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ABSTRACT: This chapter discusses deflationist and anti-metaphysicalist views of the temporal-ontology question—i.e., the question of whether past and future objects exist (i.e., roughly, the question of whether *presentism* or *eternalism* is true. In addition to surveying the possible deflationist and anti-metaphysicalisat views the one might hold, this chapter provides an argument against the most popular versions of deflationism—versions that can be thought of as *Carnapian*—and it develops some non-Carnapian versions of deflationism and anti-metaphysicalism.

Deflationism and Anti-Metaphysicalism about Temporal Ontology

1. INTRODUCTION

In this chapter, I'll discuss deflationist and anti-metaphysicalist views of the temporal-ontology question. By the *temporal-ontology question*, I mean the question of whether past and future objects exist—i.e., roughly, the question of whether *presentism* or *eternalism* is true. In section 2, I'll define presentism and eternalism. In section 3, I'll articulate a number of different deflationist views of the temporal-ontology question. In section 4, I'll articulate a view that, while not deflationist, is still "anti-metaphysical" in a certain way. In section 5, I'll argue against the most popular versions of deflationism—versions that can be thought of as *Carnapian*. And in section 6, I'll say a few words about non-Carnapian versions of deflationism and anti-metaphysicalism.

(I'll wait until section 3.3 to cite the works of other philosophers who have written about deflationism. This is partly because there has been very little discussion of deflationism about the temporal-ontology question—which is surprising because there's been a *lot* of discussion of deflationism about *other* metaphysical questions. One aim of this chapter is to generate more discussion here.)

2. PRESENTISM AND ETERNALISM

Presentism is the view that only present objects exist, and *eternalism* is the view that past, present, and future objects all exist. So, e.g., eternalists believe that there exist dinosaurs and 22nd-Century cockroaches, and presentists don't.[1]

Alternatively, we can think of eternalism as the view that physical reality is temporally extended and presentism as the view that physical reality *isn't* temporally extended. More precisely, if

we assume the naïve view that there are exactly three spatial (and no other non-temporal) dimensions, then we can say that presentism is the view that physical reality is a 3-dimensional manifold in which only present objects exist, and eternalism is the view that physical reality is a 4-dimensional manifold in which past, present, and future objects all exist, and temporally distant objects like dinosaurs are analogous to spatially distant objects like Saturn. Thus, according to eternalism, just as Saturn exists in the outer solar system, dinosaurs exist in the Jurassic period, where the outer solar system and the Jurassic period are both just different regions of the 4-dimensional spatiotemporal manifold.

(Advocates of presentism include Prior (1970), Hinchliff (1996), Bigelow (1996), Zimmerman (1998), Markosian (2004), Bourne (2006), and Merricks (2007). And advocates of eternalism include Quine (1950), Smart (1963), Lewis (1986), Heller (1984), Hudson (2001), Sider (2001), and Hawley (2001).)

Presentism and eternalism aren't mutually exclusive. There are other views you could endorse here, e.g., *growing block theory*, which says that past and present objects exist but future objects don't (see, e.g., Broad (1923) and Tooley (1997). But in this chapter, I'll assume that the only viable views in the temporal-ontology debate are presentism, eternalism, and the non-factualist view that there's no right answer to the question.

3. DEFLATIONISM

3.1 Trivialism and Non-Factualism: Here are two views that can be thought of as *deflationist* views of the temporal-ontology question:

> *Non-factualism*: There's no fact of the matter whether presentism or eternalism is true.
>
> *Trivialism*: There's a fact of the matter whether presentism or eternalism is true, but it's an utterly trivial fact—along the lines of the fact that all bachelors are unmarried, or the fact that there are no married bachelors. More specifically, the facts that settle the temporal-ontology question aren't substantive facts about the nature of reality; they're just *semantic* facts (i.e., facts about the meanings or truth conditions of our sentences), together perhaps with ordinary empirical facts that are entirely uncontroversial.

In the next two subsections, I'll say a few words about how we might develop more filled-in versions of these two views.

3.1.1 Trivialism: We can think of the debate between presentists and eternalists as being about

the truth values of certain sentences, e.g.,

> [Dinosaur] There exist dinosaurs.

Eternalists think these sentences are true, and presentists think they're false. And we can use this fact to develop two different kinds of trivialism. To see how we can do this, consider the following two languages:

> *Trivialist-Presentese* is a language in which (a) [Dinosaur] is a *present-tense* sentence that expresses the (obviously false) proposition that dinosaurs exist at the present time, i.e., in the 21st Century; and (b) likewise for other sentences like [Dinosaur].
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> *Trivialist-Eternalese* is a language in which (a) [Dinosaur] is a *tenseless* sentence that expresses the (obviously true) proposition that there either were dinosaurs, or will be dinosaurs, or are dinosaurs at the present time; and (b) likewise for other sentences like [Dinosaur].

Given this, we can define the following two versions of trivialism:

> *Presentist Trivialism*: Trivialist-Presentese is the language that matters vis-à-vis the temporal-ontology question. But it's entirely obvious that [Dinosaur] is false in Trivialist-Presentese (because dinosaurs are obviously extinct), and likewise for other sentences like [Dinosaur]—and so presentism is trivially true.
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> *Eternalist Trivialism*: Trivialist-Eternalese is the language that matters vis-à-vis the temporal-ontology question. But it's entirely obvious that [Dinosaur] is true in Trivialist-Eternalese (because there's indisputable fossil evidence that there used to be dinosaurs), and likewise for other sentences like [Dinosaur]—and so eternalism is trivially true.

3.1.2 Non-Factualism: Given the remarks in section 3.1.1, we can define the following version of non-factualism:

> *Trivialese-Based Non-Factualism*: Trivialist-Presentese and Trivialist-Eternalese are the only two languages that matter vis-à-vis the temporal-ontology question. But neither of these two languages matters more than the other here; and so there's no fact of the matter whether [Dinosaur] is true in "*the language that matters*" vis-à-vis the temporal-ontology question; and so there's no fact of the matter whether presentism or eternalism is true. (The *reason* there's no fact of the matter whether Trivialist-Presentese or Trivialist-

> Eternalese is "the language that matters" here might be that (a) there's no fact of the matter whether *ordinary English* is Trivialist-Presentese or Trivialist-Eternalese (because the linguistic intentions of ordinary folk aren't robust enough to determine what language they're speaking); or it could be that (b) there's no fact of the matter whether *the language of mainstream presentists and eternalists* is Trivialist-Presentese or Trivialist-Eternalese (because these philosophers haven't been precise enough about what they mean by their words).)

But this isn't the only version of non-factualism. To appreciate this, consider the following language:

> *Substantialese* is a language in which [Dinosaur] says that dinosaurs are among the things that *exist*—or, better, the things that exist *tenselessly*—where (a) this is not analytically entailed by the claim that there used to be dinosaurs,[2] and (b) it doesn't analytically entail the claim that dinosaurs exist at the present time, i.e., in the 21st Century.[3] Thus, given certain obvious empirical facts (e.g., that there used to be dinosaurs and that they're now extinct), we can say that in order for [Dinosaur] to be true in Substantialese, it needs to be the case that dinosaurs exist in a metaphysically substantive eternalistic way in a past region of the 4-dimensional spatiotemporal manifold; in short, it needs to be the case that reality is a 4-dimensional block in which the past times at which dinosaurs existed are just as real as the present time. And likewise for other sentences like [Dinosaur].

Given this, we can define a second version of non-factualism as follows:

> *Substantialese-Based Non-Factualism*: Substantialese is the language that matters vis-à-vis the temporal-ontology question. But there's no fact of the matter whether sentences like [Dinosaur] are true in Substantialese. And so there's no fact of the matter whether presentism or eternalism is true.

You might wonder how this view could be true. The answer is that it could be true if the claims that presentism and eternalism make in Substantialese are *imprecise*. Eternalism makes a substantive claim in Substantialese. It says that the world is a certain way; in particular, it says that in addition to all the facts about presently existing objects and events, certain *further facts* obtain—facts about the existence of past and future objects and events. And presentism also

makes a substantive claim in Substantialese—it says that these alleged further facts *don't* obtain. But what if it's not clear what these alleged facts would even *be*? What if the claims that presentism and eternalism make in Substantialese are *imprecise*? The answer is that if the Substantialese formulations of presentism and eternalism are imprecise enough, then it could be that there's no fact of the matter which of these two theories is true.

The path from imprecision to indeterminacy is of course a familiar one. If Ralph is a borderline case of baldness, then according to one very plausible view, there's no fact of the matter whether 'Ralph is bald' is true because it's *imprecise*.

Likewise, one might reasonably think that the claims that presentism and eternalism make in Substantialese are *catastrophically imprecise*—i.e., so imprecise that they don't have truth values. To repeat, eternalism says that certain *further facts* obtain, and presentism says that these alleged facts *don't* obtain. But it might be that there's a catastrophic imprecision, in the formulations of presentism and eternalism, about what the alleged further facts would *be*. It might be so unclear what these further facts would be that there's just no fact of the matter whether they obtain. And if that were the case, then Substantialese-based non-factualism would be true.

3.2 Mere-Verbalism: Let's say that a debate between two people, P1 and P2, over the truth value of a sentence S is *merely verbal* iff (a) S expresses different propositions in the languages of P1 and P2, and (b) P1 and P2 would agree that S is true in P1's language and false in P2's language (Hirsch (2009) defines 'merely verbal debate' in roughly this way). Given this, we can define the following view:

> *Mere-verbalism*: Debates about the temporal-ontology question are merely verbal because (a) presentists speak Trivialist-Presentese, and eternalists speak Trivialist-Eternalese (and no other languages matter vis-à-vis the temporal-ontology question), and (b) presentism is obviously true in Trivialist-Presentese, and eternalism is obviously true in Trivialist-Eternalese.[4]

This view isn't fully distinct from the other deflationist views defined so far. If we combine mere-verbalism with the claim that Trivialist-Presentese is the (one and only) language that matters vis-à-vis the temporal-ontology question, then it entails presentist trivialism; and if we

combine mere-verbalism with the claim that Trivialist-Eternalese is the language that matters here, then it entails eternalist trivialism; and if we combine mere-verbalism with the claim that neither of these languages matters more than the other, then it entails Trivialese-based non-factualism.

The only view defined so far that *doesn't* fit well with mere-verbalism is Substantialese-based non-factualism. This is because Substantialese-based non-factualists think that (a) presentists and eternalists *speak the same language*, and (b) they speak a *substantialist* language, not a trivialist language. Because of this, we can also say that unlike the other views defined so far, Substantialese-based non-factualism is *not a Carnapian view*. Carnap (1950) held that we can get answers to our ontological questions by merely defining a language; and this idea fits well with all the views defined so far except for Substantialese-based non-factualism.

3.3 Citations: There's been very little discussion of the deflationist views I've defined here. There's been *some* discussion—e.g., Sider (2001, 2006) and Hestevold and Carter (2002) argue against trivialism, and in my (2016), I develop a version of Substantialese-based non-factualism, and I argue for the disjunction of that view and another view that I'll define in section 4. But there hasn't been a *lot* of discussion of the views I've defined here, and I don't know of anyone who has explicitly *endorsed* any of these views.

This is surprising because numerous philosophers have endorsed analogous views in connection with other metaphysical questions. E.g., in my (2021), I argued for analogues of Substantialese-based non-factualism in connection with the composite-object question and the abstract-object question. And a great many philosophers have endorsed *Carnapian* views—i.e., analogues of trivialism, Trivialese-based non-factualism, or mere-verbalism—in connection with other metaphysical questions. The list here includes Carnap (1950), Putnam (1987), Parfit (1995), Sosa (1999), van Fraassen (2002), Sidelle (2002), Schiffer (2003), Thomasson (2007, 2015), Hirsch (2009), Chalmers (2011), Rayo (2013), Dennett (2013), and Button (2013). I suspect that many of these people would endorse Carnapian views of the temporal-ontology question; e.g., Hirsch (2009) seems like a prime candidate here, since he endorses a mere-verbalist view of the endurantism-perdurantism question. Finally, for pushback against Carnapian views, see, e.g., Sider (2001, 2006), Hawthorne (2006), Eklund (2016), Bennett

(2009), McSweeney (2016), and me (2021).

4. ANOTHER ANTI-METAPHYSICAL VIEW

In addition to the deflationist views defined in section 3, we can also define a view that, while not really *deflationist*, is still an *anti-metaphysical* view in a certain way, namely the following:

> *Scientism*: *Part 1*: There's a fact of the matter about whether presentism or eternalism is true, but it's a perfectly ordinary *physical* fact, of the same kind as, e.g., the fact that there are tigers and the fact that there are no 700-story buildings. *Part* 2: The temporal-ontology question is an ordinary empirical question about the nature of physical reality—in particular, about a contingent aspect of physical reality—and so this question is of the same kind as, e.g., the question of whether there are any planets orbiting Alpha Centauri A and the question of whether quantum mechanics is true. Moreover, the temporal-ontology question cannot be settled with an *a priori* philosophical argument; the only way to settle it (if it can be settled at all) is to use an empirical argument—i.e., an argument that relies on at least one premise that can't be justified *a priori*. *Part 3*: The kinds of arguments that metaphysicians typically run for presentism and eternalism *aren't good arguments*. Indeed, with very few exceptions—e.g., the special-relativity argument for eternalism (and *maybe* the Ockhamist argument for presentism and the argument in Builes and Impagnatiello (forthcoming))—these arguments aren't even of the right *kind*, i.e., they don't provide evidence of a kind that could justify the belief in a substantive empirical hypothesis about physical reality like presentism or eternalism.

I don't know of anyone who has explicitly endorsed this view, but I develop a version of it in my (2016). It might seem that lots of philosophers—namely, those who think that metaphysics is continuous with the empirical sciences in its subject matter and methodology (e.g., Quine (1950), Putnam (1967), Sider (2001), and Emery (2023))—would endorse scientism. I think that part 3 of scientism is incompatible with the "pro-metaphysical" aspects of Sider's views, and maybe Emery's view as well, but perhaps Quine and Putnam would endorse scientism, or something like it. And perhaps Builes (2019)—or Builes and Impagnatiello (forthcoming)—would too.

Scientism is compatible with the view that metaphysicians could *settle* the temporal-ontology question, and so you might doubt that it's an "anti-metaphysical" view. But it's clearly

anti-metaphysical in *some* sense, and I don't think there's anything interesting to say about whether it's "really" an anti-metaphysical view.

5. AGAINST TRIVIALISM
(AND MERE-VERBALISM AND TRIVIALESE-BASED NON-FACTUALISM)

I've now defined several different views of the temporal-ontology question. But do we have any reason to *believe* any of these views? Well, let me start by arguing *against* trivialism. We can do this with the following argument:

> [T1] Substantialese is the language that matters vis-à-vis the temporal-ontology question.
> [T2] If Substantialese is the language that matters here, then trivialism is false. Therefore,
> [T3] Trivialism is false.

This argument is valid, and *prima facie*, both premises seem true. But let me argue that they really *are* true.

5.1 The Argument for [T1]: My argument for [T1] is based on the following premise:

> [Possible-Language] If we wanted to, we could debate the temporal-ontology question in Substantialese.

I think that if [Possible-Language] is true, then [T1] is also true. You might think that trivialists could endorse [Possible-Language] and still reject [T1] by endorsing one of the following two views:

> [Folk-English] Ordinary folk English isn't Substantialese, or any language like Substantialese; it's a trivialist language like Trivialist-Presentese or Trivialist-Eternalese.
> [Philosophical-English] The actual philosophers who are debating the temporal-ontology question in print—people like Lewis, Sider, Markosian, and Zimmerman—don't speak Substantialese, or any language *like* Substantialese. Rather, they speak trivialist languages like Trivialist-Presentese and Trivialist-Eternalese.

My own view is that [Folk-English] is false and [Philosophical-English] is not just false, but *obviously* false. But this doesn't matter. Because even if [Folk-English] and [Philosophical-English] are both true, if [Possible-Language] is *also* true, then Substantialese is obviously the language that matters vis-à-vis the temporal-ontology question—for that's the language that gives us a question of the kind that we're *trying* to ask when we ask the temporal-ontology

question. What we're trying to ask here is a controversial, non-trivial question about the nature of physical reality. Thus, if we get a question like that by speaking Substantialese but not by speaking a trivialist language—if by speaking a trivialist language, we get a trivial question about zoological history—then Substantialese is the language that we *should* be speaking here. In short, it seems that if [Possible-Language] is true, then Substantialese is the language that matters vis-à-vis the temporal-ontology question—and so [T1] is true.

But it seems obvious that [Possible-Language] *is* true. In other words, it seems that we in fact *can* debate the temporal-ontology question in Substantialese. We can define Substantialese as I did above, and we can agree to speak that language while we're debating the temporal-ontology question. So, again, it seems that [Possible-Language] is true—and, hence, that [T1] is also true.

Trivialists might respond to this argument by saying something like the following:

We agree that we need to maintain that there's *something wrong* with Substantialese. But we don't have to claim that we *can't speak* Substantialese—i.e., we don't have to reject [Possible-Language]. We can instead argue that Substantialese is *imprecise*. We started out with the sentence [Dinosaur]—i.e., with 'There exist dinosaurs.' This sentence is imprecise—it can be interpreted in multiple ways. We then got two interpretations—or *precisifications*—of [Dinosaur]. On the Trivialist-Presentese precisification, [Dinosaur] says that dinosaurs exist *at the present time*, i.e., in the 21st Century; and on the Trivialist-Eternalese precisification, [Dinosaur] says that dinosaurs *did* exist, or *will* exist, or *do* exist. Now, here's a question: Is there a *third* way to precisify [Dinosaur]? Well, Substantialese is presumably an attempt to give us a third precisification. But it fails to do so. On the Substantialese precisification (or *attempted* precisification), in order for [Dinosaur] to be true, sentences like the following need to be true:

> [D1] Dinosaurs exist in a metaphysically substantive eternalistic way.
>
> [D2] Reality is a 4-dimensional block.

But the problem is that [D1] and [D2] are *themselves* imprecise; it's totally unclear what the world needs to be like to make [D1] and [D2] true. Indeed, on our view, sentences like [D1] and [D2]—and, hence, Substantialese utterances of [Dinosaur]—are

catastrophically imprecise, i.e., so imprecise that they don't have truth values. So if you want an impossibility claim, we can put it like this: it's not possible to *settle* the temporal-ontology question, if we're speaking Substantialese.

In short, the claim here is that trivialists could try to undermine my argument for [T1]—without rejecting [Possible-Language]—by endorsing the following thesis:

Catastrophic-imprecisionism about Substantialese: Sentences like [Dinosaur] and [D1] and [D2] (and theories like presentism and eternalism) are catastrophically imprecise in Substantialese—i.e., they're so imprecise that they don't have truth values.

The problem with this response to my argument for [T1] is that Catastrophic-imprecisionism about Substantialese doesn't do anything to save trivialism or to undermine premise [T1]. On the contrary, what this thesis motivates is *Substantialese-based non-factualism*. And, as we've seen, that view is not a trivialist view.

Let me say a bit more about this. Premise [T1], recall, says that Substantialese is the language that matters vis-à-vis the temporal-ontology question. That just seems *right*. If we ask the temporal-ontology question in Substantialese, then we get what we're *supposed* to get, namely, a non-obvious question about the structure of physical reality (in particular, about whether physical reality is 3-dimensional or 4-dimensional) and not a trivial question about zoological history. Moreover, if we suppose that catastrophic-imprecisionism about Substantialese is true, that doesn't do anything to undermine the idea that Substantialese is the language that matters vis-à-vis the temporal-ontology question. If catastrophic-imprecisionism about Substantialese is true, then there's no fact of the matter whether presentism or eternalism is true in Substantialese, and so—since Substantialese is the language that matters here—the appropriate conclusion to draw is that there's no fact of the matter whether presentism or eternalism is true. In other words, if catastrophic-imprecisionism about Substantialese is true, then the right conclusion to draw isn't that trivialism is true; it's that *non-factualism* is true—in particular Substantialese-based non-factualism.

Trivialists might respond here by claiming that while we *start out* thinking that Substantialese is the language that matters vis-a-vis the temporal-ontology question, if catastrophic-imprecisionism about Substantialese is true, then we have good reason to switch to

Trivialist-Presentese or Trivialist-Eternalese.

But I think this is just false—I don't think we'd have any good reason at all to switch to one of these trivialist languages in this scenario. Let me motivate this claim by considering an analogy. Suppose that a group of us are arguing about whether the following sentence is true:

[C] *Casablanca* is a good movie.

And now suppose that we obtain good reason to believe that in our language, [C] is catastrophically imprecise, so that there's no fact of the matter whether it's true. Given this, it seems that we should be non-factualists about [C].

But now suppose that Trivialist Tom points out that we can just switch to a new language in which [C] is true if and only if more than three actors appeared in *Casablanca*. If we do this, then since it's obvious that more than three actors *did* appear in *Casablanca*, we'll get the result that [C] is true—indeed, trivially true. And so, Trivialist Tom claims, we should do this.

I find Trivialist Tom's stance here baffling. Of course, we *could* switch to this new language, but why *would* we? Just to get the result that [C] is *true*? But why would we care about that? We could've just said—in our original language—that more than three actors appeared in *Casablanca*. We didn't need to say it with [C]. Moreover, why would we *want* to say that more than three actors appeared in *Casablanca*? It's so *boring*. Finally—and this is the really important point—noting that [C] is true in this new trivialist language doesn't do anything change the fact that [C] is catastrophically imprecise in the *original* language.

This, I think, is exactly analogous to our situation. Presentists and eternalists are debating the temporal-ontology question in Substantialese. If we discover that catastrophic-imprecisionism about Substantialese is true, then we should endorse non-factualism about the temporal-ontology question and call it a day. There's nothing to be gained by switching to Trivialist-Presentese or Trivialist-Eternalese. For (a) the propositions that are expressed by sentences like [Dinosaur] in Trivialist-Presentese and Trivialist-Eternalese are utterly boring (they're trivially true and false propositions about zoological history); and (b) if we wanted to express these (boring) propositions, we could do this much more clearly with other sentences (namely, 'Dinosaurs either do, did, or will exist' and 'Dinosaurs exist at the present time, i.e., in the 21st Century'); and (c) pointing out that [Dinosaur] is trivially false in Trivialist-Presentese

(and trivially true in Trivialist-Eternalese) won't change the fact [Dinosaur] is catastrophically imprecise in Substantialese—which, again, is the language that actually matters in connection with the temporal-ontology question that we're actually trying to answer. And so it won't change the fact that, in this scenario, we should be non-factualists about the actual temporal-ontology question that we're actually trying to answer.

So it seems to me that even if catastrophic-imprecisionism about Substantialese is true, Substantialese is still the language that matters vis-à-vis the temporal-ontology question. And so I think premise [T1] is true.

5.2 The Argument for [T2]: [T2], recall, says this:

> [T2] If Substantialese is the language that matters vis-à-vis the temporal-ontology question, then trivialism is false.

Prima facie, this seems true because sentences like [Dinosaur] and 'There exist past and future objects' are neither trivially true nor trivially false in Substantialese. But trivialists might deny this—they might claim that *even in Substantialese*, [Dinosaur] is trivially true or trivially false.

I have two responses to this. First, the trivialist's claim here—that [Dinosaur] is trivially true or trivially false in Substantialese—just seems obviously *false*. Indeed, I defined Substantialese with the explicit intention of making it the case that, in that language, sentences like [Dinosaur] and 'There exist past and future objects' make controversial claims about the nature of reality—and that they *don't* make claims that are trivially true or trivially false. In particular, it's built into the definition of Substantialese that (a) in Substantialese, the fact that there used to be dinosaurs is *not sufficient* for the truth of [Dinosaur]—i.e., something *more* is needed for the truth of [Dinosaur] in Substantialese—but (b) the present-day existence of dinosaurs is *not needed* for the truth of [Dinosaur] in Substantialese. So an *extra fact* is needed here—over and above the fact that there used to be dinosaurs—but the extra fact that's needed is *not* that dinosaurs exist at the present time. The extra fact is *something else*. Moreover, we can't just look at the world and *see* whether this alleged extra fact exists. In short, the world needs to *be* a certain way in order for [Dinosaur] to be true in Substantialese—an *extra fact* needs to obtain—and it's not obvious whether the alleged extra fact actually *does* obtain. So [Dinosaur] just *isn't* trivially true or trivially false in Substantialese.

(It *may* be that all of our descriptions of the alleged "extra fact" are hopelessly obscure and imprecise—and so it may be that [Dinosaur] is catastrophically imprecise in Substantialese. But that wouldn't change the fact that the alleged fact *is* required for the truth of [Dinosaur] in Substantialese—because that's built into the *definition* of Substantialese. So, again, [Dinosaur] just isn't trivially true or trivially false in Substantialese.)

The second point I want to make here is that if trivialists want to undermine the [T1]-[T3] argument by rejecting [T2], then it's not enough to claim that [Dinosaur] is trivially true or trivially false in Substantialese. They have to claim that it's *impossible* to construct a language in which [Dinosaur] makes a non-trivial claim in the ballpark of what mainstream eternalists want it to say. In other words, trivialists can't say this:

> There *is* a substantialist language in which [Dinosaur] makes a controversial claim about the nature of reality in the vicinity of what mainstream eternalists have in mind; but the above definition of Substantialese fails to zero in on the substantialist language in question. And Substantialese—as it's defined above—is a trivialist language.

This clearly won't give trivialists what they need. For if there's a substantialist language that we could use here, then we could just switch to *that* language—and trivialism would be false in that language. So, again, if trivialists want to undermine the [T1]-[T3] argument by rejecting [T2], what they need to claim is that it's *impossible* to define a substantialist language of the kind that I was trying to define when I defined Substantialese. But the idea that this is impossible just seems incredible. It seems obvious that we *can* construct a language in which [Dinosaur] makes a controversial non-trivial claim about the nature of reality. Indeed, for the reasons given above, I think it's obvious that Substantialese *is* such a language.

Here's another way to think about this. All anti-trivialists need here is that it's *possible to think the thought*—the perhaps catastrophically imprecise and indeterminate thought—that (a) dinosaurs don't exist at the present time, but (b) dinosaurs do exist in a past region of spacetime, in a metaphysically robust eternalist way, and (c) this is different from (and doesn't analytically follow from) the claim that there used to be dinosaurs. If it's even possible for us to think this (perhaps catastrophically imprecise) thought, then we can invent a language in which some sentence expresses this thought. So if trivialists want to undermine the [T1]-[T3] argument by

rejecting [T2], they have to say that it's *impossible* for us to think the above thought. But this just seems obviously false. In fact, I'm thinking the above thought right *now*; that thought might be catastrophically imprecise, but I'm thinking it nevertheless. And so it *is* possible to think this thought.

Could I be deceived about what I'm thinking about right now? Sure. I could also be deceived about whether I have two hands. But we have to start somewhere in philosophy, and the claim that I'm right now thinking the thought that I seem to be thinking—the (perhaps catastrophically imprecise) thought that reality is 4-dimensional—seems pretty certain to me. Indeed, this claim seems *more* certain to me than the claim that I have two hands. And so I think that this is a good place to start. And so I think premise [T2] is true. And since I've already argued for [T1], I conclude that trivialism is false.

5.3 Likewise for Mere-Verbalism and Trivialese-Based Non-Factualism: Exactly analogous arguments can be used to undermine mere-verbalism and Trivialese-based non-factualism because those two views are—like trivialism—wedded to the idea that we *can't* debate the temporal-ontology question in Substantialese. But I won't bother to run through the details of these other arguments here.

6. SCIENTISM AND SUBSTANTIALESE-BASED NON-FACTUALISM

If the arguments of section 5 are sound, then of the views defined in sections 3 and 4, only two are still standing, namely, scientism and Substantialese-based non-factualism. I think we can argue for the *disjunction* of these two views by arguing for the following two claims:

(i) *Necessitarian* versions of presentism and eternalism are false, so that if there's a fact of the matter in the temporal-ontology debate, it's a contingent fact.

(ii) If a contingentist version of presentism or eternalism is true, then scientism is true.

I gave a very similar argument to this in my (2016). I can't run through the argument here, but if I'm right, then either scientism or Substantialese-based non-factualism is true. I don't know *which* of these two views is true, but I think this turns on the answer to the following question:

[Precise-Enough?] Are the Substantialese formulations of presentism and eternalism precise enough to pick out two different robust physical possibilities, or two different well-defined (or at least reasonably well-defined) ways that the physical world could be?

I think it can be argued that (a) if the answer to [Precise-Enough?] is 'Yes', then scientism is true, and (b) if the answer to [Precise-Enough?] is 'No', then Substantialese-based non-factualism is true. But I don't know what the answer to [Precise-Enough?] is.

Perhaps you think it's obvious that the answer is 'Yes' because we can construct two different *mathematical models* here—i.e., models in which physical reality is 3-dimensional (and presentism is true) and models in which physical reality is 4-dimensional (and eternalism is true). I agree that we can construct models of these kinds, but the problem is that we don't know whether these models pick out two different *physical possibilities*—i.e., two different physical scenarios that are genuinely possible.

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NOTES

[1] It might be better to define presentism as the view that *it's always the case that* only present *(concrete)* objects exist. But we needn't worry about these complications here. (You might also think we should define presentism and eternalism as making *necessitarian* claims. But I think we should leave room for contingentist versions of presentism and eternalism.)

[2] I'm assuming here that 'There used to be dinosaurs' is to be interpreted in an ontologically innocent way; if it's interpreted as being ontologically committing—e.g., as saying that there exists a past time at which dinosaurs exist—then it might be natural to say that, in Substantialese, this sentence *does* analytically entail [Dinosaur].

[3] To say that a sentence S1 *analytically entails* S2 is to say that S2 follows from the conjunction of S1 and some true claims about meaning.

[4] There are other kinds of mere-verbalism. In my (2021), I distinguish (a) the view that *actual* debates in the *actual* temporal-ontology literature are merely verbal, from (b) the view that it's *impossible* to have a *non*-verbal debate about the temporal-ontology question. And Eklund (2016) makes a similar distinction. But we needn't worry about this here.