \sigma(\ulcorner \tau_j \urcorner) \wedge \sigma(\ulcorner \tau_j \urcorner) \subseteq \text{Domain}(w)\};$
- $\llbracket \ulcorner \tau_i = \tau_j \urcorner \rrbracket_\sigma = \{w \in \mathscr{W} : \forall z (z \prec \sigma(\ulcorner \tau_i \urcorner) \leftrightarrow z \prec \sigma(\ulcorner \tau_j \urcorner)) \wedge \sigma(\ulcorner \tau_j \urcorner) \subseteq \text{Domain}(w)\};$
- $\llbracket \ulcorner \neg \phi \urcorner \rrbracket_\sigma = \mathscr{W} - \llbracket \phi \rrbracket_\sigma$; $\llbracket \ulcorner \phi \wedge \psi \urcorner \rrbracket_\sigma = \llbracket \phi \rrbracket_\sigma \cap \llbracket \psi \rrbracket_\sigma$
- $\llbracket \ulcorner \exists x_i \phi \urcorner \rrbracket_\sigma = \left\{ w \in \mathscr{W} : \exists z \left(w \in \llbracket \phi \rrbracket_{\sigma[z/\ulcorner x_i \urcorner]} \right) \right\};$
- $\llbracket \ulcorner \exists \alpha_i \phi \urcorner \rrbracket_\sigma = \left\{ w \in \mathscr{W} : \exists zz \left(w \in \llbracket \phi \rrbracket_{\sigma[zz/\ulcorner \alpha_i \urcorner]} \right) \right\}$

Finally, we let $\llbracket \phi \rrbracket$ be $\llbracket \phi \rrbracket_\sigma$ for arbitrary σ whenever ϕ is a sentence. Since $\llbracket \dots \rrbracket$ respects logical entailments, Legitimacy entails that our interpretation of L is in good order, and since $\llbracket \text{“}R = R\text{”} \rrbracket$ (which is just the set of worlds in $\mathscr{W}$ at which each of the given objects exist) contains the actualized world, Reference entails that “ R ” is a non-empty term. We know, moreover, that the referent of “ R ” plays the theoretical role of R because our characterization of $\llbracket \dots \rrbracket$ ensures that “ $\in$ ” behaves like set membership and that $\llbracket \ulcorner \forall x (x \in R \leftrightarrow \neg (x \in x)) \urcorner \rrbracket$ contains the actualized world, where “ $\in$ ” expresses membership amongst the given objects.

be no such assignment: since I don't have a sister, there is no entailment-preserving interpretation $\llbracket \dots \rrbracket$ such that $\llbracket \ulcorner \exists x (\text{Sister}(x, \text{AR})) \urcorner \rrbracket$ consists of all and only worlds in $\mathcal{W}$ at which I have a sister and $\llbracket \ulcorner \text{Sister}(\text{Sara}, \text{AR}) \urcorner \rrbracket$ contains the actualized member of $\mathcal{W}$. The case of R is special because it is possible to characterize an interpretation $\llbracket \dots \rrbracket$ for L that satisfies two conditions at once: (1) $\llbracket \dots \rrbracket$ pairs sentences of L with subsets of $\mathcal{W}$ in a way that captures the intended theoretical role of " R ", and (2) an atomic sentence like $\llbracket \ulcorner R = R \urcorner \rrbracket$ is guaranteed to include the world that is actualized in the scenario in which " R " is introduced.¹⁴ Analogues of these conditions can often be jointly satisfied in the case of terms purporting to refer to abstract entities, but they cannot be jointly satisfied in the case of "Sara" unless the world cooperates by ensuring that my parents have a daughter.

We have seen that the anti-absolutist thinks of objects (and therefore aspects of ways for the world to be) as open-ended. To many philosophers—my youthful philosophical self included—the idea that a domain could be open-ended seems utterly mysterious. "Either the items in the domain exist or they don't!", my youthful self might have declared as he gave the table a thump. I continue to believe that this is an appropriate reaction *if* we're allowed to assume an ontology that is singled out independently of our representational practices. But keep in mind that that is exactly the assumption the anti-absolutist denies. She thinks that it is our linguistic practices—and our representational practices more generally—that are responsible for singling out different aspects of ways for the world to be.

That makes all the difference. It means that a given domain of objects—which is typically the result of using a compositional language to render salient a family of aspects of ways for the world to be—can be used as the basis for characterizing a more complex language, which in turn renders salient a richer family of aspects of ways for the world

¹⁴When the details are spelled out as in footnote 13, $\llbracket \ulcorner R = R \urcorner \rrbracket$ is the set of worlds at which those of the initially given objects that are not members of themselves exist.

to be, and thereby results in an expansion of our original domain of objects.

As we have seen, there is nothing “constructed” about the *aspects* themselves. An aspect of a feature of the world is no less objective than the feature itself: it is there to begin with and would have been there independently of our representational efforts. But our representational efforts are needed to single it out. Whereas an absolute first-orderist might think that the extensions of a term like “object” or “aspect” can be fixed by appeal to the “absolutely general domain”, the anti-absolutist thinks that such terms lack significance independently of a given system of representation, which is needed to specify a network of connections between ways for the world to be, and thereby specify a collection of nodes to serve as the extension of terms like “object” or “aspect”. So, if you want a quantifier that ranges over aspects, you’ll need to start by setting up a language that singles out a domain for your quantifier. And that opens the door to indefinite extensibility. For if you give me one such language, I can use it to characterize a more expressive language, which delivers a richer domain.

In section 2 I argued that there is a certain kind of tension between Absolute First-Orderism and the methodological standards implicit in our scientific practice. In physics and mathematics, for example, the introduction of abstract entities is not usually seen as hostage to metaphysical fortune by turning on whether the “absolutely general” domain includes entities of the right sort. The anti-absolutist is able to avoid this problem. As illustrated by our discussion of the Russell set R , she thinks that one can often include theoretical entities to one’s domain of discourse simply by formulating the right sort of theory. The success of this procedure will depend on formal features of one’s assignment of propositions to the sentences of the relevant theory and on whether the world in $\mathscr{W}$ that turns out to be actualized is included in propositions that get assigned to atomic sentences involving appropriate singular terms. The world comes into the picture because it is needed to determine which world in $\mathscr{W}$ is actualized. But in the cases that concern us it won’t matter whether the actualized world satisfies any metaphysical assumptions. In

the case of names purporting to refer to atomic orbitals, it matters only whether electrons have the right sort of behaviors—behaviors that could turn out to be describable without alluding to orbitals. And in the case of pure mathematics, where every sentence in one’s theory will be taken to express the universal proposition $\mathscr{W}$, it won’t matter at all which world turns out to be actualized. As long as one’s assignment of propositions to sentences respects logical entailments, the singular terms in question will refer.¹⁵

And because Anti-Absolutism is based on the idea that a single way for the world to be can be fully and accurately described using sentences with different logical forms, it makes room for the view that there is no difference between a patient’s dying and her death’s taking place—and therefore for the view that a physician who is justified in thinking that the patient died at 7:42 is *thereby* justified in thinking that the patient’s death took place at 7:42. There is no need to see her as having an epistemic entitlement to bridge the gap between the two facts because there is no gap: there is only one fact.¹⁶

6 Metasemantics

The absolute first-orderist and the anti-absolutist disagree about metasemantics. A nice way of bringing out the point is by focusing on the language of (pure) first-order arithmetic.

Consider an absolute first-orderist who takes the “absolutely general” domain to include the natural numbers along with two arithmetical properties: addition and multiplication. But she takes it to include no further abstract objects and no further arithmetical properties. Because of the extreme sparsity of her domain, she is in a position to use

¹⁵Note that the assumption that one’s assignment respects logical entailments is enough to guarantee that the newly introduced theory is consistent. (*Proof:* Suppose that $\llbracket \dots \rrbracket$ pairs each sentence of one’s mathematical theory T with $\mathscr{W}$. Now suppose, for *reductio*, that $T \vdash \phi \wedge \neg\phi$ and therefore $\llbracket \phi \wedge \neg\phi \rrbracket = \mathscr{W}$. But since $\phi \wedge \neg\phi \vdash \emptyset$, the fact that our assignment $\llbracket \dots \rrbracket$ respects logical entailments guarantees that $\llbracket \phi \wedge \neg\phi \rrbracket = \emptyset$, contradicting our earlier conclusion that $\llbracket \phi \wedge \neg\phi \rrbracket = \mathscr{W}$.)

¹⁶Of course, the physician may not *recognize* that she is justified in thinking that the patient’s death took place at 7:42 if she is under the grip of the wrong metaphysics. But that is a separate issue. For further discussion of coarse-grained conceptions of belief, see Rayo 2013, Elga & Rayo 2020, 2021.

a “reference-first” approach to interpreting the language of arithmetic. First, she stipulates that her arithmetical quantifiers are to range over “all and only abstract objects in the absolutely general domain”. Next, she stipulates that the language’s addition and multiplication predicates are to express the addition and multiplication properties, each of which she is in a position to single out uniquely.¹⁷ Finally, she uses standard compositional clauses to characterize an assignment of propositions to sentences on the basis of her assignment of semantic values to basic lexical items.

The resulting interpretation delivers a striking result: it succeeds in assigning *every* arithmetical sentence its intended truth-value. Gödel’s Theorem entails that no recursive procedure could deliver such a result. The reference-first approach is able to get around this limitation by *outsourcing* some of the content determination work to the “absolutely general” domain. Because our absolute first-orderist takes the domain to include the natural numbers and their basic properties—and because she thinks she is in a position to single them out uniquely—she thinks she can use them to determine an assignment of truth-values to arithmetical sentences.

The anti-absolutist has a very different perspective. She agrees with the absolute first-orderist that arithmetical objects and properties exist but she doesn’t think they can be singled out in a way that would allow for a “reference first” metasemantics. For, as we have seen, she sees arithmetical objects and properties as nodes in a network of connections between ways for the world to be. And she thinks there is no way of singling out the relevant nodes without setting forth a language—or, more generally, a compositional system of representation¹⁸—that includes the language or arithmetic. Why

¹⁷For instance, the multiplication property might be singled out as the only three-place property of abstract objects such that there is some abstract object x in the domain such that for every abstract object y in the domain, the property relates x and y to x .

¹⁸A fuller picture would see our representational capacities—including perception and thought—as working in tandem to set up the network of connections between ways for the world to be whose nodes include the aspects we think of as objects and properties.

Consider, for example, perception. Across the room from me, an apple is resting on the table. When I look in that general direction, I experience the world as articulated in a particular way. I can’t help seeing the world as containing a particular object—an apple. I see the apple as being a particular way:

not? Because the nodes are just shared aspects of a way for the world to be and she thinks there are no “metaphysically salient” aspects of a way for the world to be. If our systems of representation don’t render them salient, nothing will. This means that one can’t single out the referents of arithmetical terms in advance of interpreting an arithmetical language. That would be exactly backwards: it is *by* interpreting arithmetical sentences that the referents of arithmetical terms are singled out.

The unavailability of a “reference first” approach places real limits on the semantic determinacy that is achievable for the language of arithmetic. If one were somehow in a position to start out with a fully determinate language that is expressive enough to characterize the standard interpretation of the language of arithmetic, one would be able to use it to characterize an interpretation that pairs every arithmetical sentence with its intended interpretation. But in the absence of such a language the best one can do is use a recursive procedure of some sort; for instance:

$$\llbracket \phi \rrbracket^{\mathbb{N}} = \begin{cases} \top, & \text{if } \mathcal{A} \vdash \phi \\ \perp, & \text{if } \mathcal{A} \vdash \neg \phi \end{cases}$$

where $\mathcal{A}$ is some standard axiomatization of arithmetic, $\top$ is the trivial proposition and $\perp$ is the absurd proposition.

We know from Gödel’s Theorem that $\mathcal{A}$ will be incomplete if consistent. So $\llbracket \dots \rrbracket^{\mathbb{N}}$

red. And I see it—the very same object—as being round. In this sense, I see the apple as a shared aspect of the fact that the apple is red and the fact that the apple is round. And I perceive a book on my desk as being red. In that sense, I see redness as a shared aspect of the fact that the apple is red and the fact that the book is red. In causing me to experience the apple as a shared aspect of different ways for the world to be, and redness as a shared aspect of different ways for the world to be, my perceptual apparatus renders salient a network of connections between ways for the world to be. And, of course, there is significant overlap between the connections rendered salient by our perceptual capacities and the connections rendered salient by the language we speak. To a first approximation, one might take a singular term to refer to an object of our experience when the following two conditions are satisfied: (1) some atomic sentences involving the singular term are assigned a way for the world to be that we perceive as the relevant’s object being a certain way, (2) the network of connections that is rendered salient by the singular term coincides with the network of connections that is centered on the object of our experience when attention is restricted to ways for the world to be that are (a) expressed by sentences of the relevant language and (b) the contents of our perceptual experience.

must remain undefined for some sentences, or misfire altogether. On the other hand, $\llbracket \dots \rrbracket^N$ preserves entailments amongst sentences for which it is defined, so it follows from Legitimacy that $\llbracket \dots \rrbracket^N$ will count as a legitimate interpretation for the relevant portion of the language. Not just that: since a sentence like “ $0 = 0$ ” will be a theorem of any reasonable axiomatization of arithmetic, Reference for Singular Terms entails that “0” is non-empty. (And, of course, analogous considerations show that arbitrary numerals are non-empty and that the addition and multiplication predicates express properties.)

If a numeral like “0” is non-empty, who does it refer to? The anti-absolutist would start by pre-empting a loaded reading of the question—a reading on which one is asking which of the objects *in an independently given domain* is the referent of “0”. As we have seen, the anti-absolutist rejects the assumption that there is such a thing as an independently given domain because she takes an object to be an aspect of a way for the world to be and she thinks that no such aspects are “metaphysically salient”. As a result, one does not interpret a language by pairing its terms with the items in an independently given domain. Instead, one singles out one’s domain by assigning propositions to the sentences of one’s language and letting the domain of the language consist of the nodes in the network of connections between ways for the world to be that is rendered salient by that assignment.

A consequence of this way of thinking is that one has no way of identifying the referents of arithmetical terms unless one’s metalanguage is able to interpret the language of arithmetic. This is because the anti-absolutist thinks that for a term to refer to a given node of the relevant network is for that node to be the shared aspect of ways for the world to be that is rendered salient by the term. And unless one’s language is able to interpret the language of arithmetic, it won’t render the right aspects salient. So, a situation in which one is in a position to quantify over the referents of arithmetical terms is also a situation in which one is in a position to give a disquotational semantics for the language of arithmetic, and answer the question of who “0” refers to by saying that “0” refers to

0.

One might worry that this picture gives rise to an indeterminacy problem. For the fact that $\llbracket \dots \rrbracket^{\mathbb{N}}$ is only partially defined means that it could be extended in different ways, with each extension delivering a different extension of the original network of connections between ways for the world to be.¹⁹ So which are the “real” natural numbers? Are they the nodes of the original network, or the nodes of one of the expanded networks?

The answer to this question depends on issues that are orthogonal to the present discussion. In particular, it depends on whether one thinks that considerations of naturalness should play a role in reference-fixing. If one thinks they shouldn’t, then one might answer the question by saying that the arithmetical terms refer to the nodes of the original network, and therefore to aspects of ways for the world to be that are relatively unspecific. If, in contrast, one sees a role for considerations of naturalness in metasemantics, one might wish to claim that one of the expanded networks is more “natural” than the rest, and that arithmetical terms refer to the nodes of that network. Suppose, for example, that one’s metalanguage is the language of first-order set-theory, which is not only able to interpret the language of arithmetic but can do so in more than one way. (For instance, it can interpret arithmetical quantifiers as ranging over the finite von Neumann ordinals, or the Zermelo ordinals, or over the elements of some non-standard model of arithmetic.) Against the background of such a framework, one might claim that one of these interpretations is more “natural” than the rest and count this as a reason for taking the numerals to refer accordingly.²⁰

From the point of view of an anti-absolutist, none of this matters very much. What really matters in interpreting a language is that each of the *sentences* one wishes to make available for use be successfully paired with a way for the world to be. An assignment of

¹⁹I am most grateful to Peter Fritz for discussion on this point.

²⁰It is worth keeping in mind that a proponent of such a view need not see naturalness as an objective notion. She might instead see reference as relative to a metatheory and take the relevant notion of naturalness to be determined by that metatheory.

referents to subsentential expressions is best seen as a form of bookkeeping. It doesn't affect the ability of the language to convey information about how the world is.

In contrast, referential indeterminacy *is* a potential problem for the absolute first-orderist. For she thinks that unless one's succeeds in pairing the basic expressions of one's language with elements of the “absolutely general” domain, one cannot succeed in pairing sentences with facts (which are themselves built out of elements of the “absolutely general” domain).

It is worth noting, moreover, that the indeterminacy problems faced by the absolute first-orderist could well be serious. Consider, for example, the “reference first” interpretation that we considered earlier. What made it possible for the absolute first-orderist to single out unique referents for her arithmetical quantifiers and predicates was the extreme sparsity of the “absolutely general” domain. But such sparsity brings disadvantages, by limiting the sorts of mathematical theories that the absolute first-orderist can regard as literally true. And if she works with a more capacious domain, it is not obvious that she will retain the ability to single out unique referents for her arithmetical terms.²¹

7 Back to First-Orderism

I have spent the past few sections articulating Anti-Absolutism and showing how it might escape some of the objections I had earlier leveled against Absolute Generality. So far, however, I haven't said much about the anti-absolutist's attitude towards First-Orderism.

Menzel and Pickel's contributions to this volume advance sophisticated arguments for First-Orderism. Since Williamson's contribution offers detailed responses, I have chosen a different approach here. Rather than engaging with the details of Menzel and Pickel's

²¹Notice, in particular, that Gödel's Theorem guarantees that no recursively specifiable set of sentences from the language of first-order arithmetic could be used to single out addition and multiplication from amongst the vast array of quasi-arithmetical properties in the expanded domain. One would, of course, be in a position to single out the relevant properties if one had a fully determinate language expressive enough to characterize the standard interpretation of the language of arithmetic. But the availability of such a language would obviate the need for a “reference first” semantics.

arguments, I will try to articulate an anti-absolutist alternative to First-Orderism. My alternative is based on a broadly Fregean conception of properties on which property-talk is shorthand for higher-order quantification. In particular, “there is a (first-level) property such that ...” is shorthand for the second-order “ $\exists F(\dots)$ ”. This means that a sentence like “properties are objects” is worse than false: it is ungrammatical.

A first-orderist might complain: “If you really think that property-talk should be cashed out in higher-order terms, why persist in using singularized English expressions like ‘the property of being wise’ or ‘a property is just a way for something to be’?” The answer is that I want to be understood and paper written in higher-orderese would be largely unreadable. It is true that using singularized English in place of higher-order resources carries the risk of misunderstanding, but I’d rather be misunderstood than unread.

Menzel and Pickel consider Fregean conceptions of properties in their papers and find them wanting. I suspect that part of the problem is that they are not focusing on a radical enough opponent. They are both responding to Williamson, who rejects First-Orderism while embracing Absolute Generality. It seems to me, however, that the best way of articulating an alternative to First-Orderism is to work against the background of an anti-absolutist picture of the relationship between our language and the world.

Recall that the anti-absolutist thinks that objects and properties are best thought of as aspects of ways for the world to be. This raises the following question: if a property is just an aspect of a way for the world to be, couldn’t one coin a singular term to refer to that very aspect? It is natural to ask this question if you think that aspects are like fish in a pond: once you’ve succeeded in singling out a fish, there is no reason you can’t introduce a singular term to refer to it.

The anti-absolutist would resist the idea that aspects are like fish in a pond. She thinks that the only way we’re able to single out an aspect of a way for the world to be is by using language—or, more generally, a compositional system of representation—to

render salient commonalities between that way for the world to be and others. When you describe the world using “Hypatia is wise” and “Socrates is wise” you render salient shared aspects of the relevant facts. But if you go on to introduce the singular term “wisdom” to refer to that shared aspect, you will have missed the mark. The problem is that “wisdom” and “is wise” fall under distinct syntactic categories and therefore give rise to slightly different networks of connections between ways for the world to be. For example, when you describe the fact that Hypatia is wise using “wisdom is instantiated by Hypatia”, you render salient an aspect of that way for the world to be that it has in common with another: the fact that wisdom is a virtue. But this is a connection that is not rendered salient when you use “Hypatia is wise”, since “Is wise is a virtue” is ungrammatical. Accordingly, “wisdom” and “is wise” correspond to different nodes in the overall network of connections between ways for the world to be that our language renders salient.²² (The networks will nonetheless be closely related. Depending on the details on the language, the network rendered salient by “is wise” may be a subnetwork of the network rendered salient by “wisdom”.)

If one really wanted “wisdom” and “is wise” to correspond to the same nodes in the network of connections that one’s language renders salient, one would need to work within a language that allows predicates and their nominalizations to be grammatically intersubstitutable. But a sufficiently rich language with this feature will run into paradox.

²²Recall that on a Fregean conception of properties, claims about aspects—which are just properties—should be cashed out in higher-order terms. As Nick Jones pointed out to me, this makes it tricky to give a precise statement of claims like “‘wisdom’ and ‘is wise’ correspond to different nodes”, since one would need different kinds of quantifiers to talk about the referents of “wisdom” and “is wise”, respectively, and standard identity predicates—including standard higher-order identity predicates—don’t accept arguments of distinct types. My preferred way to address this issue is by seeing my discussion of the issue as an instance of Wittgensteinian therapy: rather than thinking of it as an attempt to defend, e.g. “‘wisdom’ and ‘is wise’ have different referents”, it is to be understood as a method for working within an opponent’s assumptions and showing that—on those assumptions—some of the opponent’s claims are inconsistent with anti-absolutism. As noted in Jacinto (forthcoming), however, the Fregean also has a more direct approach: she can introduce a mixed type “quasi-identity” predicate that takes singular terms in one argument place and predicates in the other. Such a predicate won’t satisfy the standard laws of identity (e.g. it won’t be reflexive), but it might nonetheless be used to address the issue in a way that is good enough for the purposes at hand.

So one will be forced to impose non-trivial restrictions on the syntactic rules of the language, restrictions that will ultimately drive a wedge between certain predicates and their nominalizations (barring an exceptionally weak logic). Menzel’s chapter suggests a nice way of carrying out that project. But—to return to a point I made in section 2—it seems to me that the need to engage in such a project at all should be counted as a cost.

It is worth emphasizing that the anti-absolutist would not object to introducing a type-free language, so long as it was interpreted in a way that respects the entailments of a suitable logic. She would concede, moreover, that the relevant interpretation might assign true propositions to strings like “wisdom = is wise” or “ $\exists x(x = \text{is wise})$ ”, and therefore that expressions like “is wise” and “wisdom”, as used in the resulting language, might succeed in singling out aspects of ways for the world to be. She would question, however, whether the relevant aspects deserve the label “object” (or “property”), since they arise from networks of connections between ways for the world to be that are significantly different from the networks that would arise from a language with a more conventional syntax. So, even if our type-free language succeeds in rendering salient an interesting family of aspects of ways for the world to be, the anti-absolutist would think it potentially misleading to describe the result as a vindication of First-Orderism. Since the relevant aspects would be nodes in a richer system of connections than those centered on singular terms or predicates, they are better thought of as entities richer than either objects or properties.

The issue is, of course, partly terminological. If the first-orderist wishes to reserve the term “object” for a node of the network of connections that her type-free language renders salient, so be it. But it is worth keeping in mind that there is a slippery slope. Consider, for example, a Tractarian language in which sentences are concatenations of “logical names” and different orderings of names are meant to correspond to different ways for the world to be. As long as the details are spelled out in the right sort of

way,²³ the anti-absolutist will think that the Tractarian language is no less legitimate a symbolic representation of the world than a first-order language. She will think, in particular, that each pair of a “logical name” and an ordering-position succeeds in making salient an aspect of ways for the world to be. But note that the relevant aspects are so different from objects in the ordinary sense that it would be misleading to call them that. (“Logical object” is less misleading only because it is so uninformative; “atomic proposition” is better because “proposition” points in the right direction, but it is still suboptimal because “atomic” hasn’t been given much content.)

I have been arguing that Anti-Absolutism lends itself to a broadly Fregean understanding of objects and properties on which First-Orderism is ultimately misguided. But the anti-absolutist also thinks that there is usually no obstacle to carrying out one’s philosophical work within a first-order language. After all, she thinks that abstract objects are cheap. As we saw in section 5, she thinks there is a large range of cases in which all it takes to expand one’s domain of discourse is to expand one’s linguistic resources. This is true, in particular, of an expansion that adds a nominalization for each of one’s original predicates.²⁴

The anti-absolutist would have no objection to using the referents of such nominalizations as objectual surrogates for properties. She would caution, however, that if you confuse your surrogates for genuine properties, you might end up tied up into philosophical knots. In particular, you might be tempted to suppose that there is sense to be made

²³Here is one way of spelling out the details. We work with a space of worlds $\mathscr{W}$ with the same cardinality as the continuum, and introduce a language with a countably infinite family of “logical names”: $t_0, t_1, \dots$. We let a *complete* sentence be an ω -sequence of logical names in which each name occurs exactly once, and we let a (possibly partial) *sentence* be a subsequence of a complete sentences. We say that sentence ψ is a logical consequence of sentence ϕ (in symbols $\phi \vdash \psi$) iff ψ is a subsequence of ϕ . We then let our interpretation $\llbracket \dots \rrbracket$ be an assignment of subsets of $\mathscr{W}$ to sentences that satisfies the following two conditions: (1) $\llbracket \dots \rrbracket$ establishes a bijection between the set of complete sentences and $\{\{w\} : w \in \mathscr{W}\}$, and (2) whenever ϕ is a (partial) sentence, $\llbracket \psi \rrbracket = \bigcup \{\llbracket \phi \rrbracket : \phi \vdash \psi\}$. It is easy to verify that any interpretation satisfying these conditions will respect logical entailments.

²⁴Roughly speaking, one works with an interpretation that assigns to each sentence of the form “ a has F-ness” the same subset of $\mathscr{W}$ that one previously assigned to “ a is F”. The details can be spelled out as in footnote 13, by working within a multi-sorted language and letting the new terms belong to a new sort.

of talk of “absolutely all” properties and embark on the fruitless project of answering questions like “how many properties are there?”. Or you might be tempted to replace a (natively consistent) higher-order comprehension schema with an inconsistent first-order comprehension principle and embark on the heroic project of finding a fully principled way of restoring consistency.

8 Modal Absolutism

Absolutists claim that there is sense to be made of a domain of “absolutely all” objects. Absolutists of the first-orderist variety go on to claim that there is sense to be made of a domain of “absolutely all” properties. In this section I would like to discuss a related but distinct claim, which I call *Modal Absolutism*: the claim that there is sense to be made of a domain of “absolutely all” ways for the world to be.

Modal Absolutism suffers from a certain instability: however many ways for the world to be one takes to be included in the “absolutely general” modal domain, they can be used to characterize more. For example, given any subdomain of the “absolutely general” modal domain, one can characterize a way for the world to be wherein God prefers exactly the ways for the world to be in that subdomain. Cardinality considerations then guarantee that not all of the newly characterized ways for the world to be can be included in the original domain.²⁵

The modal absolutist might respond to this argument by denying that the newly constructed scenarios all correspond to genuine ways for the world to be.²⁶ But one should expect such a response to be satisfying only to the extent that the notion of a “genuine way for the world to be” is motivated independently of one’s desire to hold on to Modal Absolutism in the face of paradox.

²⁵Variants of this argument are discussed in Davies 1981, Forrest & Armstrong 1984, Kaplan 1995, Nolan 1996, Fine 2003, Uzquiano 2015, Fritz 2017.

²⁶See, for example, Lewis 1986, §2.3. I offer relevant discussion in Rayo 2020, along with a version of the argument that I believe is able to escape Lewis’s criticism.

It seems to me that a better approach is to embrace the idea that ways for the world to be, like objects and properties, are open ended: if you give me some ways for the world to be, I can use them to construct more. Although such open-endedness does not follow from the basic anti-absolutist picture we have been discussing so far, it is a natural enough extension of the view that it is worth saying a few words about it here.

The best way to motivate modal open-endedness is to start with the notion of a *distinction* between ways for the world to be, and to think of such distinctions as theoretical tools. Consider, for example, the distinction between there being oxygen and not. The ability to distinguish between these different ways for the world to be is a scientific triumph, which transformed our ability to understand the world around us. The decision to include such a distinction in our scientific toolkit—as opposed to including, e.g. the distinction between there being phlogiston and not—was based on the distinction’s fruitfulness as a theoretical tool. Conspicuously: it allowed us to accommodate observations about combustion more satisfactorily than any rivals.

Generally speaking, a distinction between ways for the world to be is a theoretical tool, to be adopted or not on the basis of its ability to help us make sense of the world. This applies even to distinctions concerning purely logical matters. Consider, for example, the intuitionist’s purported distinction between the world’s being such that $\neg\neg p$ and the world’s being such that p . Reasonable people can disagree about whether there is a genuine distinction here. The way to adjudicate the issue is by weighing the distinction’s fruitfulness as a theoretical tool. Should the distinction allow us to develop a conception of the world more satisfying than its rivals, we should adopt it as genuine; otherwise, we should not.

I have been discussing the claim that one should decide whether to *adopt* a distinction. It is tempting to think that there is a separate metaphysical question of whether the distinctions one chooses to adopt are, in a suitable sense, “objectively correct”.²⁷ On

²⁷I further discuss the question of objective correctness in Rayo 2013, chapter 2 and Rayo 2014.

the view I would like to consider, this temptation ought to be resisted. Asking whether a distinction between ways for the world to be is “objectively correct” would be just as wrong-headed as asking whether it would be “objectively correct” to use a hammer for a particular home renovation project.

An absolute first-orderist might suggest a contrasting picture: “The objectively correct distinctions are just the result of applying the properties that are included in the absolutely general domain. For instance, it is *because* the domain contains the property of being an oxygen atom that one should use the distinction between being an oxygen atom and not to describe the world.”

From the point of view of an anti-absolutist, this is all backwards. Recall that the anti-absolutist thinks of objects and properties as aspects of ways for the world to be, and that she thinks there is nothing metaphysically significant about the particular aspects that our representational capacities render salient. So although she thinks it is true—strictly and literally—that there are oxygen atoms, she also thinks that there is nothing metaphysically significant about that particular description of the relevant feature of the world. The very facts that we currently describe using oxygen-talk might have been described using a separate set of distinctions. So there is nothing about the way the world is, independently of our representational capacities, that makes the distinction between there being oxygen and not “objectively correct”. It is *because* the distinction is so useful that it is advisable to describe the world as containing oxygen atoms.

Accordingly, the anti-absolutist thinks that there is nothing about the world, as it is in itself, that makes the distinction between containing oxygen and not “objectively correct”. Instead, it is a distinction we find attractive because of a combination of the way the world is and our psychological constitution. It is therefore a mistake to think that there is a single space of possible worlds on the basis of which all inquiry is to be conducted. Instead, one fixes a space of worlds for the purposes of a particular theoretical

project, as carried out by an individual with a particular psychological constitution.²⁸ More specifically: one takes the family of distinctions between ways for the world to be that would seem most fruitful for the purposes of that project to an individual with that psychological constitution and lets a “world” consist of a coherent way of taking a stand with respect to each of those distinctions.²⁹

A nice feature of this approach is that it makes room for modal open-endedness. Suppose one is given a set of worlds, $\mathscr{W}$, based on a particular family of ways for the world to be. Then $\mathscr{W}$ itself might be used to characterize further ways for the world to be. (For instance, one might characterize, for each subset of $\mathscr{W}$, a way for the world to be wherein God is concerned with exactly the worlds in that subset.) The new distinctions can then be used to characterize a richer set of worlds $\mathscr{W}^+$. On the picture we have been considering, there is nothing mysterious going on. A distinction between ways for the world to be is ultimately a tool, and the availability of one set of tools puts us in a position to characterize further tools.

9 The Prior-Kaplan Pradox

Before bringing this paper to a close I would like to say a few words about the Prior-Kaplan Paradox (Prior 1961, Kaplan 1995).

To set up the paradox, we start with the observation that the following sentence can be proved using standard deductive systems for higher-order logic, where $\ulcorner \Diamond \phi \urcorner$ abbreviates $\ulcorner \neg(\phi = \perp) \urcorner$.³⁰

²⁸The set $\mathscr{W}$ that figures in the anti-absolutist semantics should therefore be thought of as tacitly indexed to a particular theoretical project and a particular psychological constitution.

²⁹Here coherence should be understood as the absence of absurdity. For further discussion of the relevant notion of absurdity, see Rayo 2013, chapters 1–2 and Rayo 2020.

³⁰I use $p, q, \dots$ as propositional variables and $O, P, \dots$ as propositional operator variables. Prior proved Prior’s Theorem by proving:

$$O(E^-) \rightarrow (E^+ \wedge E^-)$$

where:

$$E^+ := \exists p(Op \wedge p) \quad E^- := \exists p(Op \wedge \neg p)$$

Prior’s Theorem: $\exists p \neg \Diamond \forall q (Oq \leftrightarrow (q = p))$

From the point of view of a modal absolutist, this is an awkward result. On the assumption that a proposition is just a way for the world to be, the modal absolutist is committed to there being a domain of “absolutely all” propositions. So she should be prepared to take the propositional quantifiers in Prior’s Theorem as ranging over “absolutely all” propositions. But now suppose that “ Oq ” is interpreted as, e.g. “God considers the question whether q ”. Then Prior’s Theorem would seem to entail an awkward result: that there is some proposition such that it is *logically impossible* for God to be concerned only with that proposition. The Prior-Kaplan Paradox, as I shall understand it here, is the claim that Prior’s Theorem delivers the awkward result.

A modal absolutist can use a number of different strategies for avoiding the problem. One proposal—developed by Bacon et al. (2016)—is to weaken one’s higher-order deductive system, so that Prior’s Theorem is no longer a theorem. Another—which is suggested by Menzel in his contribution to this volume—is to suggest that Prior’s Theorem should be recast in first-order terms using *semantic* vocabulary, so that Prior’s Theorem ceases to be a theorem in the absence of substantive semantic assumptions.

I will not attempt to assess these proposals here. Instead, I would like to describe the situation from the point of view of a modal anti-absolutist. The key observation is that an anti-absolutist need not accept the claim that the proposition expressed by “ Oq ” (relative to some value of “ q ”) will generally fall within the range of the quantifiers binding “ q ”. The absolutist is stuck with that claim because she is committed to thinking that one’s quantifiers might range over “absolutely all” propositions, but the modal anti-absolutist has no such commitment.

As we discussed in the preceding section, the modal anti-absolutist thinks that propositions are open ended: if you give her some propositions, she can use them to characterize more. Now suppose that propositions are modeled as subsets of a given set of worlds

$\mathcal{W}$. Then the anti-absolutist thinks that each proposition $\pi \subseteq \mathcal{W}$ can be used to characterize the distinction between God’s considering π and not. We can then characterize an enriched set of worlds, $\mathcal{W}^+$, by starting with the worlds in $\mathcal{W}$ and refining them by considering all coherent ways of taking a stand with respect to the new distinctions. This puts us in a position to think of the semantic value of “ O ” (interpreted as “God considers the question whether ...”) as a function that assigns to each proposition $\pi \subseteq \mathcal{W}$ a proposition $\pi^+ \subseteq \mathcal{W}^+$.³¹ And we have a nice way of capturing the intuitive thought that God might have given her full attention to any proposition in $\mathcal{W}$ she liked; namely: for each proposition $\pi \subseteq \mathcal{W}$ there is a world in $w^+ \in \mathcal{W}^+$ at which God considers π and nothing else.

The anti-absolutist agrees that Prior’s Theorem is a logical truth. But she sees the theorem as revealing an expressive limitation of standard higher-order languages. For such languages are restricted to propositional operators of one particular kind: operators whose output is restricted to the propositions in their input range. And, as we have seen, the anti-absolutist thinks that an English expression like “God considers the question whether ...” is usefully modeled not by a standard propositional operator but by “super operator” whose output might include propositions outside its input range.

Happily, the anti-absolutist is in a position to characterize a formal system that allows for “super operators” of this kind. I relegate the details to an ancillary document,³² but the intuitive idea is straightforward. One begins by modeling a proposition as a subset of some initial set of worlds $\mathcal{W}^0$. Next, one uses each $\pi \subseteq \mathcal{W}^0$ to characterize the

³¹Suppose, for example that $\mathcal{W} = \{w_0, w_1\}$, where w_0 is the possibility that all is fire and w_1 is the possibility that not all is fire (Kaplan 1995). Then we can let $\mathcal{W}^+$ be the 32-member set consisting of the following two worlds for each subset S of $\mathcal{P}(\mathcal{W})$:

- $w_{0,S}$: all is fire and S is the set of propositions $\pi \in \mathcal{P}(\mathcal{W})$ such that God considers π
- $w_{1,S}$: not all is fire and S is the set of propositions $\pi \in \mathcal{P}(\mathcal{W})$ such that God considers π

Finally, we let $\llbracket “O” \rrbracket$ be the function that assigns to each proposition $\pi \subseteq \mathcal{W}$ the proposition $\{w_{i,S} \in \mathcal{W}^+ : i \in \{0,1\} \wedge \pi \in S\} \subseteq \mathcal{W}^+$, and we let $\llbracket “Oq” \rrbracket$, relative to an assignment of a proposition $\pi \subseteq \mathcal{W}$ to “ q ”, be the result of applying $\llbracket O \rrbracket$ to π .

³²Available here: <https://philpapers.org/archive/RAYSDT.pdf>

distinction between, e.g. God’s considering π and not. The new distinctions are then used to characterize a richer set of worlds $\mathscr{W}^1$, which in turn serves as the basis of an even richer set of worlds $\mathscr{W}^2$. And so forth. The result is an infinite hierarchy of sets of worlds, $\mathscr{W}^0, \mathscr{W}^1, \mathscr{W}^2, \dots$, with each subsequent member of the hierarchy consisting of worlds more fine-grained than those of its predecessor. And because propositions are modeled as sets of worlds, the powerset of each level of the hierarchy can be used to model an increasingly fine-grained domain of propositions.

To keep track of one’s place in the hierarchy, the language includes the operators $\uparrow$ and $\downarrow$, which increase and decrease the level of fineness of grain of the propositions in the range of one’s propositional quantifiers. The language also includes a “super propositional operator” $\mathcal{Q}$. Formally, $\mathcal{Q}$ expresses a procedure for characterizing a propositional operators that take propositions from one level of the hierarchy as input and deliver propositions from the next level of the hierarchy as output. So, for instance, an occurrence of “ $\mathcal{Q}$ ” within the scope of a single occurrence of “ $\uparrow$ ” might correspond to “God considers the question whether ...” as applied to base-level propositions and deliver first-level propositions as output; an occurrence of “ $\mathcal{Q}$ ” within the scope of two occurrences of “ $\uparrow$ ” corresponds to “God considers the question whether ...” as applied to first-level propositions and delivers second-level propositions as output; and so forth.

The resulting formalism has some nice features. For example, one gets a comprehension principle guaranteeing that arbitrary sentences express propositions of some sufficiently high level of fineness of grain. Also: when attention is restricted to standard higher-order vocabulary, one gets a standard deductive system. This means, in particular, that one can prove Prior’s Theorem and thereby capture the idea that a standard propositional language is not rich enough to capture the behavior of an English expression like “God considers the question whether ...”. But the formalism also allows one to prove:

Anti-Prior’s Theorem $\forall p \diamond \forall q (\uparrow \mathcal{Q} q \leftrightarrow (q = p))$

(*Read:* for any base-level proposition p , it is logically consistent that the only base-level proposition God considers, as viewed from the perspective of first-level propositions, is p .)

Anti-Prior's Theorem captures the anti-absolutist idea we possess a procedure for using a given set of (base-level) propositions to introduce a richer set of (first-level) propositions, including the proposition that God's attention is restricted to π , for each proposition π in the original set.

10 Conclusion

This paper articulates a response to Menzel and Pickel's Absolute First-Orderism. Rather than engaging with the details of their arguments, however, I have proceeded by developing an alternative view, which I call Anti-Absolutism. Although Anti-Absolutism, in various forms, has been defended by many different philosophers over the years, it constitutes a radical departure from much of contemporary metaphysics.

I'm not sure Menzel and Pickel will be moved by my alternative proposal. But I hope to have made room for the idea that a broadly Williamsonian framework is too narrow a setting for a proper defense of Absolute First-Orderism. The key opponent is the anti-absolutist.³³

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