

# Characterising Theories of Time and Modality

[Author's name and institution omitted]

Some authors – call them *Reformers* – have recently argued that the traditional Presentism–Eternalism and Actualism–Possibilism debates in the metaphysics of time and modality respectively are unclear or insubstantial, and should therefore give way to the newer Temporaryism–Permanentism and Contingentism–Necessitism debates. In ‘On characterising the presentism/eternalism and actualism/possibilism debates’ (2016, *Analytic Philosophy* 57: 110-140), Ross Cameron defends the *Conservative* position that the traditional debates are both substantive and distinct from the Temporaryism–Permanentism and Contingentism–Necessitism debates. In this paper I respond to Cameron’s arguments for Conservatism and in doing so further develop the resources available to Reformers.

## 1. Introduction

*Presentism* in the metaphysics of time is standardly defined as the thesis that – quantifying unrestrictedly – *everything is present*:

PRESENTISM:  $\forall x \text{ Present}(x)$   
(*Informally: everything is present*)

For example, here is Meyer (2005):

Presentism, we are told by its advocates, is the following thesis about the relation between time and existence:  
P: Nothing exists that is not present

Presentism is typically set in opposition to *Eternalism*, the thesis that there are non-present past and future things such as dinosaurs and Martian presidential inaugurations.

The Presentism–Eternalism debate has an analogue in the metaphysics of modality. *Actualism* in the metaphysics of modality is standardly defined as the thesis that – quantifying unrestrictedly – *everything is actual*:

ACTUALISM:  $\forall x \text{ Actual}(x)$   
(Informally: *everything is actual*)

For example, here is Menzel (2014):

Actualism is the philosophical position that everything there is – everything that can in any sense be said to be – *exists*, or is *actual*.

Actualism is typically set in opposition to *Possibilism*, the thesis that there are non-actual possible things such as blue donkeys and children of Marilyn Monroe and Ludwig Wittgenstein.

Recently, some authors have begun to express doubts about the substance of the Presentism–Eternalism and Actualism–Possibilism debates, and in particular, about the meaningfulness of the predicates ‘is present’ and ‘is actual’ as they appear in the standard definitions of Presentism and Actualism.<sup>1</sup> They suspect that there are no substantive answers to the questions: ‘What exactly is it that, according to Presentism, absolutely everything *is*?’ ‘What exactly is it that, according to Actualism, absolutely everything *is*?’ For example, Williamson (2013, 22-5) makes the case against the traditional debates by considering and rejecting a number of candidate interpretations of the standard definitions of Presentism and Actualism. AUTHOR (2017) considers and rejects further candidate interpretations of the standard definition of Presentism. However, the case that Williamson and AUTHOR make is not entirely negative: they agree that the Presentism–Eternalism debate should give way to the Temporaryism–Permanentism debate, and the Actualism–Possibilism debate should give way to the Contingentism–Necessitism debate.<sup>2</sup> *Temporaryism* in this context is the view that sometimes, there are temporary existents:

TEMPORARYISM:  $S \exists x S \neg \exists y y=x$

---

<sup>1</sup> There is a distinct doubt about the substance of the traditional Presentism–Eternalism debate centred on the question of whether the copula ‘is’ in the standard definition of Presentism is ‘tensed’ or ‘tenseless’ – see e.g. Crisp (2004), Ludlow (2004a, 2004b), and Meyer (2005). This is not the doubt about the substance of the debate that I have in mind here.

<sup>2</sup> While Williamson (2013) argues that the labels ‘Presentism’ and ‘Actualism’ are ‘badly confused’ and should therefore be abandoned, AUTHOR (2017) argues that given that self-described Presentists are inevitably Temporaryists (more specifically, *Transientists*, according to whom things both begin and cease to exist over time – see §3 below) and self-described Actualists are inevitably Contingentists, Presentism should be identified with Transientism and Actualism should be identified with Contingentism.

(*Informally: sometimes, something is sometimes nothing*)

Those who reject Temporaryism are *Permanentists*:

PERMANENTISM:  $\Lambda \forall x \Lambda \exists y y=x$

(*Informally: always, everything is always something*)

Similarly, *Contingentism* is the thesis that possibly, there are contingent existents:

CONTINGENTISM:  $\diamond \exists x \diamond \neg \exists y y=x$

(*Informally: possibly, something is possibly nothing*)

Those who reject Contingentism are *Necessitists*:

NECESSITISM:  $\Box \forall x \Box \exists y y=x$

(*Informally: necessarily, everything is necessarily something*)

Williamson and AUTHOR argue that the traditional Presentism–Eternalism and Actualism–Possibilism debates should give way to the clearer, genuinely substantive Temporaryism–Permanentism and Contingentism–Necessitism debates. Call this view *Reformism*. In ‘On characterising the presentism/eternalism and actualism/possibilism debates’ (2016), Ross Cameron makes the case for *Conservatism*, the view that the traditional debates are both substantive and distinct from the Temporaryism–Permanentism and Contingentism–Necessitism debates. Cameron’s case for Conservatism has three key elements: first, an argument that there is an important distinction between theories of time/modality that the Temporaryism–Permanentism/Contingentism–Necessitism distinctions fail to capture (§§1-2); second, a positive proposal concerning how we ought to understand Presentism and Actualism (§3); and finally, some responses to possible objections to the proposed interpretations of the traditional definitions (§§3-4). In what follows I respond on behalf of Reformism to Cameron’s arguments, and in doing so, further develop the Reformist position.

## 2. Theories of Time and Modality

Cameron (2016, §§1-2) defends the independent substance of the Presentism–Eternalism and Actualism–Possibilism debates by arguing that there are Permanentist theories the difference between which is best explained by the fact that one is Presentist and the other is Eternalist (§1), and there are Necessitist theories the difference between which is best explained by the fact that one is Actualist and the other is Possibilist (§2). If Cameron is right, then – contrary to the Reformism of AUTHOR 2017 – Permanentism is consistent with both Presentism and Eternalism, and Necessitism is consistent with both Actualism and Possibilism. In this section I assess both Cameron’s modal (§2.1) and temporal (§2.2) arguments. I conclude in each case that there are better ways of explaining the differences between the theories Cameron describes.

### 2.1 Necessitism, Actualism and Possibilism

We begin with Cameron’s argument that there are Necessitist theories, the difference between which is best explained by the fact that one is Actualist and the other is Possibilist. Cameron focuses on two well-known theories of modality: Lewis’s (1986) *Modal Realism* and Williamson’s (2002, 2013) theory of modality. As Cameron (2016, 114) points out, both theories are Necessitist.<sup>3</sup> Cameron then argues that, although both theories are Necessitist, they are Necessitist for *different reasons*; and the best explanation for this difference is that Lewis’s theory is a *Possibilist* form of Necessitism whereas Williamson’s theory is an *Actualist* form of Necessitism.<sup>4</sup> Cameron (2016, 116) concludes that ‘Necessitism cannot be what is at issue between the actualist and the possibilist, for they each can accept it’. We can represent Cameron’s argument as follows:

(1) Lewis’s theory is Necessitist for reason  $\phi$

---

<sup>3</sup> This might not be quite so obvious in the case of Lewis’s Modal Realism. However, see Williamson (2013, 16-17) for an argument that Modal Realism implies Necessitism.

<sup>4</sup> It is clear that Cameron considers Williamson’s theory to be Actualist – for example, he writes (2016, n.3) that ‘once we settle on a consistent terminology, Williamson’s view is exactly analogous to that of the presentist permanentist from the previous section’ (i.e. that Williamson’s theory is an Actualist Necessitist theory). See also (ibid. p.128, n.34).

(2) Williamson's theory is Necessitist for reason  $\psi$

(3)  $\phi \neq \psi$

(4) The best explanation for this difference between Lewis's and Williamson's theories is that Lewis's theory is Possibilist and Williamson's theory is Actualist

(c1) Lewis's theory is Possibilist and Williamson's theory is Actualist

(c2) Necessitism is consistent with both Actualism and Possibilism [from (c1)]

To assess this argument, we need to consider two questions: first, is it true that Lewis's and Williamson's theories are Necessitist for different reasons? And second, is the best explanation for this difference (if there is such a difference) that Lewis's theory is Possibilist and Williamson's theory is Actualist?

Let's start with the first question. Cameron (2016, 115-6) characterises the different reasons for which Lewis's and Williamson's theories are Necessitist as follows:

For a possibilist like Lewis, it's not the case that everything is at every world – according to him, I might not have existed – but, because the unrestricted quantifier looks out beyond a world to include the things that exist at *every* world, unrestricted existence is non-contingent. For Williamson, by contrast, it *is* the case that everything is at every world – according to him, it is not true that I might not have existed – and so the quantifier need never look beyond the domain of the world in question for it to be true that were that world actual, everything that could exist would exist, and hence existence is non-contingent.

And similarly (Cameron 2016, 124):

To be a possibilist, one has to be a necessitist because what there is includes what is in merely possible worlds, and not because what there is is what there actually is, but the actual ontology is the same as the ontology of any other possible world.

The idea seems to be as follows: according to Williamson’s but not Lewis’s theory, ‘everything is at every [possible] world’ (or, I assume, equivalently: ‘the actual ontology is the same as the ontology of any other possible world’). Therefore, the Williamsonian can confirm that Necessitism is true just by ‘looking at’ the inhabitants of an arbitrary world, whereas the Lewisian must ‘look at’ the inhabitants of *every* world.

Now, this is a puzzling claim for a few reasons. First, the wholly unrestricted universal quantifier ( $\forall x$ ) functions the same way whether one is a Lewisian or a Williamsonian: it ranges over *absolutely everything*.<sup>5</sup> Therefore there is no question of the quantifier *not* ‘looking out beyond a world to include the things that exist at every world’.

Second, it is odd to characterise the Williamsonian acceptance of Necessitism in terms of possible worlds and their literal inhabitants given Williamson’s clear and consistent commitment to the explanatory priority of directly modal notions.<sup>6</sup> For the Williamsonian, Necessitism is true because *necessarily, everything necessarily exists* – any explanation of this in terms of possible worlds and their inhabitants is inevitably explanatorily posterior. However, the main problem with Cameron’s claim is that it equivocates on the notion of *existing at a (possible) world* – and if we disambiguate, we find that Lewis’s and Williamson’s theories are actually in agreement.

There are two natural ways of understanding the expression ‘*x* is in world *w*’: as equivalent to ‘*x* is located in *w*’ or as equivalent to ‘in *w*, *x* exists’. Each reading generates a different interpretation of the sentence ‘everything is at every world’:

LOCATION:  $\forall x \forall w \text{ Located}(x,w)$   
*(Informally: everything is located in every world)*

EXISTENCE:  $\forall x \forall w \text{ in } w(\exists y y=x)$   
*(Informally: everything is such that for any world, in that world, it exists)*

Start with Location. The Lewisian and the Williamsonian agree that it is not the case that everything is located in every world, and therefore that Location is false. For example, they agree that Marwig – the possible first child of Marilyn Monroe and Ludwig Wittgenstein – is not located in the actual world. Of course, unlike Lewis’s theory,

---

<sup>5</sup> See Williamson (2003) for some relevant discussion.

<sup>6</sup> See especially Williamson (2013, §8.4).

Williamson's theory is not modally reductionist, and so it isn't a particularly natural setting for talk about things being located in possible worlds. But let us imagine a Williamsonian who is happy to talk this way. What are *possible worlds* according to such a Williamsonian, and what is it for something to be *located in* one of them? The natural option for the Williamsonian is to identify possible worlds with *world-propositions*: maximal, consistent propositions that could be true.<sup>7</sup> In that case, a natural Williamsonian account of what it is for some  $x$  to be located in a world  $w$  is that  $w$  implies that  $x$  is *concrete*:<sup>8</sup>

LOCATION-IN-W (TW):  $\forall x \forall w (\text{Located}(x,w) := (w \supset \text{Concrete}(x)))$ <sup>9</sup>  
*(Informally: for some  $x$  to be located in some world  $w$  is just for  $w$  to imply that  $x$  is concrete)*

For example, given that the actual world – i.e. the (contingently) *true* world-proposition – implies that Marwig is non-concrete, it follows that Marwig isn't located in the actual world. More generally, given the above analyses of 'possible world' and 'is located in  $w$ ', the Lewisian and the Williamsonian can agree on the pattern of instantiation of the modal location relation. And this is just what we should expect: for although the Williamsonian eschews the reductive analysis of modal notions in terms of maximal interrelated spatiotemporal systems and their literal inhabitants, she will want to provide some content to the notion of things being located in possible worlds given that she has the theoretical resources to do so – and she will have no desire to say non-standard things about the pattern of instantiation of the modal location relation.<sup>10</sup>

Now consider our second reading, Existence:

---

<sup>7</sup> As Cameron (2016, 6, fn.5) points out. See Fine (1977) for a well-known development of this strategy.

<sup>8</sup> See Williamson (2013, 6-7) on the contingency of concreteness. It is important to remember that 'is concrete' is a term of art for the Williamsonian, to be put to whatever theoretical use is required. Therefore, one shouldn't worry too much about questions such as e.g. whether some inhabitants of Lewis-worlds are not concrete.

<sup>9</sup> In what follows ':= ' indicates the giving of an analysis.

<sup>10</sup> Of course, one could have strange versions of Lewis's and Williamson's theories that *accept* Location. The Lewisian version of the view would be one according to which every concrete possible world has exactly the same inhabitants – and therefore, for example, every world overlaps on *me*. The Williamsonian version of the view would be one according to which necessarily, everything is necessarily concrete. These theories would be more closely analogous to Cameron's (2016, 112-4) 'Democritean eternalism' and 'Democritean presentism' respectively – more on which in §2.2 below.

EXISTENCE:  $\forall x \forall w \text{ in } w (\exists y y=x)$   
(*Informally: everything exists in every world*)

In this case, the notion of something's *existing in a world* is interpreted using the modal sentence operator 'in (world)  $w$ '. The Lewisian and the Williamsonian will agree that everything is in every world in this sense, and therefore that Existence is true. In particular, it is natural for the Lewisian to treat the modal operators as redundant when the quantifiers within their scope are unrestricted (as Lewis 1986, 16 points out).<sup>11</sup> It follows that for the Lewisian, Existence is equivalent to the trivially true claim that everything is something ( $\forall x \exists y y=x$ ). For the modally non-reductionist Williamsonian, on the other hand, the operator 'in  $w$ ' is naturally understood in terms of the analysis:

IN-W:  $\text{in } w(\phi) := \Box(\text{Actual}(w) \supset \phi)$   
(*Informally: for some  $\phi$  to be the case in a world  $w$  is just for it to be the case that necessarily, if  $w$  is actual then  $\phi$  is the case*)

In that case, Existence is equivalent to the claim that for any  $x$  and any world  $w$ , necessarily, if  $w$  is actual then something is  $x$  ( $\forall x \forall w \Box(\text{Actual}(w) \supset \exists y y=x)$ ), which is of course true on the Williamsonian theory.

Perhaps there is yet a way to capture the idea that Lewis's and Williamson's theories are Necessitist for different reasons – in fact, we have just seen how the explanation might go. Take the following 'world-theoretic' statement of Necessitism, which is simply the necessitation of Existence:

NECESSITISM\*:  $\forall w \text{ in } w (\forall x \forall w \text{ in } w (\exists y y=x))$   
(*Informally: everything in every world exists in every world*)

As mentioned above, it is natural for the Lewisian to treat the modal operators as redundant when the quantifiers within their scope are unrestricted. Hence for the Lewisian, Necessitism\* is equivalent to the trivially true claim that everything is something ( $\forall x \exists y y=x$ ). On the other hand, for the Williamsonian who identifies possible worlds with world-propositions, Necessitism\* is equivalent to the substantive claim that every world is such that necessarily, if it is actual then for

---

<sup>11</sup> Cameron (2016, 5, fn.4) endorses this interpretation of Lewis's theory.

any  $x$  and any world  $w$ , necessarily, if  $w$  is actual then something is  $x$  ( $\forall w \Box(\text{Actual}(w) \supset \forall x \forall w \Box(\text{Actual}(w) \supset \exists y y=x))$ ). And these are certainly two different ways of ‘grounding’ the truth of Necessitism\*. The question is whether the best explanation for this difference is that Lewis’s theory is Possibilist and Williamson’s is Actualist. The answer seems to me to be a clear ‘no’: in fact, the best explanation for this difference is that Lewis’s theory is *modally reductionist* whereas Williamson’s theory is *modally anti-reductionist*. And we can be a bit more specific: as a modal reductionist, Lewis accepts the theses of *Propositional Necessitism* and *Anti-modalism*:<sup>12</sup>

PROPOSITIONAL NECESSITISM: Every proposition is if true [false] necessarily true [false]

ANTI-MODALISM: There are no metaphysically fundamental modal operators

In contrast, Williamson rejects both of these theses in favour of *Propositional Contingentism* and *Modalism*:

PROPOSITIONAL CONTINGENTISM: Some propositions are true [false] but could be false [true]

MODALISM: There are metaphysically fundamental modal operators

This marks a very important difference between Lewis’s and Williamson’s theories. At the heart of Lewis’s project is the reduction of the modal to the non-modal: the package of Propositional Necessitism and Anti-modalism reflects this. In contrast, Williamson rejects Lewis’s reductionist programme in favour of the view of contingency as ‘radical contingency’: the package of Propositional Contingentism and Modalism reflects this. There is no good reason to evoke theses associated with the names ‘Actualism’ and ‘Possibilism’ to capture these important differences between their theories.

---

<sup>12</sup> Lewis himself might not have put things like this, but it is an accurate characterisation of his view. See e.g. Williamson (2002) for a clear characterisation of Lewis’s theory as Propositional Necessitist.

I have argued that the difference between Lewis's and Williamson's theories with respect to how they 'ground' the truth of Necessitism\* can be adequately explained by the fact that Lewis's theory implies the package of Propositional Necessitism and Anti-modalism whereas Williamson's theory implies the package of Propositional Contingentism and Modalism. But doesn't this leave something out? That is, isn't there *something* to the idea that Lewis's theory is Necessitist because *as a Possibilist*, Lewis holds that what there is – unrestrictedly – includes the inhabitants of other concrete possible worlds, whereas in contrast, Williamson's theory is Necessitist because *as an Actualist*, Williamson holds that what there is – unrestrictedly – is necessary? For example, here is Cameron (2016, 124):

The possibilist will be a necessitist because she thinks that what there unrestrictedly is necessarily includes what there could be, but the actualist who thinks that what there is unrestrictedly is limited to what there actually is can still be a necessitist if she thinks that existence is non-contingent.

According to the above, a 'Possibilist' like Lewis accepts Necessitism on the grounds that 'what there unrestrictedly is necessarily includes what there could be', whereas an 'Actualist' like Williamson accepts Necessitism on the grounds that 'existence is non-contingent'. But why would a Williamsonian deny that 'what there unrestrictedly is necessarily includes what there could be'? Given Necessitism, necessarily, what there is (unrestrictedly) includes everything that could be – it couldn't be that what there is (unrestrictedly) fails to include some merely possible thing, as given Necessitism *there couldn't be* any merely possible things. (And if we read the sentence 'what there unrestrictedly is necessarily includes what there could be' as equivalent to 'everything in every world exists in every world', we simply return to the above point that the Williamsonian and Lewisian both reject Location and both accept Existence.)

Similarly, why would a Lewisian deny that 'existence is non-contingent'? As we saw above, for the Lewisian the fact that existence is necessary is a straightforward consequence of the trivial fact that everything is something. Of course, it is true that there is a difference between Lewis's and Williamson's theories when it comes to the 'grounds' of claims like 'what there is (unrestrictedly) includes what is located in other possible worlds' and 'everything exists of necessity' – but as we have already seen, this difference is best explained by the fact that as a Propositional Necessitist Anti-Modalist, Lewis holds that the modal operators are redundant when the quantifiers within their scope are unrestricted, whereas as a Propositional Contingentist

Modalist, Williamson identifies possible worlds with modally non-reductive world-propositions. Again, it is the fact that Williamson accepts, and Lewis rejects, the modally non-reductive package of Propositional Contingentism and Modalism that best explains the difference between their views. There is no need to invoke theses associated with the names 'Actualism' and 'Possibilism' to explain the difference.

## 2.2 Permanentism, Presentism and Eternalism

We now turn to consider Cameron's argument that there are Permanentist theories, the difference between which is best explained by the fact that one is Presentist and the other is Eternalist (§1). Cameron's argument in this case is interestingly different from the modal argument described above, as the pair of Permanentist theories in terms of which the argument is stated assume a 'Democritean metaphysic' (2016, 112):

Consider, for example, a Democritean metaphysic. All that exists are atoms in the void. These atoms are indestructible: they cannot cease to be, nor are new ones generated. Furthermore, their intrinsic nature is essential to them: they undergo no real change. All that changes in the world is the spatial arrangement of these atoms. Some used to be arranged dinosaur-wise, but now none are; some are now arranged Obama-wise, whereas a million years ago and a million years hence, none were or will be; no atoms have as yet been arranged colony-on-the-moon-wise, although some will come to be so arranged.

It is clear from the above that Democriteanism implies Permanentism: according to Democriteanism always, everything is an atom, and atoms never begin or cease to be. However, Democriteanism also implies the temporal analogue of Location:

LOCATION\*:  $\forall x \forall t \text{ Located}(x,t)$   
(*Informally: everything is located at every time*)

That is, Democriteanism implies a particular view of the distribution of the temporal location relation: namely, that everything (quantifying

unrestrictedly) bears it to *every* time.<sup>13</sup> (This makes any Democritean theory of time less than *strictly* analogous to the Lewisian and Williamsonian theories in terms of which Cameron’s modal argument is stated, which as we saw above both imply the falsehood of the modal analogue of Location\* (i.e. of Location).)

Having so characterised Democriteanism, Cameron (2016, 112) then argues that it is possible to distinguish ‘presentist’ and ‘eternalist’ varieties of the view:

The presentist Democritean thinks that all there is to reality is that these things, the Xs say, are arranged the way they are now. The Xs were arranged differently and they will be arranged differently, but the way the Xs were and will be arranged is no part of how reality is, simpliciter... But, consider now an eternalist Democritean... this eternalist Democritean thinks it follows from the Xs having been arranged differently that the Xs are arranged that way *in the past*, and from the fact that the Xs will be arranged differently again, she concludes that they are so arranged *in the future*. Every way the Xs were, are or will be arranged, according to the eternalist Democritean, is a way they can be found to be arranged in reality: the past, present and future states of the Xs are all *real*... By contrast, the presentist Democritean admits the reality only of the present arrangement of the Xs: the only way the Xs are *at all*, she thinks, is the way they are *now*.

Having distinguished these two versions of Democriteanism, Cameron concludes – given that Democriteanism implies Permanentism – that ‘Permanentism cannot be what is at issue between the present and eternalist’.

How should Reformists respond to Cameron’s argument here? First, note that Cameron seems to beg the question against Reformism by simply using the as-yet undefined labels ‘presentism’ and ‘eternalism’ to describe the relevant versions of Democriteanism (Cameron provides positive characterisations of ‘presentism’ and ‘eternalism’ in §3 of his paper – see §3 below). However, it is not difficult to state Cameron’s argument in a way that avoids this:

(1) There is a version of Democriteanism – call it *DP* – according to which sentences of the form ‘It was [will be] the case that

---

<sup>13</sup> Just as the Lewisian identifies worlds with maximal interrelated spacetime systems and the Williamsonian identifies (or *should* identify) worlds with world-propositions, Democriteans could identify times either with maximal instantaneous regions of spacetime – *hyperplanes* for short – or with *time-propositions* (i.e. maximal, consistent, sometimes-true propositions). Moreover, Democriteans who identified times with time-propositions would naturally hold that for some *x* to be located at some time *t* is for *t* to imply that *x* is concrete, so that Location\* would come to the claim that for all *x* and for times *t*, *t* implies that *x* is concrete. On the other hand, Democriteans could reject the existence of times altogether; for them, Location\* would be vacuously true.

some  $x$  is  $F$  *do not* imply sentences of the form ‘Some atoms are arranged  $F$ -wise at some past [future] time’

(2) There is a version of Democriteanism – call it  $DE$  – according to which sentences of the form ‘It was [will be] the case that some  $x$  is  $F$  *do* imply sentences of the form ‘Some atoms are arranged  $F$ -wise at some past [future] time’

(3) The best explanation for this difference between  $DP$  and  $DE$  is that  $DP$  is Presentist and  $DE$  is Eternalist [from (1) and (2)]

(c1)  $DP$  is Presentist and  $DE$  is Eternalist

(c2) Permanentism is consistent with both Presentism and Eternalism [from (c1)]

The question is, is it true that the best way to explain the relevant difference between  $DP$  and  $DE$  is by appeal to theses associated with the names ‘Presentism’ and ‘Eternalism’? I argue that it is *not*. In fact, the best way to explain the relevant difference between the theories is that  $DP$  implies the following package of views:

PROPOSITIONAL TEMPORALISM: Some propositions are sometimes true and sometimes false

MODALISM: There are metaphysically fundamental temporal operators

TEMPORARY ARRANGEMENTS: Ordinary predicates like ‘is a dinosaur’ express temporary properties (such as *being arranged dinosaur-wise*)<sup>14</sup>

whereas  $DE$  implies the following, distinct package of views:

---

<sup>14</sup> A *temporary property* is a property that something (or some things) sometimes has (or have) and sometimes lacks (or lack). A *permanent property* is a property such that if something (or some things) have it, it (or they) always has (or have) it.

PROPOSITIONAL ETERNALISM: Every proposition is if true [false]  
always true [false]

ANTI-TEMPORALISM: There are no metaphysically fundamental  
temporal operators

PERMANENT ARRANGEMENTS: Ordinary predicates like 'is a  
dinosaur' express permanent properties (such as *being arranged  
dinosaur-wise at time t*)

Of course, it is not strictly necessary to mention that DE implies Permanent Arrangements, as Permanent Arrangements follows straightforwardly from Propositional Eternalism. However, it is important to mention that DP implies *Temporary Arrangements*, because there is a third kind of Democriteanism which combines Permanent Arrangements with Propositional Temporalism and Temporalism – call that view *DMST*. DMST can be thought of as a version of DE according to which it is always the case that exactly one time bears a temporary (indeed, instantaneous) fundamental property of presentness.<sup>15</sup> On this view, the only temporary propositions are propositions concerning the fundamental property of presentness such as that 2pm GMT 1 May 1066 was present, and the only predicates that express temporary properties are 'extraordinary' predicates like 'is present'.

The differences described by Cameron between DP and DE are explained by the fact that DP implies Propositional Temporalism, Temporalism and Temporary Arrangements, and DE implies Propositional Eternalism, Anti-temporalism and Permanent Arrangements. For example, consider DP, and note that we are to understand 'Some atoms are arranged *F*-wise at a past [future] time' in premises (1) and (2) of Cameron's argument as meaning something like 'There is a hyperplane earlier [later] than this one to which some

---

<sup>15</sup> I assume that given the package of Propositional Eternalism and Anti-temporalism, a defender of DE will naturally identify times with hyperplanes, just as the Lewisian identifies possible worlds with maximal interrelated spacetime systems. Similarly, as Cameron (2016, 113, n2) points out, a defender of DP has a choice about how to conceive of times: the most natural view would be to identify times with time-propositions. An alternative would be to deny that there are such things as times and hold that reality includes a persisting maximal region of space, although this view seems much less attractive given the option of identifying times with time-propositions. Note that we could easily add theses concerning the nature of times to the above packages of views in order to further expand the logical space of Democritean theories.

atoms bear the *being arranged F-wise* relation'.<sup>16,17</sup> It is clear that given the package of Propositional Temporalism, Temporalism and Temporary Arrangements, a defender of DP would reject the inference from e.g.

(4) It was the case that there is a dinosaur

to

(5) Some atoms are arranged dinosaur-wise at a past time

In particular, given Temporalism she would take the temporal operator 'it was the case that' in (4) as fundamental rather than as analysable in terms of how things are at some earlier hyperplane; and given Temporary Arrangements, she would reject the idea that the predicate 'is a dinosaur' expresses the permanent relational property of *being arranged dinosaur-wise at an earlier hyperplane*.

More generally, the package of Propositional Temporalism, Temporalism and Temporary Arrangements implied by DP reflects a commitment to the view of change as 'radical change' – and advocates of 'radical change' reject inferences such as that from (4) to (5). In contrast, the package of Propositional Eternalism, Anti-temporalism and Permanent Arrangements implied by DE reflects a commitment to the programme of 'spatialising' time – and advocates of that programme accept inferences such as that from (4) to (5). There is no need to invoke theses associated with the names 'Presentism' and 'Eternalism' to explain this difference between the theories.

But isn't there *something* to the idea that there are *different ways* of being a Permanentist? For example, here is Cameron (2016, 113):

The permanentist thinks that what is in the domain of the unrestricted quantifier is not subject to change. But, intuitively, there are two ways in which that can be the case. To be an eternalist, you have to think it is because our quantifier ranges over past and future things as well as present things... The Democritean presentist does not think this; she thinks that there is no

---

<sup>16</sup> Where a *hyperplane* is a maximal, instantaneous region of spacetime.

<sup>17</sup> Cameron (2016, 124, n.25) is explicit that this is how we are to understand the relevant sentences: 'to be an eternalist, what there is must include what is *located* in a genuine past or future'. Otherwise, the defender of DP clearly *could* accept the inference from 'It was [will be] the case that some  $x$  is  $F$ ' to 'Some atoms are arranged  $F$ -wise at a past [future] time', as long as she identified times with time-propositions; in that case, the latter sentence would be treated as equivalent to the DP-friendly 'Some formerly [yet-to-be] true time-proposition implies that some atoms are arranged  $F$ -wise'.

change as to what is in the domain of the unrestricted quantifier not because that quantifier ranges over past and future things, but because *present* ontology always inherits the ontology of the past, and never adds to it.

According to the above, some Permanentists accept and some Permanentists reject the claim that

(6) Our quantifier ranges over past and future things as well as present things

However, this sentence is ambiguous. And if we disambiguate, we can see that there is no need to invoke theses associated with the names 'Presentism' and 'Eternalism' to explain any differences between different versions of Permanentism with regard to the truth of (6).

One obvious way to read (6) is as equivalent to

NON-PRESENT THINGS:  $\exists x P \exists y y=x \wedge \exists z F \exists x_1 x_1=z$

(*Informally: there is something that did exist and something that will exist*)

Assuming that time has no beginning or end, no Permanentist will reject this reading of (6): given Permanentism, there is never anything that is ever nothing. But presumably this is not the reading that Cameron has in mind – more likely, (6) is supposed to be read as equivalent to something like

NON-PRESENT THINGS\*:  $\exists x \exists t_1 \text{Past}(t_1) \wedge \text{Located}(x, t_1) \wedge \exists y \exists t_2 \text{Future}(t_2) \wedge \text{Located}(y, t_2)$

(*Informally: something is located at a past time and something is located at a future time*)

Surely a defender of DP would reject (6) on this reading? Not at all. Just as it is natural for a Williamsonian to identify worlds with world-propositions, it is natural for a defender of DP to identify times with *time-propositions* (i.e. maximal consistent sometimes-true propositions). In that case, it is also natural to hold that for some  $x$  to be located at a time  $t$  is just for  $t$  to imply that  $x$  is *concrete*:

LOCATION-AT-T (DP):  $\forall x \forall t (\text{Located}(x, t) := (t \supset \text{Concrete}(x)))$

(After all, why would a defender of DP reject the opportunity to account for the truth of claims concerning the distribution of the temporal location relation, if she has the resources to do so?\*) For such a defender of DP, Non-present Things 2 is *true*: it is equivalent to the true claim that there is some  $x$  such that some past (i.e. formerly-true) time-proposition implies that  $x$  is concrete, and there is some  $y$  such that some future (i.e. yet-to-be true) time-proposition implies that  $y$  is concrete.

There are a couple of ways a Conservative could respond here. First, she could argue that *even if* defenders of DE and DP can both accept Non-present Things\*, each theory will provide different ‘grounds’ for the truth of the claim – and *that* difference between the theories is best explained by the fact that the former is ‘Eternalist’ and the latter ‘Presentist’. Alternatively, she could insist that in the context of Non-present Things\*, *times* must be identified with hyperplanes; and more generally, that (6) ought to be read as equivalent to something like (where ‘ $Ix$ ’ means ‘ $x$  is a hyperplane; ‘ $L(x,y)$ ’ means ‘ $x$  is located at  $y$ ’; ‘ $t$ ’ is the proper name for *this* hyperplane; and ‘ $x < y$ ’ means ‘ $x$  is earlier than  $y$ ’)

NON-PRESENT THINGS\*\*:  $\exists x \exists y (\exists z (Iz \wedge z < t \wedge \exists x, Ix, \wedge t < x, \wedge L(x,z) \wedge L(y,x))$   
*(Informally: there are things located at hyperplanes earlier and later than this one)*

And it seems clear that a defender of DP – that is, someone who accepts Propositional Temporalism, Temporalism and Temporary Arrangements – would reject (6) on this reading (just as the Williamsonian would reject the claim that there are things located in other maximal interrelated spatiotemporal systems).

It should be clear by now how a Reformer would respond to these arguments. In each case, she will allow that there is a difference between DE and DP; but she will argue that *in fact*, what best explains the relevant difference is that DP implies the ‘radical change’ package of Propositional Temporalism, Temporalism and Temporary Arrangements, whereas DE implies the ‘spatialising’ package of Propositional Eternalism, Anti-temporalism and Permanent

---

\* Some self-described ‘Presentists’ worry about the identification of times with time-propositions on the grounds that some past and future time-propositions would have to have non-present – and therefore, on the view, *non-existent* – entities as constituents (see e.g. Markosian 2004 for discussion). However, note that this concern does not arise in a Permanentist setting.

Arrangements. It is these differing commitments that best explain the relevant differences between the theories; ‘Presentism’ and ‘Eternalism’ do not come into it.

### 3. *The Positive Proposal*

Cameron (2016, 110) agrees with Reformism that the senses of *present* and *actual* in the context of the standard definitions of Presentism and Actualism respectively have not been made sufficiently clear in the literature. In §3, Cameron presents his own positive proposal for how to understand the relevant notions. According to Cameron, to be an Actualist is to hold that anything located in a world is located in the actual world; to be Possibilist is to hold that there are things located in merely possible worlds as well as in the actual world; to be a Presentist is to hold that anything located at a time is located at the present time; and to be an Eternalist is to be hold that there are things located at past and future times as well as at the present time. For ease of exposition, let us focus on Cameron’s temporal theses:

PRESENTISM (RC):  $\forall x(\exists t(\text{Located}(x,t) \supset \text{Present}(t)))$   
*(Informally: everything is if located at any time located at the present time)*

ETERNALISM (RC):  $\exists x \exists t_1 \text{Past}(t_1) \wedge \text{Located}(x,t_1) \wedge \exists y \exists t_2 \text{Present}(t_2) \wedge \text{Located}(y,t_2) \wedge \exists z \exists t_3 \text{Future}(t_3) \wedge \text{Located}(z,t_3)$   
*(Informally: there are things located at past, present and future times)*

These definitions have the virtue of being both clear and couched in relatively familiar terms. Moreover, the question of whether there are things located at past and future times as well as at the present time is both philosophically interesting *and* cross-cuts the Permanentism–Temporaryism debate: that everything exists eternally clearly does not settle the question of whether everything is located at the present time if any.

However, as we should expect with any positive proposal concerning the substance of the traditional Presentism–Eternalism debate, Cameron’s proposal faces some difficult cases. For example, consider a theory – call it *Intervalism* – according to which reality consists in a short, ever-changing interval of time: a very recent past

moment, a present moment, and a very near-future moment.<sup>19</sup> Given Cameron's definitions, Intervalism implies Eternalism. However, that seems like the wrong result: those who are interested in the traditional Presentism–Eternalism debate would likely count Intervalism as a kind of Presentism, not as a kind of Eternalism. After all, Intervalism shares most of the essential characteristics of archetypal 'Presentist' theories, namely Temporalism (e.g. the fact that there *were* dinosaurs on Earth cannot be reduced to some fact about there being dinosaurs located at an earlier hyperplane); Propositional Temporalism (e.g. the proposition that there are no dinosaurs on Earth is sometimes true and sometime false); and *Transientism*:

TRANSIENTISM:  $S \exists x P(\neg \exists y y=x) \wedge S \exists x F(\neg \exists y y=x)$   
*(Informally: sometimes, there is something that was nothing, and sometimes, there is something that will be nothing)*

In short, if Intervalism is either Presentist or Eternalist, it is surely Presentist (contra Cameron); and if it is neither, Cameron must still (mistakenly) count it as Eternalist.

Cameron might respond here by pointing out that it is no surprise that when the heretofore relatively fuzzy boundaries of Presentism and Eternalism are made more precise, our initial judgements about some non-standard theories will need to be revised. Indeed, there are also hard cases when Presentism is simply identified with Transientism, as AUTHOR (2017, 15-16) recommends. Hence Cameron is in a similar position to at least some Reformers. (Of course, it may be that the existence of hard cases for both Cameron and AUTHOR simply shows that it would be best to abandon the labels 'Presentism' and 'Eternalism' entirely, as Williamson 2013 recommends.) However, Cameron faces harder cases than that described above.

To see this, consider the following theories: first, *Four-dimensionalist Spacetime Monism*. As the name suggests, this theory combines the theses of *Four-dimensionalism* and *Spacetime Monism*:

FOUR-DIMENSIONALISM: Reality consists in a four-dimensional spacetime manifold in which all (relatively) past, present and future events and objects are permanently located

---

<sup>19</sup> I am not aware that anyone has ever defended this view; however, it does not seem to reside in the realms of fantasy.

SPACETIME MONISM: All objects and events are identical with regions of spacetime

Four-dimensionalism is the picture of fundamental temporal reality associated with the Special Theory of Relativity and defended by *B-theorists* such as Sider (2001) and Skow (2015).<sup>20</sup> Spacetime Monism is a thesis concerning the relation between spacetime and its occupants defended by e.g. Skow (2005) and Schaffer (2009).<sup>21</sup> Schaffer describes the view as follows:

Spacetime is substance enough. There is no need for the dualism of the contained and the contained (or for fundamental containment relations). When God makes the world, she need only create spacetime.

Four-dimensionalist Spacetime Monism is *not* a non-standard theory: it is a key player on the field. Moreover, there is no doubt that those who use the labels 'Presentism' and 'Eternalism' would count it as an Eternalist theory.

Next, consider the standard 'Presentist' theory defended by e.g. Bigelow (1996), Prior (1970) and Zimmerman (1996), but supplemented with the thesis that times are time-propositions (i.e. maximal consistent sometimes-true propositions). Call this theory *Presentism*<sup>+</sup><sup>22</sup>. Presentism<sup>+</sup> is *not* a non-standard theory: it is a key player on the field. Moreover, there is no doubt that those who use the labels 'Presentism' and 'Eternalism' would count it as a Presentist theory.

Now consider the question: is the location relation mentioned in Cameron's definitions of Presentism and Eternalism supposed to be a *fundamental* relation or not? Either way, it seems that Cameron is forced to miscategorise one of the theories just described. First, suppose the relation is supposed to be fundamental. In that case, given Cameron's definitions, Four-dimensionalist Spacetime Monism is a version of Presentism: it is a view according to which *nothing* stands in a fundamental location relation. As Schaffer puts it in the above quotation, given Spacetime Monism 'there is no need for... fundamental containment relations'.

On the other hand, suppose the temporal location relation can be non-fundamental. In that case, given Cameron's definitions,

---

<sup>20</sup> B-theorists combine Four-dimensionalism with Propositional Eternalism, Anti-temporalism and – unless they are Democriteans – a rejection of Location\* (see §2.2 above).

<sup>21</sup> The view is also endorsed by Sider (2001, 110ff).

<sup>22</sup> Crisp (2007) and Markosian (2004) defend Presentism<sup>+</sup>.

Presentism+ is a version of Eternalism. The reason is that there is a very natural analysis of the location relation available to Presentists+, according to which what it is for some  $x$  to be located at a time  $t$  is for  $t$  to imply that  $x$  exists:

LOCATION-AT-T (P+):  $\forall x \forall t (\text{Located}(x,t) := (t \supset \exists y y=x))$   
*(Informally: for some  $x$  to be located at a time  $t$  is just for  $t$  to imply that something is  $x$ )*

For example, given that some time  $t$  – i.e. some formerly-true time-proposition – implies that there are dinosaurs, it follows that there are dinosaurs located at  $t$ . More generally, it follows that there are many things located at past and future times as well as at the present time, and therefore that Eternalism (on Cameron’s definition) is true.<sup>23</sup>

One way for Cameron to respond to this dilemma would be to modify his definition of Eternalism as follows:

ETERNALISM\* (RC):  $\exists x \exists y \exists z (\exists t_1 \text{ Past}(t_1) \wedge \text{Concrete}(t_1) \wedge \text{Located}(x,t_1) \wedge \exists t_2 \text{ Present}(t_2) \wedge \text{Concrete}(t_2) \wedge \text{Located}(y,t_2) \wedge \exists t_3 \text{ Future}(t_3) \wedge \text{Concrete}(t_3) \wedge \text{Located}(z,t_3))$   
*(Informally: there are things located at concrete past, present and future times)*

Given this definition – and assuming that time-propositions don’t count as ‘concrete times’ – Presentism+ does not imply Eternalism. The problem with this response, however, is that it implies that certain obviously ‘Eternalist’ theories are non-Eternalist. For example, consider Dorr’s (*Counterparts* MS) theory of time. Dorr’s view combines Permanentism with Propositional Temporalism and a counterpart-theoretic analysis of facts concerning change in individuals, so that (for example) for some particular  $x$  to have been  $F$  is for  $x$  to have a past-counterpart  $y$  that is  $F$ . Dorr’s theory is Four-dimensionalist – on his view, reality consists in a four-dimensional spacetime manifold. However, *times* are not identified with hyperplanes, but rather with certain sets of ordered pairs called ‘counter-pairings’ – i.e. with functions. Hence – and assuming that

---

<sup>23</sup> Similarly, as we saw above in §2.2, it is natural for a defender of DP to hold (where *times* are time-propositions) that some  $x$  is located at time  $t$  just in case  $t$  implies that  $x$  is *concrete*. It follows that if the location relation in Cameron’s definition of Eternalism can be non-fundamental, Cameron will also have to count DP as Eternalist. Again, this seems like the wrong result.

functions don't count as 'concrete times' – it is false on Dorr's view that there are things located at concrete past and future times. (There *are* things located at hyperplanes, but hyperplanes are not times.) However, there is little doubt that those who use the labels 'Presentism' and 'Eternalism' would want to count Dorr's theory as *Eternalist*.

Similarly, consider Bacon's (forthcoming in *Noûs*) theory of time. Like Dorr's theory, Bacon's combines Permanentism with Propositional Temporalism. Moreover, like Dorr's theory, Bacon's theory is Four-dimensionalist. However, *times* are not identified with hyperplanes, but rather with functions from abstract indices – more specifically, ways of labelling *time-shifted properties*, such as the property of having been sitting 5 minutes ago – to hyperplanes.<sup>24</sup> Hence – and assuming that functions don't count as 'concrete times' – it is false on Bacon's view that there are things located at concrete past and future times. (There *are* things located at hyperplanes, but hyperplanes are not times.) However, there is little doubt that those who use the labels 'Presentism' and 'Eternalism' would count Bacon's theory as *Eternalist*.

It seems that Cameron faces a dilemma: either (i) misclassify either Four-dimensionalist Spacetime Monism or Presentism+, or (ii) misclassify both Dorr's and Bacon's theories. However, there is a final move Cameron could make. He could abandon talk of 'times' in his definitions altogether, and simply characterise Eternalism as a theory concerning *hyperplanes* (here '*I**x*' means '*x* is a hyperplane'; '*L*(*x*,*y*)' means '*x* is located at *y*'; '*t*' is the proper name for *this* hyperplane; and '*x*<*y*' means '*x* is earlier than *y*')

ETERNALISM\*\* (RC):  $\exists x \exists y \exists z (\exists x_1 Ix_1 \wedge x_1 < t \wedge \exists x_2 Ix_2 \wedge t < x_2 \wedge L(x, x_1) \wedge L(y, x_2) \wedge L(z, x_3))$   
*(Informally: there are things located at this hyperplane and at earlier and later hyperplanes)*

Given this definition, both Dorr's and Bacon's theories imply Eternalism. Moreover, defenders of Presentism+ typically hold that there are no regions of spacetime non-simultaneous with this one (and therefore no earlier or later hyperplanes). Finally, Four-dimensionalist Spacetime Monism plausibly counts as an Eternalist theory on the above definition, as on that view it is natural to define a location relation for objects (which according to the theory are themselves regions) and regions as follows:

---

<sup>24</sup> See Bacon (forthcoming in *Noûs*, 21-22).

LOCATION-AT-R (4-DSM):  $\forall x \forall r (\text{Located}(x,r) := x=r)$   
(*Informally: for some  $x$  to be located at a region  $r$  is just for  $x$  to be identical with  $r$ )*)

As long as the location relation in Cameron's definition of Eternalism can be *non-fundamental*, it follows given the above analysis that given Four-dimensional Spacetime Monism, there are things located at this hyperplane and at earlier and later hyperplanes (i.e. the hyperplanes themselves).

The above interpretation of Cameron's definition of Eternalism seems to avoid the dilemma of either (i) misclassifying either Four-dimensionalist Spacetime Monism or Presentism+, or (ii) misclassifying both Dorr's and Bacon's theories. However, this definition generates a *further* dilemma for Cameron of either counting an obviously 'Presentist' theory as an Eternalist theory or counting Four-dimensionalist Spacetime Monism as a Presentist theory.

To see this, consider the following package of views:<sup>25</sup> first, the sort of Transientism accepted by self-described 'Presentists' such as Bigelow (1996), Prior (1970) and Zimmerman (1996), according to which many objects and events begin and cease to be over time – so that, for example, it is now the case that there is nothing that is Xanthippe (although there was) and nothing that is the inauguration of the first President of Mars (although there will be). Second, that points and regions of spacetime exist eternally and that the geometric relations between points and regions are permanent.<sup>26</sup> Third, that the fundamental location relation between objects (and events) and regions of spacetime is temporary – so that, for example, I was but am no longer located at some region  $r$  in 2010. Finally, that if it is sometimes the case that an event  $e$  occurs then it is always the case that there is an abstract state of affairs  $s$  corresponding to  $e$  – so that, for example, it follows from the fact that there was an event of my birth that there is now (and always was and will be) a state of affairs of my being born which did but no longer *obtains*.<sup>27</sup> Call the theory that combines this package of views *Presentism++*. Presentism++ supplements a number of essentially 'Presentist' theses – such as Transientism, Propositional Temporalism, and Temporalism – with a

---

<sup>25</sup> This sort of view is suggested – but not quite endorsed – by Zimmerman (2011).

<sup>26</sup> As Zimmerman (2011) points out, there are many good reasons for 'Presentists' to posit a persisting, substantial four-dimensional spacetime manifold which retains its fundamental geometrical structure over time.

<sup>27</sup> Again, Zimmerman (2011) describes some convincing reasons for 'Presentists' to posit such persisting states of affairs.

persisting, substantial four-dimensional spacetime manifold.<sup>28</sup> However, unlike theories that accept Four-dimensionalism, it is not true according to Presentism++ that there are objects located at, or events occurring at, non-simultaneous regions of spacetime: according to Presentism++ it is always the case that there is exactly one instantaneous region at which objects are located and events occur (although of course *which* region is so distinguished changes as time passes).

Now suppose that the location relation mentioned in the definition of Eternalism above can be non-fundamental (as we have been assuming). In that case, it is plausible that Presentism++ implies Eternalism as defined above. For as we have seen, Presentists++ hold that there is a permanent state of affairs  $s$  (which may or may not obtain) corresponding to every event  $e$  that ever occurs. Given such permanent states of affairs, it is very natural for Presentists++ to accept something like the following analysis of what it is for a state of affairs  $s$  to bear the location relation to a region  $r$  of spacetime:

LOCATION-AT-R (P++):  $\forall s \forall r$  (Located( $s,r$ ) := Always( $r$  is occupied  $\supset$   $s$  obtains))

*(Informally: for some state of affairs  $s$  to be located at a region  $r$  is just for it to be the case that whenever  $r$  is occupied,  $s$  obtains)*

For example, given that there is a region  $r$  of substantial spacetime such that whenever  $r$  is occupied by events and objects the state of affairs of my birth obtains, it follows that the state of affairs of my being born is *located at  $r$* . More generally, it follows that there are things – namely, states of affairs – located at this hyperplane and at earlier and later hyperplanes, and therefore that Eternalism is true. However, there is little doubt that those who use the labels ‘Presentism’ and ‘Eternalism’ would count Presentism++ as *Presentist*. (Of course, Cameron could try to avoid this result by specifying that the location relation mentioned in the definition of Eternalism must be taken to be *fundamental*. In that case, however, it follows again that Four-dimensionalist Spacetime Monism is a non-Eternalist – and therefore on the analogous interpretation of Cameron’s Presentism, *Presentist* – theory.)

It seems that the best way to interpret Cameron’s version of Eternalism is as the thesis that there are things located at this hyperplane and at earlier and later hyperplanes. However, given this interpretation of Eternalism, Cameron faces a dilemma: either accept

---

<sup>28</sup> As Zimmerman (2011) points out, advocates of the view would not want to count the fourth dimension of the manifold as a *temporal* dimension in the usual sense.

that Four-dimensionalist Spacetime Monism is a Presentist theory or that Presentism++ is an Eternalist theory. Neither option is attractive. And this does not seem to be a problem that can be avoided by simply pointing out that adopting precise definitions inevitably requires us to revise some of our initial judgements – a good definition of Eternalism would surely count Four-dimensionalist Spacetime Monism as an Eternalist theory and Presentism++ as a non-Eternalist theory. In contrast, note that the Reformist view defended by AUTHOR (2017) that Eternalism is Permanentism and Presentism is Transientism classifies both theories correctly.

#### 4. *Concession?*

In the previous section I argued that Cameron's (2016, §3) positive proposals for how to understand the theses of Presentism and Eternalism face some difficult cases. I take it that these difficulties lend support to the Reformist position that the traditional Presentism–Eternalism debate should give way to the newer Temporaryism–Permanentism debate. (I leave it to other Reformers to show that Cameron's positive proposals for how to understand the theses of Actualism and Possibilism also face difficult cases.)

But does Cameron *really* hold that Presentism should be understood as the thesis that everything is if located at any time located at the present time? In §4, Cameron writes:

I suspect that the best version of presentism is one on which to be present *just is* to exist. On such a view, to say that something is present just is to say that it exists, and one who accepts such a view will find talk of non-present things unintelligible.

Taking the above quotation in isolation, it sounds as if Cameron endorses an alternative interpretation of the standard definition of Presentism as the thesis that everything is something:

PRESENTISM (ALT):  $\forall x \exists y y=x$   
(*Informally: everything is something*)

But this interpretation faces the obvious objection that Presentism cannot be the thesis that everything is something, because that thesis is *trivial* – and whatever Presentism is, it is not taken by its defenders

to be a trivial thesis.<sup>29</sup> And in any case, doesn't Cameron reject the above interpretation in favour of the thesis that everything is if located at a time located at the present time? What is going on?

In fact, Cameron is making an important point concerning the question of what it is to be *present* in the sense of the standard definition of Presentism: namely, that how one interprets the meaning of the predicate 'is present' in the context of that definition will naturally depend on one's antecedent theoretical commitments. For example, as Cameron points out, he defends a version of the *Moving Spotlight Theory* which combines (among other things) Four-dimensionalism, Propositional Temporalism and Transientism.<sup>30</sup> And given this theoretical background, it is natural for Cameron to interpret the predicate 'is present' in the context of the standard definition of Presentism as expressing the property of *being if located at a time located at the present time*. It follows that *for Cameron*, Presentism is the substantial and false thesis that everything is if located at a time located at the present time.

Similarly, consider a B-theorist who accepts (among other things) Four-dimensionalism, Propositional Eternalism and Permanentism. Given this theoretical background, it is natural for B-theorists to interpret the predicate 'is present' in the context of the standard definition of Presentism as expressing the property of *being located at this hyperplane*. It follows that *for the B-theorist*, Presentism is the substantial and false thesis that everything is located at this hyperplane.

Finally, consider a self-described 'Presentist' who accepts Propositional Temporalism, Temporalism and Transientism and rejects Four-dimensionalism. As Cameron (2016, 137) rightly points out, given this theoretical background it would be natural for the self-described 'Presentist' to interpret the predicate 'is present' in the context of the traditional definition of Presentism as simply expressing the property of *being something*. It follows that *for the self-described 'Presentist'*, Presentism is the trivially true thesis that everything is something.

We now have an explanation for the above quotation: when Cameron writes 'I suspect the best version of presentism is one on which to be present *just is* to exist', what he means is that *relative to* the typical antecedent theoretical commitments of self-described 'Presentists', the best way to understand the claim that everything is present is as the (trivial) claim that everything is something. And given that Cameron's own antecedent theoretical commitments differ from those of the self-described 'Presentist', *he* understands the claim

---

<sup>29</sup> AUTHOR (2017) rejects this interpretation on these grounds.

<sup>30</sup> On Cameron's view objects and events are permanent but there are temporary *states of affairs*.

that everything is present differently: he does not actually endorse the trivial interpretation of the traditional definition of Presentism.

Cameron is surely right that how one understands what it is to be *present* in the context of the standard definition of Presentism will naturally depend on one's antecedent theoretical commitments. We should add that the same goes for what it is to be a *time* and what it is for some *x* to be *located at* a time: indeed, that there are different ways of understanding these notions depending on one's antecedent theoretical commitments is one of the most important lessons of the discussion in §3 above of Cameron's proposed interpretations of Presentism and Eternalism. (And of course, the same goes for what it is to be *actual*, what it is for something to be a *possible world*, and what it is for some *x* to be *located in* a world.)

The question is: what are the consequences for the traditional Presentism-Eternalism debate of the fact that the meaning of 'is present' depends on one's antecedent theoretical commitments? Cameron (2016, 138) concludes that Reformers should be cautious about dismissing candidate interpretations of the standard definition of Presentism (such as that above) on which the thesis is trivial:

We should be more careful dismiss a claim as 'trivial'. A theory can be trivial, but it may not be trivial *that* it is trivial. A judgement of triviality depends on a theoretical background. If *p* is a trivial truth relative to some set of background theoretical assumptions but not relative to some alternative set of background theoretical assumptions, then *even if the former set of assumptions are correct*, as long as it is a substantive issue which of those background assumptions are correct, it will thereby be a substantive issue *whether p* is trivial... If a certain kind of presentism... turns out to be true, it will be utterly trivial that everything is present... But even so, we shouldn't dismiss these claims as made by such a presentist... for in making them they are proclaiming their commitment to a certain theoretical outlook, and that is a substantive issue.

How should Reformers respond to this point? I think they should welcome it as (perhaps surprisingly) providing clear support for Reformism. For example, consider AUTHOR (2017), who rejects the interpretation of the standard definition of Presentism as the thesis that everything is something on the grounds that, in that case, Presentism is trivial. The reason AUTHOR rejects that interpretation on those grounds should be obvious: if Presentism is the logical truth that everything is something and Eternalism is the contradictory thesis that something is nothing, then the traditional Presentism-Eternalism debate is simply not a debate worth having. Rather, argues AUTHOR – and this is the essence of the Reformist position – we should look elsewhere for substantive debates in the philosophy of time, and in particular, to the Permanentism-Temporaryism debate. But in effect,

*this is just what Cameron concedes above*: that is, if Presentism in the mouth of the self-described ‘Presentist’ is trivial, then that is because she has some *non-trivial* antecedent theoretical commitments. All we need in order to secure a commitment to Reformism from this point is to infer that it is *these* commitments that should be at the centre of debates in the philosophy of time. (And a similar point applies in the modal case: if Actualism in the mouth of the self-described ‘Actualist’ is trivial, and the reason for that is that she has some *non-trivial* antecedent theoretical commitments, then it is *these* commitments that should be at the centre of debates in the philosophy of modality.) Finally, what could these theoretical commitments be? They are exactly the theses used to characterise the differences between the different kinds of Democriteanism in §2.2 above, and to characterise the various theories of time described in §3 above: Propositional Temporalism and Propositional Eternalism; Temporalism and Anti-temporalism; and Permanentism and Transientism (which is itself a type of Temporaryism). *These* are the theses that should be front and centre in debates in the philosophy of time.

### *References*

- Bacon, A. (forthcoming in *Noûs*). Tense and relativity.
- Bigelow, J. (1996). Presentism and properties. *Philosophical Perspectives* 10: 35-52.
- Cameron, R. (2016). On characterizing the presentism/eternalism and actualism/possibilism debates. *Analytic Philosophy* 57: 110-140.
- Crisp, T. (2007). Presentism and the grounding objection. *Noûs* 47: 90-109.
- Fine, K. (1977). Prior on the construction of possible worlds and instants. In A. Prior & K. Fine, *Worlds, Times and Selves*. London: Duckworth.
- Lewis, D. (1986). *On the Plurality of Worlds*. Blackwell: Oxford.
- Ludlow, P. (2004). Presentism, triviality, and the varieties of tensism. In D. Zimmerman (Ed.) *Oxford Studies in Metaphysics Vol. 1*. Oxford: Oxford University Press: 21-36.

Markosian, N. (2004). A defence of presentism. In D. Zimmerman (Ed.) *Oxford Studies in Metaphysics Vol. 1*. Oxford: Oxford University Press: 47-82.

Menzel, C. (2014). Actualism. *The Stanford Encyclopedia of Philosophy* (Summer 2016 Edition), Edward N. Zalta (Ed.), forthcoming URL=<<http://plato.stanford.edu/archives/sum2016/entries/actualism/>>.

Meyer, U. (2005). The presentist's dilemma. *Philosophical Studies* 122: 213-25.

Prior, A. (1970). The notion of the present. *Stadium Generale* 23: 245-248.

Schaffer, J. (2009). Spacetime the one substance. *Philosophical Studies* 145:131-48.

Sider, T. (2011). *Writing the Book of the World*. Oxford: Oxford University Press.

\_\_\_\_\_. (2001). *Four-dimensionalism: An Ontology of Persistence and Time*. Oxford: University Press.

Skow, B. (2015). *Objective Becoming*. Oxford: Oxford University Press.

\_\_\_\_\_. (2005). *Once Upon a Spacetime*. PhD Thesis, URL=<<http://web.mit.edu/bskow/www/research/onceuponaspacetime.pdf>>

Williamson, T. (2013). *Modal Logic as Metaphysics*. Oxford: Oxford University Press.

\_\_\_\_\_. (2003). Everything. *Philosophical Perspectives* 17: 415-465.

\_\_\_\_\_. (2002). Necessary existents. In A. O'Hear (Ed.) *Logic, Thought and Language*. Cambridge University Press.

Zimmerman, D. (2011). Presentism and the space-time manifold. In C. Callendar (Ed.) *The Oxford Handbook of the Philosophy of Time*. Oxford University Press.

\_\_\_\_\_. (1996). Persistence and presentism. *Philosophical Papers* 25: 115-126.