#### ORIGINAL RESEARCH



# Presentism and representation: saying it without words

Sam Baron<sup>1</sup> · Kristie Miller<sup>2</sup> · Jonathan Tallant<sup>3</sup>

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#### **Abstract**

The Triviality Argument against presentism maintains that we should reject presentism because there is no way to define the view that is not either trivially true or obviously false. We suggest that this style of argument over-emphasises purely linguistic means of representing a philosophical thesis. We argue that there is no reason to suppose that all philosophical theses must be linguistically representable, and thus that the failure to linguistically represent presentism is no big deal. It certainly shouldn't lead us to reject the view. We offer a more general moral for philosophy, and that is to look beyond purely linguistic methods of representing philosophical views and embrace a wider range of representational media.

**Keywords** Presentism · Triviality argument · Representation

#### 1 Introduction

In the philosophy of time there is a small and lively literature that focuses on how we are to define certain views. In particular we have in mind a literature that charges that one specific view, presentism, cannot be properly defined. Critics of presentism who make this charge take it to show that presentism should be rejected.

✓ Jonathan Tallant Jonathan.tallant@nottingham.ac.uk

> Sam Baron samuel.baron@acu.edu.au

Kristie Miller kristie.miller@sydney.edu.au

- Dianoia Institute of Philosophy, Australian Catholic University, Melbourne, Victoria, Australia
- School of Philosophical and Historical Inquiry and The Centre for Time, The University of Sydney, Camperdown, NSW, Australia
- Department of Philosophy, University of Nottingham, Nottingham, UK



<sup>&</sup>lt;sup>1</sup> See, for instance, Crisp (2004a, 2004b), Deasy (2015, 2019), Golosz (2013), Hestevold and Carter (2002), Sakon (2015), Lombard (1999), (Ludlow (2004) and Pezet (2017).

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We argue that it is not terminal for presentism if it cannot be stated in natural language, or even in a rarefied, technical metaphysical or formal language. Though presentism is our focus in this paper, we take the point (once shown) to be perfectly general: that a view cannot be stated is not conclusive evidence against it.

We begin by outlining the challenge of stating presentism (Sect. 2). We then consider and reject a strong reading of the challenge (Sect. 3) and a weak reading of the challenge (Sect. 4). Section 5 considers an attempt to resuscitate the weak reading. Section 6 contains a discussion of how, and how far, our remarks may be generalised. We conclude in Sect. 7.

# 2 The challenge of stating presentism

Let us suppose that presentism is to be understood as the view that:

PR: Only present objects exist.<sup>2</sup>

The presentist is faced with a question: what is the tense of the expression captured in PR? If it is present tensed, then PR says something trivial. A present tensed reading of PR tells us that only present objects exist *now*. *But*, comes the reply, *of course* only *present* objects exist *now*. After all, to be present just is to exist now. And so the claim that only present objects exist now seems to say nothing more than that present objects exist in the present. Put this way, the claim seems to be something that even a non-presentist can accept, since even a non-presentist will agree that present objects exist in the present. Understood in this fashion, PR appears to be a triviality and so cannot state a metaphysically substantive thesis.

Suppose, instead, that PR is understood as meaning something broader; that only present objects have existed, exist now, or will exist. (In other words, suppose that PR is read as a disjunction of past, present and future tense). In that case, or so goes the concern, PR says something obviously false. The Roman Empire existed, but does not exist now. The Roman Empire is therefore a counterexample to PR when read in this way. The presentist is thus presented with a dilemma: their view is either trivial, or obviously false. Following Meyer (2005), call this the presentist's dilemma.

There are ways to escape the dilemma. For one thing, one could take one of the horns of the dilemma, but argue that it's not so bad. Another way out of the dilemma is to locate a further, non-threatening option.

Is there such an option? No, says the critic of presentism. To be sure, we try to articulate some tenseless reading of PR. But, so say the critics, a tenseless reading of PR will collapse into one of two (false) expressions. The tenselessness of any such reading of PR will either give us a claim about objects that exist anywhere in time, or else it will give us a claim about objects that exist outside of time. The latter reading clearly cannot be the intended reading, since that would turn PR into the claim that 'only present objects exist outside of time'—and presentism is, if it's anything, a claim about temporal existence. That leaves us with the other reading—that 'only present objects exist anywhere in time'. But that, so claim critics, is just the same as saying

<sup>&</sup>lt;sup>2</sup> Tallant and Ingram (2021) provide an overview of positions that might be described as 'presentist'.



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that only present objects have existed, exist, or will exist, which is just the disjunction of tenses that we rejected a moment ago.

Perhaps there are ways to make the tenseless reading work, but we doubt it (though see Crisp, 2004a, 2004b for discussion). At any rate, we will assume that there is no tensed or tenseless statement of presentism that is fully adequate. Where does this leave us? Well, it appears that PR is either trivial or false. Given this, it is tempting to suppose that presentism is either trivial or obviously false. Thus, we have the following argument<sup>3</sup>:

## The triviality argument

- [A1] If the only way that we have to represent a position is with expressions that are either trivially true or obviously false, then that position is either trivially true or obviously false.
- [A2] Presentism can only be represented with expressions that are either trivially true or obviously false.

Therefore,

[A3] Presentism is either trivially true or obviously false.

Thus stated, the argument suffers from a crucial ambiguity, concerning the second premise. As stated, there are two readings of this key premise, a weaker and a stronger.

**Weak Representation Thesis:** The only purely linguistic representations of presentism<sup>4</sup> are expressions that are either trivially true or obviously false. **Strong Representation Thesis:** We can represent presentism only by using purely linguistic expressions, and when we do the resulting representations are either trivially true or obviously false.

Our aim is to use the ambiguity in the second premise against the Triviality Argument. Either we interpret the key premise as the Strong Representation Thesis or as the Weak Representation Thesis. Either way, the argument is unpersuasive.<sup>5,6</sup>

<sup>&</sup>lt;sup>6</sup> As a referee points out, the general point being made in this paper can be put in terms of propositions. If presentism is a proposition, then that proposition may be difficult to express in a purely linguistic fashion. At best, we think that's what the triviality argument shows. We should not draw the stronger conclusion that presentism qua proposition is in fact trivially true or obviously false because of our failure to express that proposition in a purely linguistic fashion.



<sup>&</sup>lt;sup>3</sup> We take the triviality argument to be an argument against presentism, rather than an argument designed to deflate the entire debate over temporal ontology. Here we follow the work of others, such as Crisp, Ludlow, Deasy, Lombard, Meyer, Sakon and Tallant who all take the triviality argument to be an argument against presentism specifically.

<sup>&</sup>lt;sup>4</sup> What is linguistic representation? We lack the space to provide a full answer to this question here. However, very roughly we take linguistic representation to be the representation of something using either natural language or some technical language (such as formal logic or the language of metaphysics, more on this below). Then a *purely* linguistic representation is one that involves only linguistic representation. By contrast representations that involve linguistic and non-linguistic representation will not be purely linguistic representations, nor, obviously, will those that involve only non-linguistic representations.

<sup>&</sup>lt;sup>5</sup> It is unclear whether anyone has had the Strong Representation Thesis in mind when putting forward the triviality argument. We suspect not, but we can't rule it out and so it seems like a potential disambiguation of the argument that must be dealt with. Accordingly, in what follows we consider that thesis is some detail. In doing so, however, we are not making the claim that any critics of presentism advocate a thesis of this kind either in general, or with respect to presentism in particular.

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In a moment, we will begin by considering the Strong Representation Thesis. First, however, it is important to clarify our aim in this paper. Our goal is to defend a modest claim: the claim (if it is true) that presentism cannot be represented in a purely linguistic manner that avoids triviality or obvious falsehood does not provide a compelling reason to suppose that presentism *is* either trivially true or obviously false. We are thus not trying to provide a defence of presentism, or to argue that presentism is in fact a coherent or true account of reality. Indeed, it is compatible with our modest defence that presentism is false, or even incoherent. Again, our focus is simply on showing that (as it has been presented in the literature) the triviality argument against presentism does not succeed.

This will become particularly important later-on, when we discuss forms of representation that are not purely linguistic. To foreshadow that discussion just a little bit, the representation we put forward, which is not purely linguistic, is only meant as a sketch of how presentism may be represented in a manner that is not trivially true or obviously false. It is not supposed to constitute anything like a defence of presentism against certain claims of incoherence. As is well known, there are serious difficulties facing presentism or, indeed, any broadly dynamic or A-theoretic theory of time, when it comes to modelling temporal passage. Both McTaggart's paradox and the rate of passage argument loom large in the literature here. Nothing we say (or show, because we use pictures) is supposed to constitute a defence against these kinds of arguments. Presentism may well be false, or incoherent because of its commitment to temporal passage. Again, all we hope to show is that the mere failure of purely linguistic representation is not sufficient to sink presentism; some other argument is needed (and the two arguments just mentioned are prime candidates).

# 3 The strong representation thesis

On, then, to the Strong Representation Thesis. The Strong Representation Thesis states that we can represent presentism only by using purely linguistic expressions, and when we attempt to do so the resulting representations are either trivially true or obviously false. Notice that if the Strong Representation Thesis is true, then the Triviality Argument looks to be in pretty good shape. For, in essence, if the only way to represent presentism is purely linguistically (the Strong Representation thesis is true) and if that representation is indeed trivially true or obviously false, then very plausibly presentism itself is either trivially true or obviously false. Given this, it is easy to see why a defender of the Triviality Argument might appeal to something like the Strong Representation Thesis.

The Strong Representation Thesis, however, should immediately strike one as in need of defence.

Why think that we can represent presentism *only* by using purely linguistic expressions? On the face of it, at least, that claim looks objectionable. Purely linguistic representations do not seem to be the only representational games in town. There appear to be mental representations that are not purely linguistic, including, at the very



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least, map-like representations and visual representations.<sup>7</sup> For instance, it appears as though a map can represent a topological structure. A map of (say) Rottnest Island can encode the distances between the Basin, Thomson Bay and Strickland Bay. It can encode the variation in elevation and the location of its various lakes. A map of Rottnest can represent all of this despite not being a purely linguistic representation. That being so, there is reason to reject the Strong Representation thesis as stated. A defender of this strong approach might go one of two ways at this point: a language of thought (LOT) route (3.1) and a language of metaphysics route (3.2). As we'll now argue, both fail.

### 3.1 Language of thought

Suppose that something like the language of thought (LOT) hypothesis is true. On at least one variant of that hypothesis, what it is for mental states to have content is for there to be some linguistic (or otherwise symbolic) tokens in the head, and what it is to think is to manipulate those tokens. So, what it is to believe something is to have a linguistic token with certain content, and put it 'in the belief box'. On such a view, insofar as we represent that P via a map-like representation, that representation has the content it does only because we have purely linguistic representations of P. Thus, it could be that *fundamentally* all representation is purely linguistic, and that non-linguistic representations, or representations that are partially non-linguistic, are derivative on purely linguistic representations. If that were so, then the only reason we would be able to represent Rottnest Island via a map-like representations would be because we represent it using more fundamental, purely linguistic representations. If that were correct, then the fact that we cannot represent presentism in a purely linguistic fashion without stating a trivial truth or an obvious falsehood would mean we cannot represent it at all. So much the worse for presentism.

Here's the point in a bit more detail. According to the LOT hypothesis under consideration, all representation is fundamentally linguistic. We take it, however, that 'fundamentality' here imposes a non-trivial constraint. What it means is that for any *non-linguistic* (or partially non-linguistic) representation of presentism that is neither trivially true nor obviously false, there ought to be some *purely linguistic* representation of that view upon which the non-linguistic/partially non-linguistic representation is based, and which itself is neither trivially true nor obviously false. Thus, even if the Strong Representational Thesis is false, there is still pressure on the presentist to provide a purely linguistic representation of their view. For if they cannot, then we have good reason to doubt the adequacy of any non-linguistic or partially non-linguistic representation that might be provided.

Be that as it may, if the version of LOT in question is intended to be a general claim about *all* thought, then it entails that creatures that lack language do not think. This

<sup>&</sup>lt;sup>8</sup> Roughly speaking, a linguistic token is a word or sentence in a mental language, sometimes called 'mentalese'. Presumably, such a token would be a brain state of some kind, assuming a materialist theory of mind.



<sup>&</sup>lt;sup>7</sup> Perhaps some of these are purely non-linguistic, or perhaps they are all partially linguistic and partially not. For our purposes this does not matter.

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seems deeply implausible. Many mammals, octopuses and some birds (like ravens), have been shown to have complex problem-solving capacities that likely require belief or belief-like states. We are prepared to go out on a limb and maintain that some non-linguistic creatures are capable of thought. 10

Our opponent might demur: this isn't *thought*, it's some other kind of thing that creatures sometimes do. Well then, fine: non-linguistic creatures perform some other activity, thinking\*, even if they do not think.<sup>11</sup> Then it is open to the presentist to say that such creatures represent\*. They represent\* without using linguistic representations. If, however, non-linguistic creatures can represent\* then surely so too can presentists and their interlocutors. Then we can hold that presentism is represented\* by means that are not purely linguistic. What we have been doing in the philosophy of time may not be thinking, perhaps it's thinking\*, where thinking\* involves the manipulation of map-like representations or of images or of some other representation which might be entirely non-linguistic or might involve a combination of linguistic and non-linguistic representation. But why should presentism be any the worse off for all that? Representation\* and representation both seem like a fine basis upon which to have a philosophical debate (more on this below).

In response, one might concede that presentism can be represented\*, but maintain that it is still a mark against the view that it cannot be represented; the thought being that it is a virtue of a view if it can be represented in a purely linguistic fashion, a virtue that factors into theory choice. There are two things to say here. First, it is far from obvious that it is a virtue of a theory that it can be represented in a purely linguistic fashion. The theoretical virtues are supposed to provide a basis for belief. The better a theory scores on the theoretical virtues, the more likely it is to be true. However, it is at best unclear why a theory's capacity to be represented in a purely linguistic fashion should make it any more or less likely to be true. Being representable linguistically seems like the wrong kind of thing to justify belief in a metaphysical theory. Second, even if being representable in a purely linguistic fashion is a theoretical virtue, we hasten to point out that each individual virtue is a pro tanto reason to believe a view, with the entire package of virtues constituting an all-things-considered basis for belief. Thus, that presentism cannot be represented in a purely linguistic fashion

<sup>&</sup>lt;sup>12</sup> We are grateful to an anonymous referee for pressing us on this point.



<sup>&</sup>lt;sup>9</sup> To be clear, our claim is not that all animals lack linguistic capacity of some kind. As a referee notes it may be that some sophisticated animals, such as those listed here, have linguistic or proto-linguistic capacities or conceptual structures. The point is just that there is little reason to suppose that this is true for all animals that are capable of thought, and so the line being pressed through the current objection is not plausible.

<sup>&</sup>lt;sup>10</sup> Some competitors to LOT have it that fundamentally thought is map-like, and that with the capacity for language came the capacity to linguistically *describe* certain aspect of the map, and to manipulate those linguistic symbols. Fundamentally though, representation itself is map-like, and thinking involves manipulating map-like representations (Blumson, 2012; Braddon-Mitchell & Jackson, 1996). There is, evidently, a deep disagreement here concerning the fundamental nature of mental representation. We cannot resolve that disagreement here. For our purposes, however, it is enough that the LOT hypothesis is far from established, and so it's use in an argument against presentism is tendentious.

<sup>&</sup>lt;sup>11</sup> We call this 'thinking\*' to highlight that what matters is the cognitive process at issue, not whether it is properly called thought. We carry this forward throughout: we talk of representation\*, metaphysics\* and so on. In each case this is to highlight that what matters is whether something can do work for us that we care about, not what it is called.

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is not grounds for rejecting the view outright. At best, it is a cost to be weighed like any other (and that may well be outweighed by other factors).

At this point it's worth reiterating a point before we press on: it is not our goal in this paper to defend presentism. Our goal, rather, is only to show that we shouldn't reject presentism simply because it cannot be represented in a purely linguistic fashion (and can only be, say, represented\*). It is thus compatible with our thesis that linguistic representability is a theoretical virtue. So long as it is merely a virtue and not a sine qua non, we see no reason why the failure of linguistic representability should provide a basis for rejecting presentism outright.

Of course, it remains open for someone to make a case in favour of the Strong Representation Thesis. However, we think, the burden lies with the defender of the triviality objection. Most things can be represented in multiple different ways. To give a toy example: a plant on a pedestal could be represented with a sentence, with a thought, through a movie, through a painting, via computer code etc. The critic of presentism is thus marking presentism out as special, insofar as we require that *it* can only be represented in a purely linguistic fashion. Given how flexible representation is in general, it takes at least some convincing to believe that presentism, or indeed anything, is representationally locked to a specific representational medium. The view that there are many potential ways to represent something would seem to be the default view, against which defenders of the Strong Representation Thesis must argue. We think making any such case is far from trivial. That being so, we shouldn't simply assume the Strong Representational Thesis is true, and infer from it the triviality or falsity of presentism.

### 3.2 Language of metaphysics

One option for our opponent is to insist that any metaphysical view must be such that we can state it using some logical/linguistic machinery—a language fit for metaphysics. A good example of this approach is due to Sider. As Sider has it, '[t]he point of metaphysics is to discern the fundamental structure of the world' (2009, p. 420). And, in order to describe that fundamental structure, we need to use a language. If that's correct, then it promises to move us beyond the position we reached at the end of 3.1, where we needed some reason to think that it was a requirement that presentism be representable in language. If metaphysics requires linguistic representation, then (since presentism is a metaphysical thesis) this threatens the presentist position.

Now, so far as Sider is concerned, the crucial language is not English. Rather, the language of metaphysics and ontology is Ontologese. <sup>13</sup> This language is committed to a particular structure within which quantifiers express fundamental concepts. Thus, in the claim "there is an F", the quantifier 'there is' expresses a fundamental concept, and hence does not have multiple candidate meanings. (Sider, 2011, pp. 170–171). Metaphysics, then, is about 'figuring out the right categories for describing the world' (2011, p. 1). Moreover, "the joint carving notions are fundamental notions; a fact is

<sup>&</sup>lt;sup>13</sup> A similar view is proposed by Stoneham (2009, p. 208), who considers various ways of supplementing English to produce a new language that can express presentism. As Stoneham notes, the main difficulty with this way of proceeding is that it is unclear whether the new language can be genuinely understood.



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fundamental when it is stated in joint-carving terms. A central task of metaphysics has always been to discern the ultimate or fundamental reality underlying the appearances" (2011, p. vii).

For Sider, in order to engage in metaphysical inquiry, we must use expressions that carve reality at its joints. And, since quantifiers are taken to carve reality at its joints, if we wish to engage in metaphysical inquiry, we must use the quantifiers and the language in which they are embedded. This, in turn, forces us into the position whereby we *must* give linguistic (or, at least, logico-linguistic) representations of metaphysical views, and thus of presentism. If we can't do that, then we must reject presentism on the grounds that it is not even a candidate to be a metaphysical thesis. <sup>14</sup>

Crudely, our opponent here is arguing that unless we are giving clear and precise statements of presentism in a specific language like Ontologese, then we aren't doing metaphysics. To which, we say: then perhaps we aren't doing metaphysics; at least, we are not doing metaphysics when it is understood in this particular manner. So be it. But whilst we might make that concession, we aren't too troubled by it. Perhaps we are doing something else—metaphysics\*. 15 Metaphysics\* differs from metaphysics in that it is prepared to countenance views that are less driven by quantificational structure in Ontologese. We're hardly the first to make the general point that quantificational structure is not necessarily the best or only mode through which we might inquire about the structure of the world [see, for instance, Smith (2005), Johansson (2016)]. We think presentists should be happy to continue in the broad church of philosophy, even whilst being cast out by some metaphysicians. Why? Well, what matters to philosophers is whether we make progress on determining the nature of the world. The important thing is whether we make that progress, not how we make it. So if we manage to make that progress in a manner that is not via metaphysics, (construed in this particular way) then so much the worse for metaphysics. Progress can be made in some other way, and that's what matters.

#### 3.3 Non-(purely)-linguistic representation

So far, we've argued that there's no reason to suppose the Strong Representation Thesis is true. Strictly speaking, that's enough for what we aim to show. The Triviality Argument (interpreted using the strong thesis) is not convincing. We can, however, take matters a step further. Arguably, the Strong Representation Thesis is false, since there do *seem* to be representations of presentism that are not purely linguistic. Here we are a bit more tentative, since the role of such representation in philosophy is less well-established, and so it is perhaps less clear what a viable representation of a philosophical view that is not purely linguistic might be like. It is notable, however,

Many people who do metaphysics\* will take themselves to be doing something that in fact deservers the name metaphysics, and will take the view of metaphysics described here to be overly narrow.



<sup>&</sup>lt;sup>14</sup> Sider's view about joint-carving representations are, in principle, separable from his commitment to Ontologese being the fundamental form of this representation (thereby locking metaphysics to a kind of linguistic representation). Strictly speaking, one could adopt a view on which the fundamental representations are joint-carving, but some of them are non-linguistic or at least not purely linguistic. That style of view is compatible with what we say here, but also cannot be used to support the Strong Representation Thesis.

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that in many books on the philosophy of time, and in many courses (certainly the courses we have taught) we find a number of pictures of presentism, comparing it to its rivals.

In a moment we will present one such picture. Before doing so, however, it is important to say a bit about how we are thinking about this kind of representation generally. Recall the broad dialectic: a number of philosophers maintain that all statements of presentism in language are either obviously false or trivially true. What we are looking for, then, is a representation of presentism that does better. We take 'doing better' to consist in three things. First, the representation should not be purely linguistic, it should use at least some non-linguistic elements. Note that we need not be looking for a representation that is *purely non*-linguistic. Hybrid representations that combine linguistic and non-linguistic elements will do fine.

Second, the representation should be useful, which is to say, that the representation should be able to anchor a substantive metaphysical debate about the nature of time. To do this, the representation needs to give someone enough of a sense of what presentism involves to be able to draw inferences about it, and to consider whether it is compatible with whatever else we might know about our world.

Third, the representation should not be trivially true or obviously false. Now, we have to be a bit careful here, since the connection between a representation that is not purely linguistic and truth or falsity is less clear than in the case of a purely linguistic representation. Purely linguistic representations express propositions, which can take truth values. But, one might argue, the same is not clearly true of representations that are not purely linguistic. We think this is a mistake: a non-linguistic representation can express propositions. For instance, a painting of a man with a hat expresses the proposition that there is a man with a hat. The context can then determine whether the painting is expressing a proposition about the actual world or about some fictional scenario. It can then be evaluated accordingly.

Still, we recognise that it is perhaps a bit strange to think of some representations that are not purely linguistic in terms of truth and falsity. It is perhaps better to think in terms of accuracy. A painting can be deemed more or less accurate of whatever it aims to represent. It is not clear what the analogue of trivial truth or obvious falsehood might be for accuracy. To be sure, we can talk of obvious inaccuracy, but trivial accuracy has a peculiar ring about it. In fact, we see this as a potential advantage of moving to representations that are not purely linguistic when it comes to presentism, since one of the options that is deemed to be fatal to a representation of presentism—trivial truth—may simply not be available in the case of a representation that is not purely linguistic.

The shift from truth and falsity to accuracy is one way in which shifting to a representation that is not purely linguistic may be beneficial. Rather than asking whether a representation of presentism is true or false, we can instead ask whether a representation is accurate with respect to our world. It is then obvious inaccuracy that we should seek to avoid, rather than obvious falsehood.

Finally, it is important to manage expectations concerning the role that representations of a view like presentism may play in the metaphysics of time. We say that a representation of presentism should not be obviously false or inaccurate, and not trivially true (if that notion applies). We also say that a representation should be useful



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insofar as it is capable of raising serious questions, and giving rise to genuine debate about the nature of time. That, however, is all we ask of such a representation. A representation of presentism should not show that presentism is true, or that it is even coherent. It should not wear incoherence on its sleeve (assuming that incoherence and obvious falsehood go hand in hand, though even that is debatable these days) but it may still represent an incoherent situation at the end of the day, so long as it takes some work to uncover that incoherence. What this means is that a representation of presentism should not be one that solves the problems presentism or dynamic theories of time in general face, such as McTaggart's paradox or the infamous rate of passage argument. That is, simply put, asking too much of a mere representation of a view. No-one, for instance, thinks that the way one states a counterfactual theory of causation in language, say, should automatically solve the problems for that view. Solving the problems is a further task. And so it is with representations of presentism that are not purely linguistic. <sup>16</sup>

With these preliminaries in place, let us now consider a representation of presentism that is not purely linguistic. Below is the kind of image one is likely to find in the literature on presentism and the philosophy of time more generally <sup>17</sup>:

<sup>&</sup>lt;sup>17</sup> The title here plays a role in the overall interpretation of the diagram. It amounts to a conventional stipulation to interpret the diagram in a specific manner.



<sup>&</sup>lt;sup>16</sup> Of course, one might try to press the point that there is something especially worrisome in the idea that there are non-linguistic representations of *theories*. This seems much less so if we think of theories as metaphysical models. After all, many models are in fact represented either non-linguistically, or at least, using some non-linguistic resources (think about the model of the atom, or of DNA, or of the solar system).

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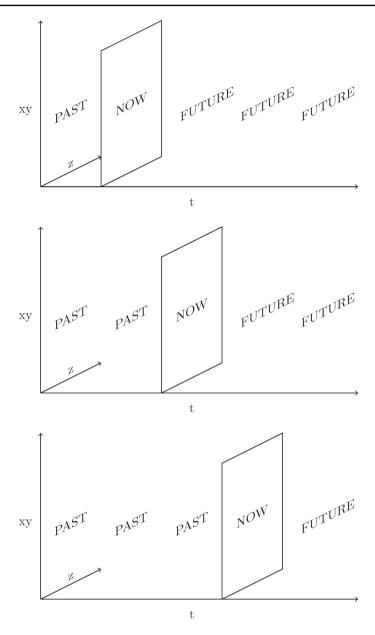


Fig. 1 A Diagram of presentism: each image depicts a distinct objectively present moment in the same world

We don't claim that this is perfect. Indeed, we can identify one respect in which the diagram is limited. The diagram is, at best, a depiction of one version of presentism, defended by Zimmerman (2011). According to this version of presentism the entire spacetime manifold exists, but most of the manifold is empty. Only those events that



are in the present slice of the manifold exist (and which slice that is changes with the passage of time). It is not difficult to modify the diagram to capture other versions of presentism, however. For instance, one could eliminate the regions labelled 'past' and 'future', leaving only the now slice in place. This would potentially capture a more thoroughgoing presentism, according to which the past and future are nothing at all (not merely empty spacetime regions). No doubt the reader can think of further modifications to the diagram that might improve the picture further. We can also imagine animating the diagram to capture the sense of flow that many presentists endorse.

At any rate, despite the limitations of the diagram, we think that the diagram satisfies the basic conditions laid down above for a representation of presentism. First, the diagram does not seem to be obviously inaccurate. Perhaps, ultimately, the diagram *is* inaccurate, but discerning that would take some work, of the kind that we are used to undertaking in philosophical debate. Second, the diagram is sufficient to anchor the debate about presentism. It gives us an initial sense of what the world would need to be like in order for presentism to be correct. In our own experience, images of this kind are perfectly adequate for the purposes of generating coherent discussion and debate about presentism.

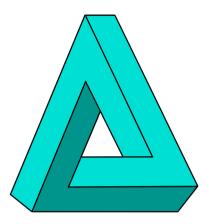
One might disagree about the value of the diagram. For, one might argue, there are serious questions about the coherence of the diagram. The diagram represents a moving now, but if the now moves at what rate does it move? And what is the dimension through which the now moves? These are good questions, but they are not questions that the *diagram* should answer. Here we emphasise the point made above, concerning what the representation should yield. It should not yield a defence of presentism, or even the defence of the coherence of the view. It is just a dialectical starting point, one that helps to foster metaphysical debate concerning the nature of time. As such, asking it to solve objections against presentism or, indeed, against dynamic theories of time in general, is asking too much.

All we ask is that the view being represented is not obviously wrong in some way: obviously inaccurate, or obviously incoherent or whatever. We see little reason to believe that this is so. Of course, if one accepts arguments like the rate of passage argument or McTaggart's paradox, then one can doubt the accuracy or coherence of the diagram, but these extra arguments really are needed. The diagram itself leaves this matter entirely open. It might be useful at this point to compare the diagram above with a picture of an impossible object, like the one below:



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Fig. 2 An impossible object



This diagram is much closer to one that is obviously incoherent. Our claim is that diagrams of presentism are not like diagrams of impossible objects like this one. Perhaps, ultimately, the two diagrams both represent impossibilia. The point is that, if this is true, this is obvious in the one case, and not in the other, and that's enough for the diagram of presentism to play the kind of debate-starting role that we have mapped out for it in the philosophy of time.

We don't imagine that this will persuade everyone. But we think that our opponent needs to be cautious in taking on a response. For instance, it would be very tempting to respond by noting that images don't capture what presentism *is*. There is, or so goes the thought, some core thesis that the presentist holds on to that visual representations leave out, or don't adequately capture.

In pursuing this line, however, our opponent runs the risk of conceding too much. To recapitulate the objection, the idea is that our opponent has in mind some idea of what presentism *is* and *then* goes on to point out that the visual representations that we've provided do not capture *that*. But this is a problematic line to take. Let's first acknowledge that they must have *some* view in mind as their view of presentism (else they cannot claim that we've failed to capture *that*). Then, they either have in mind a view that is trivially true or obviously false, or something that is neither of these things. If they have in mind a view that is neither trivially true nor obviously false, and we haven't captured that, then so be it. For they have undermined their own view by the admission that there is a view held in mind that is neither trivially true nor obviously false. We just struggle to state it (even in pictures).

On the other hand, if our interlocutor had in mind a view that was trivially true or obviously false, and they argued that our pictures did not capture *that*, then we can agree: the pictures don't capture presentism in that sense. But that's grist to our mill. If our pictures don't capture a trivially true or obviously false view, then they already do better than the purely linguistic approaches to representation that we've considered.

It therefore seems that our opponent would need to argue either that our pictures are somehow incapable of representing presentism or that pictures are not a viable means of representing a metaphysical thesis. We see only two ways to secure the second point—LOT and ontologese-style views—and we have already explained why those



don't work. What of the idea that our pictures can't represent presentism? Again, if one takes that line, then it seems one must have some view in mind that we are failing to represent. Whatever that view is, either it's a view that is trivially true or obviously false one or it's not. If it is not, then well and good. That view is presentism and so even our opponent can agree that there's such a view to represent in the first place. If it is a view that is trivially true or obviously false, then our pictures don't represent that view whatever it is. It represents a better view, namely the one that philosophers commonly take themselves to be talking about under the name presentism. Either way, we don't see a problem.

At this point, our opponent might try a different tack. Rather than arguing that the diagrams fail to capture presentism, our opponent might argue that no diagram provided to date has managed to represent an intelligible view (at least, not one that is neither trivially true nor obviously false). One might even take this a bit further and argue that no representation of presentism so far—purely linguistic or otherwise—has managed to represent in an intelligible fashion.

We must be careful here, for reasons already articulated. We should differentiate between two ways in which a diagram might fail to represent something that is intelligible. First, a diagram might fail to do so in an obvious way. Some might be inclined to take the diagram in Fig. 2 to be of this kind if, for instance, one maintains that the obviously impossible is also unintelligible. In fact, we don't take Fig. 2 to be a diagram of something that is obviously unintelligible, because we don't take representing something that is impossible as being sufficient for representing something that is unintelligible. The impossible, we believe, is perfectly intelligible, though perhaps this will ultimately depend on how one analyses the notion of intelligibility. Assuming that even the impossible is intelligible, however, then it is rather unclear *what* a diagram of presentism that failed to represent something intelligible would be like. We rather suspect that the diagram would need to be a complete mess so that it is then very difficult to make claims about whether the diagram accurately represents the world. The diagram that we have provided, whatever its flaws might be, is not like that.

Second a diagram might fail to represent an intelligible view, but in a non-obvious way. For instance, it might take further argument to show that the view being represented is unintelligible (perhaps via one of the arguments already flagged). The diagram we have outlined may well fail to represent an intelligible view in this sense, but we don't see that as a problem. Expecting the diagram to represent an intelligible view in this sense amounts to expecting the diagram to solve any latent problems for a view that threaten its intelligibility. That, we submit, is asking too much of a diagram, or indeed even a purely linguistic representation of a view.

At this point one might try a different line of attack. Rather than rejecting the diagram on the grounds that it represents an unintelligible view, one might take the diagram in Fig. 1 to be unintelligible and so, arguably, to not represent anything. There are at least two ways to press an objection along these lines. First, one might argue that the diagram is *only* intelligible if accompanied by some linguistic representation. Second, one might argue that the diagram in Fig. 1 is unintelligible whether or not it is accompanied by a linguistic representation.



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Both challenges can be met. With respect to the first challenge, note that nothing we have said forbids the use of linguistic representation in conjunction with nonlinguistic representation as a basis for representing presentism. As already noted, a hybrid representation is permitted and, indeed, the diagram we have offered is one such representation. The point is just that a purely linguistic representation is not necessary for representing presentism, and perhaps a representation that is not purely linguistic can do better even while having linguistic elements. For the first challenge to pose a genuine threat, the idea would have to be that for a diagram to be intelligible it has to be possible to translate it into a linguistic representation. On the face of it, this condition on the intelligibility of pictorial representation seems far too demanding. We generally don't need to translate a picture into words for it to be intelligible. There is, for instance, no need to translate the Mona Lisa into a set of statements for the painting to be intelligible. Of course, we can potentially produce such a translation, but that such a translation is producible does not seem to enforce the production of that translation as a necessary condition on intelligibility in any obvious way. Perhaps the idea is that because all representation is fundamentally linguistic, there *must* be a way to translate a diagram into words. We have already explained why we don't take this version of LOT to be compelling.

This brings us to the second challenge to the intelligibility of the diagram. The worry here is that there just is no way to make the diagram at Fig. 1 intelligible, even if we add various linguistic elements. Again, it is important to differentiate the claim that the diagram at Fig. 1 is intelligible from the claim that what it represents is not intelligible. As already discussed, a diagram can represent something that we ultimately discover is not intelligible if, for instance, intelligibility is linked to being coherent, and what is represented is not coherent (as some might argue is the case for Fig. 2). The claim at issue here, then, is that the diagram itself is unintelligible, even if what it represents is not. To take an analogy, consider a map of a subway system that is in an unknown language and that uses an unrecognised method of representing the system. In this situation, the map is unintelligible to a particular person, even though what it represents—a subway system—is not. Our answer to the challenge put this way, however, is straightforward: there is no reason that we can see to believe that the diagram in Fig. 1—or, indeed, other diagrams like it—are unintelligible. It seems clear enough what is going on, particularly within the context of debates about the philosophy of time.

### 3.4 Why no purely linguistic description?

One last question will detain us in this section: we've worked on the basis that there are representations that are not purely linguistic. Fine. But why should it be the case that we can give representations of presentism that are not purely linguistic, but not also be able to give purely linguistic representations of the same?

Here is one suggestion. We don't take it to be decisive, but we think it's worth mentioning. In his defence of McTaggart's argument for the unreality of time, Dummett (1960) offers an analysis of the core line taken. As Dummett notes (1960, p. 501),



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we can give a complete description of spatial reality that makes no recourse to spatial token-reflexive expressions. However,

McTaggart is saying that on the other hand a description of events as taking place in time is impossible unless temporally token-reflexive expressions enter into it, that is, unless the description is given by someone who is himself in that time...we can give a complete narration of the sequence of events, but there would remain to be answered the question, "And which of these events is happening now?" (1960, p. 501).

### As he goes on:

I think the point is that McTaggart is taking it for granted that reality must be something of which there exists in principle a complete description. I can make drawings of a rock from various angles, but if I am asked to say what the real shape of the rock is, I can give a description of it as in three-dimensional space which is independent of the angle from which it is looked at. The description of what is really there, as it really is, must be independent of any particular point of view. Now if time were real, then since what is temporal cannot be completely described without the use of token-reflexive expressions, there would be no such thing as the complete description of reality. There would be one, as it were, maximal description of reality in which the statement "The event M is happening" figured, others which contained the statement "The event M happened," and yet others which contained "The event M is going to happen." (1960, p. 503)

From this, Dummett draws a lesson from McTaggart; not *necessarily* that time is unreal, but that if time is truly dynamic, then we cannot give a complete, purely linguistic description of reality (1960, p. 504).<sup>18</sup>

We think that there is something to Dummett's conclusion. Tense is pervasive in language and in thought. If reality is as the presentist maintains, then, we agree, there cannot be a complete, purely linguistic *description* of reality. Though Dummett is not focusing on presentism explicitly, one casualty on this list of descriptions may be a full and complete definition of presentism *itself*.

To make this vivid, note that one way in which the presentist tried to escape the charge of triviality or falsehood was via a disjunction of tenses. That is, the presentist might claim that (in a sense) only present objects exist, have existed, and will exist. Whilst we agreed, above, that this definition won't work (in that, for instance, there were past objects that are not present) perhaps the failure of the definition is just a consequence of our inability to give a complete, purely linguistic description of reality, rather than a deep fact about presentism.

As a referee notes, a presentist might respond that they can give a complete description, but that the description changes. The difficulty, however, for presentism is that we don't seem to have a viable description, in language at least, that is complete at any given moment. So, it is not clear that we have a complete description that changes. Rather, it seems that the change is needed to complete the description, but the linguistic medium is not obviously capable of capturing change in the relevant sense.



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## 4 The second horn: the weak representation thesis

In the previous section, we argued against the Triviality Argument framed in terms of the Strong Representational Thesis. As noted, however, there is a second way to frame the argument, using a weaker account of representation. Here, recall, is the Weak Representation Thesis.

The only purely linguistic representations of presentism are expressions that are either trivially true or obviously false.

If we substitute that in as the key premise in the argument, then we get the following argument.

## The weak triviality argument

- [A1] If the only way that we have to represent a position is with expressions that are either trivially true or obviously false, then that position is either trivially true or obviously false.
- [A2] The only purely linguistic representations of presentism are expressions that are either trivially true or obviously false.
  - [A3] Presentism is either trivially true or obviously false.

A1 is consistent with there being representations of presentism that are not purely linguistic. That being so, the truth of A2 does not establish that presentism is trivially true or obviously false. To render the argument more threatening, we would have to modify [A1].

[A1] If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position is either trivially true or obviously false.

This modification renders the triviality argument valid. As we see it, however, there are two problems with the resulting argument that warrant rejecting it. First, for the argument to be at all convincing, some reason must be given to suppose that presentism *must* be representable in a purely linguistic fashion and in a manner that does not lead to a trivial truth or an obvious falsehood. Note that this is not *quite* the same as the Strong Representational Thesis. The Strong Representational Thesis requires that the *only* representations of presentism are purely linguistic. What we need to scaffold the Weak Representational Thesis is the idea that presentism *must* be representable in a purely linguistic fashion (even if that's not the only way to represent the view). For it is only if presentism must be representable in a purely linguistic fashion without descending into trivial truth or obvious falsehood that the lack of any such representation would pose a problem.

As matters stand, we see no reason to suppose that presentism must be representable in a purely linguistic fashion. Indeed, we have already considered the only two ways to defend such a claim that we know of. These were discussed in the course of defending the Strong Representational Thesis. Both the language of thought hypothesis and the notion that metaphysics must deploy Ontologese present reasons to suppose that presentism must be linguistically representable. And so, we offer the same responses here that we offered there: the language of thought hypothesis is implausible, and



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failure to communicate in Ontologese only locks presentism out of a certain style of metaphysics.

Suppose, however, that some reason can be given for the view that presentism must be representable in a purely linguistic fashion. Even then, we don't think that the Weak Triviality Argument succeeds. The problem lies with [A1]. What [A1] misses is that linguistic representations often possess limitations in expressive power. In virtue of these limitations, it is possible for our representations to misfire. It may be that the closest we can get to representing something using a certain language distorts whatever it is we are trying to represent. Here's a simple example, familiar to anyone who has ever taught first-order logic.

- [1] All women are mortal
- [2] Hypatia is a woman

Therefore,

[3] Hypatia is mortal

The argument is intuitively valid, and in representing it as we do we might reasonably be taking ourselves to represent a valid argument. <sup>19</sup> But there is no way to express it in propositional logic in a manner that preserves its validity. To the extent that our representation fails to capture that validity, it misfires in some important way.

Of course, we aren't forced to conclude from this that the argument is invalid. Rather, it is open to us to conclude that the formal language lacks the capacity to express the argument properly, precisely because it results in invalid arguments. This simple example involves a single representational target (an argument) and a single language (propositional logic) but it is not difficult to see how the point generalises to attempts to express presentism in, say, English. The fact that we can't avoid triviality and falsehood in English is not clearly a problem in and of itself. Just as the failure to represent an argument as valid in propositional logic doesn't immediately suggest that the argument is in fact invalid, the failure to represent a position in English doesn't mean we are forced to conclude that whatever it is we are trying to represent is trivially true or false.

One might disagree. Let us grant that if we try to represent something purely linguistically using only a single language and end up with only trivially true or obviously false expressions, then we shouldn't indict the target of the representation. Matters would be different if we were to try a range of different languages to represent something, and they *all* yielded a result that is trivially true or obviously false. In that case, we should conclude against the target of the representation, by concluding that what is being represented is itself either trivially true or obviously false. To return to the argument analogy, it is a simple matter to formulate a logical language that renders the simple syllogism above valid. Suppose, however, that we have an argument that is intuitively valid and we repeatedly fail to find a language in which the validity of the argument is preserved. In that situation, one might argue, we should give up the intuitive validity of the argument. That line of reasoning employs something like the

Logical consequence is, of course, relative to a relevant system of logic. However, we take there to be an intuitive notion of validity, which is used to make judgements about arguments in natural language. It is that intuitive notion of validity that can then be modelled, more or less accurately, by the consequence relations in various logical systems.



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Weak Representational Thesis and so, if the reasoning is any good, we cannot dispose of the Weak Triviality Argument quite so easily.

We must be careful here. On the one hand, we don't want to rule it out that the failure to represent something in a certain way (say, in a manner that avoids triviality or obvious falsehood) can tell us something about the target of the representation. On the other hand, it seems that even if we repeatedly fail to provide an adequate expression of something using a variety of languages (formal and natural), we think that there is scope to resist the indictment of whatever it is we are trying to express (in our case, presentism).

What begins to emerge, then, is a fine balance between the basis one has for thinking that a certain representational target is 'viable' and the failures one endures when attempting to represent that target linguistically. We put 'viable' in scare quotes because we have something very specific in mind. Recall that the representational target is a particular position or theory, not some feature of the world (though the theory or position may be taken to apply to some feature of the world, such as time). The target is viable, we shall suppose, if it does not seem to one to be trivially true or obviously false. Note that 'viable' does not mean 'true'. Nor does viability track the notion of plausibility, nor does it mean we have a reason to believe the position in question. In short, viability is nothing more than a particular kind of seeming, the seeming one has when reflecting on a position grasped in the mind that leads one to take it seriously in the philosophy room. When we are faced with a failure to represent some phenomenon in a purely linguistic fashion, the two questions we must ask ourselves are: how strong is the basis for belief in the representational target being a viable notion? And exactly how much failure to express it have we endured? If we have endured enough failure, and we have tried our best to linguistically represent some target, then perhaps that provides a reason to doubt the viability of the target phenomenon.

In the case of presentism, the relevant basis for belief in the viability of presentism (in the sense of viability used above) comes from two directions. First, from intuitions that many people have that presentism is viable in the specific sense introduced above, namely that it seems to many to not be trivially true or obviously false. To be clear, these are not intuitions to the effect that presentism is true, or plausible, or reasonable to believe, or anything like that. We, like many others, are hesitant to put much stock in intuitions of that kind. Rather, the intuitions at issue are intuitions people have that they are thinking of a substantive notion when they think of presentism. Since these are intuitions about one's own mental states, we don't see any reason to discount intuitions of this kind. Note that this sets the intuitions at issue apart from other intuitions. For instance, one might have intuitions to the effect that simultaneity is absolute or that there is an ether. These are intuitions about what the world is like and are to be regarded with suspicion. The intuitions we are focusing on are intuitions about how a particular position seems to be, to those who discuss it, namely that it does not seem to suffer from some obvious flaw. This is a far cry from intuiting something about the world. We are not, for instance, interested in the intuition that the world is a presentist world.

The second source of support for the view that presentism is a viable notion stems, somewhat ironically, from the many objections against presentism that there are. Here we echo a point made by Meyer (2005, pp. 218–219) who notes that:



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... if there is no non-trivial version of presentism, as I have argued, then the question of its compatibility with relativity should never arise.

Presentism is usually thought to be at odds with the special and general theories of relativity. This has produced a wealth of literature on the topic. <sup>20</sup> This suggests that the view that proponents and opponents of presentism alike have in mind is not one that is either trivially true (in which case no arguments in its favour are required) nor obviously false (in which case arguments against it are redundant). At least, the debate over the objection against presentism from relativity appears quite mysterious if the conception of presentism being targeted is trivially true or obviously false. The same general point applies to other objections against presentism. The chief philosophical objection, the truthmaker objection, <sup>21</sup> would be misfiring in a serious way if the view being targeted is trivially true or obviously false.

One might respond that objections from relativity do not start by acknowledging that presentism is a viable view. Rather, such objections take issue, primarily, with the concept of a universal present, and thus target presentism at best indirectly. Proponents of such objections, one might continue, would not be at all surprised to discover that presentism is not a viable view, in the sense described here. We are not convinced that is right. Consider the way that Putnam sets up the argument from relativity. He begins by laying out the view of the 'person on the street', which he states as follows:

(1) All (and only) things that exist *now* are real. (Putnam, 1967, p. 240).

A similar focus on presentism can be found in the exchange between Savitt (2000) and Hinchliff (2000) and in the discussion by Wuthrich (2011). Each of these philosophers take at least some form of the objection from relativity to target presentism specifically. Of course, there is a broader objection, one that targets the notion of a privileged present. But the objection against presentism is unique, insofar as this objection is taken to show that relativity not only imperils the privileged present, but also forces one to believe in the reality of non-present entities. Given that at least some philosophers appear to be targeting presentism directly, it is difficult to make sense of the argumentative landscape if presentism is not taken to be viable in our minimal sense. Namely, not trivially true or obviously false. Of course, some of the proponents of these objections may not take presentism to be viable in a stronger sense: they may not deem it to be coherent at the end of the day, or at all plausible. But that presentism doesn't wear this on its face appears to be the best explanation for why arguments from relativity are needed in the first place.

So, the view that presentism is not trivially true or obviously false is strongly held by both critic and proponent of presentism alike. Why else would so much time be spent arguing against the view? This brings us to the second question: how much failure have we endured, when it comes to articulating presentism? The failure we have endured is, if we're being honest, not that extensive. We've tried a few different attempts in English, and some in classical first-order predicate logic with identity and that's about

<sup>&</sup>lt;sup>21</sup> For a representative overview, see Caplan and Sanson (2011) and Tallant and Ingram (2018, Sect. 6).



<sup>&</sup>lt;sup>20</sup> See, for instance, Balashov and Janssen (2003), Craig (2001), Hawley (2006), Markosian (2004), Saunders, (2002), Zimmerman (2011), and various papers in Craig and Smith (2008).

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it. This just doesn't seem to be enough to undermine the strongly held belief many people have that presentism is a viable notion. In some sense, we already know this because there are many people who continue to discuss presentism *despite* the fact (if it is a fact—we acknowledge that there is disagreement on this score) that there's no known way to state it. Our claim is the normative claim that they oughtn't be moved to reject it on those grounds. We've really only scratched the surface in how we might express presentism, and we can't rule it out that there's a better option, or even no option given the limits of language itself. We conclude, then, that the Weak Triviality Argument provides no reason to reject presentism.

## 5 Weak representation: other options

We have defended presentism from the Weak Triviality Argument. However, it may be that there are other arguments available that, though not *quite* the same, might be enough to give us reason to reject presentism. To help see how that might go, let's return to [A1].

[A1] If the only way that we have to represent a position is with expressions that are either trivially true or obviously false, then that position is either trivially true or obviously false.

Rather than insisting on the trivial truth or obvious falsity of presentism, the lack of an adequate definition of presentism might indicate something else. Our opponent might look to exploit this in a number of ways. To illustrate, we can imagine an opponent replacing [A1] with any of [B1–E1] below.

If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position

- [B1] cannot be understood;
- [C1] is not worth discussing;
- [D1] is not substantive (there is no such position);
- [E1] is not coherent

We don't think that any of the ensuing arguments works, but it is worth explaining why. Let's consider each in turn.

[B1] If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position cannot be understood

On the face of it [B1] is a strange thesis, since taken at face value it suggests that we cannot understand trivial truths or obvious falsehoods. Clearly, we can, so that is not a plausible way to understand the thesis. Instead, we suggest that 'understanding' here means something more substantive. A position can be substantively understood, we will assume, when we can conceive of a world in which the thesis is non-trivially true. Interpreted this way, [B1] is a bit more plausible, since it may be that we can't understand presentism in this sense.



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Still, we think that [B1] is false, even with this more substantive notion of understanding plugged in. Assuming, as we are, only the Weak Representation Thesis, then there can be mental representations that are not purely linguistic and whose content does not derive from purely linguistic representations. But given that we have such representations, it is plausible that we understand at least some of them in this more substantive sense, as discussed previously. One could intend something even more technical by 'understands' so that, in effect, understanding in that sense requires purely linguistic representation. Then, sure, we do not understand representations that are not purely linguistic in this technical sense. But our reply here will mirror one that we gave in the context of the LOT hypothesis. If you want to use 'understand' in this manner then fine. But then there is something, call it understanding\* of representations that are not purely linguistic. Then the amended Weak Triviality Argument using [B1] is sound, but its conclusion is uninteresting. It turns out we cannot understand presentism. But, so what? We can understand\* it. Since we need understanding\* to make sense of our cognitive appraisal of representations that are not purely linguistic anyway, there is little reason to suppose that we lacking understanding\* enough for presentism.

Why think that we need understanding\*? Well, we clearly need some way to comprehend representations that are not purely linguistic, since we clearly do have such comprehension. For instance, we can read maps, which are not purely linguistic representations. Whatever the method of comprehension for representations that are not purely linguistic, that can be used to comprehend presentism as well.

Next, C1:

[C1] If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position is not worth discussing

We have two objections to [C1].

First, assuming we have some representation of presentism that is not purely linguistic, why should the view thereby fail to be worth discussing? To be sure, we see how discussion might be made more fraught in such a case. Imagine there is a map-like representation under discussion in the metaphysics room. On the assumption that we cannot completely and accurately describe that representation using language, it will be difficult to have a full discussion of the map. Anything we say will, of necessity, fail to accurately describe the map in its entirety. Still, that doesn't make discussion useless or hopeless. Perhaps there is still a lot that can be said about the map. Perhaps, moreover, we can draw diagrams to aid in our discussion. We see no reason why discussion should be abandoned simply because we cannot convert all aspects of a representation that is not purely linguistic into some linguistic representation.

Second, and setting that to one side, on one reading, an argument including [C1] as its key premise will read like some kind of cynical philosophical 'gotcha', that says nothing about the comprehensibility of a position, but moves from the lack of an exceptionless definition to the conclusion that something isn't worth talking about. This seems to us to be a move of bad faith; the kind of move that no-one interested in general philosophical inquiry ought to be interested in. Defining views is hard. If people



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understand them, we think that's enough to be going on with, even if the definition we give is lacking in some way or another. Given the ubiquity of terminological debates and disputes about the proper extension of theoretical terms of art, we think that an argument containing [C1] as a key premise would purport to show too much.

So much for [C1]. Onto [D1]:

[D1] If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position is not substantive (there is no such position)

This too is false.

Suppose it's true that the only purely linguistic representations of a position are expressions that are either trivially true or obviously false. Even so, it does not follow from this that there simply is no such position as the one we purport to represent. After all, and to repeat a core theme of this section we have been given no reason at all why we cannot represent a substantive position using a representation that is not purely linguistic.

Finally, then [E1]:

[E1] If the only purely linguistic representations of a position are expressions that are either trivially true or obviously false, then that position is not coherent

This is also false.

Suppose that we cannot represent a position in a purely linguistic fashion, in such a way that it is neither trivial nor obviously false. Nonetheless, it doesn't follow that the substantive position that we are trying to represent must be incoherent. A position could be coherent, yet not be able to be represented in a purely linguistic fashion. Perhaps we should say that a position is incoherent only if it cannot be represented *simpliciter* (though even that's not obvious). But so long as there are propositions whose content cannot be represented in a purely linguistic fashion, this allows that there are coherent views that can only be represented in a fashion that is not purely linguistic. Presentism may be just such a view. Nothing our opponent has said shows otherwise.

This concludes our discussion of the different readings of the triviality argument. In each case, the argument remains unpersuasive. As such, the opponent of presentism will have to pursue a different tack. Of course, there may be other ways to replace [A1] with something still threatening to presentism. In that case, our opponent should say more.

#### 6 Other cases?

At the outset we suggested that what we say in this paper might reasonably carry over to other debates in metaphysics. It is time to elaborate on this point. Our argument suggests a broad moral for metaphysics. For any debate in metaphysics, we should not rule out, ahead of time, the availability of representations that are not purely linguistic. This has two general implications. First, recall that non-linguistic representations can play a role in philosophical debate by (i) being useful, insofar as they provide enough



understanding of a philosophical position to ground discussion or debate and (ii) in at least some cases, not being trivially true or obviously false (or whatever the analogous bad-making features of representations that are not purely linguistic might be). Because the presence of representations that are not purely linguistic cannot be ruled out ahead of time, there is at least a potential for those representations to play a role in any metaphysical debate. What this suggests is that the methodology of metaphysics may be richer than previously thought, since it includes both linguistic and non-linguistic means of representation as approaches to philosophical debate. We have already given one example of the role that such representations can play in philosophy with respect to presentism, but it is perhaps useful to consider a second example. More on this in a moment.

The second general implication of our argument is this: because of the potential availability of representations that are not purely linguistic, we cannot infer from the lack of linguistic representations of a position, that the view is either trivial or false.

So, abstracting away from the details, consider a debate about view x. Bob says that, for x to be viable, there must be an adequate purely linguistic representation of x. Bob then proceeds to show that there is no such purely linguistic representation of x. Bob takes this to show that x is not viable. But—and this is the key point—we now know that Bob shouldn't reason that way about x. Rather, Bob's interlocutor, Sally, can reasonably respond to Bob that there is at least one other route available: appeal to representations of x that are not purely linguistic. Until this further route has been found wanting, Bob's argument is at best incomplete.

Thus, we think that our discussion in this paper illustrates the following very general argument pattern to be no good:

1a. For it to be the case that we should accept that x is a viable view, there would have to be an adequate purely linguistic representation of x.

1b. There is no adequate purely linguistic representation of x.

Therefore.

1c. It's not the case that we should accept that x is a viable view.

Instances of the above argument can be formulated for most debates. Here are four quick examples. First, consider the debate between endurantists and perdurantists. Against an endurantist, one might argue as follows:

2a. For it to be the case that we should accept endurantism, there would have to be an adequate purely linguistic representation of what it means to be 'wholly present' that sets endurantism apart from perdurantism.

2b. There is no adequate purely linguistic representation of what it means to be 'wholly present' that sets endurantism apart from perdurantism.

Therefore.

2c. It is not the case that we should accept endurantism.

Next, consider the debate surrounding free-will. Against a libertarian, one might argue as follows:

3a. For it to be the case that we should accept libertarianism, there would have to be an adequate purely linguistic representation of what it means to act freely in a sense consistent with one's actions.



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3b. There is no adequate purely linguistic representation of what it means to act freely in a sense consistent with one's actions.

Therefore,

3c. It's not the case that we should accept libertarianism.

Next, consider the debate over property dualism. Here, one might argue as follows:

4a. For it to be the case that we should accept property dualism, there would have to be an adequate purely linguistic representation of what it means for mental properties to 'depend on' physical properties.

4b. There is no adequate purely linguistic representation of what it means for mental properties to 'depend on' physical properties.

Therefore,

4c. It's not the case that we should accept property dualism.

Lastly, consider the debate over moral realism. In this case, the following argument can be formulated:

5a. For it to be the case that we should accept moral realism, there would have to be an adequate purely linguistic representation of what it means for moral properties to 'depend' on natural properties.

5b. There is no adequate purely linguistic representation of what it means for moral properties to "depend" on natural properties.

Therefore,

5c. It's not the case that we should accept moral realism.

What we've shown is that arguments of the above form that include premises like 2a, 3a, 4a and 5a are not sound.

### 6.1 Why care?

It seems to us that this is a result of some value. To strengthen the claim that the result is valuable, it is perhaps useful to dig into one of the above examples in a bit more detail. Consider, then, the debate over how to state endurantism. As some have urged, it is quite difficult to provide a purely linguistic representation of this view, one that preserves a metaphysical distinction between endurantism and its chief alternative, perdurantism (compare, Crisp, 2005; Markosian, 1994; Merricks, 1995; Sider, 1997). This has led some to conclude that, because no adequate definition can be found, endurance should be rejected or set to one side (Sider, 1997, Sect. 2 is representative).

The difficulty centres on the notion of being 'wholly present'. It is common to state endurantism as the view, in part, that objects persist by being wholly present at different times. However, it is notoriously difficult to explicate 'wholly present' in a manner that doesn't collapse the distinction between endurantism and perdurantism. This has had a polarising effect on the debate. Some are inclined to believe that there is no meaningful distinction between the two views, precisely because there appears to be no way to adequately state endurantism. Others continue to believe that there is a meaningful distinction between the two views, even if that distinction cannot yet be captured.

Thus, in cases involving both presentism and endurance there is an apparent failure to represent a view in a purely linguistic fashion, and in both cases, this has led some to reject the idea that there is a viable view to be stated. What we have said in the case



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of presentism can thus apply here, too: insofar as some believe that endurantism is to be rejected purely because of a failure of linguistic representation, then that is too quick. For the failure to represent a view in a purely linguistic manner is not sufficient grounds for rejecting it, as we have been at pains to argue here.

#### 6.2 Primitives?

One might deny, however, that endurantism is sufficiently analogous to presentism for our point to take hold. For, one might argue, while it may be plausible to suppose that presentism cannot be stated in a purely linguistic fashion the same is not true of endurantism. That's because a proponent of endurantism has the option of simply taking the notion of 'wholly present' as a primitive notion. She can thus take a statement of endurantism as the view that 'objects persist by being wholly present' as a perfectly adequate linguistic representation of the view. Granted, there is no way to further articulate what being 'wholly present' is in language that would set the view apart from perdurantism. However, assuming that one is prepared to accept that being 'wholly present' is primitively different from anything that a perdurantist would accept about persistence, then perhaps a simple statement of endurantism in these terms is acceptable.

One response here is to simply reject the idea that an adequate, purely linguistic representation of a view can take any term as primitive. Such a requirement would, however, raise some thorny questions: can *any* view be stated in a purely linguistic fashion (assuming every view must involve taking something as primitive)? We think that there are few who would reject the idea that at least *sometimes*, purely linguistic representations can take some term as primitive.

The willingness to accept the use of primitives matters, but it doesn't undermine the central point we are making. When stating a view, there appear to be two options. First, demand that all terms within the linguistic statement of a view are non-primitive, in this sense: those terms must be subject to further explication in language. Second, allow that some terms within the linguistic statement of a view are primitive terms, not to be explicated with further linguistic representations. Setting aside some general view that primitives can never be used when stating a view purely linguistically (which as we note above, seems very implausible) we take it that a demand that all terms within the linguistic statement of a view are non-primitive will arise when the relevant primitive is not one that all, or most, parties to the debate accept.

So, for instance, one *can* provide a purely linguistic representation of presentism if one is willing to allow for primitive terms to be part of that representation (as for instance, is done by Hestevold & Carter, 2002). It is only when the claim that 'present objects exist' is required to be explicated in further terms that the triviality objection against presentism starts to take form. And in this case this objection has force precisely because many parties to this debate do not accept the primitive in question.

We expect that the same is true in the case of endurantism: it is only when 'wholly present' is not permitted to be a primitive notion that an objection against endurantism based on linguistic representation starts to take shape. Of course, in this case it is much less clear, at least of late, that most of the parties to this debate do reject the



relevant primitive. Arguably, a primitive locational notion such as being exactly located (Gilmore, 2007) is widely accepted by both parties to this debate.

Our point, though, is that *even when* there is no agreed primitive term to which parties can appeal in providing a linguistic statement of a view, the fact that a view cannot be then stated purely linguistically is not yet a reason to reject it. For there may be other, non-purely linguistic representations of the view available.

Our point, as before, is not about the specifics of a debate, but about the general shape of a given dialectic. What the discussion shows is that when one is presented with an objection to a view based on the claim that the view lacks an adequate purely linguistic representation, there are really two ways to resist such an argument: one could offer a linguistic representation of the view cast in terms of a primitive that parties to the debate would agree is not obviously incoherent or problematic, or one could appeal to our thesis that a view's lacking an adequate purely linguistic representation is not a sufficient reason for rejecting that view. Finding some accepted primitive allows for more options concerning purely linguistic representation. However, it doesn't change the fact that where purely linguistic representation is deemed to fail (with or without primitives) there may well be a non-linguistic representation adequate for blocking the charge that, without a linguistic representation, a certain view should be dismissed.

Is this the case for the debate over endurantism and perdurantism? We believe so. *Even if* one rejects a primitive notion of location, there is still scope to represent these views in non-purely linguistic ways (Figs. 3, 4). It is not at all unusual to see diagrams of the following sort appealed to in discussion of theories of persistence<sup>22</sup>:

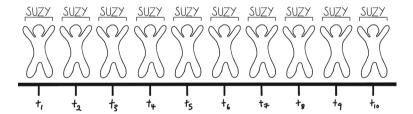


Fig. 3 Endurantism

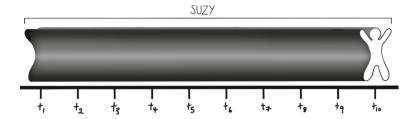


Fig. 4 Perdurantism



<sup>&</sup>lt;sup>22</sup> Gilmore (2018, Fig. 7 is representative).

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Diagrams such as these provide at least a preliminary response to scepticism about the difference between endurantism and perdurantism. After all, the diagrams look very different, and so there do appear to be at least two ways for something to be in time. The diagrams to some extent serve as intuition pumps. More than this, though, the diagrams provide a hint as to where the difference between endurantism and perdurantism might lie. For what's notable about the two diagrams is that Suzy seems to bear two different relationships to time. In the second diagram, bits of Suzy appear to be scattered across time, in a way that doesn't seem true for the first diagram. In this way, we can see that the notion of being 'wholly present' might be locking onto something metaphysically perspicuous after all, it's just that we haven't quite found the right linguistic machinery to elucidate it and, indeed, may never find such machinery.

### 6.3 Why the failure?

A question arises as to why the linguistic machinery used to state the notion of being

'wholly present' might be failing us. We conjecture that it is the use of 'present' that is the problem. It is helpful, here, to report a specific claim made about one putative way to define 'wholly present' due to Sider (1997).

A more likely sense of 'wholly present', my intended sense from now on, may be defined as follows:

(WP) x is wholly present at t =df everything that is at any time part of x exists and is part of x at t

But on this reading the claim that objects are always wholly present becomes:

(WP2) Necessarily, for every x and every time t at which x exists, everything that is a part of x at some time or other exists and

is part of x at t

This makes three dimensionalism too strong, for (WP2) entails the impossibility of gain and loss of parts.

What we are seeing here is, as it was in Sect. 3.4, is a case where change over time is making difficulty for our efforts to give a complete and perspective independent description of reality. The persistence case is slightly different, in that we are not in this section considering presentism. Nonetheless, we are describing a view according to which what is present, changes. Even if this is not quite the same dynamism as is associated with presentism, it is still a case where we have a complication involving relativisation to times, and change over times. It may simply be that our language lacks the resource necessary to permit us a fully perspicuous representation of what it is to be *wholly present* in a world where what is present also changes (as the endurantist requires).



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## 6.4 The other arguments

In 6.1 we identified a number of different arguments that might be run against positions in the literature on metaphysics: those involving libertarianism, property dualism and moral realism. To be clear, we don't know of any author who has explicitly offered one of these arguments. But we think that such arguments might be available or at least 'in the air'. For instance, when defending libertarianism van Inwagen writes as follows:

'Free will', then, is to be defined in terms of 'can'. But how is 'can' to be defined? I am afraid I do not know how to define 'can', any more than I know how to define 'law of nature'. (p. 8)

Later in the book he states: "I have never pretended to understand 'how free will works'. If I knew I would tell you, but I don't know." (p. 216) And he sees the book as "an attempt to present a position on free will that commits its adherent to smaller mysteries than does any available competing position." (p. 216).

Clearly, then, even if no-one has explicitly stated an argument of the form we present in 6.1 against libertarianism, the concern about how to define 'can' preoccupies a portion of van Inwagen's project. *One* reason one might offer such a defence is if one thought the fact that one cannot fully linguistically represent one's view—in this case, libertarianism—leads to its rejection.

Similarly, discussions of the nature of what it is to 'depend' are rife in the metaphysics literature. Whether or not someone has explicitly stated an argument against property dualism or moral realism on the grounds that the notion of 'depends' cannot be cashed out, is perhaps a little beside the point. There are those who have argued that notions of dependence, grounding, and the cognate notion of fundamentality cannot be spelled out, and that this poses a problem for metaphysical theorising *in general*. We think it reasonable to see both property dualism and moral realism as notions requiring some notion of dependence, and, as such, anyone who reasons from the lack of an adequate definition of such a term to a challenge to dependence—and here we see the likes of Hofweber (2009) as representative—is advancing an argument with the shape of the one we reject. Thus, we think that our argument does or at least could get purchase on a range of debates.

#### 6.5 The general application

So far, in this section, we've shown how our argument in the first half of the paper can be generalised beyond presentism. We outlined this in a schematic way, for four different metaphysical debates, and then unpacked one of these cases, persistence, in a bit more detail. Suppose that we are correct and that our argument does generalise more widely. Still, we've not said *how* to apply it. We think that in seeking to apply our approach to a specific debate there is a relatively straightforward decision procedure that can be worked through.



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First, ask: does the debate in question turn on a disagreement about whether there is a representation of x? If so, ask: might the availability of a non-linguistic representation of x help move the debate along? It might be hard to assess this, so one might ask for a demonstration of the kind of representation that might be given (see the example we gave in Sect. 3.3). If the availability of a non-purely linguistic representation of x might help the debate along, we should then look to provide one (if it has not already been given) and consider why purely linguistic representations have (to date) failed. Of course, we grant that it might be up for dispute whether a non-purely linguistic representation does indeed help the debate along. Perhaps there will be disagreement about whether, for instance, some of the diagrams we offered earlier in this paper help the dispute about presentism along, and the same may well be true elsewhere.

If the decision procedure can be fully applied to a debate, then we think it reasonable to make use of the approach that we've taken here and consider the deployment of non-purely linguistic representations. We concede, however, that there may not be very many debates to which this general decision procedure can be immediately applied.

Still, we take the generalizability of what we've said to have value, for three reasons. First, the dialectical resource we've identified can serve to guide future metaphysical debate. When debates start to descend into arguments about how to represent a view in a purely linguistic fashion, as they well might, then what we've said here can serve as a useful corrective. Thus, our argument can serve as a guideline for doing good metaphysics, by offering a prescription against running arguments of the general form outlined in this section. This, in turn, helps us to better understand the enterprise of metaphysics itself by clarifying the ways in which arguments can be profitably developed.

Second, our arguments in this paper serve as a reminder not to overlook representations

that are not purely linguistic within metaphysics. It is fair to say that metaphysics, in general, has focused on linguistic representation, in part because current metaphysics is a descendent of the linguistic turn within philosophy. By showing that representations that are not purely linguistic can have a role to play in metaphysics, the focus on purely linguistic representation starts to seem myopic. The general availability of a certain approach—namely, the potential to represent a view in a manner that is not purely linguistic—provides a gentle reminder to the metaphysics community to look beyond purely linguistic representation, not just with respect to the kind of argument form that we have outlined in this section, but also more generally.

Third, not all arguments appear on the page. Some arguments are rejected before that stage (by interlocutors, by referees, by editors, by authors, and so on). We think it an open possibility that positions that seemingly demand a representation, but cannot be captured by a purely linguistic representation, may simply be being rejected out of hand. (Our own experience of writing and submitting papers suggests this to be the case.)



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### 7 Conclusion

We don't think that the Triviality Argument against presentism succeeds. When framed in terms of the Strong Representation Thesis it is unconvincing because there is little reason to accept that the only way to represent presentism is in a purely linguistic fashion. When framed in terms of the Weak Representation Thesis, the argument fails because, on the one hand, there is no reason to suppose that presentism must be represented in a purely linguistic fashion and, on the other hand, even if such a reason can be found, we simply haven't endured enough failure to dispose of presentism. There is also no plausible way to modify the Triviality Argument by focusing on notions like understanding, coherence, or discursive capacity.

In sum, a focus on purely linguistic representation in metaphysical debate will get us so far, but a lack of such representation need not be fatal. There may be more to philosophical reflection than description through language. Since there has been precious little discussion of means of representing philosophical views to date that are not purely linguistic, we hope this more general point will encourage everyone to move beyond purely linguistic representation as the only means of representing philosophically substantive positions.<sup>23</sup>

**Data availability** Aside from the items in the bibliography, there are no sources and there is no data to be made accessible.

#### **Declarations**

**Conflict of interest** Each author reports that they have no potential conflicts of interest.

Research involving human participants and/or animals The research reported here does not involve Human

Participants or Animals.

Informed consent The research reported here does not involve Human Participants so no consent is required.

Consent for publication As corresponding author, I confirm that all authors consent to the paper being published at this journal.

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## References

Balashov, Y., & Janssen, M. (2003). Presentism and relativity. *British Journal for the Philosophy of Science*, 54(2), 327–346.

Blumson, B. (2012). Mental maps. Philosophy and Phenomenological Research, 85(2), 413-434.

Braddon-Mitchell, D., & Jackson, F. (1996). Philosophy of mind and cognition. Blackwell Publishers.

Caplan, B., & Sanson, D. (2011). Presentism and truthmaking. *Philosophy Compass*, 6(3), 196–208.

Craig, W. L. (2001). The metaphysics of relativity. Kluwer.

Craig, W. L., & Smith, Q. (Eds.). (2008). Einstein, relativity and absolute simultaneity. Routledge.

Crisp, T. M. (2004a). Reply to Ludlow. In D. Zimmerman (Ed.), Oxford studies in metaphysics (Vol. 1, pp. 37–46). Oxford University Press.

Crisp, T. M. (2004b). On presentism and trivality. In D. Zimmerman (Ed.), *Oxford studies in metaphysics* (Vol. 1, pp. 15–20). Oxford University Press.

Crisp, T. (2005). Presentism and cross-time relations. American Philosophical Quarterly, 42(1), 5–17.

Deasy, D. (2015). What is presentism? Nous, 51(2), 378-397.

Deasy, D. (2019). The triviality argument against presentism. Synthese, 196, 3369–3388.

Dummett, M. (1960). A defence of McTaggart's proof of the unreality of time. Philosophical Review, 69(4), 497–504.

Gilmore, C. (2007). Time travel, coinciding objects, and persistence. In D. Zimmerman (Ed.), *Oxford studies in metaphysics* (Vol. 3, pp. 177–198). Oxford University Press.

Gilmore, C. (2018). Location and mereology, the stanford encyclopedia of philosophy (Fall 2018 Edition), Edward N. Zalta (Ed.), https://plato.stanford.edu/archives/fall2018/entries/location-mereology

Golosz, J. (2013). Presentism, eternalism and the triviality problem. Logic and Logical Philosophy, 22(1), 45–61.

Hawley, K. (2006). Science as a guide to metaphysics? Synthese, 149(3), 451-470.

Hofweber, T. (2009). Ambitious yet modest metaphysics. In D. Chalmers, D. Manley, & R. Wasserman (Eds.), *Metametaphysics* (pp. 260–289). OUP.

Hestevold, H. S., & Carter, W. R. (2002). On presentism, endurance, and change. Canadian Journal of Philosophy, 32(4), 491–510.

 $Hinch liff, M. \, (2000). \, A \, defense \, of \, present is m \, in \, a \, relativistic \, setting. \, \textit{Philosophy of Science}, \, 67, S575-S586.$ 

Johansson, I. (2016). Against fantology again. In L. Zaibert (Ed.), The theory and practice of ontology (pp. 25-43). Palgrave Macmillan.

Lombard, L. B. (1999). On the alleged incompatibility of presentism and temporal parts. *Philosophia*, 27(1–2), 253–260.

Ludlow, P. (2004). Presentism, triviality, and the varieties of tensism. In D. Zimmerman (Ed.), Oxford studies in metaphysics (Vol. 1, pp. 21–36). Oxford University Press.

Markosian, N. (1994). The 3D/4D controversy and non-present objects. *Philosophical Papers*, 23(3), 243–249.

Markosian, N. (2004). A defense of presentism. In D. Zimmerman (Ed.), *Oxford studies in metaphysics* (Vol. 1, pp. 47–82). Oxford University Press.

Merricks, T. (1995). On the incompatibility of enduring and perduring entities. Mind, 104:(415), 523-531.

Meyer, U. (2005). The presentist's dilemma. Philosophical Studies, 122(3), 213-225.

Pezet, R. (2017). A foundation for presentism. Synthese, 194, 1809–1837.

Putnam, H. (1967). Time and physical geometry. The journal of Philosophy, 64(8), 240–247.

Sakon, T. (2015). Presentism and the triviality objection. Philosophia, 43, 1089–1109.

Saunders, S. (2002). How relativity contradicts presentism. In C. Callender (Ed.), Time, reality & experience (pp. 273–292). Cambridge University Press.

Savitt, S. F. (2000). There's no time like the present (in Minkowski Spacetime). Philosophy of Science, 67, S563–S574.

Sider, T. (1997). Four Dimensionalism. Philosophical Review 106, 197-231.

Sider, T. (2009). Ontological realism. In D. Chalmers, D. Manley, & R. Wasserman (Eds.), *Metametaphysics: New essays on the foundations of ontology* (pp. 384–423). Oxford University Press.

Sider, T. (2011). Writing the book of the world. Oxford University Press.

Smith, B. (2005). Against fantology. In J. Marek & E. M. Reicher (Eds.), Experience and Analysis (pp. 153–170). OBV & HPT.

Stoneham, T. (2009). Time and truth: The presentism-eternalism debate. Philosophy, 84, 201-218.



Tallant, J., & Ingram, D. (2018). Presentism. In *The Stanford Encyclopedia of Philosophy* (Spring 2018 Edition), E. N. Zalta (Ed.), https://plato.stanford.edu/archives/spr2018/entries/presentism/.

Tallant, J., & Ingram, D. (2021). The Rotten core of presentism. Synthese, 199, 3969–3991.

Wuthrich, C. (2011). The fate of presentism in modern physics. In R. Ciuini, G. Torrengo, & K. Miller (Eds.), *New papers on the present: Focus on presentism* (pp. 91–132). Philosophia Verlag.

Zimmerman, D. (2011). Presentism and the space-time manifold. In C. Callender (Ed.), *Oxford handbook of the philosophy of time* (pp. 163–244). Oxford University Press.

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