

1. Introduction.

This paper argues that most metaphysicians place a faulty constraint on their ideology. They assume that it must be a language of (a modest extension of) predicate logic. This gives rise to two difficulties in the philosophy of time, namely the problem of temporary intrinsics, and the presentism/ eternalism dispute. We should avoid those problems adopting an ideology that violates the alleged restriction.

I start by explaining what it is to disagree about the choice of ideology. Metaphysics aims to display the nature of reality. The language we use to state the facts is the ‘ideology’ of our metaphysical theory. We want our ideology to ‘fit’ the facts. There is more to this than the ability of the ideology to express truths. Two ideologies can be inter-translatable, yet one ‘fits’ reality and the other does not.

I give three examples, starting with a variant of Goodman’s ‘grue’ and ‘bleen’. Let t_0 be a constant time. x is a proelec at t iff: either (x is a proton and $t \leq t_0$) or (x is an electron and $t > t_0$). x is an elecpro at t iff: either (x is an electron and $t \leq t_0$) or (x is a proton and $t > t_0$). The ideology of ‘proelec’ and ‘elecpro’ can state all the truths the ideology of ‘electron’ and ‘proton’ can. The two ideologies are inter-translatable. Yet one ideology ‘cuts nature at the joints’, and the other is objectively gerrymandered. The ideology of ‘electron’ and ‘proton’ is metaphysically preferable, because it ‘fits’ reality.

It is not just kind-terms that ‘fit’ reality or don’t. Here is how Kit Fine understands the A-theory/ B-theory debate, which concerns whether “any tensed facts are constitutive of reality” (2005a p. 268).

The question concerns the fit, or lack of fit, between the tensed character of our representations and the character of reality itself. But fit is not simply a matter of truth. Both sides to the debate can agree to the truth of particular tensed statements. (Fine 2005a p. 270)

Thirdly, there are expressions of English that do not carry the shape of a putative fact on their sleeve. For example, “The *average* man in this room is less than 6ft tall” may be used to say something true. If so, it still won’t ‘fit’ the facts in the way the

following sentence might: “The *loud* man in this room is less than 6ft tall”. If that’s right, our metaphysical ideology should not include expressions of the form, “the average F is G”. We should use a ‘fitting’ ideology to express such a truth. We give the unfitting expression a philosophical analysis.

A sentence need not describe a fundamental fact in order to fit reality in our sense. It can fit derivative reality, or fail to do so. The above examples show this. Protons are not fundamental, yet the ‘proton/electron’ ideology is the right way to state the facts about them. We can debate whether the derivative facts about cars and such like are tensed. We can think that “the average man” is a misleading expression, but the corresponding statement about the arithmetic mean is not. So our notion of ‘fit’ is not what Kit Fine and Ted Sider have in mind. Fine’s notion of “a fact in metaphysical reality” is closely tied to the notion of a fundamental fact. (Fine 2001, noting p. 27.) Sider’s topic is “the fundamental structure of the world” (2008 p. 36).

This paper is about the correct ideology for describing temporal phenomena. (There are fundamental temporal phenomena, so the issue arises even if Fine and Sider are right, and a sentence can only ‘fit’ a fundamental fact.) Firstly, does it fit reality to say that an object has a property at one time and not at another? For example, does it fit reality to say, “The car was red *at 10am*”? Secondly, does it fit reality to have names for things that do not exist (but did)? For example, does it fit reality to say, “*Socrates* lived in Athens”?

I think both these common-sense formulations do fit reality. Most metaphysicians think this can’t be. They simply assume the correct ideology is a language of (a modest extension of) predicate logic. (One is allowed to use certain sentence operators, such as ‘It was the case that’ and ‘Possibly’.) Call this attitude ‘reifying predicate logic’. (I don’t mean there’s something anti-nominalist about it.) Reifying predicate logic means that ‘Fa’ and ‘Rab’ display the nature of predication. Reifying predicate logic means that ‘ $\exists xFx$ ’ displays the nature of existence. These implications remain if we adopt a tense logic and/ or modal logic. Adding primitive sentence operators to the ideology, such as ‘WAS’ or ‘ \diamond ’, leaves the purely predicative and existential expressions unchanged.

Reifying predicate logic restricts our choice of ideology, giving rise to two problems in the metaphysics of time. Firstly, it requires reducing [having a property at a

time] to [having a property simpliciter]. David Lewis's 'problem of temporary intrinsics' is that there is no intuitively satisfactory way to do so. Secondly, it requires either paraphrasing away apparent reference to Socrates, or accepting that Socrates exists. 'Presentism' accepts the first horn of that dilemma, and 'eternalism' the second. Both conflict with common-sense.

If we don't reify predicate logic, both metaphysical problems disappear. We can adopt a more natural, common-sensical ideology. Reifying predicate logic is a piece of revisionary metaphysics, which results in two discomfoting problems. We would need a strong argument for choosing such an ideology, and I don't know of one.

Refusing to reify predicate logic does not mean rejecting the disciplines of metaphysics or logic. I think there is a correct ideology that 'fits' reality. This paper practices full-blooded metaphysics. There is a further project of determining the entailment relations between sentences of the correct ideology. Nothing said here conflicts with the idea that there is one correct logic. I am arguing for an ideology that is at odds with the current consensus. More modestly, I hope to have articulated the assumptions which underlie much contemporary theorizing.

Section 2.1 sets out the problem of temporary intrinsics, and my response. The following section replies to some worries about my solution and my interpretation of Lewis. Section 2.3 criticises some other responses to the problem. Sections 3.1 to 3.4 discuss the presentism/ eternalism controversy. 3.1 raises two puzzles about the debate. The first is that it is driven by a strange assumption. The second is that some philosophers think that the two sides do not disagree at all. 3.2 shows that the strange assumption is part of the Quinean metaontology, which results from taking predicate logic to display the nature of existence. Presentism and eternalism are different Quinean theories. The reason some people fail to see the disagreement is that it is partly ideological, namely whether to adopt a tensed or tenseless ideology of existence. 3.3 delineates the possible non-Quinean A-theories and B-theories of time. 3.4 sketches a broader post-Quinean landscape. Our metaphysics can be more commonsensical once we abandon that dogma.

This paper argues that two standard problems in the philosophy of time are based on a mistaken assumption. However, I think the A-theory/ B-theory debate is a genuine metaphysical dispute. While it is not the topic of this paper, I do want to point out some

connections with our concerns. Here is the characterization I will be using. The B-theorist thinks that the facts have no feature corresponding to tense. Tensed sentences are made true by 'tenseless facts'. The A-theorist disagrees; she thinks there are tensed facts. This formulation is close to Fine's (quoted above). It is also close to Sider's.

Tensed and tenseless temporal judgments are often called A-judgements and B-judgements respectively. ... Do tensed judgements concern features of reality that are in some sense irreducibly tensed, or can their truth be reduced in some way to tenseless facts about time, those expressed by B-judgements? (Sider 2001, pp. 12-13.)

A typical A-judgement is expressed by the present-tensed sentence: Sally is sitting. A typical B-judgement is expressed by the tenseless sentence: Sally is sitting at 5pm on 1/1/1980. The B-theory is reductionism about tense; the A-theory is anti-reductionism about tense.¹

2.1 Lewis's problem of temporary intrinsics.

I start by outlining my argument. Lewis demands that we reduce <having a property at a time> to <having a property simpliciter>. The problem of temporary intrinsics is that none of the proposed reductions are acceptable. I reject the demand for a reduction, so I reject the existence of the problem. However, reifying predicate logic requires making the reduction. It is the only motivation I can think of. So reifying predicate logic creates a spurious metaphysical problem.

I introduce the problem by means of an example. My friend's car went into the body shop for a complete re-spraying yesterday. The problem of temporary intrinsics is to explain the compatibility of the following three facts:

- 1) The car was red all over.
- 2) The car was blue all over.
- 3) Nothing can be red all over and blue all over.

¹Sider defines the B-theory as the combination of reductionism about tense with eternalism (2001 p. 14). I do not; it is useful to keep these two issues separate. I argue in section 3.3 that there is no tight link between the B-theory and eternalism.

The common-sense solution is that the car had different properties at different times. 1 and 2 are made true by 1' and 2' respectively:

1') The car was red all over at 10am.

2') The car was blue all over at 5pm.

A better formulation of 3 is 3':

3') Nothing can be red all over and blue all over at the same time.

So far, so simple.² The problem is that David Lewis demands an explanation for this notion of “an enduring thing having a monadic property at a time” (Lewis 2002 p. 12).

How is such change [of intrinsic properties] possible?... It is *not* a solution just to say how very commonplace and indubitable it is that we have different shapes at different times. To say that is only to insist – rightly – that it must be possible somehow. (1986, p. 204.)

How can one and the same thing have contrary intrinsic properties? How does it help that it has them at different times? (2002, p. 1.)

He rightly rejects any attempt to explain what it is for a thing to have a property *simpliciter*. In particular, he rejects explaining it by means of a reified instantiation relation (2002, pp. 6-7). So Lewis can object to taking a thing's having a property at a time as bedrock, only if he takes having *simpliciter* to be basic, and having at a time to be derivative. Lewis demands that we analyse <having a property at a time> in terms of <having a property *simpliciter*>. The real predicative facts are that an object has a property *simpliciter*. The problem of temporary intrinsics is that there is no satisfactory way of carrying out the reduction Lewis demands.

Before we see whether the reduction can be performed, let us consider why someone might attempt it. I can think of two reasons. Firstly, one might be motivated by Ockham's Razor. One's ideological primitives should not be multiplied beyond necessity. Maybe we need the ideology of predication *simpliciter*, to fit the mathematical facts. If Lewis's reduction cannot be carried out satisfactorily, then the extra ideology *is* necessary. Ockham's Razor justifies investigating a reduction; it does not demand one.

² The common-sense response is incompatible with presentism, for it makes reference to other times.

The second motivation does necessitate a reduction. If one reifies predicate logic, then one takes ‘Fa’ and ‘Rab’ to display the nature of the predicative facts. ‘The car was red at 10am’ must be shoe-horned into that form. (For now, I will ignore the issue of tense.)

If the ideology only includes predication simpliciter, then predicate logic does reflect the nature of reality in that respect. So the reductionist accepts the ideology of logic (with respect to predication). We can represent the strategies for a reduction in predicate logic, without any loss of generality. For ease of exposition, I will talk platonistically about properties. The question of reducing 1’, 2’ and 3’ arise for the nominalist too.

So suppose we are platonists about properties and relations, and reify predicate logic. We read what properties there are off our formalized claims. An n-ary predicate picks out an n-ary relation, which a “non-relational tie” (Lewis 2002 p. 7) binds to n objects. An object and a property would be sufficient to determine a truth-value. ‘The car was red at 10am’ has to be translated into the language of predicate logic, thus exhibiting which property or relation is really being predicated of which object(s). There are only three options: t is a relatum; build t into the predicate; build t into the subject.

The last of these is Lewis’s “temporal parts” solution. On that view, the car does not get to be red. Rather, the 10am time-slice of the car is red (simpliciter). The car changes in virtue of having (simpliciter) temporal parts with different properties. On this view, persisting things do not really *have* temporary properties. What appeared to be their temporary properties are (timelessly) properties of their temporal parts. Persisting things are not the right kind of thing to have those properties. Lewis’ solution changes the subject of the predication of redness from what we intuitively take it to be, namely the car. On this view, English speakers say truly, “Things have different properties at different times”, but that is a metaphysically misleading way of putting things. If you think that is not a metaphysically misleading way of putting things, then you should reject the ‘temporal parts’ solution to the problem of temporary intrinsics. (Of course, this only scratches the surface of the controversy about temporal parts.)

A more conclusive objection can be made against the first two options, on which the subject really is the car. Lewis calls them both the “relational solution.” On those views, the only property in the vicinity is being-red-at-10am. There is also the 2-placed

relation, being-red-at. But there would be no *property* of being red. Lewis says (1986 p. 204), “[This] solution to the problem of temporary intrinsics is that there aren’t any temporary intrinsics.” This is misleading: intrinsicity has nothing to do with it. The problem is that there would be no temporary *properties*. (The example is redness, but the point is general.) The relational solution says that the car changes if it bears the red-at relation to 10am but not 5pm. But that cannot be described as a change in the *properties* of the car. The relational solution is unacceptable, for things obviously can change their properties.

Reifying predicate logic makes the problem of temporary intrinsics serious. We cannot predicate redness of the car. If we do not reify predicate logic, we need not analyze what it is for an object to have a property at a time. We accept the notion as part of our ideology. We are content that the common-sense response fits reality. No problem of temporary intrinsics arises. The next two sections consider objections to this response, and compare it to other views in the literature. The impatient reader may skip straight to section 3.

2.2 More on my view of temporary intrinsics.

One might have difficulty grasping what it is to take ‘x is F at t’ as primitive. How can the time appear in the fact, but not as a relatum? Of course, I cannot reply by explaining the notion I take to be primitive. Instead, I draw an analogy with the role of properties in a fact. They need not be relata either.

Platonists must admit that there are at least two different roles in a predicative fact, played respectively by the predicated property (or relation) and the subject (or relata). A fact is not just a concatenation of things, namely an n-ary relation and n relata. Nor can we turn a concatenation of things into a fact by adding the instantiation relation to it. Predicating the instantiation relation is not less problematic than predicating the property of redness. If the latter requires an explanation in terms of the instantiation relation, so does the former. So explaining predication in terms of the instantiation

relation leads to an infinite regress. (Lewis 2002 agrees, pp. 6-7.)³ Rather, we must take the predicative form of fact as primitive. There are two kinds of role in that form: the predicate-role and the subject(s)-role. Only properties and relations can play the predicate-role. We cannot say very much about what it is to play these roles, only that those relata bear that relation. We do not explain what it is for an object to have a property.⁴

My claim is that some facts contain a third role. That role can only be filled by a time, just as only a property or relation can play the predicate-role. The third role is that of the time of instantiation. That time is neither the predicate, nor part of it. It is not a relatum, nor part of one. It is a distinct third kind of component of the fact. The fact involves the car, the property of being red, and the time 10am, all in different ways. All we can do to characterize those ways is to say: the car was red at 10am. We should not try to explain what it is for an object to have a property at one time, and not at another.⁵

My view requires giving up traditional definitions of n-adicity (i.e. a relation's being n-placed), and of being a relatum. This is no cost, as my definitions are more

³ Peter van Inwagen (1990 pp. 249-250) takes it as primitive that things have different properties at different times. Unfortunately, he states his view in terms of the instantiation *relation*. This allows Lewis to make the tangential objection that we should not reify instantiation (2002 pp. 4-7).

⁴ I am working with facts, but there is an analogous problem with 'the unity of the proposition'. How are propositions formed? Concatenating an object and a property won't do it. A list is not a proposition. As in the case of facts, the problem is dissolved by primitivism about the proposition-forming operation. We take as primitive the way an object and a property are combined to form the proposition that predicates the property of the object.

⁵ Incidentally, this sheds light on Lewis's claim that predication is a 'non-relational tie' between an object and a property. The property does not appear in the fact as a relatum (i.e. playing the relatum-role). So the fact does not consist in a relation holding between the property and something else. Unfortunately, any talk of 'the property' suggests it plays the relatum-role.

intuitive. We give up the old definition, that an ‘n-adic’ relation and n things always determine a candidate for a complete fact. Sometimes, the facts contain a time of instantiation as well. I define: an ‘n-adic’ relation would hold between n things. A 1-adic relation is a property. Similarly, we should work with the following common-sensical definition of ‘relatum’. In a fact, a relatum is one of the things related in the given way. We give up the old definition, that whatever must be added to a relation to get a complete fact is a relatum. The time at which the relation holds is not one of the things thus related. The things added to the relation to get a fact play two fundamentally different roles in the fact. The old definition of ‘relatum’ picks out a disjunctive kind, like jade. It fails to line up with our intuitive understanding of the holding of a relation. The new definitions are incompatible with reifying predicate logic. For in logic, an n-adic predicate and n names form a sentence. If that sentence fits reality, the facts will not contain an extra element not designated in the sentence. There could not be a third kind of element in the fact, that is neither predicate nor relatum.

Why is my view incompatible with taking a modest extension of predicate logic to display the nature of reality? Why can’t we write ‘@t (Fa)’, introducing a complex sentence-operator to the ideology to capture instantiation at a time? Actually, I do not object to that formalization. Our question is why Lewis and those following him do not even consider this option. I think that’s because it marks too great a departure from the formal languages they are familiar with. That everyone ‘reifies predicate logic’ is meant to explain why the literature ignores the correct response to Lewis’s problem. Writing ‘@t (Fa)’ is too much of a departure from predicate logic *for those philosophers*.

Here’s an objection to holding that some properties are always had relative to a time. Mark Hinchliff takes it as a premise that,

A property ... is one-placed; a single thing can just have it, have it without qualification or reference to anything else, just plain have it. (1996 p. 121)

His claim is that the A-theorist can satisfy this requirement with his present-tensed having of a property, but the B-theorist’s tenseless predication of temporary properties will always be relativised to a time. I don’t think the B-theorist should be worried about denying the *tenseless* version of Hinchliff’s premise. It has little appeal as a definition of what it is to be a property, or to be one-placed. Tenselessly having a property is having it

at a time – where’s the problem? The real intuition in the area is that the way things are now is the way things are simpliciter. Those facts are present-tensed and do not contain a time. That is just a statement of his brand of A-theory (see Hinchliff p. 123). Hinchliff’s argument carries less intuitive weight than a bald statement of his view. (The view is no worse off for that.) An interesting issue is whether present-tensed predication simpliciter can be combined in one’s ideology with tensed predication relativised to a time. To describe reality, must we say both that I am sat, and that I am sat now? I find such a view alluring and perplexing.

A different worry one might have with my view is that it is ‘ontologically committed’ to times. Many philosophers think that it is natural for an A-theorist to be a ‘presentist’, i.e. to avoid ontological commitment to entities which do not exist now. It is true that presentists cannot hold that times are part of the facts. But sections 3.1-3 argue that presentism is not a natural part of the A-theory. There is no reason to think that we have to choose between tensed facts and facts that relativise instantiation to a time. Common sense has it exactly right: the car was red at 10am.

Mine is not the standard interpretation of Lewis’ argument. That interpretation focuses on his insistence that something be bent or straight simpliciter (e.g. 2002 p. 5). On my interpretation, Lewis is insisting that the property of being red should not be eliminated in favour of the relation being-red-at-t. Being red simpliciter is contrasted with being-red-at-t, not with the unanalyzed notion of being red at t. He is not objecting to the common-sense observation that the car was red *at 10am* and blue *at 5pm*. On the standard interpretation, Lewis claims as a datum that *something* is red simpliciter, as opposed to red at a time. But (continues Lewis on the standard interpretation) persisting things do have their properties at a time. So it must be something else that is red simpliciter, namely an instantaneous temporal part. The obvious response to this argument is to reject the putative datum. Common sense does not demand that some things are red simpliciter, as opposed to red at some times and blue at others.⁶⁷ It is one thing to argue for an absurd

⁶ This interpretation and this response to it are considered by Sider 2001 pp. 95-7.

conclusion. It is quite another to argue from an absurd premise. On this interpretation the argument is not interesting; so it is not Lewis.

2.3 Other responses to Lewis.

In section 2.1, I presented an interpretation of Lewis's 'problem of temporary intrinsics.' Given that understanding of the problem, Lewis's argument against the relational solution is actually pretty good. My interpretation is suitably charitable. It also has the virtue of making the response to Lewis quite clear. In this section, I examine some other views of Lewis's problem. It is not always clear what the problem is meant to be. The proposed 'solutions' create difficulties rather than resolving them.

The first view I will consider is Mark Johnston's 'adverbialism' (Johnston 1987). He says that the problem is to:

break free of the Procrustean presupposition that a temporal qualification in a report of change has to be understood either as a relativisation of a singular term or as a relativization of a predicate or as a sentence-former on closed sentences.

(p. 126)

Johnston does not do this by letting into this ideology the form of expression, '*a* is F at *t*'. He does not say why we cannot be content with the common sense response. While he does not appear to reify predicate logic, he is not a straightforward primitivist about having a property at a time. He says that "the most philosophically perspicuous" representation is, '*a* is *t*ly such that it Fs' (p. 126). He gives the following semantics for that expression.

'a is *t*ly such that it Fs' is true-in-L just in case *a* satisfiesL-at-t the predicate 'such that it Fs', where satisfying-at-a-time for various times is well enough understood to take as basic for these purposes. (p. 126)

Thus we understand how "instantiating a property, it turns out, is instantiating at some time the property" (p. 129).

⁷ More precisely, common sense does not say that anything is *tenselessly* red simpliciter. Lewis would not be saying that reality includes tensed facts that do not contain a time of instantiation. For only the A-theorist believes in tensed facts, and Lewis is a B-theorist.

Johnston seeks to justify the form 'x is F at t' by reference to the adverbial formulation, '*a* is *tly* such that it Fs'. But the latter is totally obscure. Adverbialism explains a platitude in terms of a mystery. Johnston then gives a semantics for the adverbial expression. But I can only understand satisfying-at-a-time in terms of having a property at that time. No metaphysical mystery is dissolved by the addition of two hyphens. Johnston's semantics eliminates the opacity of the adverbial formulation only by taking us back to where we started.

Further, we can't take seriously Johnston's claim that the temporal qualification 'at t' is an adverb. If Sally runs quickly, then she runs. (Davidsonian event-semantics for adverbs entails the general result.) If *a* Fs in a way that is G, then *a* Fs. Johnston claims,

Unproblematically Sam may have the property of being fat in the *t** way and the property of being thin in the *t* way. (p. 128)

That entails that Sam is fat and Sam is thin. Johnston tries to avoid this by saying (p. 128), "we do not in general allow temporal adverb dropping." I reply that if they really were adverb, they would drop. (Johnston can't reply that 'allegedly' is another adverb that can't be dropped. For being allegedly red is not a way of being red. He claims that being *tly* red is being red in the *t* way.)⁸

Here are two other strategies from the literature. They appear to accept Lewis' demand for a reduction of a thing's having a property at a time.⁹ The first analyses it as: the occurring-at relation holds simpliciter between a token event of x's being F, and the time t. The second analysis is that: the obtaining-at relation holds simpliciter between the *type* of event (viz. x's being F), and the time t. (Either of these analyses can be formulated in terms of states of affairs instead of events.)

⁸ Johnston also says his solution is to "relativis[e] the instantiation relation" (p. 129). Ignoring the reification of instantiation, this looks like taking as primitive an object's having a property at a time. Even if Johnston has the right view, his thesis-statements and elucidations are misleading.

⁹ I do not insist on this interpretation of the aim of the analyses. My criticisms do not depend on it.

The second view is held by Forbes 1987 (see especially pp. 140-2). It is examined by Haslanger 2003 pp. 342-350. At p. 343 n. 30, she says that her 1989 view is best interpreted as a version of Forbes'. I am not sure which of the two views is intended by Lowe 1988. Here is what he says.

To say that the *having* (instantiating, exemplifying) of a shape is related to a time is to say that the holding of a *two*-place relation is related to a time, not that a *three*-place relation is involved, one of whose relata is a time. (p. 74)

[My view] is that a thing's *being shaped* itself stands in relations to times, not that a thing's being shaped is partly a matter of *that thing's* standing in relations to times. (p. 75)

My objection to every view of these two kinds centres on "x's *being* F". For is that instantiation simpliciter (of F by x), or instantiation at a time, or something else? None of these answers is acceptable. These views are built out of a notion of event or state of affairs that is unavailable.

Take first the analysis in terms of a token event. Suppose the event is one of instantiation simpliciter. If there is an event of Ted's winning the basketball, then Ted wins the basketball. If there is an event of Lewis's being sat, then Lewis is sat at some time or other. In general, if there is an event of x's being F, then x is F (maybe at some time or other). If the event is the car's being red simpliciter, then the car instantiates redness simpliciter. Unless x is F simpliciter, there is no event of x's being F simpliciter. In other words, the car is red. But similarly, the car is blue. Contradiction. We cannot reply by saying that the existence of the event entails that the car is red simpliciter at some time t. For 'simpliciter' just means: not relativised to a time. In Lowe's terminology, if a two-placed instantiation relation holds between the object and the property, we will get a contradiction. Coming along afterwards and saying that the event of instantiation bears interesting relations to various times does not remove the contradiction.

Now suppose the event is one of instantiation at a time, e.g. the car's being red at t. Then we have assumed what we were trying to reduce, namely a thing's having a property at a time. No progress has been made. So the view must be that the object does not instantiate the property, either simpliciter or at a time. The property is merely

pseudo-instantiated by the object. By contrast, real instantiation of the occurring-at relation does take place between the event and the time. The view must be: the *pseudo-having* of redness by the car *truly-has* the occurring-at relation to the time 10am. But the idea of pseudo-instantiation is a theoretical monstrosity. The car really is red (at 10am).

The second analysis, in terms of event types, is no better. What type of event (or state of affairs) obtains-at t? There are three options: x's being F simpliciter, x's being F at a time, and x's pseudo-being p. The third is unacceptable, and the second takes for granted what is to be explained. The remaining option is that it is x's being F simpliciter that obtains-at t. There is such a tokening of the type only if: either x is F simpliciter at t (nonsense) or x is F simpliciter simpliciter (leading to a contradiction). So the second analysis is no improvement on the first.

I end this section with a general point. There are two pieces of ideology on the table, namely instantiation simpliciter and instantiation relative to a time. Talking about events of instantiation does not allow you to avoid the question of whether the object instantiates the property. You still have to say whether the car is red. Saying that the car is red simpliciter leads to contradiction. If that is the only kind of instantiation in your ideology, then you must deny that the car really instantiates redness. But it is a datum that the car really is red. To capture that datum, we need instantiation at a time in our ideology. There is no hope of a solution to the problem of temporary intrinsics, other than refusing to analyse having a property at a time. Reifying predicate logic commits you to such an analysis. So we have good reason not to reify predicate logic.

3.1. Presentism versus eternalism: two puzzles about the debate.

I start with a summary of sections 3.1-3. The presentism/ eternalism dispute concerns the existence of things that (intuitively) do not exist now. The eternalist says that there are dinosaurs, the presentist says that there are not. The debate is meant to be different from the A-theory/ B-theory dispute (though there are connections between the two). Section 3.1 notes two oddities about the debate. These show that we can only make sense of the issue as concerning Quine's notion of 'ontological commitment'. That Quinean metaontology is the result of reifying predicate logic with respect to existence. For the A-theorist, both presentism and eternalism are unacceptable options. The A-

theorist should reject the Quinean metaontology, thus being neither a presentist nor an eternalist. The B-theory has non-Quinean varieties that should not be dismissed out of hand. In other words, no-one should accept a prior constraint on one's metaphysics of time placed by reifying predicate logic with respect to existence.

The rest of this section points out two surprising features of the presentism/eternalism dispute. The first is a strange assumption accepted by both sides. They both assume that:

(Commitment) If you refer to something, or quantify over it, then you are committed to its existence.

This assumption drives the core dialectic. Dean Zimmerman has the metaphysical intuition that his childhood and the snows of yesteryear “are no more” (1998 p. 214-5). Hence he:

Begin[s] the work of philosophical paraphrase, trying to find plausible construals of [those] statements ... that capture what is meant but do not involve direct reference to non-present times, individuals, and events. (Zimmerman 1998 p. 215)

Zimmerman think that if a paraphrase does not exist, then the eternalist is right, and there are dinosaurs. His view of the intuitive attraction and theoretical commitments of presentism are typical. The main debate is about the acceptability of the particular presentist paraphrases of ordinary sentences.¹⁰¹¹

¹⁰ E.g. Sider 2001 pp. 25-35, and Lewis 2004.

¹¹ Two other problems for presentism have received attention. I briefly discuss the requirement that ‘truth supervenes on being’ in section 3.3. The second objection is not specific to presentism. Special relativity says that there is no privileged simultaneity relation, and hence what the presentist holds to ‘exist’ is frame-relative. But this is a problem for all A-theorists, not just presentists. For the tense of a fact would be frame-relative. Further, it is a problem for having times in your metaphysics. For if things happen at a time, then it makes sense for two events to happen at the same time. Special relativity says that simultaneity is frame-relative. (For a taste of these issues, see Sider 2001 pp. 42-52 and Fine 2005a pp. 298-307.)

For example, ‘Socrates lived in Athens’ appears to refer to Socrates. According to our disputants, that would mean that Socrates exists. Another example: ‘There have been three kings of England called George.’ That sentence appears to quantify over past kings of England. If it does, our disputants hold, it means that there are three kings of England. This is most odd. Surely it is enough that Socrates and those kings existed. It is not required that they exist.

Where does the demand for paraphrase come from? It is not the case that both sides accept B-theoretic de-tensing of our sentences about what exists. Presentists are all A-theorists, rejecting the B-theory. Rather, the disputants share a view about the nature of existence that involves Commitment. Given the oddness of that view, we need to identify where it comes from, and whether there are good reasons of holding it.¹²

The second perplexity is that it can appear that there is no dispute to be had between presentists and eternalists. The ‘triviality objection’ says that once we have disambiguated the sense of ‘there are’, it will be indisputable whether ‘there are’ dinosaurs.¹³ One’s facts of existence can be tensed or tenseless, relativised to a time or not. These choices are independent, yielding four ideologies of existence. The problem is that for each of the four views, it is obvious what to say about dinosaurs.

- Tensed and relativised: There are no dinosaurs now. There were dinosaurs at 100 million BC.
- Tenseless and relativised: There are no dinosaurs now. There are dinosaurs at 100 million BC.
- Tensed and unrelativised: There are no dinosaurs. There were dinosaurs.
- Tenseless and unrelativised: There are dinosaurs, but they are all located before now.

Only the last of these requires explanation. The tenseless facts of existence simpliciter should not privilege some times over others (that would be arbitrary and

¹² Hinchliff rejects Commitment, and thus the need for paraphrase (1996 pp. 124-5). He does not offer a diagnosis of that strange assumption.

¹³ Amongst others, the triviality objection is examined by: Zimmerman 1998, 2002; Sider 2001 pp. 15-17, 2006; Crisp 2004a, 2004b; Ludlow 2004.

unmotivated). So if any people, tables and molecules ‘exist’, then existence at some time or other suffices for existence simpliciter. Hence dinosaurs ‘exist’ in that sense. Intuitive claims about when a thing exists are recast as claims about its temporal location. Here’s another argument for this conclusion. If one thinks that tenseless existence simpliciter is the metaphysically important notion, then one must provide a truth-maker for the English sentence, ‘there were dinosaurs’. I can’t think how to do this from the assumption that there are (tenselessly) no dinosaurs (simpliciter). Adopting this ideology settles the debate in favour of the existence of dinosaurs.

3.2. The presentism/ eternalism dispute assumes the Quinean meta-ontology.

Our puzzles about the presentist/ eternalist dispute are resolved once we see it as concerning what we should be ‘ontologically committed’ to. The disputants hold that ‘exists’ translates the existential quantifier of predicate logic, at its most unrestricted. Their question is: $\exists xDx$? (where ‘ Dx ’ means ‘ x is a dinosaur’). Presentists and eternalists hold this to be the metaphysically significant sense of ‘exist’. They share the ‘Quinean’ metaontology, which results from reifying predicate logic with respect to existence. We should reject that theory, and hence the debate itself. The triviality objection says that the presentist and eternalist do not really disagree. I say that they do disagree, but they share background assumptions which we should reject. The triviality objection fails because we can disagree about which ideology is correct.

I will now summarize the picture that generates the presentist/ eternalist controversy. Call it the Quinean theory, for it is the picture associated with his 1948 paper, “On What There Is.” It constitutes reifying predicate logic with respect to quantification and existence. We start from predicate logic. The quantifiers, ‘ \exists ’ and ‘ \forall ’, range over the objects in the domain. An object is in the domain iff it is quantified over. Names must be names for objects in the domain.¹⁴ ‘ $\exists x(Fx)$ ’ is true iff there is an F in the domain. To this language, we may add sentence operators, say P , such that $P(\exists x(Fx))$ does not entail $\exists x(Fx)$.

¹⁴ Quine 1948 holds that names are disguised descriptions, taking the sting out of this requirement. Post-Kripke, the sting has returned.

‘ \exists ’ is pronounced, ‘there is’ or ‘there exists’. (If there is a mismatch between the logic and the English expression, it is the natural language which belongs on the rubbish-heap of history.) Quantification ranges over the things in the domain. Putting these together, we get that to be is to be the value of a bound variable. All the real things are in the domain, for we want to state the truths about them. So the objects in the domain are:

- (i) The objects quantified over or named.
- (ii) What exists.
- (iii) What there is.

The Quinean theory can be summarized by the equation: (i)=(ii)=(iii). It will emerge in section 3.4 that they are all different. The notion of ‘ontological commitment’ assumes that (i)=(ii)=(iii). My claim is that ontological commitment is the ideological equivalent of phlogiston: it corresponds to nothing in reality.

The Quinean theory has a great effect on ontological argument. Without that theoretical commitment, there is no immediate route from (i) to (ii). In other words, Commitment is the heart of Quine’s metaontology. On that theory, using a name for Socrates means that he is in my domain, and so exists. So that Socrates lived in Athens would entail that Socrates exists (unless some clever paraphrase can be performed). Common-sense holds that Socrates existed, but no longer exists. So Quineanism is counter-intuitive.

Presentists and eternalists accept Commitment because they are both Quineans. They are Quineans because they both reify predicate logic. That’s why presentists must develop a tense logic. They extend the language of predicate logic with primitive sentence operators, such as ‘WAS’ and ‘WILL’. The extended language still has sentences of the form ‘ $\exists x(Fx)$ ’, which capture the notion of ontological commitment. The presentist translates (or paraphrases) English expressions into this tense logic. Increasingly baroque operators are added to the language when the translation runs into difficulty.

By appealing to their Quineanism, we can directly characterize what presentists and eternalists disagree about. According to Quineanism, there is one domain, and one ontological question. A kind of thing is either in or out of your ontology; there is not third option. Common sense distinguishes between what did exist, what exists, what will exist,

and purely fictional things. The Quinean must subordinate those categories to the one big question: are those things in or out of my ontology? There is more to say than the natural language platitudes, that dinosaurs existed but do not exist. It is not clear how those platitudes line up with the one real ontological question. Intuitively, past things do not belong in the garbage with fictional things; nor do they belong in the top drawer with present things. The presentist's appeal to intuition should not confuse English claims about what exists for insight into the one ontological question. It is only by assuming that there is a close match between English and predicate logic that presentism appears obviously correct. The disputants need to be careful that the intuitions to which they appeal concern ontological commitment, rather than the English-language notion of existence, which may not 'fit' reality (according to a Quinean).

This conception of the dispute is explicit in the work of Zimmerman and Sider. Zimmerman says that presentism is not trivial, because it is a thesis about what is in the "one largest class of all real things" (1998 p. 210). He is concerned with:

the range of things to which one should be 'ontologically committed.' (1998 p. 210)

In his 2002, he argues that the triviality objection fails for the following reason:

It is informative to be told that the most unrestricted quantifier there is has only present things in its domain. (2002, p. 13.)

Sider is also explicit that this is the game. The presentist/ eternalism dispute is over whether:

There exist dinosaurs: $\exists xDx$

... [According to the presentist,] no quantifier, no matter how wide-open, ranges over dinosaurs. (2006 pp. 75-76)

The disputants do not accept exactly the same ideology of existence, disputing whether dinosaurs exist in that agreed upon sense. Presentists make tensed existence claims, and eternalists make tenseless existence claims. Their dispute is partly about which of those ideologies to adopt.¹⁵ However, they both accept a constraint on the

¹⁵ Kit Fine calls arguments that assume a common ideology 'doctrinal', and those that do not 'ideological' (2005a p. 320).

ideology of existence. They are both Quineans, and so accept Commitment. They both reject relativising the existence-facts to times (it is not suggested by predicate logic). The crucial question is whether we can state all the facts in the presentist's tensed ideology, while respecting Commitment. The presentist project of paraphrase attempts to show that we can.

We are now in a position to see why the triviality objection fails. It says that once we agree on the ideology, there is no dispute left. That is true, but just shows that the dispute is (partly) about which ideology to adopt. The ontological question is inseparable from the ideological question. Analogously, once we have chosen between the proelec-electro and electron-proton ideologies, there is no dispute about which claims to accept; yet only the latter ideology fits reality. The general point is that it makes sense to disagree about the choice of ideology. The triviality objection overlooks that crucial part of metaphysics.¹⁶

3.3 Quineanism and the A-theory/ B-theory debate.

This section examines how the A-theory/ B-theory debate interacts with the presentism/ eternalism dispute. First suppose we are Quineans. One cannot be a presentist B-theorist, but the other three combinations are possible. A presentist B-theorist would think that the existence facts are tenseless, and hence do not change. So if only present things exist, then 2006 (say) would be eternally privileged. That's silly. It would also be a struggle to find a truth-maker for the English sentence, 'there were dinosaurs'. So presentism entails an A-theory. Eternalists are usually B-theorists, but need not be. According to the eternalist A-theorist, there is one unchanging domain for all time; but the predicative facts about those things are tensed, and do change. However, it is odd to

¹⁶ Sider argues that no expression of tense logic has the same inferential role as the eternalist quantifiers (2006 pp. 84-92). Hence there is no translation scheme between the claims of the eternalist and those of the presentist. So their dispute is not merely verbal. I think that's right. But even if they were intertranslatable, one ideology might fit reality better. The dispute would still not be merely verbal. (Compare Sider 2006 pp. 81-82.)

hold that existence claims do not contain a tense, but predicative claims do. What would motivate this disjunctive treatment?¹⁷

Suppose we reject Quineanism. Though we can stipulate what it takes for a position to be ‘presentist’ or ‘eternalist’, we should do so in a way that highlights the assumptions that drive the debate. I will say that positions that reject Quineanism are neither presentist nor eternalist, though they can bear a superficial resemblance to one of those positions. Section 3.1 laid out four ideologies of existence, according to whether the existence facts are tensed and whether they are relativised to a time. All four options are available to someone who rejects Quineanism. It would be natural to go for an ideology of existence similar to that for predication. For example, if one says that *x* was *F* at *t*, then one should say that *x* existed at *t*. At least on the surface, the time-relativised options are happy versions of the A-theory and the B-theory.

If one is an A-theorist, there is a powerful incentive to reject Quineanism and Commitment. It is natural for the A-theorist to deny that Socrates exists. Quineanism then requires the A-theorist to paraphrase “Socrates lived in Athens”. Post-Kripke, that project seems ill-omened. Intuitively, it is not required. Another line of objection is also avoided by non-Quinean A-theorists. It has been objected that the presentist’s truths about the past are not ‘supervenient on being’ (e.g. Sider 2001 pp. 35-42). For an A-theorist, this amounts to requiring truths about the past to be made true by facts about the present. The A-theorist should feel no pull towards such a principle. However, presentists might be committed to it. (See Bigelow 1996.) For past things are out of their ontology; they are not real; they belong with fictional things on the metaphysical garbage heap. How could there be facts about such things? By contrast, there is no mystery for an anti-Quinean about facts concerning things that used to exist.

¹⁷ Zimmerman argues against this combination. He objects,

Neither Plato nor [a past] headache has any of the ordinary intrinsic properties it displayed while present.... Past and future things become nearly-bare particulars, unreal echoes of their once or future selves. (1998 p. 212)

Sider endorses this complaint (2001, p. 95).

The B-theorist might want to relativise existence to a time, which would require rejecting Quineanism. But suppose the B-theorist does not relativise existence to a time. Their position would look superficially like eternalism. But if they did not accept Quineanism, it would not be. For example, they might think that if that sperm had fertilized that ovum, then Bert would have resulted. Bert would have had blue eyes. Bert could have existed, but does not. A Quinean would wonder whether or not he should be ontologically committed to merely possible things like Bert. That is the ‘actualist/possibilist’ dispute. An anti-Quinean would reject the dispute, saying that one can use the name ‘Bert’ without Bert needing to exist. A B-theorist could accept unrelativised existence, but be an anti-Quinean, as demonstrated by their rejection of the actualist/possibilist dispute. They would not be an eternalist, as I am using the term. Even if a B-theorist is a Quinean and an eternalist, they should accept that an A-theorist should resist Quineanism. The eternalist might view Quineanism as a consequence of their metaphysics, rather than as a prior constraint on it. The important point is that we should not take Quineanism as an unargued premise. It is not intrinsically attractive, and has troubling consequences for some views. If one is an A-theorist, avoiding presentism and its commitment to the project of paraphrase is itself a good reason to reject Quineanism. If one is a B-theorist, one should still not *assume* Quineanism is correct.

3.4. Non-Quinean quantification and existence.

This section sketches a common-sensical non-Quinean ideology. The A-theory is not the only thing that goes better once we stop reifying predicate logic. According to the view I sketch, there are different kinds of ontological commitment to. On the Quinean theory, a thing is either in your ontology or out. That’s a false dichotomy.

Here are some types of English expression:

- 1a) There are Fs. 1b) There were Fs (at t).
- 2a) There exist Fs. 2b) There existed Fs (at t).
- 3) There have been 109 Fs.
- 4) Jonny exists.

Consider first 1 and 2 together. There are no dinosaurs; there no longer exist any dinosaurs. In English, verbs are tensed. ‘To be’ and ‘to exist’ are verbs, and must be

tensed like any other. There are no dinosaurs, but there were 100 million years ago. Quantification over times goes the same way. There *was* a time when I was a young whippersnapper. To repeat what was said in section 3.2: the above platitudes are not what the presentist is asserting. The presentist asserts a thesis about Quinean ‘ontological commitment’.

There were dinosaurs; they did exist. That is some kind of ontological commitment, just one about the past. Dinosaurs are not merely imaginary. We should resist any pressure to put past objects either into ‘our ontology’, or out of it. There are more ways of being real than the solitary one that Quineanism allows. There is nothing more to say than: dinosaurs did exist, but they do not any more. The tensed quantificational expressions fit reality.

Consider 3, and the example, “There have been 109 popes”. We have already seen that quantification over past things does not mean that they exist. Of course it is not a fundamental fact that there have been 109 popes; but our representation fits that derivative fact. It is grounded in facts about people that existed. The derivative fact has no unexpected consequences for our ontology. (Lewis 2004 and Sider 2001 pp. 25-35 argue that this example is a problem for presentism.)

1 and 2 need a predicate, but 5 doesn’t. When we drop Quineanism, we also lose the reason to be confused by such sentences as, “Jonny exists”. Existence is not a quantifier, i.e. a property of properties.

Quineanism ties 1 and 2 together. Here is an intuitive view that is thus ruled out by Quineanism. Things exist, but events happen. We can dismiss the question of whether events ‘exist’ as a category mistake, though there are events. The natural correlate of ‘Did Homer exist?’ is: ‘Did the siege of Troy *occur*?’, not: ‘Did the siege of Troy exist?’ For an object, to be is to exist. For an event, to be is to occur. Similarly, facts obtain, rather than exist. If we reject Quineanism, I see no reason to take seriously the further question of whether events or facts ‘exist’. Contra Quineanism, what there is is not what exists.

4. Conclusion.

To reify predicate logic is to take predicate logic as (the core of) your ideology. That is a controversial view about the nature of reality. If you reify predicate logic, then

you must reduce having a property at a time. Attempting that reduction leads to the problem of temporary intrinsics. I can't think of another motivation for the reduction. If you reify predicate logic, you have to choose between presentism and eternalism. Presentism is committed to a daunting project of paraphrase. If you don't reify predicate logic, then you can avoid both presentism and eternalism. This is an especially attractive option for an A-theorist. These are reasons not to reify predicate logic; we have seen no reason for doing so. It should certainly not be *assumed* in our metaphysical debates. Section 3.4 gestures at how well things will go once we leave that dogma behind.

More generally, we have seen that choosing an ideology is a crucial part of metaphysics. An ideology encodes a philosophical position. If possible, it is best to state the doctrine in English, so as to be clear about what is at stake. For example, one view is that instantiation at a time reduces to instantiation simpliciter. Another view is that there are tensed facts. Adopting an ideology can only be a conclusion of philosophical argument, not a premise for metaphysics. The insight into how things are comes first, the representation of it second.¹⁸

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