

# What is Presentism?

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(Forthcoming in *Noûs*)

Different versions of the *A-theory of time* (according to which some instant of time is absolutely, objectively present) are traditionally defined in terms of whether everything is present, or whether there are also past and future things. In this paper I argue that the traditional way of defining A-theories should be abandoned. I focus on the traditional definition of *presentism*, according to which *always, everything is present* (§2). First, I argue that there are good reasons to reject all the most plausible interpretations of the predicate ‘is present’ as it appears in the traditional definition of presentism (§3). It follows that there are also good reasons to reject the most plausible interpretations of the traditional definitions of the other A-theories. I then argue that there is a better way of defining the A-theories, in terms of the question of whether existence has a beginning and an end (§4). Finally, I argue that what goes for the traditional definition of presentism goes for the traditional definition of its modal analogue *actualism*, according to which *necessarily, everything is actual* (§5): there are good reasons to reject the traditional definition of actualism in favour of a definition in terms of contingent existence.

## 1. Introduction

The logical space of theories of time is divided between *A-theories* and *B-theories*. A theory of time is an A-theory just in case according to that theory, there is an absolute, objective present moment; otherwise, it is a B-theory.<sup>1</sup>

**THE A-THEORY:** There is an absolute, objective present instant

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<sup>1</sup> The names ‘A-theory’ and ‘B-theory’ are derived from McTaggart (1908).

THE B-THEORY: There is no absolute, objective present instant<sup>2</sup>

Both A- and B-theorists agree that every instant is present *relative to itself*; A-theorists add that there is also an absolute, objective present instant, and therefore there is some fundamental distinction between one instant (the absolute present) and all others.<sup>3</sup> In that sense, all A-theorists are in agreement concerning a certain aspect of the *qualitative* nature of temporal reality. However, A-theorists disagree about the *ontological* nature of temporal reality, and this gives rise to different versions of the A-theory. Different versions of the A-theory are traditionally defined in terms of how they answer the following pair of questions:

THE TRADITIONAL QUESTIONS:           (i) Are there past things?

(ii) Are there future things?

According to the traditional definitions, *presentists* answer ‘no’ to (i) and (ii): they hold that everything (unrestrictedly) is present.<sup>4</sup> Defenders of the *growing block theory* answer ‘yes’ to (i) and ‘no’ to (ii); they hold that, in addition to all the present things posited by presentists, there are some extra things which are past, but none which are future.<sup>5</sup> Defenders of the *moving spotlight theory* answer ‘yes’ to both (i) and (ii); they hold that in addition to all the

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<sup>2</sup> Some might worry that under this definition, certain plausibly non-B-theoretic views are counted as B-theories. For example, following McTaggart (1908, 461-2), some theorists distinguish the *C-theory*- according to which the instants of time are permanently ordered, but not by the asymmetric temporal relation of precedence- from the A- and B-theories. Given that according to C-theorists there is no absolute, objective present instant, it follows that on this definition, the C-theory is a B-theory. There are two ways to avoid this result. First, one could modify the current definition of the B-theory by adding that the instants of time are ordered by the relation of precedence. Alternatively, one could argue that the C-theory is not, after all, a theory of *time*, on the grounds that it denies that the instants have a *temporal* order. In that case, one could retain the current definition on the understanding that the A- and B-theories are theories of *time*.

<sup>3</sup> An immediate problem for A-theorists is that this distinction does not seem to show up in contemporary spacetime physics; see Putnam (1967) and Zimmerman (2011) for discussion.

<sup>4</sup> Presentists include Bigelow (1996), Prior (1968), and Zimmerman (2008).

<sup>5</sup> Growing blockers include Broad (1923), Tooley (1997), and Forrest (2004).

past and present things posited by growing blockers, there are some extra things which are future.<sup>6</sup> Here are some traditional definitions of the A-theories due to Sider:

Presentism is the doctrine that only the present is real. (Sider 1999, 325)

Intermediate between the polar opposites of presentism and eternalism [the view that ‘past and future objects and times are just as real as currently existing ones’] is the view . . . that the past is real but the future is not. (Sider 2001, 12)

According to one such view [the moving spotlight theory], reality consists of the four-dimensional manifold accepted by the B-theorist, with an equally real past, present, and future. But one slice of the manifold enjoys a special metaphysical privilege: it is the *present*. (Sider 2001, 17)

Here is Hare (2009):

Some imagine that the past exists but the future does not . . . Some imagine that the future exists but the past does not . . . Presentists, meanwhile, hold that only present objects, events, moments exist (and perhaps things that exist timelessly, like gods and numbers). There are no past or future things. (Hare 2009, 17)

Finally, here is Callender (2011):

Some metaphysicians (“eternalists”) believe that the past, present, and future are all real, others (“possibilists”) believe the past and present are real but the future is not, and yet a third group (“presentists”) hold that only the present is real. (Callender 2011, 3)

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<sup>6</sup> Sullivan (2012) and Deasy (2014) defend the moving spotlight theory.

In this paper, I argue that the traditional way of defining the A-theories should be abandoned. In order to make that case, I focus on the traditional definition of presentism, according to which *always, everything (unrestrictedly) is present* (§2). First, I argue that there are reasons to reject all of the most plausible candidate interpretations of the predicate ‘is present’ as it appears in the traditional definition of presentism (§3). Assuming that what is for something to be ‘past’ or ‘future’ according to the traditional definitions of the other A-theories is to bear some relation to things that are ‘present’ in the sense of the traditional definition of presentism, it follows that there are also good reasons to reject the most plausible interpretations of the traditional definitions of the *other* A-theories. I then argue that there is a better way of defining the A-theories, in terms of the question of whether existence has a beginning and an end (§4). Finally, I argue that what goes for the traditional definition of presentism goes for the traditional definition of its modal analogue *actualism*, according to which *necessarily, everything (unrestrictedly) is actual*; there are good reasons to reject all the most plausible candidate interpretations of the predicate ‘is actual’ as it appears in the traditional definition of actualism (§5). Therefore there are good reasons to reject the traditional definition of actualism in favour of a definition in terms of contingent existence.

## 2. *The traditional definition*

Presentism is probably the best known version of the A-theory, and according to some theorists (Bigelow 1996, 35), the ‘commonsense’ theory of time. As mentioned above, presentism is traditionally defined as the thesis that always, everything is present:<sup>7</sup>

PRESENTISM (TRADITIONAL): Always, everything is present

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<sup>7</sup> Versions of this definition are given by, for example, Bigelow (1996, 35), Crisp (2003, 215), De Clerq (2006, 386), Markosian (2004, 47, n.1), Meyer (2005, 213) and Sider (1999, 326).

There are a few important points to note concerning this definition. First, some hold that presentism is *necessarily* true if true (Markosian 2004, 47, n.1; Sider 1999, 326), while others allow that presentism may be contingently true if true (Crisp 2003, 215). Whether presentism is necessary or contingent has no bearing on what follows, and therefore I operate throughout with the modally non-committal definition above.

Second, there is a question about whether the universal quantifier ‘everything’ in the above definition should be read as restricted or unrestricted. Given that presentism is a metaphysical thesis, it is natural to read the quantifier as unrestricted (as Crisp 2004 does, for example); I assume the unrestricted reading in what follows. However, it is also left open that the quantifier should be read as restricted given the best candidate interpretation of the traditional definition.

Third, some theorists omit the initial ‘always’ from the traditional definition (e.g. Bigelow 1996). I assume this is because it is simply taken for granted that metaphysical theories of time are eternally true if true. For example, it is not easy to see why a presentist would want to defend the thesis that at some instants everything is present, but at other instants there are also some non-present things.<sup>8</sup> Therefore I continue to assume that presentism is the thesis that *always* everything is present.

Finally, there is a debate concerning whether the universal quantifier in the traditional definition is ‘tensed’ or ‘tenseless’. In particular, some argue along the following lines (see, for example, Ludlow 2004 and Meyer 2005): the quantifier in the traditional definition is either tensed or tenseless. If it is tensed, then presentism is the obviously false thesis that always, everything is now present. If it is tenseless, then presentism is the trivially true thesis that always, everything is, was, or will be present. Therefore presentism is either obviously false or trivially true. The problem with this argument is that the key premise- that the

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<sup>8</sup> On the other hand, growing blockers according to whom there is a first instant of time would presumably defend this thesis.

quantifier in the traditional definition is either tensed or tenseless- is false. The universal quantifier in the traditional definition ('everything') should be read as expressing exactly the universal quantifier of classical first-order predicate logic ( $\forall x$ ).<sup>9</sup> After all, the traditional definition is intended to express a metaphysical thesis, and metaphysical theses ought to be expressed in the most metaphysically perspicuous- i.e. most 'joint carving'- terms possible. Classical first-order predicate logic is a much better candidate for a language whose terms so cut than a natural language like English. Moreover, the standard quantifiers of classical first-order predicate logic are neither 'tensed' nor 'tenseless' (or at least, not in the sense of the above argument). For example, consider the sentence 'There were dodos'. This sentence can be represented as having the logical form  $\mathbf{P}\exists xDx$  (where ' $\mathbf{P}$ ' is the 'past-tense operator' of classical tense logic, read as 'it was the case that').<sup>10</sup> If the quantifiers are either 'tensed' or 'tenseless', then this sentence must be read as either 'it was the case that, for some  $x$ ,  $x$  is now a dodo' or 'it was the case that, for some  $x$ ,  $x$  is, was, or will be a dodo'. However neither reading is correct:  $\mathbf{P}\exists xDx$  is simply read 'it was the case that, for some  $x$ ,  $x$  is a dodo.' Therefore the quantifiers are neither 'tensed' nor 'tenseless'. There is a perfectly clear reading of the traditional definition of presentism on which it expresses a thesis which is neither trivially true nor obviously false: namely, the reading on which it expresses the thesis expressed by the sentence ' $\mathbf{A}\forall x Present(x)$ '. (Why think the quantifiers have 'tensed' or 'tenseless' interpretations in the first place? According to Rini and Cresswell (2012, 65), the idea that the quantifiers are either 'tensed' or 'tenseless' is plausibly based on the idea that the quantifiers are verbs, so that (for example) expressions of the form ' $\exists x\alpha$ ' must be read as either 'there *is now* an  $x$  such that  $\alpha$ ' (i.e. as 'tensed') or 'there *is, was, or will be* an  $x$  such that  $\alpha$ ' (i.e. as 'tenseless'). However, as Barcan (1962) points out, the quantifiers are not verbs, they are quantifiers: expressions of the form ' $\exists x\alpha$ ' can simply be read 'for some  $x$ ,  $\alpha$ ',

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<sup>9</sup> As Szabó (2006) argues.

<sup>10</sup> See Prior (1957) on tense logic.

in which the tense (if any) is located entirely in  $\alpha$ , and expressions of the form ‘ $\forall x\alpha$ ’ can be read as ‘for all  $x$ ,  $\alpha$ ’, in which the tense (if any) is located entirely in  $\alpha$ . Therefore there is no good reason to think the quantifiers have either reading.)

The interesting question concerning the traditional definition is not how to interpret the universal quantifier, but how to interpret the predicate ‘is present’. What is it for something to be ‘present’ in the sense of the traditional definition of presentism? What exactly *is* presentism, as traditionally defined? As we shall see, surprisingly, there are good reasons to reject all of the most plausible answers to this question.

### 3. Interpretations

In this section I describe what I take to be the most plausible suggestions for what presentists could mean by ‘is present’ in the context of the traditional definition of presentism. In each case, I show that given the relevant analysis of ‘is present’, presentism so defined (i) is trivial; (ii) is too implausible to be worthwhile debating; (iii) has consequences which most self-described presentists would reject; (iv) is consistent with ‘rival’ theories such as the B-theory and the moving spotlight theory; or (v) is controversial for reasons that have nothing to do with the philosophy of time. I do not claim that having one of these features absolutely rules out a candidate interpretation of the traditional definition; for example, it could be that self-described presentists are unaware of the full implications of their view, or that presentism understood correctly is consistent with the B-theory (after all, it is not obvious that presentism is supposed to *entail* the A-theory). However, having at least one of features (i) – (v) can reasonably be said to *count against* a candidate interpretation of the traditional definition. And given that there is an alternative to the traditional definition which has none of these features (described in §4 below), the fact that every plausible interpretation of the traditional definition has at least one of them gives us a good reason to reject the traditional

definition in favour of the alternative definition.

Before continuing, it is worth anticipating one possible response to the argument thus far. The A- and B-theories were defined above in terms of whether there is an absolute, objective present instant. However, if the debate between A- and B-theorists is a substantial debate (as I assume it is), then why can't presentism as traditionally defined be understood in the same terms? In other words, why can't the traditional definition be understood as saying that always, everything has the same property of presentness which, according to A-theorists, is possessed by some instant? (Note that this would have the added benefit of making presentism inconsistent with the B-theory: if everything has absolute, objective presentness, then of course some instant does.) It should be obvious why this strategy will not work. For one thing, presentism so defined entails that every instant is absolutely, objectively present; however, that is not something that A-theorists wish to say. Moreover, it leads to 'McTaggartian' contradiction: given that to be past is to be earlier than a present instant and to be future is to be later than a present instant, it would follow (assuming there are no first or last instants) that every instant is (wholly) past, present and future. Finally, many A-theorists identify instants of time with propositions of a certain sort; namely, maximal, consistent propositions that are sometimes true.<sup>11</sup> According to such theorists, what it is for an instant to be absolutely, objectively present is for that instant to be true. Therefore for such theorists, the thesis that always, everything is present in the sense of the predicate 'is present' operative in the definition of the A-theory amounts to the thesis that *always, everything is true*. But obviously, there are many things which cannot be true, such as rivers and galaxies.

It is relatively easy to say what it is for an instant to be 'present' in the sense operative in the A-/B-theory debate. As we saw above, according to many A-theorists, for an instant *t*

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<sup>11</sup> See, for example, Crisp (2007) and Markosian (2004).

to be present is for  $t$  to be true (on the propositional view of instants).<sup>12</sup> According to others, for  $t$  to be present is for  $t$  to be *accurate* (where an instant is accurate iff for all propositions  $p$ ,  $p$  is true at  $t$  iff  $p$  is true simpliciter), or to bear a fundamental property of presentness (as on the ‘classic’ moving spotlight theory).<sup>13</sup> Given that the sense of ‘is present’ operative in the traditional definition of presentism is distinct from the sense operative in the A-/B-theory debate, the interesting question is what it is for something to be present in the sense operative in the traditional definition of presentism.

Let us now assess some plausible candidate interpretations of ‘is present’ as it appears in the traditional definition of presentism. We begin with a very simple and natural idea; that to be present is just to *exist*:

PRESENTNESS 1:  $x$  is present  $\text{=df}$   $x$  exists

Given presentness 1, the traditional definition comes to:

PRESENTISM 1: Always, everything exists

This analysis is supported by Zimmerman (1996):

There is no advantage for the presentist in distinguishing between being present and existing; and no other obvious candidate to play the role of ‘being present’ comes readily to mind. *Thus to be present just is to be real or to exist.* (Zimmerman 1996, 117; Italics mine)

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<sup>12</sup> Note that for A-theorists, absolute presentness is not merely a special property possessed by some instant; it is a temporary property momentarily possessed by successive instants, which grounds the objective distinction between the (absolute) past, present, and future. For example, consider a version of the B-theory according to which instants are maximal, consistent propositions. On this view *every* instant is *permanently* true. An A-theorist who identified absolute presentness for instants with truth would not count this view as a strange kind of A-theory according to which every instant is absolutely present. The reason is that on this view, the property of *being true* does not play the role that absolute presentness plays for A-theorists: in particular, it is not a temporary property momentarily possessed by successive instants (it is a permanent property possessed by every instant).

<sup>13</sup> Dorr, C. *Counterparts* (unpublished MS) defends the ‘accuracy’ definition.

This interpretation is also supported by the fact that some philosophers interpret the modal thesis of *actualism*, which is supposed to be analogous to presentism, as the thesis that necessarily, everything exists. For example, here is Plantinga (1983):

Let's agree that there neither are nor could have been any non-existent objects; it's a necessary truth that there aren't any. This view is sometimes called 'actualism'; I shall follow this custom. (Plantinga 1983, 4)

In the above quotation, Plantinga defines actualism as the thesis that necessarily, there aren't any non-existent objects; in other words, that necessarily, everything exists.

The problem with this interpretation is that the thesis that always, everything exists is *trivial*: no theorist would deny it. Therefore if presentism is presentism 1, everyone is a presentist. If presentists wish to defend a non-trivial thesis, they should reject presentism 1 as the correct interpretation of the traditional definition.

Another natural idea is that to be present is to instantiate the fundamental property of presentness:<sup>14</sup>

PRESENTNESS 2:  $x$  is present  $\text{=}_{df}$   $x$  instantiates fundamental presentness

Given presentness 2, the traditional definition comes to:

PRESENTISM 2: Always, everything instantiates fundamental presentness

There are two problems with this interpretation. First, normal self-described presentists have explicitly rejected the thesis that presentness is fundamental. For example, Zimmerman (1996: 118, n.8) writes that 'no *real* presentist has any reason to believe in a special quality of "being present" (and, indeed, no articulate presentist that I know of has ever posited such a

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<sup>14</sup> Why not a *non*-fundamental property of presentness? Because then we would still be faced with the question of what it is *in fundamental terms* for something to be non-fundamentally present.

quality).’ Zimmerman goes on to characterise ‘real presentism’ as a thesis that ‘has no room for a special quality of “being present”’. (Similarly, Sider (2011, 242, n.8) states that ‘neither presentists nor spatializers [e.g. B-theorists] should accept a fundamental feature of “presentness”’.)<sup>15</sup> It seems clear that presentism 2 is not the thesis that presentists wish to defend. Second, if presentism is presentism 2 then the debate between presentists, growing blockers and moving spotlights reduces to a debate about whether everything or only some things instantiate fundamental presentness. However, that sounds more like a parody of the philosophy of time than a substantive philosophical debate. Therefore presentists should reject presentism 2 as the correct interpretation of the traditional definition.

Next, consider the following pair of interpretations due to Williamson (2013, 24).

First, suppose that something is present iff it has a spatial location:

PRESENTNESS 3:  $x$  is present  $\text{=}_{df}$   $x$  has a spatial location

Given presentness 3, the traditional definition comes to:

PRESENTISM 3: Always, everything has a spatial location

How exactly should we understand presentism 3? After all, it is not immediately obvious that presentism 3 is inconsistent with ‘rival’ non-presentist views such as the B-theory and the moving spotlight theory; don’t B-theorists, for example, agree that always, everything has a spatial location? Presumably, we are supposed to understand the notion of ‘having a spatial location’ in presentism 3 in such a way that the thesis would be false in a non-presentist setting.<sup>16</sup> For example, if *having a spatial location* implies being simultaneous with events that are happening *right now*, because anything that is *not* simultaneous with events that are happening right now has a *spatiotemporal* rather than ‘merely’ spatial location, then

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<sup>15</sup> Similarly, the view that necessarily, everything instantiates the fundamental property of actuality does not sound at all like the thesis which actualists defend.

<sup>16</sup> A similar point applies to presentism 4 below.

presentism 3 would appear to be inconsistent with the B-theory.<sup>17</sup> Similarly, if we agree that given ‘eternalist’ views such as the B-theory things only ever have spatiotemporal rather than spatial locations (due to the ‘eternalist’ commitment to a complete spacetime manifold), then presentism 3 is inconsistent with the B-theory.

Let us grant that there is some plausible interpretation of presentism 3 such that the theory is inconsistent with non-presentist views such as the B-theory. In any case, as Williamson points out, presentism 3 is controversial for reasons that have nothing to do with the philosophy of time. In particular, if presentism is presentism 3 and if, as many believe, abstract objects such as numbers and sets have no spatial location, then presentism implies that there are never any abstract objects. But one would not expect the truth of presentism to rule out the existence of numbers and sets.

It is tempting to add a temporally rigid element to presentness 3, so that to be present is just to be such as to have a spatial location *now* (formally:  $\mathbf{A}\forall x (Present(x) \leftrightarrow \mathbf{N}Spatial\ Location(x))$ ).<sup>18</sup> The problem with this interpretation is that it means presentism has consequences that most self-described presentists would reject. For example, given that Napoleon did exist (formally:  $\mathbf{P}\exists x x=拿破侖$ ), it follows from presentism 3 by standard temporal logic that Napoleon has a spatial location now.<sup>19</sup> However, most presentists accept the following principle:

**PROPERTY PRINCIPLE:** Always, for all  $x$ , always: if  $x$  has a property then  $x$  exists<sup>20</sup>

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<sup>17</sup> I consider the proposal that presentism is the thesis that *always, everything is simultaneous* below (as ‘presentism 7’). I also consider the effects of adding a temporally rigid element to the definition of presentism below.

<sup>18</sup> I take for granted the standard view that ‘now’ rigidly designates the time of utterance in every context, just as ‘actually’ rigidly designates the world of utterance in every context. It follows from this view that for all propositions  $p$ ,  $\mathbf{N}p$  iff  $\mathbf{A}Np$ .

<sup>19</sup> Informally: if everything located at every instant is such that it has a spatial location at the current instant, then in particular everything located at every *past* instant has a spatial location at the current instant. Given that Napoleon is located at a past instant, it follows that Napoleon has a spatial location at the current instant. (I assume here and throughout that identity facts are eternal.)

<sup>20</sup> Plantinga (1983, 11) refers to the conjunction of the analogous modal principle with the thesis that necessarily, everything exists (the thesis that Plantinga calls ‘actualism’) as ‘serious actualism’.

Given the property principle, it follows from the fact that Napoleon has a spatial location that Napoleon exists. (Note that it is left open *how Napoleon is*: for example, it does not follow that he is a general, or French, or even composed of atoms.) However, I think it is safe to say that most presentists hold that Napoleon no longer exists (change the example if you disagree). Therefore the addition of a temporally rigid element to presentness 3 leads to a conclusion which most presentists would almost certainly reject.

The fact that a given interpretation of the traditional definition has consequences most self-described presentists would reject can reasonably be said to count against that interpretation. It does not absolutely rule out the interpretation as correct: it could be that most presentists fail to see the full implications of their view. If an interpretation with such consequences yet yields a view which is plausible and philosophically substantive, it could still be worth defending and debating. However, presentism 3 is not such a view. Indeed, the thesis always, everything has a spatial location now- i.e. at *this* instant- is totally implausible. For example, surely the event of my birth does not have a spatial location at this instant (if it does, where is it?). Therefore presentists should be very reluctant to identify presentism with presentism 3.

As Williamson (2013) points out, another natural thought is that presentism 3 can be fixed by restricting the scope of the initial quantifier. For example, suppose we restrict the scope of the initial quantifier in presentism 3 to things with a temporal location. Then we get the following analysis of ‘present’:

PRESENTNESS 4:  $x$  is present  $\equiv_{df}$  if  $x$  has a temporal location then  $x$  has a spatial location

Given presentness 4, the traditional definition comes to:

PRESENTISM 4: Always, everything with a temporal location is spatially located

As with unmodified presentism 3, the problem with presentism 4 is that it has contentious consequences outside the philosophy of time. In particular, if presentism is presentism 4 and mental events are non-physical events (and as such lack a spatial location) that occur in time (and as such have a temporal location) then presentism implies that there are never any mental events. However, one would not expect the truth of presentism to have such profound consequences for the philosophy of mind. This counts strongly against presentism 4 as the correct interpretation of the traditional definition.<sup>21</sup>

We have seen that to be ‘present’ in the sense of the traditional definition cannot merely be to exist or have a spatial location, or to instantiate the fundamental property of presentness. However with the exception of presentness 3, we have not considered the plausible idea that to be present has something to do with how things are *now*. For example, perhaps to be present is not just to exist, but to exist *now*:

PRESENTNESS 5:  $x$  is present  $\text{=}_{df}$   $x$  exists now

Given presentness 5, the traditional definition comes to:

PRESENTISM 5: Always, everything exists now

For example, Zimmerman (1996, 115) writes that ‘presentists hold that the only things that really exist are those that exist *now*’.<sup>22</sup> The problem with this interpretation is that like presentism 3, presentism 5 has consequences that most self-described presentists would reject. For example, if everything at every instant exists now, then given that Napoleon did exist it follows that Napoleon exists now. Therefore if presentism is presentism 5, presentism implies that Napoleon exists now. However, it is safe to say that most presentists hold that

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<sup>21</sup> I do not see any hope in performing further scope-restricting manoeuvres on the quantifier in presentism 3. For example, one could restrict the scope of the quantifier to non-abstract things. However, this would raise the difficult question of what it is for something to be *non-abstract*. It is no solution to the problem of defining presentness to define it in terms of ‘non-abstractness’.

<sup>22</sup> Granted, Zimmerman leaves out the initial ‘always’ here; however, I take it that Zimmerman holds that presentism is always true if true.

Napoleon no longer exists (change the example if you disagree).

As with the temporally-rigidified version of presentism 3, the fact that presentism 5 has consequences most self-described presentists would reject does not absolutely rule it out as the correct interpretation of presentism. If presentism 5 was a particularly plausible and philosophically substantive thesis then it might still be worth defending and debating. However, presentism 5 is not plausible. In particular, the choice of *this* instant as the instant at which everything at every instant exists seems arbitrary: there is no good reason to think that this instant is eternally special in that way. Of course, this arbitrariness could be removed by modifying the view so that everything at every instant exists at *every* instant. In that case, presentism is identical to the thesis of *permanentism*, according to which always, everything exists forever.<sup>23</sup>

PERMANENTISM: Always, everything always exists

However, it seems highly implausible that presentism is *really* the thesis that always, everything exists forever.

A defender of presentness 5 might reply to the above argument as follows: while it is true for the reasons described above that presentism 5 cannot be the correct interpretation of presentism, it does not follow that presentness 5 is the wrong analysis of what it is for something to be present in the sense of the traditional definition. The reason is that if a presentist accepted presentism 5, what she would mean when she said that always, everything is present is that the sentence ‘Everything is present’ is true in every context of utterance. Therefore given presentness 5, the correct interpretation of presentism is:

PRESENTISM 5.5: The sentence ‘Everything exists now’ expresses a true proposition in every context of utterance

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<sup>23</sup> The name permanentism for this thesis is due to Williamson (2013, 4).

One problem with this interpretation is that presentism 5.5 is consistent with the B-theory. It is natural to think that presentism 5.5 is *inconsistent* with the B-theory, on something like the following grounds: given the B-theory, temporal operators (such as ‘always’, ‘sometimes’, ‘now’, ‘was’, and ‘will be’) are implicit quantifiers over instants, which restrict the explicit individual quantifiers in their scope to things that are located at the relevant instant.<sup>24, 25</sup>

Therefore given the B-theory, a current utterance of the sentence ‘Everything exists now’ expresses the proposition that everything is located at this instant. However, B-theorists obviously deny that everything is located at this instant: for example, they deny that Socrates is located at this instant. Therefore B-theorists reject presentism 5.5.

The above argument relies on the premise that the B-theory implies the *restrictor principle*:

RESTRICTOR PRINCIPLE: The standard temporal operators are implicit quantifiers over instants of time which restrict the explicit individual quantifiers ( $\forall$ ,  $\exists$ ) in their scope to things that are located at the relevant instant

For example, given the restrictor principle, an utterance at instant  $t$  of the simple past-tensed sentence

(1) ‘There were dinosaurs with feathers’

is interpreted as expressing something like the proposition that there is an instant  $t^*$  earlier than  $t$  such that there are dinosaurs with feathers located at  $t^*$ . However, not only does the B-theory not *imply* the restrictor principle- as we saw above, the B-theory is simply the thesis

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<sup>24</sup> More carefully: the standard temporal operators are quantifiers over instants which restrict the explicit individual quantifiers in their scope to the domain of individuals that are located at the domain of instants appropriate to the operators. In what follows, I use the short form in the main text for convenience. Sider (2001) is an example of a prominent B-theorist who appears to accept this thesis.

<sup>25</sup> Similarly, it is typically assumed that *modal realism* (famously defended by Lewis 1986) must be combined with the thesis that the standard modal operators ‘ $\Box$ ’ and ‘ $\Diamond$ ’ are implicit quantifiers over worlds which restrict the explicit individual quantifiers in their scope to the relevant world.

that there is no absolute, objective present instant- but given certain very plausible assumptions, the B-theory is *inconsistent* with the restrictor principle. For example, consider the following true sentence:

(2) ‘There is some  $x$  and some  $y$  such that there is no instant at which both  $x$  and  $y$  are located’

For example, there is no instant at which both Napoleon and Obama are located. Now consider the following very plausible temporal-logical principle:

SOMETIMES PRINCIPLE: If something is the case, then it is sometimes the case

FORMALLY:  $\varphi \supset \mathbf{S}\varphi$

This principle is, of course, the temporal analogue of the widely-held modal-logical principle that if something is the case then it *could* be the case ( $\varphi \supset \Diamond\varphi$ ). Given the sometimes principle, (2) implies (3):

(3) ‘Sometimes, there is some  $x$  and some  $y$  such that there is no instant at which both  $x$  and  $y$  are located’

Given the restrictor principle, (3) is equivalent to the contradictory:

(4) ‘For some instant  $t$ , there is some  $x$  and some  $y$  located at  $t$  such that there is no instant at which both  $x$  and  $y$  are located’

It follows that B-theorists have a choice: they must either deny that there are things that are not located at the same instant; reject the sometimes principle; or reject the restrictor principle. Given that it would be absurd for B-theorists to deny that there are things such as

Napoleon and Obama that are not located at the same instant, and given the plausibility of the sometimes principle (how could something be the case but *never* be the case?), it seems B-theorists must reject the restrictor principle. In that case, B-theorists should hold that the explicit quantifiers in (3) are unrestricted, and therefore that (3) expresses the true proposition that there is a pair of things such that there is no instant at which they are both located. Moreover, to return to presentism 5.5, it follows that B-theorists should hold that the explicit quantifiers in the sentence ‘Everything exists now’ are unrestricted, and therefore that the sentence expresses relative any context of utterance the trivially true proposition that everything exists. Thus B-theorists should accept presentism 5.5. It follows that if presentism 5.5 is the correct interpretation of the traditional definition, presentism is consistent with the B-theory.

The fact that presentism 5.5 is consistent with the B-theory counts against it, but does not absolutely rule it out as the correct interpretation of presentism; it is not entirely obvious that presentism as normally understood is supposed to entail the A-theory. Indeed, we should not be surprised to find that given certain plausible candidate interpretations of the traditional definition, the question of whether presentism is true cross-cuts the A-/B-theory debate. The real problem with presentism 5.5 is that it is trivial: no-one (even B-theorists) should deny that the sentence ‘Everything exists now’ is true in every context. Therefore presentists should not identify presentism with presentism 5.5.

The failure of presentism 5 demonstrates that whatever it is to be ‘present’ in the sense of the traditional definition, it is not to meet some condition *now*, or bear some relation to what there is *now*. Surprisingly, some theorists miss this point. For example, according to Crisp (2003) ‘an object *x* is present iff *x occupies* or *exists at* the present time.’ But what is ‘the present time’, and what is it for something to ‘occupy’ it? Crisp explains:

We shall think of *the present time* as follows. Say that an object  $x$  is *slim* iff, for any  $y$  and  $z$ , if  $y$  and  $z$  are parts of  $x$ , then there is either no temporal distance or a temporal distance of *zero* between  $y$  and  $z$ . A *time . . .* is a maximal slim object: an object such that the mereological sum of it and anything which isn't a part of it is not slim. The present time . . . is the maximal slim object that includes as a part every event that occurs *now*. Thirdly, say that something *exists at* or *occupies* the present time iff it is a part of the present time.<sup>26</sup> (Crisp 2003, 212)

Putting all of the above together yields the following analysis of the predicate 'is present':

PRESENTNESS 6:  $x$  is present =<sub>df</sub>  $x$  is part of a maximal slim object that includes as a part every event that is occurring now

Given presentness 6, the traditional definition comes to:

PRESENTISM 6: Always, everything is part of a maximal slim object that includes as a part every event that is occurring now

As with previous interpretations involving a temporally rigid element, this interpretation has implications that most self-described presentists would reject. If it is always the case that everything is part of a maximal slim object that includes as a part every event that is occurring now, then (for example) it was the case that Napoleon is part of a maximal slim object that includes as a part every event that is occurring now. Consider an event that is occurring now, such as the event of your reading this sentence. Given that the event of your reading this sentence is occurring now, it follows from presentism 6 that it was the case that Napoleon is part a maximal slim object that includes as a part the event of your reading this sentence. Given Crisp's account of what it is for an object to be *maximally slim*, it follows

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<sup>26</sup> This characterisation of the present instant precedes Crisp's adoption of the propositional view of instants in Crisp (2007).

that it was the case that there is no temporal distance between Napoleon and the event of your reading this sentence. However, I take it that most presentists would argue that it is never the case that there is no temporal distance between Napoleon and the event of your reading this sentence.<sup>27</sup>

Let us consider a final interpretation of the traditional definition. A natural thought is that presentism is the thesis that *always, everything is simultaneous*, or that *there is never any temporal distance between things*.<sup>28</sup> But what does it mean to say that two things are simultaneous? A plausible answer is that two things are simultaneous iff they are located at the same instant. In that case, perhaps what it means to say that always, everything is present is that always, for any two things, if they are located at instants, they are located at the same instant:

PRESENTISM 7: Always, for all  $x$  and  $y$  and instants  $t$  and  $t^*$ , if  $x$  is located at  $t$  and  $y$  is located at  $t^*$  then  $t = t^*$

Should presentists identify presentism with presentism 7? First, note that presentism 7 is consistent with the moving spotlight theory. Although the most natural view for moving spotlights is the 'B-theoretic' view that objects and events have permanent spatiotemporal locations (so that, for example, my father is permanently located at an interval beginning in 1946), it is open to moving spotlights to reject this picture and instead hold that the spatiotemporal location relation is temporary. In that case, the most natural view is that the only instant at which anything is ever located is the absolute present instant. On this alternative picture, my father is located at just one instant- the absolute present- and

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<sup>27</sup> Some presentists, such as Zimmerman (1997), hold that certain kinds of events are permanent. Such presentists might be content to allow that it is sometimes the case that there is no temporal distance between Napoleon and the event of your reading this sentence. However, it is not clear that this position is sustainable given the plausible idea that whenever the event of your reading this sentence exists, you exist.

<sup>28</sup> As we saw at the beginning of this section, Crisp (2007, 103) opts for something like this interpretation.

Napoleon is no longer located at any instants (although he was).<sup>29</sup> Presentism 7 follows naturally from the thesis of the temporariness of spatiotemporal location: if the only instant at which anything is ever located is the absolute present instant, then it is always the case that any two things that have a temporal location are located at the same instant (namely, the absolute present).

The fact that presentism 7 is consistent with the moving spotlight theory- or at least, a version of the moving spotlight theory- does not show that presentism 7 is not presentism. However, it does provide good reasons for presentists not to identify their theory with presentism 7. First, most presentists explicitly characterise their view in opposition to so-called ‘eternalist’ theories such as the B-theory and the moving spotlight theory. Therefore it would be surprising if their theory was after all consistent with the moving spotlight theory. Second, suppose that presentism *is* presentism 7. Then if the moving spotlight theory is true, the question of whether presentism is true reduces to the question of whether the spatiotemporal location relation is permanent or temporary. However, presentists surely want to say that there is more to the question of whether presentism is true; they want to say that the question of whether presentism is true is one whose answer has profound consequences for our views concerning time, change, and ontology. In that case, they should reject presentism 7 as the correct interpretation of the traditional definition.

#### 4. *A new debate*

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<sup>29</sup> The idea of a moving spotlight theory with temporary spatiotemporal location relations might strike some as peculiar. However, consider the view that Sider (2011) calls ‘Williamsonian Passage’, which is essentially the temporal analogue of Williamson’s (2013) theory of modality. As Deasy (2014) argues, this theory can reasonably be counted as a version of the moving spotlight theory. Moreover, according to Williamsonian passage *concreteness* is a temporary property of objects and events; and it seems plausible that something is concrete iff it has a spatiotemporal location. Therefore Williamsonian passage appears to be a moving spotlight theory according to which the spatiotemporal location relation is temporary. One might also worry that, in the absence of permanent spatiotemporal locations, the moving spotlight theory threatens to collapse into a version of presentism. There are two points to make in response to this worry: first, it remains the case that according to the moving spotlight theory everything that did and will exist, exists. However, no presentist would accept that (for example) Napoleon exists, whether or not he has a spatiotemporal location. Second, in order to make the case that a given view is *really* just a version of presentism, one needs to be able to say what presentism is; but as this paper has endeavoured to show, that is much easier said than done.

We have seen that on each of the most plausible interpretations of the predicate ‘is present’, the traditional definition of presentism is either trivial (presentism 1, presentism 5.5); too implausible to be worthwhile debating (presentism 2); has consequences which most self-described presentists would reject (presentism 5, presentism 6); consistent with rival theories such as the B-theory and the moving spotlight theory (presentism 5.5, presentism 7); or controversial for reasons that have nothing to do with the philosophy of time (presentism 3, presentism 4). Therefore there are reasons to reject each of the most plausible interpretations of the predicate ‘is present’ as it appears in the traditional definition of presentism. This is a serious problem for the traditional definition of presentism. Moreover, it is very natural to define the predicates ‘is past’ and ‘is future’ as they appear in the traditional definitions of the other A-theories (i.e. the growing block theory and the moving spotlight theory) in terms of the same predicate, so that to be past is to be earlier than the present things, and to be future is to be later than the present things. In that case, the problem with the traditional definition of presentism infects the traditional definitions of all the A-theories. In short, it is not clear how to understand any of the A-theories, as traditionally defined.

The problems with the traditional definitions of the A-theories present an opportunity to recast the debate between presentists, growing blockers and moving spotlight theorists in clearer and more philosophically substantive terms. Here is one attractive way to do so. Consider the following questions:

THE NEW QUESTIONS:

(i) Do things begin to exist?

(ii) Do things cease to exist?

As with the traditional questions, presentists, growing block theorists and moving spotlight theorists answer these questions differently. For example, most presentists appear to answer ‘yes’ to both (i) and (ii): they hold that as time passes, many things- such as cats, cars, trees

and stars- both begin and cease to exist. Therefore most presentists appear to be committed to the thesis of *transientism*, according to which sometimes, something begins to exist and sometimes, something ceases to exist:

TRANSIENTISM: Sometimes, something begins to exist and sometimes, something ceases to exist

FORMALLY:  $\mathbf{S}(\exists x \mathbf{P} \neg \exists y y=x) \ \& \ \mathbf{S}(\exists x \mathbf{F} \neg \exists y y=x)$

Most growing blockers, on the other hand, appear to answer ‘yes’ to (i) and ‘no’ to (ii): they hold that as time passes, many things- such as cats, cars, trees, and stars- begin to exist, but never cease to exist (once they begin to exist, they form an eternal part of the expanding block universe). Therefore most growing blockers appear to be committed to the thesis of *pastism*, according to which sometimes, something begins to exist but nothing ever ceases to exist:

PASTISM: Sometimes, something begins to exist and nothing ever ceases to exist

FORMALLY:  $\mathbf{S}(\exists x \mathbf{P} \neg \exists y y=x) \ \& \ \mathbf{A}(\neg \exists x \mathbf{F} \neg \exists y y=x)$

Pastists hold that the sum total of what exists increases, but never decreases, over time. It follows that given pastism, if it was the case that something is a dinosaur roar (for example) there is something that was a dinosaur roar. More generally, pastism implies that for any monadic property  $F$ , if it was the case that something is  $F$  then there is something that was  $F$ . However, pastism is silent about whether things that were  $F$ s are  $F$ s or *former*  $F$ s (i.e. things that are not  $F$ s, but were). Therefore pastism does not imply that there are dinosaur roars, but only that there are things that *were* dinosaur roars. Similarly, even though pastism implies that Napoleon exists (given certain uncontroversial assumptions concerning identity over time), it does not imply that Napoleon is French, or short, or composed of atoms and

molecules; only that he *was* all of these things.

Finally, most moving spotlights answer ‘no’ to both (i) and (ii): they hold that existence has neither a beginning nor an end, and therefore the ontological facts are fixed for all time.<sup>30</sup> This is the thesis of permanentism, mentioned in §3 above:

PERMANENTISM: Always, everything always exists

FORMALLY:  $\mathbf{A}\forall x \mathbf{A}\exists y y=x$

Just as pastism implies that for any monadic property  $F$ , if it was the case that something is  $F$  then there is something that was  $F$ , permanentism implies that for any monadic property  $F$ , if it was or will be the case that something is  $F$  then there is something that was or will be  $F$ . However, like pastism, permanentism is silent on whether things that were  $F$ s are  $F$ s or former  $F$ s, and in addition is silent on whether things that will be  $F$ s are  $F$ s or *future*  $F$ s (i.e. things that will be  $F$ s but are not yet). Therefore permanentism does not imply that there are dinosaur roars or Mars bases, but only that there are things that *were* dinosaur roars and *will be* Mars bases. Similarly, although permanentism implies that my first granddaughter exists, it does not imply that she is a girl, or is sweet, or even composed of atoms and molecules; only that she *will be* all of these things.

Presentists, growing blockers and moving spotlights appear to provide distinct answers to the new questions described above. Indeed, transientism, pastism and permanentism can reasonably be considered *essential* components of presentism, the growing block theory and the moving spotlight theory respectively. I suggest, therefore, that each of the A-theories should be identified with the conjunction of the A-theory and the relevant answer to the new questions, as follows:

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<sup>30</sup> See, for example, Deasy (2014).

PRESENTISM: There is an absolute, objective present instant (THE A-THEORY) & sometimes, something begins to exist and sometimes, something ceases to exist (TRANSIENTISM)

THE GROWING BLOCK THEORY: There is an absolute, objective present instant (THE A-THEORY) & sometimes, something begins to exist and nothing ever ceases to exist (PASTISM)

THE MOVING SPOTLIGHT THEORY: There is an absolute, objective present instant (THE A-THEORY) & nothing ever begins to exist and nothing ever ceases to exist (PERMANENTISM)

Defining the A-theories this way carries a number of advantages. First, it makes it essential to the A-theories that they are A-theories. In particular, this means that presentism is inconsistent with the B-theory by definition, which seems correct.<sup>31</sup> Second, the theses of transientism, pastism and permanentism are clear and easily understood theses which can be straightforwardly expressed in standard temporal-logical terms. (Of course, it remains the case that presentism is defined in terms of the predicate ‘is present’, given that one of the conjuncts of the new definition of presentism is just the definition of the A-theory. However, as mentioned above in §3, there is no mystery concerning the meaning of the predicate ‘is present’ as it appears in the definition of the A-theory; for example, as we saw above, on one popular view according to which instants are propositions, it expresses the property of *being true*.) Third, given the new definitions each version of the A-theory is clearly inconsistent with the others. Finally, and perhaps most importantly, the question of which of transientism,

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<sup>31</sup> Note that transientism plausibly entails the A-theory. For if there is change over time in what there is, there are temporary ontological facts and therefore temporary propositions, and if there are temporary propositions there is an *accurate* instant (where an instant *t* is accurate iff for all propositions *P*, *P* is true at *t* iff *P* is true simpliciter; see Dorr, C. *Counterparts* (unpublished MS)). However, arguably, an instant *t* is accurate iff *t* is absolutely, objectively present.

pastism or permanentism is true given the A-theory- in other words, the question of whether existence in the broadest sense has a beginning and an end- is a substantive and interesting philosophical question.

Definitions of philosophical theories are seldom perfect, and in particular, there is almost always scope to object to what a given definition includes and rules out. Let us consider two such objections to the new definition of presentism.<sup>32</sup> First, notice that transientism is consistent with the view that exactly one thing begins and ceases to exist, while everything else exists eternally. Some might object that this view- even when combined with the A-theory- does not deserve the label ‘presentism’ (or at least, does not *automatically* deserve the label ‘presentism’). On the other hand, some might object that, rather than being consistent with certain non-presentist views, presentism as defined above is inconsistent with some putatively presentist views. For example, consider the thesis of *simplicity*:

SIMPLICITY: Always, everything is always mereologically simple

Some might argue that a view which combined simplicity with permanentism would count as a presentist theory. According to such a view, there are never any ordinary material objects such as cats, cars, trees, and stars, but there are permanent simple objects which are sometimes but not always arranged cat-, car-, tree-, and star-wise. A defender of this view might sound very like a presentist: she might say that ‘past things’ like Napoleon no longer exist, in the sense that there are no longer any simples arranged Napoleon-wise; and similarly for ‘future things’.

Objections such as the above do not pose a serious threat to the new definition of presentism. Indeed, some vulnerability to such objections is a sacrifice worth making for the gain in clarity afforded by the new definition. For example, consider the view described

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<sup>32</sup> Similar objections could be raised against the growing block theory. The new definition of the moving spotlight theory seems less open to such objections.

above that combines permanentism and simplicity. According to the new definition, this theory is not a presentist theory; that is clear. However, it is not clear that it *is* a presentist theory according to the traditional definition. If everything there ever was or will be exists now (given permanentism), is it true that there are no past and future things in the sense of the traditional definition? It is difficult to say without knowing what it is to be ‘present’ in the sense of the traditional definition. Thus the relative obscurity of the traditional definition even infects putative objections to the new definition. It is better for presentists to operate with the new definition and thereby know exactly which theories are and are not consistent with their own. Moreover, note that philosophical progress could still be made even if presentists were to withhold the title ‘presentism’ from the transientist A-theory. The central thesis of this paper is that A-theorists (including presentists) should abandon the traditional definitions of their theories in favour of the new definitions described above. However, the main reason for accepting this thesis is that the new definitions- unlike the traditional definitions- express clear, opposing, philosophically substantive theses that are worth debating. As long as presentists and other A-theorists put *these* theses at the heart of their theorising- even if they do not label them ‘presentism’, and so on- progress can be made in the philosophy of time.

### 5. *Actualism*

I have argued that presentists should abandon the traditional definition of their theory in favour of a definition in terms of transient existence. There is an analogous argument to the effect that *actualists* should abandon the traditional definition of their view in favour of a definition in terms of *contingent* existence. I briefly discuss that argument here.

Analogous to the temporal A-theory is the modal A-theory, according to which some possible world is absolutely, objectively actual:

MODAL A-THEORY: There is an absolute, objective possible world

Among modal A-theories, the best-known theory is *actualism*, traditionally defined as the thesis that necessarily, everything is actual:<sup>33</sup>

ACTUALISM (TRADITIONAL): Necessarily, everything is actual

FORMALLY:  $\Box \forall x \text{ Actual}(x)$

Given the analogy between time and modality, and in particular the strong analogy between presentism and actualism, most of the arguments described above in favour of redefining presentism have straightforward modal analogues. It follows that there is a strong case to be made that the traditional definition of actualism is obscure. In other words, given the analogy between time and modality, the following argument looks sound:

- (1) The traditional definition of presentism is obscure  $\supset$  the traditional definition of actualism is obscure
- (2) The traditional definition of presentism is obscure
- (3) The traditional definition of actualism is obscure

It follows that actualists have a good reason to reject the traditional definition of their theory.

As everyone knows, one person's modus ponens is another person's modus tollens. Therefore it is likely that some readers will be tempted to argue against the central thesis of this paper by accepting premise (1) of the above argument and denying the consequent. The problem with this response is that it must be combined with a plausible interpretation of the predicate 'is actual' as it appears in the traditional definition of actualism. However, given the analogy between time and modality, the argument of this paper seems to show that there is no such interpretation to be had. Therefore this response seems doomed to failure. Of course,

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<sup>33</sup> Actualists include Adams (1974), Plantinga (1976) and Fine (2005).

one could argue that there is a plausible interpretation of actualism which has no temporal analogue. However, in that case it would be hard to accept premise (1) above, which derives its plausibility from the analogy between time and modality. Why think that the traditional definition of actualism succeeds only if the traditional definition of presentism succeeds unless the temporal and modal cases are analogous?

Actualists are in the same position as presentists (and other A-theorists): it is hard to provide a substantive, interesting, uncontroversial interpretation of the traditional definition of actualism. However, that does not mean that actualists are out of a job. Actualists should abandon the debate concerning whether necessarily, everything is actual, and instead concentrate on defending the conjunction of the modal A-theory and the modal-ontological thesis of *contingentism*, according to which there could be something that could have failed to exist.<sup>34</sup>

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

FORMALLY: Possibly, there is something that possibly doesn't exist

Most actualists appear to be contingentists: in particular, most actualists appear to hold that many ordinary material objects such as cats, cars, trees and stars could have failed to exist. Moreover, contingentism is a substantive philosophical thesis that can be clearly and unambiguously stated in standard temporal-logical terms. These features make contingentism an ideal thesis for actualists to defend. Just as presentists should redefine their view as the conjunction of transientism and the temporal A-theory, actualists should redefine their view as the conjunction of contingentism and the modal A-theory.

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<sup>34</sup> See Williamson (2010) on contingentism and the negation of contingentism, *necessitism* (the thesis that necessarily, everything is necessarily something). Williamson (2013) makes the case against contingentism and for what we might call 'the modal spotlight theory': that is, the conjunction of necessitism and the modal A-theory.

## 6. Conclusion

There are good reasons to abandon the traditional definitions of the A-theories in favour of the new definitions described in §4 above. In particular, it is very difficult to provide a plausible interpretation of the traditional definition of presentism. Given how the traditional definitions of the A-theories are interrelated, this problem infects all the traditional definitions of the A-theories. On the other hand, the new definitions are clear and easily stated, and provide opposing answers to a substantive philosophical question, namely, whether existence has a beginning and an end. This is the question that should be at the heart of the debate between A-theorists of time.<sup>35</sup>

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<sup>35</sup> Thank you to Earl Conee, Cian Dorr, Jonathan Erhardt, John Hawthorne, Timothy Williamson, Dean Zimmerman, two anonymous referees and audiences at the Universities of Manchester and Oxford for many useful comments and suggestions.

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