UNIVERSITY OF CALIFORNIA

Los Angeles

Being and Time:

The Metaphysics of Past and Future

in a Dynamic World

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Philosophy

by

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2005

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2005

Dedication

I dedicate this dissertation to my father, and to my mother, and—even though she wants no part of it—to my wife, Natasha.

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Acknowledgements

First thanks go to Calvin Normore, my committee chair—and, by popular consensus (I only report what others tell me)—the biggest sweetheart in the philosophical world, who nursed this project, in his own inimitable way, from its infancy to its current state.

Second, to David Kaplan both for his insights into the issues I discuss—most of which, I worry, failed to make it into the present draft (but it is just a draft)—and, just as importantly, for the times when, seeing that I was completely derailed, he managed—in his own, inimitable way—to put me back on track.

Several years ago, Ben Caplan, then a fellow graduate student at UCLA, was not a presentist, despite my best efforts to convince him that he ought to be. He then spent a semester at Princeton, and returned a convert. I wish I had been the one to convert him. I have benefited immensely from our ongoing discussion about the issues discussed in this dissertation. At this point, I cannot fully abstract his insights and contributions from my own, and so I ask him to forgive me any failures to specifically attribute what is his to him. We have collaborated on a paper, still a work in progress, entitled "The Way Things Were," in which we discuss the Truthmaker Problem at greater length and with greater care than I do here (in Chapters 1 and 4). The dissertation would probably have benefited had there been greater overlap between that paper and what I say about the issue here.

Thanks also to Joseph Almog, Josh Blander, Jon Garthoff, Andrew Hsu, Joe Hwang, Sean Kelsey, Michael Nelson, Terry Parsons, Philippe Schlenker, Chris Smeenk, Sheldon Smith, Dawn Starr, and Luca Struble, for useful advice and criticism.

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ABSTRACT OF THE DISSERTATION

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Doctor of Philosophy in Philosophy

University of California, Los Angeles, 2005

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This dissertation concerns the consequences of supposing that the world is dynamic or "tensed", that is, the consequences of supposing that the most fundamental metaphysical facts—facts about what there is, and what properties and relations things instantiate—are subject to change. This assumption, I argue, generates a difficult but compelling conception of the past and future: the past once was, but is no longer, real; the future will be, but is not yet, real. This, in turn, leads to a limited argument for presentism, the view that only the present is real, as being the only dynamic conception of the world that does not have a redundant conception of past and future.

The conceptual core of the dissertation appears in Chapter 2, where it is argued that, given a dynamic world, we are committed to saying things about the past and future which cannot be captured in terms of how things are: not in terms of what exists; not in terms of what properties or relations things instantiate; and not in terms of any brute "tensed" facts about the current state of the world.

The remainder of the dissertation considers two ways we might complicate our understanding of ontology and ideology in light of this commitment. According to the first, which I reject, the commitment requires that we relativize our most fundamental ontological and ideological concepts, so that ontology concerns not what exists, full stop, but what exists *as of* a time, and ideology concerns not how things are, full stop, but how they are *as of* a time.

According to the second, which I endorse, the commitment requires that we come to grips with absolute ontological and ideological concepts whose extensions are, nevertheless, subject to change. I suggest that, against this background, an appeal to primitive tense operators is attractive, and the resulting view does not fall prey to some of the standard objections to such an appeal.

Chapter 1

Two Approaches to Presentism

I'm a presentist: I believe that only the present is real. But I'm not a presentist because I have a desire to make do with less: I'm not especially drawn to desert landscapes. I'm a presentist because I think presentism is a consequence of a compelling account of the past and future.

That might sound odd: how can a presentist, who holds that neither past nor future are real—who holds, one might say, that there's no such thing as past or future—even begin to provide an account of the past and future, let alone a compelling one? Presentists like to say that their view is compelling because it captures the idea that there is something special about the present. But a quick glance at the literature on the topic suggests that most presentists believe that the past and future are a serious problem for presentism, not a virtue (and, I should add, most anti-presentists agree).[1] In short, presentists seem to run into trouble when, having elevated the present by throwing out the past and future, they then return to consider what they should say about the past and future, and find themselves a bit strapped for resources.

[1] For presentists who fit this description, see Bigelow 1996, Keller 2004, Markosian 2004, Crisp 2003, Davidson 2003.

The Way of Doing Without

The most common response to this puzzle is to try to find a way to make do without the past or future.[2]

For example, one standard worry is that, given presentism, any apparent reference to past and future things will have to be eliminated or explained away. After all, you can hardly go around referring to past or future things if it is your stated view that there are no such things, since if there are no such things, then, *a fortiori*, there are no such things to refer to.

Presentists rise to the challenge, showing us how, by means of various tricks, we can do without genuine reference to past or future things. All these tricks share a common punch-line: a sentence involving a name for a past or future thing—e.g., Socrates—turns out, upon analysis, to be used to communicate something about some presently existing surrogates or stand-ins for the past or future thing itself.[3] For example, one proposal that seems to enjoy some popularity is that sentences that contain the name 'Socrates' are used to communicate something about the presently existing but

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[2] Presentists who are clearly engaged in this sort of project include: Bigelow 1996, Crisp 2003, Davidson 2003, Keller 2004, and Markosian 2004. Hinchliff 1988, 1996 and Frances 2005 are two presentists who clearly reject this sort of project.

[3] These "analyses" can take significantly different forms, but the differences are not significant for our purposes. Still, my phrasing here is calculated to cover two rather different proposals, so perhaps I should say something about the hedge. According to the first proposal, sentences that appear to express singular propositions about past or future things (e.g., 'Socrates was ugly') are shown, upon analysis, to actually express propositions about present things. According to the second, because the name 'Socrates' lacks a referent, and so is an "empty" name, sentences containing 'Socrates' fail to express any proposition at all, or, at best, express a "gappy" proposition—that is, a proposition that contains a gap where it ought to contain a constituent. Even so, some say, the sentence can be used by speakers to convey information—information about presently existing things—even if that information is not part of the proposition expressed by the sentence.

uninstantiated individual essence *being Socrates*.[4] Another is that they are used to communicate something about the name 'Socrates' itself.[5] Yet another is that they are used to communicate general facts—*present* general facts, of course—about the world as a whole.[6] However one works out the details, the aim is the same: to recast apparent reference to a past or future thing in terms that only refer to presently existing things, and so avoid the embarrassment of referring to things which, on one's view, don't exist.

As with reference, so with truth: if you are a presentist, then it seems that propositions that appear to make claims about the past or the future—claims, for example, about what the weather was like yesterday or will be like tomorrow—must be grounded in present facts. After all, as a presentist, one is committed to saying that there are no past or future facts or states of affairs: the only properties things have are the properties they presently have and the only relations they bear are relations they presently bear. But if one's view is that there are no past or future states of affairs, one can hardly go around supposing that there are propositions whose truth is grounded in such states of affairs—that is, grounded in *nothing*.

Once again, presentists rise to the challenge, and provide novel ways to do without—novel ways, that is, to ground claims about the past and future in the present. The most obvious and least satisfactory position along these lines attempts to ground these truths in presently existing causal traces and trends. Geach, for example, says that

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[4] For discussion of this proposal, see Michael Rea 2003: 264ff; Keller 2004: 96ff.

[5] Markosian 2004: 68ff.

[6] Bigelow 1996.

when I say today that Jones will be hanged tomorrow, I am making a claim whose truth depends on the present existence of a process or trend that is, as of now, heading toward that end.[7] Supposing Jones is in jail, has been sentenced to hang, has exhausted his appeals, and that the date of execution has been set for tomorrow morning—supposing, in other words, that there is a presently existing process in motion, which is heading toward the result that Jones is hanged tomorrow, and that there isn't anything around that is obviously going to interfere with the culmination of that process—what I say is true.

Even so, Geach wants to allow that it may happen that something unexpected does interfere after all: the rope, for example, may unexpectedly snap, sparing Jones from being hanged. Even if, in the event, that is what actually occurs, Geach will insist that what I said the day before was true when I said it, because, when I said it, I was not making a claim about what, in the event, would actually occur, but a claim about what, as of that time, was going to occur. It was a claim about where things were headed at the time, and not a claim about where things would, in the event, actually end up.[8]

In a similar spirit, some have suggested that claims about the past should be understood as claims about presently existing causal traces of past events, or, sometimes,

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[7] Geach 1977.

[8] Geach systematically conflates claims about what *will* happen with claims about what *is going to* happen (the conflation is most natural in the past tense, so that what *would* happen is treated as equivalent to what *was going to* happen). While it is possible to hear these as equivalent, the latter form of words, which treats the future in terms of the present progressive, is suggestive of his view. The sentence 'I am going to the store, but I will never make it there' seems to describe a consistent situation, one which will come about if, for example, I am hit by a bus before I make it to the store. The sentence 'I will make it to the store, but I will never make it there', on the other hand, is not consistent.

more specifically as claims about presently existing memories of past events.[9] Such views are often, but not always, motivated by a verificationist theory of meaning: a claim about the past, the thought goes, is only meaningful if it is interpreted as being in some way about presently discoverable evidence pro or con. Again, this leads to some odd results: "if only I could wipe out all traces of my arch-nemesis," our villain thinks to himself, "I could succeed in making it the case that he never existed."

A natural reaction to Geach's proposal regarding claims about the future is something like this: sure, one thing I might do is make a claim about where things are heading as of now, claims whose truth does not depend upon how things actually turn out. But I *also* can, if I wish, make a claim about how things *will* actually turn out—the claim, for example, that Jones *will* be hanged, as opposed to the claim that, as things now stand, Jones *is going to* be hanged. The truth or falsity of such a claim doesn't depend on the present existence or not of a trend heading toward that end; it simply depends on what in fact, when the time comes, actually occurs.

Likewise, a natural reaction to the corresponding proposal about the past is that, while it may be true that we sometimes make claims about the present evidence—e.g., when we say that there are fossils that suggest the past existence of dinosaurs—we also make claims directly about how things were, claims whose truth does not depend on the present existence of evidence—e.g., when we way that there were dinosaurs, and that,

[9] See for example Lukasiewicz 1967, Dummett 1969.

even if, by means of some massive disaster, all causal traces of dinosaurs were wiped away, that would not make it the case that there never had been dinosaurs.

So the problem with causal traces and present trends, as potential truth grounds for claims about the past and future, is their failure to accurately and completely reflect what actually did or will happen. An event, after all, may leave no causal traces, or whatever causal traces it may initially leave behind may, over time, be washed out and lost. Likewise, things may happen that are not reflected by where presently existing trends are presently headed.

One way to avoid this problem is to beef up one's theory of causation, by appealing to deterministic laws of nature whose determinism is strong enough that they, together with the present state of the world, uniquely determine a unique history and future for the world.

Another way to avoid this problem is to shift the present grounds from relatively familiar items, like causal traces and trends, to more exotic items, like presently existing "tensed" facts or presently instantiated "tensed" properties. So what makes it now true that, for example, Jones will be hanged, is the fact that Jones currently bears the property *being such that he will be hanged*. Assuming that there are such properties, and that the present instantiation of such properties is systematically correlated with what actually happened or will happen, we appear to have presently existing materials adequate to ground the truth of our claims about the past and future.

As in the case of reference, the point I want to emphasize here is that, however one works out the details, the aim of all of these proposals is the same: to recast claims

that appear to be grounded in past or future events or states of affairs in terms that only refer to presently existing things, events, and states of affairs, and so avoid the embarrassment of making claims whose truth is grounded in events or states of affairs which, on one's view, don't exist.

And as with truth and reference, so with every other phenomena that seems to require appeal to past or future things or states of affairs: in every case, the apparent appeal to past or future things or states of affairs is eliminated and replaced by appeal to something present. The moral, then, seems to be this: if you want to be a presentist, you are going to have to find some way to do without past or future, some way to make do with what you've got.

There is another motivation for approaching presentism in this way, as a way of making do without. The debate between presentists and eternalists is often approached by way of an analogy to the debate in the metaphysics of modality between actualists and possibilists. Just as presentists hold that only the present is real, so actualists hold that only the actual is real: the only things that exist are actual things, and the only properties or relations things instantiate are those properties or relations they actually instantiate. By contrast, possibilists hold that the actual world is just one among many possible worlds, all of which exist, in the same way that eternalists hold that the present time is just one among many times, all of which exist.

In light of this analogy, one path to presentism is by way of actualism: someone impressed by the virtues of actualism, or someone who had come to believe that possibilism is a crazy metaphysical view, might feel, in light of the analogy between that

debate and the debate between presentists and eternalists, that they ought to be presentists, either because the analogy suggests that the virtues of actualism should carry over to presentism, or because it suggests that the craziness of possibilism should carry over to eternalism.

One who approaches presentism from this direction will see the problems concerning past and future that face the presentist in light of what they know about the analogous problem that faces the actualist in accounting for the merely possible. In the case of actualism, the most common solution to this problem has been to find some way to construct "possible worlds" out of actually existing materials—so that, for example, a "possible world" may be taken to be some sort of actually existing abstract structure, representing or reflecting some consistent recombination of actual things, given their actual properties, powers, dispositions, and natures.[10]

In the modal case, there is a fair bit of intuitive plausibility behind this move, whatever one may think of its ultimate merits. First, there is something intuitive to the idea that modal facts should be somehow tied to actual facts, that they should not be allowed to swing entirely free from how things actually are. Second, the recombinatorial idea—the idea that modality has something to do with other ways things could have been arranged or combined, and that any such recombination is a way things could have been—has some grip on our ordinary ways of thinking about modality.[11]

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[10] For one standard actualist view of this sort, see Plantinga 1974.

[11] This isn't to say that there aren't problems—e.g., the well-known problem of accounting for the apparent truth that there could have been things other than those things that actually exist, a possibility which appears to require more than the mere recombination of actually existing things.

But it is hard to see the intuitive plausibility of making the move in the temporal case. There is no immediately obvious reason to believe that facts about how things were or will be should be somehow tied to facts about how things presently are. We tend to think that the past and future can, at least to some significant degree, "swing free" from the present. For example, it is natural to suppose that there are several possible futures, each consistent with how things presently are. Moreover, there is no obvious analogue to the recombinatorial idea: although we *might* be tempted by a picture according to which the same basic atoms always exist, and change simply consists in their constant recombination, there is no temptation to suppose that each possible recombination is a way things were or will be.

Nevertheless, if one comes to presentism as an actualist who seeks to make do without the possible, one will be tempted to become a presentist who seeks to make do without the past or future, and so one will be led to look for a way of building other "times" out of presently existing materials, in just the way that many actualists attempt to build other "worlds" out of actually existing materials.[12]

But none of this is promising. If presentism requires the renunciation of the past and future, the recasting of past and future as aspects of the present, then I'm out. I see nothing plausible or compelling to the idea that the name 'Socrates' refers not to a past man, but to some presently existing surrogate for a past man, nor to the idea that sentences involving 'Socrates' are used to make general claims about the world, rather

[12] For proposals of this sort, see Crisp (2003) and Davidson (2003).

than particular claims about the man. Nor do I see anything plausible or compelling to the idea that the truth of a proposition about last weekend's weather should be, in the final analysis, grounded in present traces (e.g., the snow on the ground today) or in facts about presently instantiated exotica like tensed properties (e.g., the fact that Columbus, Ohio instantiates the property *having been snowed upon*). Nor—as I've already mentioned—do I see anything plausible or compelling to the idea that, as presentists, we should treat the past and future as abstract constructions out of present things, on analogy with an actualist treatment of possible world as abstract constructions out of present things. The modal intuitions that get this actualist project off the ground are simply not there in the case of time.

It isn't that I find the details of the particular proposals implausible. It is that I find the whole project implausible. Building the past and future into the present (or, conversely, building them out of the present) seems to me to be a fundamentally misguided project.

A Compelling Intuition that Suggests Another Way

I started by saying that I am a presentist—which I am—but perhaps that's a red herring. As I said at the beginning, I am not a presentist because I have a desire to make do with less; I am a presentist because I think presentism is a consequence of a very compelling account of the past and future.

Consider in this light what Ted Sider, the contemporary arch-anti-presentist, describes as the "compelling intuition" behind presentism:

PPF: the present is; the past was, but is not; the future is not, but will be.[13]

Now, any account of time will save the truth of PPF. So, as is so often the case in metaphysics, the sentence by itself is not a sure guide to get you on to the compelling intuition that drives presentism.

What you need to understand is that the presentist takes PPF as a claim about fundamental ontology, a claim about what is, was, and will be, full stop; or, if you like, a claim about what is, was, and will be *real*:

PPF* (emphatic, presentist reading of PFF): the present is real; the past was real, but is not real; the future is not real, but will be real.

Taken this way, presentism is a consequence: if the past was but is not real, then it is not real; if the future will be but is not real, then it is not real.

As I said, any account of time will save the truth of PPF. On a standard non-presentist interpretation of PPF, the sentence bears no heavy ontological weight. First, on a standard non-presentist interpretation, the verbal tenses—'was', 'is', and 'will be'—are taken to indicate, for a contextually given time of evaluation *t*, the relations of earlier, simultaneous with, and later than *t*. So, supposing *t* is the contextually given time, PPF expresses something like this:

[13] Sider 2001: 11.

PPF† (partially deflated, non-presentist reading of PPF): The present is simultaneous with *t*; the past is earlier than but not simultaneous with, *t*; the future is later than, but is not simultaneous with, *t*.

Moreover, the noun phrases 'the present', 'the past', and 'the future' are taken to designate, relative to our time of evaluation *t*, that which is earlier than, simultaneous with, or later than *t*, respectively. So what is being said is something like:

PPF†† (fully deflated, non-presentist reading of PPF): That which is simultaneous with *t* is simultaneous with *t*; that which is earlier than *t* is earlier than but not simultaneous with *t*; that which is later than *t* is later than but not simultaneous with *t*.

PPF†† is simply a claim about the relative temporal locations of various things. It does not entail presentism. It is quite consistent with the view that all times, past, present, or future, are real.

Here then is an open question: which of these two ways of understanding PPF captures what an ordinary speaker means by uttering that form of words? This is an important question, but it is not a question I want to take up. Sider says that PPF captures the "compelling intuition" behind presentism. I don't think the compelling intuition is an intuition to the effect that PPF, when uttered by the man on the street, expresses a truth, whatever, upon analysis, that truth may turn out to be. And I don't think that's the intuition that Sider finds compelling either. I take it instead that the

compelling intuition is captured by PPF*: the past was real, but it isn't any more; the future will be real, but it isn't yet; only the present is real.

To say that this intuition is compelling is not to say that it is obviously true: it is just to say that it has a strong pull on our imagination. And perhaps I should confine myself to saying that it has a strong pull on *my* imagination. I think what we have here is an extremely natural way to think about the distinction between past, present and future.

Notice that PPF* is not *just* the claim that the past and future are not real: that is *part* of what is being claimed, but the claim is more complicated than that. PPF* also says that the past *was* real and the future *will be* real. In this way PPF* takes us beyond the standard definition of presentism. Presentism, as standardly defined, is the view that only the present is real. This provides us, at best, with some negative information about the past and future: if only the present is real, we can infer that neither past nor future are real.

PPF*, by contrast, tells us something positive about the past and future: the past, is not real, *but it was*; the future is not real, *but it will be*. This is tricky. On the one hand, PPF* seems to be saying that the past and future have no ontological status at all: neither is real, full stop. On the other hand, PPF* appears to tell us something positive about the past and future. To be past is not merely not to be: it is not to be *but* also once have been. Likewise to be future is not merely not to be: a future thing is something that is not *but* will be. The challenge is to do justice to both sides of these characterizations: to retain the full force of the 'not's—the claims that neither past nor future exist—while at the same

time doing justice to the 'but's—the claims that the past and future, though they don't exist, did and will, respectively.

But the challenge is worth taking on, since it is PPF*, not presentism by itself, that is intuitively compelling. If we divorce presentism from PPF*—if we try to be presentists while saying nothing positive about the past and future—I just don't see any reason to be attracted to the view.

With this in mind, we can make a first stab at what goes wrong when presentists try to make do without the past and future. Such views, in trying to do justice to the 'not's—in trying to do justice, that is, to the claim that neither past nor future exist—fail to do justice to the 'but's, because they reduce the once existing past, or the not yet existing future, to existing aspects of the present.

If instead we take PPF* seriously, and try to do justice to both the 'not's and the 'but's, what is suggested is not an impoverished, reductive, metaphysics of the past and future, but a rich and challenging metaphysics of the past and future. Put most broadly, the aim of this dissertation is to develop that metaphysics.

Dynamic and Static; Tensed and Tenseless

To say that the world is *dynamic* is to say that (at least some) things change in a metaphysically fundamental way. To say, instead, that the world is *static* is to say that, while things may, in some sense, be said to change, change is not metaphysically

fundamental: it is, in short, a phenomenon that can be analyzed in terms of an underlying metaphysics that does not change.[14]

A static theorist says that the most fundamental metaphysical facts are fixed, timeless, tenseless. To say that there is change in the world, they say, is to say something about the fixed, timeless, tenseless, structure of this fixed, timeless, tenseless reality, say, that there are certain things with certain properties in certain places in the structure, and other things with other properties other, suitably related places in the structure. For a dynamic theorist, on the other hand, change infects the most fundamental facts, so that even at the most fundamental level, reality is not fixed, timeless, or tenseless, but is variable, temporal, tensed.

The idea that the world is dynamic is associated with the idea that time flows, that the world is in flux, that reality is fleeting. It is also associated with the view that the future is an empty vessel, waiting to be filled, as reality unfolds. The idea that the world is static is associated with the idea that the world is a single, four-dimensional block; that time is just one of the four dimensions of this block; that the bedrock of reality is fixed and immutable; that the apparent passage or flow of time is a feature of our experience of time, not a feature of the world itself.

Let me say upfront that the term "static" here may be misleading: indeed, most static theorists resent being so-called. This is because static theorists need not—and typically do not—suppose that there is no change in the world. The point at issue does

[14] I take these labels from McCall 1976, 1994, and Tooley 1997.

not concern whether or not there is change; what is at issue is instead is a nest of issues concerning how to understand change, and how to correlate issues of change with issues of fundamental metaphysics.

For contemporary philosophers, the distinction between dynamic and static conceptions of the world is perhaps more familiar when described as a distinction between a *tensed* or *A-theory* conception of reality and a *tenseless* or *B-theory* conception of reality.[15] This use of 'tensed' and 'tenseless' is dangerous: these labels frequently mean quite different things in different metaphysical contexts.

In this context, when the distinction is characterized in terms of tense, the route to the fundamental issue concerning the status of change begins first with a distinction between tensed and tenseless sentences. You might assume, from the labels, that this is a distinction between sentences that possess a grammatical tense or tense marker and those that do not. But that would be a mistake. The distinction instead is borrowed from tense logic: it is, at least in the first instance, the distinction between a sentence whose truth-value can vary with time, and one whose truth-value cannot.[16] Perhaps all such sentences possess some sort of grammatical tense or tense marker; perhaps not: that is a further issue.

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[15] The labels 'A-theory' and 'B-theory' derive, of course, from McTaggart 1908 and 1927. I mention them here for the benefit of those to whom they are familiar; they are not labels I will myself use.

[16] See, for example, Prior 1968, 78:

> For some years now a number of us have been working on what is called 'tense logic', in which an attempt is made to give something of the rigour of modern logical systems to a language whose sentences resemble those of natural languages in being, in some cases at least, true at one time and false at another.

Consider the sentence:

(S1) Bill Clinton is President.

The truth value of (S1) appears to vary with time. If I had uttered (S1) in 1994, I would have said something true; if I utter (S1) today, I say something false. Contrast this with:

(S2) Bill Clinton is President in 1994.

It seems plausible to say that (S2) was true in 1994, and remains true today. In fact, it seems plausible to suppose that (S2) is true no matter when uttered.[17] (S2) seems to have this in common with (S3):

(S3) 2 + 2 is 4.

[17] I say that this seems plausible, but I have to admit that my tutored (prejudiced?) ear finds it implausible. The truth about Clinton's Presidency, circa 1994, is this:

(S2*) Bill Clinton *was* President in 1994.

What I am stumbling over, of course, is the grammatical tense of the verb 'to be' in (S2). Given the use of the present tense 'is', (S2) sounds to me like a claim about what Bill Clinton is like right now, in 1994, which is problematic, given that it is not now 1994. In other words, (S2) appears, to my ear, to contain contradictory temporal modifiers.

The standard response to this worry is to say that it depends on what the meaning of 'is' is: proponents of the "tenseless" reading of (S2) claim that the occurrence of 'is', though grammatically in the present tense, should be understood as indicating a mere copulative tie, and that copulative ties are temporally neutral. But this response makes a substantive assumption, which I would be inclined to reject: the assumption that the mere copulative tie is itself temporally neutral.

(S3), like (S2), is true whenever it is uttered. A sentence like (S1), whose truth-value varies with time, is called a "tensed" sentence by the tradition. Sentences like (S2) and (S3), whose truth-values do not vary with time, are said to be "tenseless".

A "tenser"—that is, one who holds that reality is "tensed"—will say that a tensed sentence, like (S1), expresses the same proposition, (P1), whenever it is uttered.[18] (S1) was true and is now false because (P1) was true and is now false. As the point is often put, according to a tensed view of reality, a tensed sentence expresses a "tensed" proposition, that is, a proposition whose truth-value varies with time. The tensed proposition, (P1), in turn, was true and is now false because (P1) makes a claim about how the world is—in particular, about how Bill is—and the facts about Bill have changed: Bill once instantiated the property *being President*, but he no longer does. In other words, on a tensed view of reality, reality changes over time: (P1) is true when it is the case that Clinton instantiates the property *being President*, and false when he does not. And so we can, if we want, talk about "tensed" facts too, understanding them to be facts—like the fact that Clinton is President—which are subject to change.

A "detenser"—that is, one who holds that reality is fundamentally "tenseless"—will say instead that a tensed sentence, like (S1), expresses different propositions when evaluated relative to different times. Evaluated relative to 1994, (S1) expresses the true proposition that Bill Clinton is President in 1994. Evaluated relative to 2005, (S1) expresses the false proposition that Clinton is President in 2005. These are two different

[18] The tenser/detenser labels are originally due to Massey 1969.

propositions, one true, the other false. Neither proposition ever changes its truth-value, so we can call them "tenseless" propositions. Nor need we posit, in order to explain these two different truth-values, any underlying changing facts—that is, we need not posit any "tensed" facts of the sort posited by the tenser. It is a fact that Clinton is President in 1994, which fact makes the proposition that Clinton is President in 1994 true. It is also a fact that Clinton is not President in 2005, which fact makes the proposition that Clinton is President in 2005 false. These facts are immutable. They are, we can say, "tenseless" facts. For the detenser, all facts are immutable, "tenseless", facts, in this sense.

Fundamental Facts: Ontology and Ideology

As we have seen, the distinction between those who hold a "tensed" conception of reality and those who hold a "tenseless" conception appears, at bottom, to be a distinction between those who hold that the fundamental facts are themselves subject to change, and those who hold that the fundamental facts are not subject to change. So the distinction is, at bottom, the distinction between dynamic and static conceptions of reality.

But what is meant here by 'fundamental fact'? In metaphysics, 'fact' can be a slippery word, and perhaps especially so in the metaphysics of time. But it seems natural to me to suppose that 'fundamental fact' is being used here to cover two sorts of possible change: *ontological* change—change concerning *what* there is—and *ideological* change—change concerning *how* things are.

To say that there is ontological change is to say that *what exists* is a matter that is subject to change, so that the ontology of the world—the sum total of what exists—

varies over time. One has this view if one thinks that Socrates, say, once was a member of the ontology, but is no more. We might say that a world that is subject to ontological change has a dynamic ontology.

The alternative is to suppose that ontology is static, that *what exists*—at least in the sense here at issue, the sense relevant to ontology and fundamental metaphysics—does not vary over time. This characterization covers two rather different conceptions of ontology and existence. On the one hand, one might have the view that anything that ever exists *always* exists, that is, the view that existence is permanent. On the other hand, one might have the view that ontology is fundamentally atemporal: it is one thing to exist, and another to be located at some times but not at others.

Ontology concerns what exists; ideology concerns what properties and relations things instantiate. Hence to suppose that there is ideological change is to suppose that what properties and relations things instantiate is a matter that is subject to change. If one thinks, for example, that Bill Clinton once instantiated the property *being President*, but no longer does, then one is endorsing a dynamic conception of property instantiation.

The alternative is to suppose that property instantiation is not subject to change, either because anything that ever instantiates a property *always* instantiates that property (instantiation is permanent: I suppose Parmenides had a view that *might* be described this way), or because instantiation, in the relevant sense, is atemporal or "tenseless", a view that can be maintained if you think, for example, that all temporary properties—like *being*

President—are really disguised relations to times, so that Clinton (timelessly) instantiates the property *being President in 1994*.[19]

These, then, are the two ways in which the world might be dynamic—two ways in which there might be fundamental metaphysical change: change with respect to what exists, or change with respect to what properties and relations things instantiate.

A Budget of Dynamic and Static Theories

In this section, I describe three theories according to which the world is dynamic—Presentism, the Growing Block Theory, and the Moving Now Theory—and one theory according to which the world is static.

Presentism, as I've said, is the view that only the present is real: only presently existing things exist; the only properties and relations things instantiate are properties and relations they presently instantiate. Now I suppose one could be a static presentist: that would be a radical view—maybe Parmenides should be described as having it; I don't know. But most presentists will want to admit that other things once existed or will exist, and that things that now exist—like Clinton—once instantiated properties they don't instantiate right now, and will instantiate properties they don't instantiate right now.

But presentism can seem stifling—it doesn't give you much temporal space to work with. So some philosophers—most recently, Michael Tooley, and before him, C.D.

[19] This is just one of many ways one can understand the ascription of temporary properties given the view that instantiation is atemporal. The most prominent alternative is to suppose that it is not the persisting thing (Clinton) that instantiates the property *being President*, but (some of) his temporal parts that do so.

Broad—have wanted to say that the past and present are real, but the future is not.[20] On this sort of view—often called the *Growing Block Theory*—the world has the structure of a four-dimensional spacetime, but it is a four-dimensional spacetime that grows: as time passes, new things, and new states of affairs, come to be.[21]

To get a slightly more vivid picture, you could imagine that reality is like a stack of books that is getting ever higher because new books are constantly being added to the top. At any given moment, the topmost book in the stack corresponds to the present. The books further down in the stack once were at the top, but are no more: they have receded down into the pile, that is, they have become past.

The Growing Block Theory will typically allow for both ontological and ideological change. Where once upon a time, there was no such thing as Ronald Reagan, at some point, he came to be—and he will *be* for ever more, even as his *temporal location* recedes ever further into the past, further down in the block. Likewise, where once, Reagan existed but did not instantiate the property *being President in 1984*—back when he was just a second-rate actor—at some point, he came to instantiate that property, a property which he will instantiate forevermore.[22]

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[20] Tooley 1997; Broad 1923.

[21] As described, the Growing Block Theory, unlike Presentism, is, by definition, a dynamic theory. If we wanted definitional parity, we could begin instead by defining (Past+Present)ism as the view that only the past and present exist, and then distinguish the Growing Block Theory as a dynamic version of (Past+Present)ism.

[22] I can't resist mentioning Prior's (1959) famous argument for presentism in this context: only the presentist (and so not the Growing Block Theorist), he says, can capture the full force of the expression "Thank goodness that's *over*!"

One way to think of the Growing Block Theory is in terms of how it restricts ontological and ideological change. When it comes to ontological change, the theory allows that new things come to be, but not that old things cease to be. Ideological change is a bit more complicated. Certain properties and relations, like *being President in 1984*, share the same sort of restriction: Reagan can come to bear the property *being President in 1984*, but once he has the property, he can never lose it. But some relational properties—like the property of being present, that is, being at the top of the block—are both gained and lost.

A third dynamic theory worth considering is the *Moving Now Theory*. This theory is associated with—though not endorsed by—McTaggart, and it comes in a few different varieties. I here describe one simple version of the theory.

As the view is often presented—though this is not essential to it—the fundamental entities are events, and these events are ordered in a series from earlier to later. The events enjoy a static existence: no event ever comes to be or ceases to be. They also instantiate all of their *ordinary* properties and relations in a fixed or static way. So, for example, the event *the death of Louis XVI* instantiates properties and relations like *being a death* and *being an execution carried out by Sanson*, in a timeless and fixed way, as well as *earlier than* and *later than* relations like *being earlier than World War I*. The event never gains or loses any of these properties or relations.

But, over the top of this static base, the Moving Now Theory posits one property—the property *being present*—which is instantiated in a dynamic way.[23] This property—to invoke the metaphor—sweeps down the series of events, from earlier to later, so that each event instantiates *being present* in its turn. Hence the name of the theory.

These are, then, three examples of dynamic theories: theories according to which either what exists, or what properties and relations things instantiate, or both, are matters that are subject to change.[24]

Perhaps the easiest way to generate a static theory is to start with the Moving Now Theory and remove the property *being present*. Static theorists believe that we can account for all the phenomena we wish to account for—our experience of time, the metaphysics of ordinary change, our use of temporal language like *is, was,* and *will be*, and so forth—while only appealing to an underlying static reality: say, for example, a static sequence of events ordered from earlier to later. No need, they say, to posit anything like a moving now, or to make any other sort of absolute distinction, be it ontological or ideological, between past, present, and future.

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[23] I said I would describe one simple version of the theory. A variant introduces a family of dynamically instantiated properties: *being present*, together with *being past* and *being future*, each of which are held in various "degrees", depending on how much past or future a given event is. The supposed virtue of this variant is the ability to define the earlier to later then relation in terms of degrees of pastness and futurity.

[24] One other dynamic theory of note is defended by Storrs McCall (1976, 1994). According to McCall, the world has a tree-like structure: the trunk representing the past, the branches representing all possible futures. The present is the node at which the trees branch off from the trunk. As time passes, McCall says, future branches are sloughed off—that is, they cease to exist.

Overview

In the next chapter, I argue that if you hold that the world is dynamic, then you cannot make sense of the past and future solely in terms of what *is real*. You must also make appeal to what *was* real and what *will be* real. Hence the presentists I described at the beginning, who get caught up in this game of recasting the unreal past and future in present terms—that is, in terms of what is real—are making a fundamental mistake. Moreover, non-presentist dynamic theories are in some sense redundant, since they posit a real past and/or a real future, in addition to the no longer real past and not yet real future. So the chapter constitutes an argument for presentism—but not presentism taken as a way of doing without—as the only non-redundant dynamic theory.

The argument of Chapter 2, while establishing the need to go beyond what is presently real, is also intended to help build a sense of what it would mean to do so. One common suggestion is that doing so requires us to recognize the ultimate temporal relativity of ontology and ideology: the fundamental ontological question is not "what is there?" but "what is there *at t*?"; likewise, the fundamental ideological question is not "what properties and relations are instantiated?", but "what properties and relations are instantiated *at t*?" In Chapter 3 I argue that this suggestion is wrong. The usual argument against this approach begins from the assumption that ontology and ideology must be absolute, not relative. My criticism is instead that, by making ontology and ideology relative rather than absolute, this approach robs itself of the resources necessary to capture the idea that the world is dynamic.

Finally, in Chapter 4, I make some remarks about what I take to be the contours of a view that does allow us to go beyond what is presently real, and so capture the genuine, but no longer real, past, and the genuine, but not yet real, future. In particular, I consider the proposal that the proper way to express the sorts of claims we need to make in order to express a dynamic metaphysics involve primitive tense operators. I say a bit about why this proposal, unlike the relativizing proposal, seems to be on the right track. I also try to say something helpful by way of distinguishing *this* primitive understanding of tense operators with other ways one might try to understand primitive tense operators. I end with a few brief remarks on how, given this approach to the past and future, the problems mentioned at the beginning of this chapter—the problems that have pushed most presentists to try to find a way of doing without the past and future—appear to lose traction.

Chapter 2

Against the Way of Doing Without

The aim of this chapter is to establish that, if one accepts a dynamic conception of the world, then one is committed to making direct appeal not just to how things are, but also to how things once were and how things will be. This appeal must be direct in the sense that it cannot be reduced to or cashed out in terms of any appeal to how things are. One consequence of this is that the idea that we might find a way of doing without the past or future, given a dynamic world, is a non-starter. Another consequence of this is that non-presentist dynamic theories are redundant: presentism—but not presentism taken as a way doing without—is the only non-redundant dynamic theory.

I begin by discussing the Moving Now Theory. The Moving Now Theory provides a simple test case for my claim for two reasons. First, the view has a fixed and static ontology—the ontology of events—so we won't have to worry about any problems introduced by a dynamic ontology. Second, the view severely restricts the range of properties whose instantiation is dynamic. The fundamental dynamic property is *being present*. Other relations and relational properties—like *being earlier than that which bears the property being present*—are dynamic as well, but only insofar as that is a consequence of the movement of *being present*. So the theory allows us to focus only on dynamic property

instantiation, and, for that matter, on the dynamic instantiation of a single property, *being present*, and the consequences of allowing that property to be dynamically instantiated.

On the other hand, focusing on this one case can distort your sense of what is required of a dynamic theory. In particular, not every dynamic theory need posit *being present* as a fundamental property. On the Growing Block Theory, for example, it is natural to define *being present*: an event is present just in case it is later than all other events. Since future events don't exist, the latest event in the series just is the most recent event to come to be—i.e., the present event. Likewise, for a presentist, it is natural to say that to be present is not to bear a special property, but simply to be. So in our discussion of the Moving Now Theory, it is worth keeping in mind that the property *being present* serves as a representative dynamically instantiated property, but that this is a consequence of the special role *being present* plays in the Moving Now Theory, and does not indicate anything more broadly about the role of such a property in dynamic theories in general.

Snapshots

A useful heuristic device for thinking about dynamic views in general is what I'll call a "snapshot". A snapshot is intended to be a picture or diagram of "the sum total of reality," a diagram, in other words, which displays both the ontology and the ideology of the world.[25]

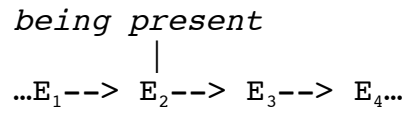
On a static theory, you'd get the same snapshot no matter *when* you took it, in much the same way that you'd get the same map of the United States no matter *where* you

[25] My "snapshots" are essentially the same as Storrs McCall's "universe-pictures" (1976: 340).

were when you drew it up. This is, of course, because on a static theory, neither ontology nor ideology vary with time.

But on a dynamic theory, you'll get a different snapshot depending on when you take it. For example, supposing that the Moving Now Theory is correct, if we take a snapshot *right now*, we will get something like this:

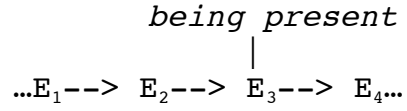
Figure 1. Snapshot 1: Moving Now Theory



In Snapshot 1, we see a series of events, E_1 through E_4. The arrows between them indicate the *earlier-to-later* relations that hold between them.[26] The little line indicates that E_2 instantiates the property *being present*.

But now suppose, having waited a moment, we take a second snapshot. We will get something like this:

Figure 2. Snapshot 2: Moving Now Theory



Because the property *being present* "sweeps" along the series of events, our new snapshot reflects this change. E_2 no longer instantiates the property *being present*. It has lost that property, and E_3 has come to have it instead.

[26] The snapshot suggests a discrete rather than continuous sequence of events, but nothing in what follows hinges on that.

If you think that Snapshots 1 and 2 are, somehow, just two different pictures of the same underlying reality, taken, say, from two different perspectives, you need to notice that, as representations of how things are, they contradict each other. According to Snapshot 1, E_2, but not E_3, has the property *being present*. According to Snapshot 2, E_3, but not E_2, has the property *being present*. So they can't both be right—at least, not together. But if the world is dynamic, then it can be the case that, first, one of them gets things right, but then things change, so that now, the second one gets things right. And this is precisely what happens, and what our two snapshots accurately reflect.

Two Accounts of the Past

Now, just looking at Snapshot 2, there is an obvious account to be given of what it is for an event to be past: an event is past just in case it bears the *earlier than* relation to some event which instantiates the property *being present*. So, in particular, given this account, E_2 is past, because it bears the *earlier than* relation to E_3, which instantiates the property *being present*.

This account of being past appeals only to what properties and relations things *currently* bear or instantiate: the instantiation of the *earlier than* relation between E_2 and E_3, together with the instantiation of *being present* by E_3.[27] Another way to put this is to say

[27] I will tend to use 'current' and 'present' differently. In a non-presentist dynamic world, it will usually be the case that there currently are more things than there presently are, because the present is thought of as being just one part of the current state of the world as represented by the current snapshot. In a presentist dynamic world—the kind of view I will ultimately advocate—this distinction between the current and the present collapses. But we need it when we consider dynamic theories in general.

that facts about what is past are, on this conception, captured entirely within the snapshot.

But there is also a second way of thinking about what it is to be past in this context: E_2 is past because it *once* instantiated the property *being present*. Notice that this way of thinking about what it is to be past is *not* captured entirely within one snapshot. It does not only appeal to the properties and relations things now instantiate—the properties and relations whose instantiation are captured in Snapshot 2, for example. It also appeals to facts about what properties things once instantiated, but no longer do. These are not facts that can simply be "read off" of one snapshot taken by itself. Instead, they seem to involve a comparison *between* snapshots, along with the fact that Snapshot 2 captures how things *are*, and Snapshot 1 captured how things *were*.

I've been invoking a distinction and attempting to speak in a fairly regimented way about that distinction. Let me make this explicit. The distinction is between what properties and relations *are* instantiated and what properties and relations *were* instantiated. For example, given that Snapshot 2 captures how things *are*, E_2 instantiates the relation *earlier than*, and E_3 instantiates the property *being present*. These are claims about what properties and relations *are* instantiated. On the other hand, given that Snapshot 1 captures how things *were*, E_2 *once* instantiat*ed* the property *being present*. That is a claim, not about what properties and relations *are* instantiated, but a claim to the effect that E_2 *once* instantiated a property.

It is natural to mark this distinction using verbal tense: the difference is between what a thing instantiates and what it instantiated. But that is a fairly subtle cue—too

subtle to track in the context of abstract metaphysical argument. So, to add emphasis, I'll mark the distinction as one between what E_2 *now* instantiates, and what E_2 *once* instantiat*ed,* or, equivalently, as one between *present* instantiation and *past* instantiation.

Given that distinction, the two ways of thinking about the past, given a Moving Now Theory, are:

> (The now-past) E_2 is past iff it *now* instantiates the *earlier than* relation to an event that *now* instantiates the property *being present*.

> (The once-present) E_2 is past iff it *once* instantiat*ed* the property *being present*.

This gives us two nice labels: the first conception of the past—the now-past—understands the past in terms of *present* instantiation: in terms of the properties and relations E_2 *now* instantiates. The second conception—the once-present—understands the past in terms of *past* instantiation, the properties and relations E_2 *once* instantiated.

In these terms, the point I wish to establish is this: if you want to capture the fact that the property *being present* is instantiated in a dynamic way—the fact that it moves down the series of events—you must understand the past in terms of the once-present. You cannot understand it only in terms of the now-past.

To test that claim out, imagine someone who says otherwise. Imagine, that is, someone who says that they are going to make do without the once-present, and confine themselves to talking about the now-past. This imagined character takes a position that is closely analogous to that of the presentist who tries to do without. The presentist who

does without hopes to account for the past solely in terms of present reality—solely, that is, in terms of what would be captured by the current snapshot of reality. So too, the Moving Now Theorist under consideration attempts to account for the past solely in terms of what is captured by the current snapshot of reality—solely, that is, in terms of current reality. The only difference between these two characters is that the Moving Now Theorist believes that there is more to current reality than the present.

To the Moving Now Theorist who says they are gong to make do without the once-present, I issue a series of challenges aimed at showing that they lack the resources to adequately express their view. In each case, the additional resource they need is the ability to appeal to the once-present. And so, I conclude, if you are going to be a Moving Now Theorist, you must give yourself the resources necessary to appeal to the once-present.

The Argument from Deviant Dynamic Structures

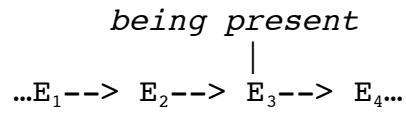
The first set of challenges involve what I will call *deviant dynamic structures*—in particular, dynamic structures in which the once-present and the now-past come apart. The Moving Now Theorist thinks that this can't happen: her view is that every event which is now-past was once-present. The challenge facing the Moving Now Theorist is to tell us what it is about her world that makes it different from the deviant structures. My claim is that she can only do so by appealing to the once-present.

I'll call the first deviant structure the skip-a-day structure. A world that has the skip-a-day structure looks just like the world described by the Moving Now Theory,

except that, at some point, the property *being present* skips over an event—say, E_2. Nevertheless, within the structure, E_2 instantiates the *earlier-than* relation to subsequent events, including whatever event instantiates *being present*. So it is now-past, but since it never instantiated the property *being present*, it is not once-present.

Assuming that E_2 is now-past, a snapshot of the skip-a-day world might look like this:

Figure 3. Snapshot 2: Skip-a-Day



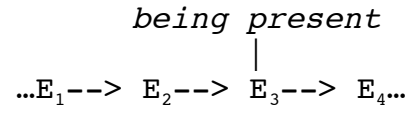
This snapshot looks exactly the same as Snapshot 2 of the Moving Now Theory. The difference between the normal case—the case in which E_2 is both now-past and once-present—and the deviant case—the case in which E_2 is now-past but was not once-present—is not a difference that shows up in the current snapshots. You cannot locate the difference by looking at the current snapshot of the Moving Now Theory's world, and contrasting that with the current snapshot of the Skip-a-Day structure. But the current snapshots capture everything about how things are. So the difference is not a difference in how things are. To capture this difference, one must go beyond claims about how things now are, and contrast how things *were* in the normal case with how things *were* in the deviant case.

A variation on the Skip-a-Day example can be generated if we imagine that the property *being present* begins its journey across the series of events at some arbitrary event—say, E_3--in the middle of the series, and sweeps on from there. To make this

vivid, imagine that God creates the entire series of events all at once, and then places the property *being present* at E_3, giving it nudge to get it started forward. All the events that are *earlier than* E_3 are past in the sense of the now-past, but not in the sense of the once-present. As we might put it, there is one sense in which "time" began at E_3: that sense tracks the facts about the once-present; and there is another sense in which time predates E_3: there are, after all, events which exist, and are earlier than E_3.

Here, then, is what the current snapshot of such a world might look like:

Figure 4: Snapshot, Skip-the-Beginning

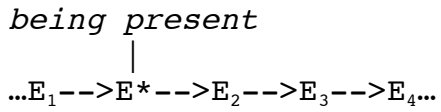


Again, the Moving Now Theorist doesn't think that this is how things actually work. But, once again, I don't see how the Moving Now Theorist can account for the difference between her view and the deviant view without appealing to facts about the once-present. The difference doesn't show up in the current snapshots.

A third example makes essentially the same point, but in a slightly different way. Imagine an event that was once-present but is not now-past: that is, an event that once instantiated the property *being present*, but does not now instantiate the *earlier than* relation to the present.

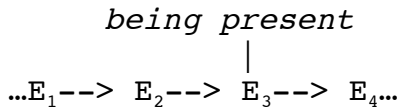
One way this could work is by simple attrition. Suppose that E* instantiates *being present*, and then ceases to instantiate *being present* as that property sweeps forward along the series of events. But suppose that at some later time, E* ceases to exist altogether—and so it just drops out of the series. So in our first snapshot, we get something like this:

Figure 5. Snapshot 1: Drop-a-Day



But in a later snapshot, we will get something like this:

Figure 6. Snapshot 2: Drop-a-Day



Again, I don't see anything about the mere idea of a dynamic structure that rules this sort of case out. Again, this is a sort of deviant behavior that the Moving Now Theory does not allow. Again, it is difficult to see how it can be ruled out without appealing to the once-present.

So there are three examples to think about. Here is a summary of the basic argument I intend to be making on the basis of these examples:

(1) The Moving Now Theorist must say how her view of the structure of the world differs from these deviant views.

(2) Nothing internal to the current snapshot serves to distinguish the Moving Now structure from the Skip-a-Day, Skip-the-Beginning, or Drop-a-Day structures.

(3) The now-past conception of the past is a conception of the past entirely in terms of what is internal to the current snapshot.

(4) So, in each case, the Moving Now Theorist must appeal to the once-present in order to explain the difference between her view and the view that the world has the skip-a-day, skip-the-beginning, or drop-a-day structure.

Someone who wished to avoid the consequence I am trying to draw must, as far as I can see, either deny (1) or (2).

By way of denying (1), some may say that, since the deviant dynamic structures I have described are metaphysically impossible, they can safely be ignored. But exactly what is it that makes them metaphysically impossible? It is not metaphysically impossible that things be as they are represented as being in, say, Snapshot 2 of the Drop-a-Day structure. That snapshot is exactly the same as the current snapshot of the Moving Now Theory (at least, it is if (2) is granted). Drop-a-Day is impossible (if it is impossible) because it allows that the world could be currently as it is represented in the current snapshot (Snapshot 2), without ever having been as it is represented in the past snapshot of the Moving Now Theory. That is, it allows that an event that once was present might now fail to be past.

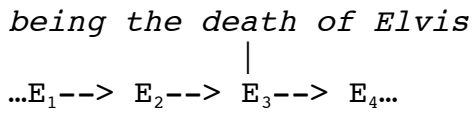
But the expression of this impossibility requires appeal to the once-present, so it is hard for me to see how one could appeal to *this* impossibility in order to rule out the need to worry about deviant dynamic structures of the sort I've described, so as thereby to avoid the need to appeal to the once-present.

The Argument from Isomorphic Static Structures

The structures described in the previous section were all examples of *deviant* dynamic structures. They are all fundamentally weird—hence the label. Arguments that proceed by way of weird examples can often seem suspicious, so it is worth noting that we can point to perfectly innocent structures to make much the same point. All we need are *static* structures that are isomorphic to the structure one finds in a single snapshot of the Moving Now Theory.

Such structures are not hard to find. Consider a static theorist who believes that there are events, and that they are ordered from earlier to later, but denies that there is any property like *being present*, which sweeps down the series of events. Nevertheless, the theorist can allow that one event is special, in the sense that is bears a property that no other event bears. Suppose, for example, that E_3 is the death of Elvis. Then we get a structure like this:

Figure 7. Snapshot of a Static Series with the Death of Elvis



What makes *this* structure different from the structure we find in the Moving Now Theorist's Snapshot 2? Well, one thing that is different is that the property involved is *being the death of Elvis* rather than *being present*. Granted. But what is it that is distinctive about *being present*, as opposed to *being the death of Elvis*? The answer is: *being present* is a property events gain and lose: E_2 once instantiated it but no longer does; E_3 now instantiates it, but won't always do so. Needless to say, *being the death of Elvis* isn't like that.

But the moment you give *that* answer, you are invoking the once-present. And I don't see what satisfactory answer could be given that doesn't invoke the once-present.

If we shift for a moment away from the Moving Now Theory, and consider the Growing Block Theory, we can generate an isomorphic static structure that is even less objectionable that the death-of-Elvis structure. Given a Growing Block Theory, the current snapshot of the world would look something like this:

Figure 8: Snapshot, Growing Block Theory

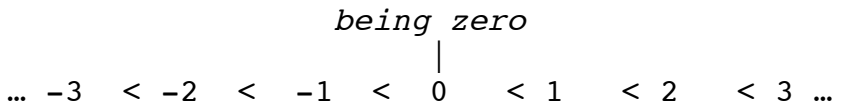
$$\ldots E_1 \dashrightarrow E_2 \dashrightarrow E_3$$

This snapshot differs from the current snapshot of the Moving Now Theory in two ways: it lacks the special property *being present* and it lacks any future events.

But now consider a static world in which the universe comes to an end at E_3, and time ends with it. This structure of this universe will be exactly the same as that found in the current snapshot of the Growing Block Theory.[28]

Returning to the Moving Now Theory, yet another isomorphic static structure is provided by the structure of the integers:

Figure 9: Structure of the Integers



[28] This example is given by Sider 2001, 22. In the passage, Sider's aim is to show that a Growing Block Theorist is committed to two tenses, one of which corresponds to my once-present, the other, my now-past.

This, of course, is, in terms of what entities, properties, and relations are involved, a completely different structure from that we find in a snapshot of the Moving Now Theory.

This example is perhaps an especially useful test case, because it seems so obvious what has gone wrong. Of course there is something different about this snapshot and the current snapshot of the Moving Now Theory. The difference isn't structural: it has to do with the actual content involved. In the case of the integers, the ordering relation is *successor*, not *earlier to later*. And property *being zero*, which serves to pick out a privileged member of the series of integers, is nothing like the property *being present*, which serves to pick out a privileged member in the series of events.

In particular, it is natural to suppose that *being present*, when it occurs in a structure, is a sure sign that the structure is dynamic. After all, it is difficult to imagine what role there could be for the property in a static world.[29] *Being present*, we might say, is, by its very nature, a property that must be dynamically instantiated. If that is correct, then the very fact that a structure contains the property *being present* is enough to distinguish it from any static structure—like the integers—and enough to show that the structure in question dynamic.

But this response won't work if the aim is to avoid appealing to the once-present. To see this, ask yourself what it is about the property *being present* that accounts for its

[29] There are two outlying cases that are worth considering. Case 1: imagine that God creates the universe for a single instant, and immediately destroys it, so that there is only one moment of time, which is present. Is this a static world or a dynamic world? Case 2: Some philosophers and theologians have characterized divine eternity as a single eternal now. This is, of course, a puzzling concept, but it suggests a picture according to which there is a single event—God's life—which exists in a static present.

dynamic nature. The only plausible answer invokes the once-present: unlike *being zero*, *being present* isn't the kind of property that a thing can have permanently. Indeed, it is part of what it is to be the property *being present* that events which *once* instantiated *being present* don't anymore and events which *once* failed to instantiate *being present* now do. In other words, what accounts for the dynamic nature of *being present* is precisely its connection to the once-present. So we cannot avoid appeal to the once-present by resting weight instead on the dynamic nature of *being present*.

Analogous remarks apply to *being earlier than*. It might be true that *being earlier than* is, like *being present*, by its very nature an indicator of a dynamic structure.[30] Indeed, one plausible account of the *earlier to later* ordering of events, given a Moving Now Theory, is that it just is the ordering induced by the movement of *being present*. On this account, what makes it the case that E_1 is earlier than E_2 just is the fact that E_1 once instantiated *being present* and E_2 now instantiates *being present*.

Perhaps this is the right account for a Moving Now Theorist to give of the *earlier to later than* relation. But it won't get her out of my dilemma: far from providing a way of doing without appeal to the once-present, this account makes the appeal to the once-present even more pervasive than one may have initially thought.

So, to summarize:

[30] This seems to be the gist of McTaggart's (1927) criticism of Russell: according to Russell, the temporal order is a static series of events from earlier to later. But, McTaggart argues, that relation can't be the temporal relation of earlier to later *unless* it is properly connected with real change (i.e., dynamic instantiation) with respect to properties like *being present*.

(1) The Moving Now Theorist must explain the relevant way in which bearing the *earlier than* relation to something which bears *being present* is different from bearing that relation to something which is the death of Elvis, and is different from bearing the *less than* relation to *zero*.

(2) Whatever this difference is, it does not show up just in a single snapshot, so cannot be explained solely in terms of the now-past.

(3) The correct way to explain the difference is by appealing to the once-present, and linking it to facts about the current snapshot.

Let me reiterate that I'm not here arguing for or against the Moving Now Theory. I'm only arguing that the Moving Now Theory cannot be used to avoid commitment to past instantiation. If you accept the view, you are committed to the once-present—you can't express your view, and distinguish it from alternatives, deviant or static—if you confine yourself only to the now-past.

Tensed Properties Presentism

The commitment to past instantiation arises precisely where property instantiation is allowed to be dynamic. On the Moving Now Theory, this occurs only with respect to *being present* and relational properties that depend on *being present*. But the point generalizes to any properties or relations that a theory allows to be instantiated dynamically.

In particular, everything I said about the Moving Now Theory can be carried over almost verbatim to the Growing Block Theory, which denies the existence of the future. Indeed, we've already seen an example of an isomorphic static structure that raises problems for the Growing Block Theorist: the static universe that comes to an end.

Presentism is a bit trickier. Suppose the world is a presentist world, and suppose we repeat our thought experiment, taking two snapshots. Suppose, for the sake of concreteness, that we took our first snapshot in 1994, and that we take our second snapshot in 2005. Ignoring everything but the presidential status of Bill Clinton and George W. Bush, here is what we would find:

Figure 10. Snapshot 1: Presentism (circa 1994)

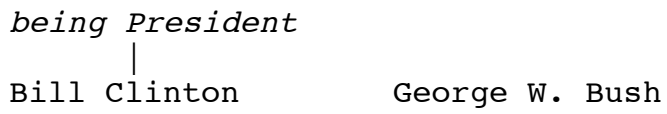
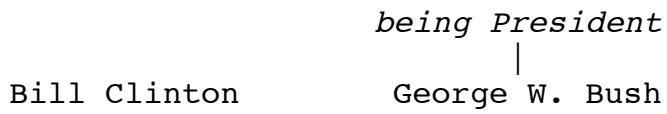


Figure 11. Snapshot 2: Presentism (circa 2005)



In Snapshot 1, we see that Clinton instantiates the property *being President*, and the George W. Bush does not. In Snapshot 2, we see that Bush instantiates *being President*, and Clinton does not.

For both the Moving Now Theory and the Growing Block Theory, there were obvious materials in the current snapshot out of which to define a notion of the now-past. But in these presentist snapshots, there are no such materials. In the current (2005)

snapshot, for example, the only apparent information about Bill Clinton is that he exists, and does not instantiate the property *being President*. But there is a wide gap between being a non-President existent and once having been a President.

So one might hope that presentists, of all people, would be least likely to fall prey to the desire to make do without appeal to past instantiation. Given presentism, how else can you capture the fact that Clinton was President, except by appealing to his past instantiation of *being President*?

But many presentists, it seems, are too clever for their own good, and their ingenuity has led them to make a problem out of their view's chief virtue. The standard solution to this perceived problem invokes a view I'll call *Tensed Properties Presentism*.[31] Tensed Properties Presentism combines presentism—the view that (a) only presently existing things exist, and (b) the only properties things instantiate are properties they presently instantiate, with the view that (c) in addition to ordinary properties, things presently instantiate *tensed* properties.[32]

An example of a tensed property is the property *having been President*. Once tensed properties are on the table, we once again have two ways of thinking about the past. On the one hand, we can think about the past in terms of past instantiation: Clinton *once*

[31] Tensed property presentists include: Bigelow (1996), Crisp (2003), Davidson (2003).

[32] Perhaps this is an appropriate place to say a bit more about the ways in which the adjective "tensed" has been variously and misleadingly applied in metaphysics. First, we have the distinction, discussed above, between tensed and tenseless sentences, propositions, and facts. Second, we have the label "tensed properties". These are unrelated. Third, discussions of the moving now or A-theory frequently describe the special properties *being past*, *being present*, and *being future* as the "tenses" or the "tense properties". In conversation, Ben Caplan has urged replacement of "tensed property" in the sense currently at issue—the sense invoked by tensed property presentism—with "past-oriented property" and "future-oriented property". Though I have not followed him here, his is certainly a more reasonable label.

instantiated *being President*. But we can also think about the past in terms of the present instantiation of tensed properties: Clinton *now* instantiates the property *having been President*.

I say that Tensed Properties Presentism is the standard solution to the perceived problem. The perceived problem is the problem we began with in Chapter 1, the problem that afflicts presentists who seek to follow the way of doing without. Such presentists believe that, as presentists, they are only allowed to appeal to the present—that is, to things that presently exist, and properties and relations things presently instantiate—in accounting for the world. If one is of this mindset, then it will seem obvious that, as a presentist, one must find some way to think about the past and future solely in terms of the present.

In terms of snapshots, then, Tensed Properties Presentism says we would see the following:

Figure 12. Snapshot 1: Tensed Properties Presentism (circa 1994)

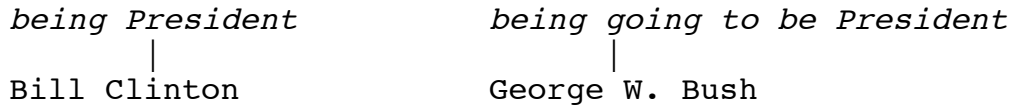
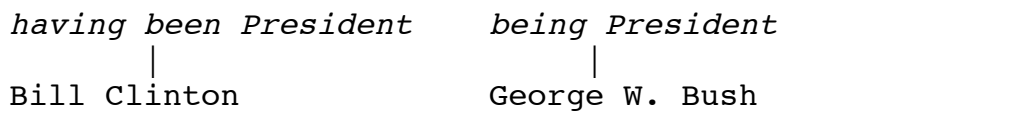


Figure 13. Snapshot 2: Tensed Properties Presentism (circa 2005)



Of course, there are more properties than these. In Snapshot 1, for example, Clinton also has the tensed property *being going to be having been President* and the property *having been being going to be President* and so on. But these snapshots will do for our purposes.

The Tensed Properties Presentist suggests that we either avoid talking about past instantiation altogether, or, if we allow ourselves so to speak, that we understand ourselves as really just talking about the present instantiation of tensed properties.

It should come as no surprise that I believe this is a mistake, and for precisely the same reasons I find the analogous move a mistake in the case of the Moving Now and Growing Block Theories. What is it about Snapshot 2 that guarantees that Snapshot 1 is an accurate representation of how things once were? In other words, what is it about Clinton's *now* instantiating the property *having been President* that tells us that he *once* instantiated the property *being President*?

I admit that this may sound like a strange question. Given that:

(1) Clinton now instantiates the property *having been President*

how could it not be that:

(2) Clinton once instantiated the property *being President*.

After all, (1) and (2) look like two ways of saying the same thing.

But (1) and (2) only look like two ways of saying the same thing because of the label being used for the tensed property. To properly assess the relation between (1) and (2), we need to get past the label, and see what is actually involved in ascribing *having been President* to somebody.

I see three accounts that could be given of *having been President*.

First, *having been President* could be taken as a simple primitive property, so that the verbal complexity in the predicate is misleading. Given such an account, it does not seem that (1) and (2) are just two ways of saying the same thing. Indeed, it seems that, given such an account, we can imagine deviant dynamic structures, in which the present instantiation of *having been President* comes apart from the past instantiation of *being President*. Suppose that, while Clinton now bears the property *having been President*, back in 1994, George H. W. Bush was enjoying his second term in office, so that the, not Clinton, instantiated the property *being President*. A Tensed Properties Presentist can rule out such possibilities, I say, only by appealing to past instantiation.

A second option would be to suppose that *having been President* is a complex property that, at least partially, must be accounted for in terms of its relation to the past instantiation of *being President*. *Being a scar* is probably a property like this. To be a scar is a complicated affair, involving not just how things are now, but how things were, as is clear from the fact that a "snapshot" will not capture, for example, the difference between a scar and a birth defect. But of course, if *having been President* is to be understood like that, then appealing to its present instantiation is no way to avoid appeal to past instantiation.

The third option I see—the option I find most plausible—is to say that *having been President* stands in for a complex predicate, whose satisfaction requires, not that Clinton now instantiate any property at all, but only that he *once* instantiated the property *being President*. To treat *having been President* this way is to treat it in the way that it is natural to treat *being dead*. To be dead, most of us think, is not now instantiate some property now, but to have instantiated the property *being alive* once but no longer. If tensed properties

are understood in this way, then there is no possibility that (1) and (2) will come apart. Indeed, this way of understanding *having been President* is the only one of the three that vindicates the initial sense that (1) and (2) are just two different ways of saying the same thing. But, of course, the ascription of a tensed property, so understood, isn't really the ascription of a property at all. The property *having been President*, so understood, shouldn't show up in the current snapshot at all, because the claim that Clinton has the property *having been President* turns out, upon analysis, *just to be* the claim that he once instantiated the property *being President*, not a claim about any property that he now instantiates.

So I think we can safely conclude that Tensed Properties Presentism cannot be used as a way to avoid appeal to past instantiation.

Future Instantiation and Past and Future Existence

I've focused on past instantiation because I think it provides the clearest case. But as far as I can see, everything I've said carries over to future instantiation as well. For example, the need, given the Moving Now Theory, to ensure that events which are now future will be present is just as pressing as the need to ensure that events that are now past were once present.

Moreover, as far as I can see, the form of argument I have employed will work equally well to establish the need, given a view that allows that existence is dynamic, to make claims about what once existed or will exist, that are not understood as claims about what now exists, or what properties and relations things now instantiate. If we can't understand Clinton's presidency in terms of how he now is, it is hard to see how we

could understand Nixon's presidency in terms of how some Nixon-surrogate now is: we need to appeal to the man himself—even though he no longer exists—and the properties he once had—even though he no longer has them.

The Redundancy of the Now-Past

It is possible, on the basis of what I've said so far, to provide a limited argument for presentism, on the grounds that any non-presentist dynamic theory introduces pointless redundancy. Consider the Moving Now Theory: given the theory, there are two conceptions of the past. We've seen that one—the once-present—is essential: if we eliminate it, we lose the ability to capture the dynamic nature of the world. But given that the once-present is ineliminable, what role remains for the now-past?

In particular, I would suggest that the proper moral to draw from reflection on the kinds of examples I've described is that the once-present is the genuine item, and the now-past is nothing but a trace or surrogate or stand-in for the genuine item.

Perhaps some reason can be given for positing such traces—I don't claim to have shown that no such reason could be given. But I do think that once we realize that they are only that—traces of the genuine item that is no longer with us—this goes a fair way toward undercutting any motivation for supposing that there are such things.

Analogous comments apply, of course, to the Growing Block Theory: if the trunk doesn't represent the genuine past, but, somehow, something the genuine past left behind, then why should we persist in supposing that there such a trunk? Why not just make do with the genuine past, and leave matters at that?

And analogous comments apply to Tensed Properties Presentism: maybe some other reason can be found for supposing that there are tensed properties, reflecting how things once were or will be. But in the absence of such reasons, why not adopt a clean conception of the present, a conception that does not traffic in such exotica, and come to grips with the no longer real past, and not yet real future, on their own terms, as we've seen we must, given that the world is dynamic?

Defenders of the Moving Now Theory or the Growing Block Theory may respond by saying that the things which are now past are the very same things that once were present. The death of Louis XVI that currently exists, in the past, is the very same event that existed back in the day. So all of my talk of traces or surrogates or stand-ins seems misplaced.

But I am not saying that the events are stand-ins. I'm saying that the way they are now—events that exist and are located earlier than the present—is nothing but a stand-in for the way they once were, when, back in their glory, they were present. They are like retired professional athletes: we care about them only for what they once were, and not for what they are now.

There is nothing here that amounts to a knock-down argument for presentism: redundancy is not incoherence, and perhaps some reason can be given for positing past or future things, or stand-ins for past or future things. But I don't see what that would be.

Morals

The moral of this chapter is this: if you assume that the property instantiation is dynamic, you are committed to past (and future) instantiation, not just present instantiation—whether it be present instantiation of "tensed properties", or present instantiation of *being present* and *being earlier than*, or present instantiation of anything else. Likewise, if you assume that existence is dynamic, you are committed to past and future existents, not just present existents, and not just present existence of surrogates or stand-ins for past or future existents. In terms of snapshots, the moral is: if you assume that the world is dynamic, you are committed to making direct appeal not just to the how things stand in the current snapshot, but how they stood in past snapshots and how they will stand in future snapshots.

In the next chapter I begin to consider the consequences of this commitment. The commitment appears to entail that we cannot make do with the simple dichotomy between what is and what is not real, as we need to appeal to what was but is not real, and what will be but is not real. One thought is that, in order to make sense of this commitment, we need to recognize, in addition to the reality represented by each snapshot, a more comprehensive reality that encompasses all of the snapshots taken together. Another thought is that the commitment will drive us to say that reality is relative—that is, relative to a time—rather than absolute. Neither of these approaches, I argue, does justice to the idea we are chasing down, the idea of a dynamic world.

Chapter 3

Against a Temporally Relativized Conception of Reality

To suppose that the world is dynamic is to suppose that reality changes, that either the ontology—what exists—or the ideology—what properties and relations things instantiate—are matters that are subject to change. In the preceding chapter, I argued that anyone who assumes that the world is dynamic cannot confine herself to describing the current ontological and ideological status of the world. She must also make claims about the prior ontological and ideological status of the world—how the world once was, but is no more—and, presumably, about the subsequent status of the world—how it will be, but is not yet.

But how are we to make sense of these descriptions of prior and subsequent ontological and ideological status, if not as descriptions of how, in some sense, things are?

The Comprehensive Proposal

One unfriendly suggestion—let's call it the *comprehensive proposal*—is this: Contrary to our original assumption about snapshots, perhaps, if the world is dynamic, we must say that no one snapshot actually captures the whole of reality; the whole of reality is instead given by the entire series of snapshots, taken together. Each snapshot, in other words, represents a part of reality, rather than the whole.

This runs contrary to our original assumption about snapshots, because a snapshot, in my sense, was supposed to be a representation of the whole of reality, not just a part of reality; it was supposed to be a representation that displayed both the ontology and ideology of the world, leaving nothing out.

In any case, the comprehensive proposal is not really a strategy for making sense of the idea that the world is dynamic. Instead, it is a strategy for embedding a dynamic world in a static structure, a structure that mimics the dynamic features of the embedded world by positing a static sequence of moments or stages, one for each successive snapshot of the original theory. The resulting theory may or may not be of philosophical interest in its own right, but it is not a dynamic theory in the sense we are after.[33]

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[33]For a nice discussion of this issue, see McCall 1994: 9-10. Especially nice, I think, is McCall's point that, understood as a procedure for diagramming, or, as he puts it, "picturing," a dynamic world, rather than as a theory of the structure of such a world, this kind of embedding might be quite useful:

> The procedure of picturing change in this way is in itself a perfectly good one, used by biologists to depict the process of cell division, by town planners to map the growth of cities, and by parents who keep a photograph album of their children. The only error to which it might lead would be to the error of confusing the object pictured with the pictures of it—of supposing that the pile of snapshots *was* the object depicted.

It is worth noting that there is another kind of modeling that might also be useful in metaphysics, and perhaps even in semantics. Just as one might build a static model of a dynamic world, so too one might build a dynamic model of a dynamic world, by using a model—concrete or abstract—which is itself dynamic. A simple concrete example of this would be to build a model landscape containing a model train track running a model train, in order to represent the motion of an actual train down an actual track through an actual landscape. In such a model, it is the motion of the model train that models the motion of the actual train: the dynamic elements in the world are modeled by way of dynamic elements in the model.

In semantics, it is commonplace to appeal to abstract—usually set theoretic—models, models which are thought to reflect important features of the logical and semantic relations among the terms of the language being studied. The models are uniformly static. But if we are interested studying the semantics of linguistic devices designed for describing a world subject to primitive change, we may do well to consider dynamic semantic models as well.

So the comprehensive proposal is a non-starter.

Two Alternatives: Relative or Absolute?

Two proposals have more promise.

According to the first, a dynamic world forces us to give up on the idea that reality—or, at least, temporal reality—is absolute. A dynamic ontology, according to this proposal, cannot be captured in terms of an absolute concept of existence, but requires a temporally relative concept of existence, that is, a concept that allows what exists *as of* one time to be different from what exists *as of* another time. Likewise, a dynamic ideology cannot be captured in terms an absolute concept of instantiation, but requires a temporally relative concept, which allows the properties or relations a thing instantiates *as of* one time to be different from those it instantiates *as of* another time.

This proposal—let's call it the *relativizing proposal*—has been explicitly championed in precisely this context by Michael Tooley (1997). Something like it can be read into Michael Dummett's defense of McTaggart's paradox (1960), and it can also be found in some recent work by Bryan Frances (2005). Moreover, the relativization of instantiation, if not ontology, is perhaps the most popular endurantist solution to the so-called problem of temporary intrinsics.[34]

[34] See, e.g., Johnston 1987; Haslanger 1989, 2003; van Inwagen 1990. In order to explain how one and the same individual can instantiate different intrinsic properties at different times, Johnston and van Inwagen treat instantiation as a three-place relation, holding between a thing, a property, and a time. Haslanger does much the same thing, albeit indirectly, by supposing that propositions that ascribe intrinsic properties to temporal individuals possess a truth-value only relative to a time. For criticism of these solutions from an endurantist perspective see Hinchliff 1996: 122.

The relativizing proposal appears to provide the materials for an account of what we are talking about when we describe the prior or subsequent ontological or ideological status of the world: when we do so, we are not talking about reality *as of* now, but reality *as of* other times.

However, I will argue that the relativizing proposal fails to capture the idea that the world is dynamic—or, at least, fails to capture what I have in mind, and what I find compelling, when I imagine a dynamic world. Even so, the standard objections to the proposal are at best uncharitable, and, at worst, rely on an outright misrepresentation of the view.[35] Unlike many of its critics, I think the relativizing proposal captures a coherent conception of what temporal reality might be like. While I am not inclined to agree with this conception, I don't see any reason to dismiss it as incoherent, "beyond the pale," or (can there be a more serious charge in metaphysics?) really just some other theory in disguise.

The other alternative—the alternative that, as far as I can see, has the best shot at capturing the idea that the world is dynamic—is to suppose that, contrary to the relativizing proposal, existence and instantiation are absolute, not relative, but are nonetheless subject to change.[36] This *absolute proposal*, as I will call it, is the view I am

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[35] I have in mind two "standard" objections: (1) Hinchliff's (1996: 122) objection that a relativized property (i.e., a property whose instantiation is relativized to a time) is really just a relation in disguise; (2) Sider's (2001: 22-25) objection to Tooley, in which he simply assumes that relativized claims about existence are not ontologically significant. I discuss Sider's objection at greater length below.

[36] This terminology can be misleading. I am not invoking some heady metaphysical concept of "Absolute Reality". I am just contrasting the view that ontology and ideology are relative to time with the idea that they are not relative. "Absolute", in this context, simply means "not relative"—and, really, just means "not relative to time".

inclined to endorse. However, unlike the relativizing proposal, the absolute proposal does not provide ready materials for an account of what we are talking about when we talk about the prior or subsequent ontological or ideological status of the world. For the absolute proposal, in other worlds, the demands placed upon us by the argument of Chapter 2 can seem intractable.

In Chapter 4, I will consider how a proponent of the absolute proposal might try to meet these demands. In the remainder of this chapter, I discuss, and provide my reasons for ultimately rejecting, the relativizing proposal.

Tooley's Path to Relativization

Michael Tooley believes that we must invoke a temporally relativized concept of existence to capture the idea of a dynamic world. As he puts it:

> In a dynamic world, the distinction between states of affairs that are real, or that exist, or that are actual, and those that are not, is insufficient: given that what states of affairs exist, or are real, or are actual may be different at different times, one also needs the concept of existing, or of being actual, as of a given time (1997: 37).

This concept of existing or being actual *as of* a time is, on Tooley's view, the key conceptual innovation required in order to make sense of a dynamic world. This strikes me as a fairly plausible—though ultimately mistaken—proposal. But Tooley, I think, sees

it not so much as one plausible proposal, but as an inevitable consequence of a careful characterization of a dynamic world.

Tooley characterizes the distinction between dynamic and static worlds in terms of two competing concepts of change, the static and the dynamic. According to the static concept, he says, an object changes just in case "it has different properties at different times" (1997: 13). Unfortunately, without some further explanation of what it is to have a property at a time, and so what it is to have different properties at different times, this could characterize almost any concept of change.[37]

But his intent comes out in the contrast he draws between this and the dynamic concept of change. According to the dynamic concept, he says, "an object changes if and only if there is a change over time in the totality of the monadic states of affairs involving the object". Applied to the world as a whole, he says, this concept tells us that "the world as a whole changes…only if the totality of temporal facts, or states of affairs, is different at different times" (1997: 14).

So, by contrast, the key feature of the static concept must be that according to it, the totality of temporal facts, or states of affairs, is temporally invariant: there is no change over time in the totality of such facts or states of affairs; the totality of such facts or states is not different at different times.

[37] Well, that's not quite right. Some philosophers—e.g., Aristotle—will argue that having different properties at different times is not sufficient for real change, demanding in addition that there be some appropriate connection between the successive states: e.g., that some potential found in the earlier state is actual in the later state. Further, having different properties at different times might not be necessary for change, if one assumes that ceasing to exist, for example, is a kind of change that an object might undergo.

For Tooley, talk about the "totality of temporal facts or states of affairs" just is talk about the ontology and ideology of the world, since a state of affairs, he says, consists in some entity instantiating some property, or bearing some relation to some other entity (1997: 35). So to say that a state of affairs exists, for Tooley, just is to say that some entity instantiates some property or relation. Hence when Tooley says that there is a change over time in the totality of states of affairs, that is his way of saying that, according to the dynamic conception of change, the ideology of the world is subject to change.[38]

So Tooley's contrast between the dynamic and static conceptions of change, put in terms of the existence of states of affairs, is essentially the same as my characterization of the distinction between dynamic and static worlds, in terms of ontology and ideology.

With this distinction in hand, then, Tooley raises and answers what for us is the key question:

> But how can the totality of states of affairs be different at different times? The answer is that this will be possible only if, in the case of temporal facts or states of affairs, facts are, fundamentally, temporally relative, so that the basic notion is not that of states of affairs being actual simpliciter, but that of states of affairs existing, or being actual, as of a particular time. (1997: 14)

[38] Presumably Tooley believes that ontological change—e.g., the coming to be of a new thing—implies ideological change as well: when a new thing comes to be, it will instantiate some properties and relations, so new states of affairs involving that individual will also come into existence.

Tooley has provided a quick and easy path from the dynamic concept of change to a temporally relative concept of existence:

(1) In a dynamic world, there is change over time in the totality of states of affairs that exist.

(2) So, in a dynamic world, the totality of existent states of affairs is different at different times.

(3) But the totality of existent states of affairs can be different at different times only if existence is temporally relative.

(4) So, in a dynamic world, existence is temporally relative.

I agree with (1) (putting aside quibbles about the treatment of ideology in terms of the existence or not of states of affairs). The move from (1) to (2) seems innocuous: in fact, Tooley doesn't flag it as a move, but treats (2) as an obvious gloss of (1).

Perhaps (3) is not so obvious, but it is certainly plausible. If how things stand with respect to some matter is different depending on some factor, that strongly suggests that how things stand with respect to that matter is not absolute, but relative to that factor. For example, if the laws and customs are different in different lands, then that suggests that what the laws and customs are is not an absolute matter, but a matter relative to the land you are in. Likewise, if the date of first frost is different in different climates, then that suggests that there is not an absolute date of first frost, but that the date of first frost

is a matter that is relative to climate. (3) simply applies this rule to the case at hand: if which states of affairs exist is a matter that is different at different times, then the existence of states of affairs is not an absolute matter, but a matter that is relative to time.

Finally, given (2) and (3), I see no way to avoid (4). So we appear to have here a quick and easy path from the dynamic conception of change to a temporally relativized concept of existence.

As I've said, I think this is the wrong place to end up. I will propose, in the next chapter, that we can have absolute, non-relative concepts of existence and instantiation, and yet allow that the extensions of these concepts vary over time. Ontological and ideological variation, in other words, does not entail ontological or ideological relativization.

I, then, will have to reject either (2) or (3). (2) and (3) both make claims about what exists being "different at different times." It is easy to hear this way of speaking as one that implies relativization. If it is so understood, then (3) is trivial, and so I will have to reject (2). This might seem bad, in that (2) seems to be nothing more than a gloss of (1), and a rather trivial gloss at that. But I will have to insist either that (2)—because it implies relativization—goes significantly beyond (1) and is false; or that, if (2) really is nothing more than a trivial gloss of (1), then it is true but does not imply relativization.

So I'm committed to saying that there is a way to avoid the conclusion of this argument, and I think there is room to do so: I do not think that relativization is an inevitable consequence of the assumption that the world is dynamic. But that doesn't take

away from the fact that it is a plausible proposal to make in this context, a proposal that deserves not merely to be resisted, but to be appraised on its own merits.

Existence *Simpliciter* and Existence *as of* a time

What, then, would it be to suppose that ontology and ideology are temporally relativized? One way to try to get a better sense of this is to assess the relationship between the proposed relative conception of reality and traditional non-relative or absolute conceptions of reality.

On this front, a somewhat surprising feature of Tooley's view is his belief that we need *both* an absolute ontological concept—a concept that, in his words, "involves no relation to time" (1997: 40)—and the relativized concept of existence *as of* a time. He thinks that we need both concepts, that both are ontologically significant, and that both are primitive—that is, we can't define one in terms of the other.

He calls the absolute concept 'existence *simpliciter*'—not his own term, but a term he borrows from the recent tradition. Since it is an absolute concept, it is not, according to Tooley, subject to variation over time. I think it is fair to say that he thinks of existence *simpliciter* as the ontological concept that is handed to us by the metaphysical tradition, the uncontroversial concept with which we, as ontologists, begin, and so as common ontological currency that he shares with static theorists, like Sider. He sees the introduction of existence *as of* a time, on the other hand, as an ontological innovation forced upon us by the idea that the world is dynamic.

As I said, Tooley claims that each of these two concepts must be treated as primitive, and each must be treated as ontologically significant. He provides an extended argument to establish the need for a primitive, absolute, concept of existence, in addition to the concept of existence *as of* a time. Unfortunately, he doesn't say much about why his concept of existence *as of* a time cannot be defined in terms of that absolute concept of existence.

As we look at Tooley's arguments, we will discover, I think, an important divide or gap. On the one hand, we will find intuitions and motivations that are directly metaphysical: given a picture of what reality is like, what concept of existence appropriately captures the picture? On the other hand, we will see intuitions and motivations that seem to come not quite directly from metaphysics, but instead from what considering what we want to able to say about the world, given our a metaphysical picture of it, and, in particular, what we want to be able to quantify over.

In particular, what Tooley ultimately establishes, if he establishes anything, is the need for a certain form of quantification—quantification over past, present, and future things, without distinction—but it is not at all obvious, given Tooley's picture, how to correlate that form of quantification with issues of ontology.

Tooley on the Need for Existence *Simpliciter*

We need an absolute concept of existence, Tooley says, for two rather different reasons.[39] First, we need it because:

> One needs to be able to make sense of metaphysical hypotheses concerning the existence of entities that are naturally viewed as not having temporal location—such as numbers, propositions, uninstantiated universals, or a complete world of Platonic forms. To do so, it would seem that one needs a notion of existence that involves no relation to time. (1997: 40)

Some entities, Tooley wants to say, are best thought of as existing *atemporally*—that is, existing "in a way that involves no relation to time". Or, at a minimum, philosophers have hypothesized that there are such entities. But we can't capture that way of existing if our only concept of existence is the temporally relativized concept of existence *as of* a time.

Someone who believes that we can do without an absolute concept of existence—that the only concept of existence we need is a temporally relativized

[39] Tooley 1997 discusses this issue in two places: section 2.2.2, pp. 39-42 and sections 5.4.2-5.4.3, pp. 150-156. Section 2.2.2 directly addresses the need for existence *simpliciter*. Sections 5.4.2 and 5.4.3 indirectly address this need in the process of addressing the need for a concept of truth *simpliciter*, defined in terms of existence *simpliciter*. The same arguments recur in these two passages, but the second passage provides further detail and elaboration. My discussion here draws from both passages without distinction.

concept—can resist this argument in at least three ways.[40] The first is to argue that there are no such things as numbers, propositions, universals, and so on: such things, one might argue, are nothing more than fictions or abstractions.[41] The second is to argue that while there are such things, they do, in fact, have temporal location. The apparent atemporality of, say, the number two, is really just a consequence of the fact that it is exists *as of* all times, and never undergoes any intrinsic change.[42] The third move would be to treat atemporal existence as existence *as of* a special *atemporal* moment.

The third move deserves further comment, if only because it is rarely acknowledged in this context. The idea here is to allow that all existence is relative to a moment—so that there is no absolute, non-relative, concept of existence—but to introduce, in addition to the moments of *time*, a special moment—call it *E*—which stands outside of the temporal order. Atemporal entities, then, can be thought of as entities that exist *as of E*. I take this to be a fairly natural way to capture, within this framework, the idea that God exists in a single eternal "now", rather than in the fleeting sequence of temporal "nows" that condition our temporal existence.[43]

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[40] Tooley (1997: 152) discusses the first two of these responses, but not the third.

[41] I intend 'abstraction' here to be understood in the classic sense: an object whose existence is a pretense, the result of a decision, on our part, to pretend that there is an identity when in fact the metaphysical situation is more complicated.

[42] This view, or something like it, is widely held among those who suppose that existence is fundamentally temporal. See, for example, Quentin Smith (1989: 325-236; 1993: 209-210).

[43] Stump and Kretzmann (1981: 430) say that "the picture of eternity as a frozen instant is a radical distortion of the classic concept." But the distortion may have more to do with the characterization of the eternal moment *E* as a "frozen instant" than with the idea that eternal existence is existence relative to an eternal moment. See their discussion surrounding their definitions of "T-simultaneity" and "E-simultaneity" (435 ff.), which strongly suggests a relativizing picture of the sort described above.

So one moral here is that Tooley doesn't have a knockdown argument from the putative existence of atemporal entities to the need to posit an absolute concept of existence. He is aware of this. Still, he thinks—and I am inclined to agree—that there is something to the thought that some things just plain exist, in a way that requires no relativization, be it to one time, all of time, or some special atemporal moment.[44]

On might suppose that the resulting concept of existence, since it is absolute, will only apply, for Tooley, to atemporal things—things whose existence is not conditioned in any way by time. This would put Tooley into a broad tradition, a tradition which posits two distinct ontological realms, one a realm of *being* or existence without qualification—a realm of absolute being—the other a realm of constant change and succession, a realm *becoming* rather than *being*. The realm of becoming, then, on Tooley's analysis, would be the realm whose proper ontological concept is temporally relativized rather than absolute.

But this is not Tooley's view: he thinks that we also need to apply this absolute concept of existence to temporal things: anything that exists *as of* a time, Tooley maintains, *also* exists *simpliciter*. So Tooley is not positing two distinct ontological realms, each with its proper concept of existence. He is instead proposing that, at least when it comes to temporal things—things like you and I—two distinct primitive ontological concepts apply.

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[44] An analogous issue arises in the literature on temporary intrinsics: if we are tempted to suppose that some things instantiate some properties in a temporally relativized way, should we also allow that some things instantiate some properties—perhaps even the very same properties—in a non-relativized, absolute way? Hinchliff (1996: 133 n. 14) gives the example of *being straight*. Suppose temporal things—his example is a candle—can only instantiate *being straight* relative to a time. Can a geometric line instantiate *being straight* in an absolute, unrelativized way? If so, we need two conceptions of instantiation, one relativized, and one absolute.

We need to both, he says, because,

> besides being able to speak of what is actual as of the present moment, one needs to be able to make sense of propositions about what was actual, and about what will be actual, and, more generally, about the totality of what is actual at some time or other (1997: 40).

You might think that there must be some mistake here. What was the point of introducing the concept of existence *as of* a time, after all, if not precisely to allow us to make sense of propositions about what is actual *as of* different times, past, present, or future?

But that's not Tooley's point here. His point is not that we need to be able to speak about what exists *as of* T_1, and contrast that with, say, what exists *as of* T_2.[45] His point is that we need to make claims that involve quantification over *all* times—past, present, or future—not just those times that exist *as of* a particular time. So, at a minimum, we need an absolute concept of existence that applies to times. But, Tooley seems to think, if we can apply it to times, we can apply it to all temporal things.

He provides two examples of propositions that, he says, require this (1997: 155-156):

[45] For clarity, I'll use the capital letter 'T', with or without subscripts, as a singular term that refers to a particular time, and I'll use the lowercase letter 't', with or without subscripts, as a variable that ranges over times.

(1) There never will be three neutrinos that form an equilateral triangle with sides exactly one meter in length.

(2) There never will be purple sheep.[46]

Within Tooley's framework, the natural way to understand a proposition like (1) is as reporting something along the lines of:

(1*) It is not the case that there is a time *t* such that a state of affairs exists *as of t* that consists in three neutrinos' forming an equilateral triangle with sides exactly one meter in length.[47]

And the natural way to understand (2) is as reporting something like:

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[46] Although both of Tooley's examples involve claims about what never will be, he could just as well—if perhaps less vividly—made his point using claims about what will be: the proposition that the antichrist will come (to pick a vivid medieval example) is a general claim about the future, to the effect that the antichrist will exist *as of* some future time or other. It is not equivalent to any singular claim about some particular future time—say, for example, *T*—to the effect that the antichrist exists *as of T*, although it may well imply the truth of some singular claim of this form. Clearly the two are not equivalent, since it may be true that the antichrist will come, but not because he will come at *T*, but because he will come at some other future time.

[47] This "analysis" of (1) leaves out the futurity of "never *will*", since it is a complication that need not concern us. As it happens, Tooley advocates an indexical analysis of that aspect of (1), so that (1*) should read:

(1*) It is not the case that there is a time *t* later than *t'* such that a state of affairs exists *as of t* that consists in three neutrinos' forming an equilateral triangle with sides exactly one meter in length,

where the value of *t'* is given by context.

(2*) It is not the case that there is a time *t* such that a purple sheep exists *as of t*.

But if (1*) is going to capture what is intended by (1), and (2*) is going to capture what is intended by (2), then the quantification over times cannot be understood as quantification over times that exist *as of* some particular time.

To see this, suppose we treat the quantification as restricted to times that exist *as of* some particular time—say, *T*. If, like Tooley, you maintain that the only times that exist *as of T* are times that are earlier than *T*, then (2*) will not rule out the possibility that purple sheep exist *as of T**, where *T** is a time later than *T*, because *T** does not exist *as of T*. For a presentist, the problem is worse: (2*) will not rule out the possibility that purple sheep exist *as of* any time other than *T*. So in both cases, the force of "there *never* will be" is lost.

The same line of reasoning rules out the most natural way to define, in terms of existence *as of* a time, a concept of existence that applies to anything that exists *as of* any time, without distinction:

(D) *X* exists *simpliciter* iff_{def}, for some time *t, X* exists *as of t*.

The thought behind (D) is that, in applying existence *simpliciter* to a thing, one abstracts from—i.e., ignores—any temporal distinctions. This will generate a concept of existence that "involves no relation to time", but not a concept that is a good guide to ontology,

since, by definition, it is a concept that brushes over fundamental ontological distinctions.[48]

But which times, in this definition, count as possible candidates for *t*? Again, if our quantification over times is restricted to those times that exist, and if our concept of existence is temporally relativized, then the quantification must involve some implicit relativization to a particular time, as in:

(D_2) *X* exists *simpliciter* iff_{def} there exists *as of T* some time *t* such that *X* exists *as of t*.

But, given (D_2), the concept of existence *simpliciter* will only apply to those things that exist *as of* times that exist *as of T*. This is hardly the desired result, whether we assume, with Tooley, that the only times that exist *as of T* are times simultaneous or earlier than *T*, or, as presentists, that the the only time that exists *as of T* is *T* itself.

To get the correct result, we would need a circular definition:

(D_3) *X* exists *simpliciter* iff_{def} there exists *simpliciter* some time *t* such that *X* exists *as of t*.

But this definition, because it is circular, doesn't provide a way to abstract a concept of existence *simpliciter* from the concept of existence *as of* a time.

[48] To make this a bit more vivid, note that a proponent of a "two realms" view, as described above, might attempt a definition along the lines of (D) without supposing that the invariant concept of existence so defined bears any interesting relationship with the absolute concept of existence that characterizes atemporal things.

These arguments seem to establish, first, the need for a concept of existence that applies to all times without distinction, past, present, or future; and, second, the impossibility of defining such a concept in terms of the concept of existence *as of* a time. Tooley wants to conclude from this that we need a primitive concept of existence *simpliciter*, which applies not just to atemporal things, like numbers, but also to temporal things like times, and, by extension, to all other temporal things.

But the argument, at least as stated, has some holes that need to be filled.

The first broad category of hole has to do with the focus, in the argument, on the ontological status of *times*, as opposed to temporal things more broadly. The second hole is a bit more conceptual: despite the apparent demand for a kind of quantification that ignores temporal distinction, there is no corresponding metaphysical intuition concerning the need for an absolute ontological concept that applies to temporal things.

Given the focus, in the argument, on the status of *times*, someone might agree that, in order to capture the sense of propositions like (1) and (2), and in order to make good on the proposed definition (D), we need to assume that *times* exist *atemporally*, but resist the extension of the result to all other temporal things.

There are a few different ways this might play out, depending on one's views about atemporal things. Those who maintain that atemporal things are, in fact, fictions or abstractions will have trouble here, but those who hold that atemporal things exist *as of* all times, or exist *as of* a special eternal moment, or exist absolutely, have room to maneuver.

For example, one who holds that times are omnitemporal—that every time exists *as of* every other time—can, it seems, apply (D_2) without apology: it doesn't matter what

time *T* happens to refer to; whatever time it is, it is sure to be the case that all the other times exist *as of* it.[49] Likewise, one who holds that all times exist as of a special atemporal moment *E* can apply (D_2), specifying that *T* refers to *E*. Finally, one who accepts Tooley's view of atemporal things—that they exist in an absolute, non-relative way—can allow, in light of Tooley's argument, that times must be among the things that so exist, but insist that this simply shows that times are not among the things that exist *as of* times, and so maintain a segregated "two realms" view, of the kind described above.

Another response to the apparent focus on times, rather than ordinary temporal things, would be to point to the well-known fact that, at least to some extent, the effect of quantification over times can be mimicked by sentential operators like '<P>' (read as "It was the case that") and '<F>' (read as "It will be the case that"), in just the same way that, at least to some extent, the effect of quantification over possible worlds can be mimicked by the sentential operator '◊' (read as "It is possible that"). So, in particular, a proposition like (2) could be analyzed along the lines of:

(2**) It is not the case that <F>(there are purple sheep).

The idea behind this response is to suggest that it is wrong to suppose that we need quantification over all times without distinction, and the ontological commitments that follow from that, in order to capture what we want to say. Instead, the apparent reference

[49] Tooley (1997: 41) seems to assume that to make this move would be equivalent to assuming something like the Moving Now Theory—according to which all things that exist *as of* any time exist *as of* every other time (except, one would assume, the state of affairs of an event's being present). But one might well distinguish the existence of a time from the existence of the things that exist *as of* that time, a possibility that Tooley seems to brush over.

to these funny objects called "times" is really just a misrepresentation of our use of tense operators.

Of course, if '<F>' just is a syntactically disguised form of quantification over times, then this is no solution at all. For the solution to work, one must hold that the operator is primitive, and that it is the apparent quantification over times that is syntactically misleading, rather than the other way around. Whether or not there is a workable view here is a matter of some dispute. I will have some things to say in defense of primitive tense operators in Chapter 4, but it is far from obvious to how to introduce primitive tense operators, understood in the way I wish to defend them, within this relativizing framework.

But suppose that these holes are filled: suppose, that is, that we are convinced that we need a form of quantification that ignores temporal distinction, and allows us to make general claims about all things that exist *as of* any time whatsoever. There remains, I think, a disturbing gap.

To see the gap, consider how this sort of demand contrasts with the demand for an absolute concept of existence that applies to atemporal things like numbers. In the case of numbers, we have the intuition that any relativization misrepresents the metaphysics. The number two, for example, seems to just plain exist. We object to the idea that some moment—be it a moment of time or the single moment *E* of eternity—has to get into the act, and, as it were, have some intimate involvement in the existence of the number two. I won't claim that this intuition is inviolable: perhaps it can be explained

away. But the intuition is certainly there, and it is an intuition that corresponds to a fairly clear idea of what the metaphysics of numbers might be like.[50]

Now *you* may or may not have the same intuition about the existence of temporal things, the intuition that relativization misrepresents the metaphysics. But that is beside the point: what matters here is that *Tooley* is committed to a metaphysical picture according to which, for temporal things, a relativized form of existence accurately captures the metaphysics, since this is, after all, his way of trying to capture the idea that the world is dynamic. And it seems that his argument for existence *simpliciter* begins with a metaphysical picture according to which existence is relativized, and proceeds to show that, in order to adequately characterize that very metaphysical picture, we need to apply an unrelativized form of quantification, and so concludes that the very temporal things that are appropriately characterized in terms of the relativized concept of existence must also be appropriately characterized in terms of an absolute concept of existence.

But—and here is where I see a gap—there is nothing about this argument that corresponds to our intuition about atemporal things, the intuition that their metaphysical situation is one appropriately characterized by an absolute concept of existence. First, and most obviously, there is nothing here to suggest that a relativized conception of existence *misrepresents* the metaphysics of the situation (since, according to Tooley, it doesn't). But second, there is nothing here—nothing, at least, that I see—to suggest that an absolute, time-invariant, concept of existence *accurately* represents the underlying metaphysics.

[50] Well, clear in this respect, at least!

This is reflected, in part, by the intuition that, when we quantify over past, present, and future things without distinction, we are *ignoring* a real distinction, and so, in an important way, *misrepresenting* the metaphysics. This is what supports attempting to provide a definition of this sort of quantification along the lines of (D). But the fact that, as a reductive definition, (D) fails, doesn't remove, as far as I can see, the motivations that led to its suggestion.

Another way to try to draw out this gap is to ask whether it is right to identify, as Tooley does, the absolute concept of existence that we want to apply to atemporal things with the absolute concept of existence that he wants to apply to temporal things. The mere fact that each is non-relative does not show that they are the same. The fact that the motivations for each are so different suggests that perhaps the concepts are themselves different.

I don't have any large objection to Tooley that I want to hang on these observations. Perhaps I am simply observing the peculiar way that things go if one takes seriously the idea that there are *two* primitive ontological concepts, which apply differently to the very same things. But I think this apparent gap at least suggests a different way one might react to Tooley's argument, which would be to take it to show that, once one accepts existence *as of* a time as one's primitive ontological concept, the demands of quantification are going to start coming apart from the demands of ontology.[51]

[51] This is the proposal Frances (2005) wishes to defend, if I understand him correctly.

So much, then, for Tooley's reasons for supposing that we need a primitive, non-relativized concept of existence in addition to existence *as of* a time. My aim here has not been to decide the issue, but to use the issue as a way to help us hone our understanding of the proposed concept of existence *as of* a time. It is the potential for a reduction in the other direction, that presents a more serious challenge to someone who wants to hold onto existence *as of* a time, and, in particular, someone who wants to say that existence *as of* a time is ontologically significant.

The Ontological Significance (or not) of Existence *as of* a Time

A common complaint against the relativizing proposal—both in its ontological and in its ideological forms—is that the proposed concepts—existence *as of* a time and instantiation *as of* a time—have no genuine ontological or ideological significance.

Suppose for a moment that you are a static theorist, that you believe that the universe is a static four-dimensional block, and believe that the only primitive ontological concept is absolute and temporally invariant, and applies to all things, past, present, or future, without distinction. Tooley comes along and says that he wants to introduce a new concept, the concept of existence *as of* a time, and explains that it is his view that what exists *as of* a given time *t* are all and only those things that are located at or earlier than *t*.

It appears that you can accommodate Tooley's new concept without abandoning your static theory of the world. You have an absolute concept of existence, and you have the concept of a temporal location, and so you can define a restricted concept of

existence: to exist *as of t* just is to exist and be located at or earlier than *t*. No great conceptual innovation here!

Indeed, it is hard to see how anything of ontological significance could rest upon this concept, so defined: we could equally well define a concept of existence *after* a given time, or existence *within a few weeks of* a given time, or, for that matter, existence *in my refrigerator within a few weeks of* a given time. There is nothing here that reflects any great metaphysical divide between two conceptions of the world: these are just various ways of carving up a static ontology of things, all of which exist absolutely.

Moreover, it can start to seem that the supposed disputes among dynamic theories—e.g., between presentists and Growing Block Theorists—aren't genuine disputes at all. The presentist says that only those things present at *t* exist *as of t*; the Growing Block Theorist, that all things that are past or present at *t* exist *as of t*. But this is because the presentist means by 'exists *as of t*', something like, 'exists, and is located at *t*', while the Growing Block Theorist means something like, 'exists, and is located at or earlier than *t*'. No metaphysical dispute here: just two different ways of talking about the same, ultimately static, ontology of things located at times.

Tooley's response to this is to insist that this defined concept of existence *as of* a time is not the concept he intended to introduce: the concept he intended to introduce was a concept that captures the metaphysical divide between dynamic and static conceptions of the world. Since a concept of existence *as of* a time that is simply defined in terms of a restriction on existence *simpliciter* doesn't do that, Tooley insists we cannot

treat his concept of existence *as of* a time as a defined concept, but must take it to be a primitive ontological concept.

Likewise, his concept is intended to capture that concept of existence about which presentists and Growing Block Theorists might have a meaningful and substantive disagreement. Since a concept of existence *as of* a time that is simply defined in terms of a restriction on existence *simpliciter* doesn't do that, Tooley insists that we cannot treat his concept of existence *as of* a time as a defined concept, but must take it to be a primitive ontological concept.

Needless to say, this is tricky ground. If we treat the concept as defined, rather than primitive, its ontological significance goes missing. If we treat is as primitive and undefined, its ontological significance (magically, a skeptic might say) reappears. What, then, imbues this primitive concept with ontological significance?

Perhaps this problem is not quite so pressing for a relativizer who, unlike Tooley, rejects an absolute concept of existence. But even then, the problem arises: what is the difference, really, between that kind of view, and a static theory that allows a defined concept of existence *as of* a time that appears for the all the world to exactly mimic the relativizer's concept?

It is worth mentioning here Sider's criticism of Tooley's appeal to existence *as of* a time.[52] Sider argues that Tooley can be interpreted in two ways: either (a) Tooley agrees with him about what exists *simpliciter* (which Tooley does), in which case Tooley is really

[52] Sider 2001: 22-25.

an eternalist, not a Growing Block Theorist (a claim which Tooley, of course, denies); or, (b) it must be that Tooley really holds that the future absolutely fails to exist, i.e., fails to exist *simpliciter* (a claim which Tooley also denies). Sider ends his discussion of Tooley with a telling remark:

> My discussion of Tooley has crucially employed a notion of existence that is not qualified or indexed in any way. In particular, I have assumed that in order to defend the thesis of the growing block universe Tooley must claim that dinosaurs and computers exist, and deny that purple cows exist. Whatever else he says about what exists or is actual *at times*, Tooley must make these claims about existence *simpliciter*. …That questions about existence *simpliciter* are meaningful is central to the legitimacy of ontology. (25)

From this it is clear that Sider simply begins with the assumption that we should give absolutely no ontological weight to Tooley's concept of existence *as of* a time. What matters for ontology, Sider says, is what you say about existence *simpliciter*. What you say about existence *as of* a time—unless it has consequences for what you say exists *simpliciter*—is ontologically irrelevant.[53]

[53] Similar comments apply to Hinchliff's (1996: 122) objection to the relativization of instantiation on the grounds that properties whose instantiations are relative to time are really "relations [to times] in disguise".

I'm sympathetic to Sider here. I'm inclined to agree that what matters for ontology is absolute, not relative, existence. But it also seems clear that Sider's criticism represents a complete failure to engage with the position Tooley is trying to defend, a position according to which relative existence does matter for ontology. Perhaps that is Sider's point: philosophers like Tooley who muddy the ontological waters with concepts of existence other than existence *simpliciter* are dangerous, and they need to be dismissed, not engaged. If so, I have to say, I don't agree.[54]

Still, how does one go about critically engaging with a position that posits a primitive that, on one's own view, doesn't deserve to be primitive? Or, less confrontationally, how does one engage with a view when one isn't certain how to understand the primitives it posits?

It seems to me that what we have to do is look at what the theory *hangs upon* the concept. We need to find, in other words, the metaphysical meat that the primitive is being used to describe. In light of that, we need to assess the claim, made by the theory, that (a) the concept is primitive and (b) it is an *ontological* concept, as opposed to some other sort of primitive concept.

Tooley: Existence *as of* a time and Causal Laws

First, then, let's consider what Tooley hangs upon his concept of existence *as of* a time: namely, the asymmetry of causation. According to Tooley, any satisfactory account of

[54] Perhaps my disagreement is motivated by solidarity: I, like Tooley, believe that the assumption that the world is dynamic requires that we muddy the ontological (and ideological) waters, though I disagree with him about how that should be done.

causation must invoke causal laws that satisfy certain "postulates" he lays down, which are intended to capture the idea that a cause is something whose occurrence affects the probability of the occurrence of its effect, but not vice versa.

Suppose, for example, that it is a causal law that the ingesting of cyanide by a human on a given day is sufficient to cause the death of that human by the next day. Suppose, for the sake of simplicity, that this is not a probabilistic law, but an absolute law: anyone who ingests cyanide dies the next day, with no exceptions. But suppose—as is plausible—that there is no converse causal law: a human death one day never causally gives rise to that human's ingestion of cyanide the day before. To really nail things down, suppose that there is no "contrapositive" causal law either: the survival of a human does not causally give rise to that human's non-ingestion of cyanide. In other words, the fact that, for example, I managed to survive through yesterday was, in part, causally due to the fact that I didn't ingest cyanide two days ago, but the fact that I didn't ingest cyanide two days ago is in no way causally due to the fact that I survived through yesterday.

Tooley thinks that the following sort of asymmetry will arise: the probability that a human will ingest cyanide on a given day, given that there is such a causal law, is no different than the probability that a human will ingest cyanide that day, irrespective of whether or not there is such a law. On the other hand, the fact that there is such a law does alter the probability that a human will die. The probability that a human will die, given that there is such a law, is a function of, among other things, the probability that a human will ingest cyanide: at a minimum, the probability that a human will die can be no

less than the probability that a human will ingest cyanide; in practice, it will usually be higher.[55]

It is helpful, I think, to put the point in terms of distributions: the distribution of cyanide ingestions, the thought goes, is responsible for the distribution of (its share of) human deaths; but the distribution of human deaths is not similarly responsible for (its share of) cyanide ingestions.

Tooley's idea is to use this natural thought about causal laws as the definitive feature of a causal law: a causal law just is a fact that generates these asymmetric relations between the probabilities of the cause and effect it describes.

All of this would of course go right out the window if the probabilities being discussed here were subjective probabilities. Suppose, for example, that I believe that the chance that you will die today is quite small, as is the chance that you ingested cyanide yesterday. But suppose I now learn from a reliable source that you are very likely to die today, but I'm told nothing about what will cause your death. And then suppose that I learn that there is this causal law according to which ingesting cyanide causes death. This new information should lead me to update my assessment of the chances that you ingested cyanide yesterday. If, for example, I happen to believe that ingesting cyanide is one of two possible causes of death, and of those two, by far the most common, and that death is always caused, then I should now suppose that the likelihood that you ingested cyanide yesterday is quite high.

[55] It can, of course, be much higher: how much higher will depends on what other causes of death there are, the probability of those causes occurring, and the probability of dying for no cause at all.

What this shows—if it wasn't already obvious—is that the asymmetry Tooley is after is no part of the pure calculus of probability. It is instead—if it exists at all—an asymmetry among objective probabilities that reflects something about the world.

But what about the world gives rise to this asymmetry? We know Tooley's answer: the asymmetry is a result of the fact that the world is dynamic, and, in particular, of the fact that it has the structure of a growing block: what exists *as of* a given time, are all and only those things and events that occur at that time or earlier. But how does that give rise to the asymmetry Tooley seeks?

Here I must admit to finding Tooley's argument very difficult to follow. Tooley's argument is made entirely in the abstract, in terms of *P*-type events, *Q*-type events, and a putative law that says that *P*-type events give rise to *Q*-type events. In these terms, then, he asks how, given his sort of dynamic world, the probability that an event of type *Q* occurs is affected by the assumption that it is a law that *P*-type events give rise to *Q*-type events. As far as I can tell, his strategy for answering this question is to consider how, in each particular case in which a *P*-event occurs, that might affect the occurrence or not of a *Q*-event.

He imagines, then, how we might reason about a case in which a *P*-type event occurs at a given moment. Here is what he says:

> If the future is not real, then, as of the time of the occurrence of the event of type *P*, the non-occurrence of an appropriately related, later event of type *Q* is not actual. So, if it were a law that events of type *P* give rise to events

> of type *Q* at a slightly later time, it would not be an open question whether the result would be the addition of an event of type *Q* at a later time or the removal of an event of type *P* at the moment in question. The nature of the world would be determined by the laws together with what was *actual* as of the moment in question, and so the event of type *P* would give rise to a later event of type *Q*. Consequently the posterior probability of an event of type *Q* [i.e., the probability that a *Q*-type event will occur *given* that the law that *P*'s cause *Q*'s] would have to be at least as great as the *prior* probability of an event of type *P*. (1997: 110-111)

If I understand him properly, Tooley's reasoning goes something like this. Consider a moment *t* at which a *P*-event (e.g., my ingesting cyanide) occurs. *As of* that moment *t*, no future events exist. So, in particular, *as of t*, there is no existing fact of the matter concerning whether or not a *Q*-event (e.g., my death) will occur. So in this context, *if* we assume that there is a law that says that *P*-events give rise to *Q*-events, we can allow that law, together with the facts that exist *as of t*, to settle what happens.

Generalizing out, then, from this line of reasoning about this particular case, we see that the occurrence of a *P*-event, together with the law, will *always* be allowed to make it the case that a *Q*-event will occur, because, in each case, *as of* the moment that the *P*-

event occurs, there will not yet be any future *Q*-event (or lack of *Q*-event) to constrain what happens. So *Q*-events will occur at least as frequently as *P*-events, and the probability that a *Q*-event occurs—given that the causal law exists—is at least as great as the probability that a *P*-event occurs.

The line of reasoning is not supposed to work in the other direction. Consider a moment *t* at which a *Q*-event (e.g, my death) fails to occur. *As of* that moment *t*, all past events exist. So, in particular, *as of t*, there *is* an existing fact of the matter concerning whether or not a *P*-event (e.g., my ingesting cyanide) occurred. So, in this context, *even if* we assume that there is a law that says that *P*-events give rise to *Q*-events, we *cannot* allow that law, together with the non-existence of a *Q*-event *as of t*, to settle whether or not the *P*-event occurred. We either have to throw out the non-occurrence of the *Q*-event, throw out the law, or declare the situation being considered inconsistent.

Generalizing out, then, from this line of reasoning about this particular case, we see that the non-occurrence of a *Q*-event, together with the law, will *never* be allowed to make it the case that a *P*-event did not occur, because, in each case, *as of* the moment that the *Q*-event fails to occur, there *already is* a past *P*-event (or lack of *P*-event) that exists, and constrains what can happen.

The key idea, in each case, seems to be that we must adopt the perspective not of existence *simpliciter*, but existence *as of* some particular time *t*, and, from that perspective, we must assume (a) that facts about what exists *as of t* are, *as of t*, settled, but (b) facts about what exists *as of* a time later than *t* remain, *as of t*, up for grabs. Assumption (a) rules out the possibility that the distribution of *Q*-events, together with the causal law, might be

responsible for (settle) any facts about the distribution of *P*-events, because *P*-events are always *already* settled. Assumption (b), on the other hand, is what allows the distribution of *P*-events, along with the law, to be responsible for (settle) at some facts about the distribution of *Q*-events.

So there you have it: this is the metaphysical meat that Tooley hopes to hang upon his primitive relativized ontological concept: when it comes to assessing what is allowed to be settled by what, those states of affairs that exist *as of* a time *t* are treated as fixed, while those states of affairs that do not exist *as of t*, but do, perhaps, exist *as of* a later time *t**, are treated as unsettled and so up for grabs.

All of this hinges, of course, on Tooley's views about the relation between causation and objective probabilities, views that are, at best, controversial. But our purpose is not to assess Tooley's views on causation. Our purpose is to assess Tooley's appeal to a primitive concept of existence *as of* a time, and his claim that that concept marks a genuine set of ontologically distinctions.

And on this point, I think there is something to be said on his behalf. Suppose, as I suggested at the outset, that we are static theorists, and that we understand Tooley's concept of existence *as of* a time simply as one of many possible ways we might carve up an absolute ontology. As I said at then, we could equally well define a concept of existence *after* a given time, or existence *within a few weeks of* a given time, or existence *in my refrigerator within a few weeks of* a given time.

But when we look at what Tooley actually does with his concept, we see why it is important, for him, to understand it as marking a genuine objective distinction, carving a

real joint, and not just as one possible way of restricting our attention to some among the many things that are real. If we could just as well treat everything that exists *later than t* as settled *as of t*, then we could just as well suppose that the distribution of *P*-events is due to the distribution of *Q*-events: that the distribution of human deaths is what explains the distribution of cyanide ingestions, rather than the other way around. If—Tooley wants to say—we fail to take existence *as of* a time seriously, as an ontological concept, then we fail to take the asymmetry of causal explanations seriously as well.

Dummett on McTaggart

We've seen what Tooley tries to hang on the concept of existence *as of* a time. Perhaps it goes without saying that Tooley's views on this matter are idiosyncratic. Hence I'd like to briefly describe two motivations for embracing existence *as of* a time that are, I think, a bit more common.

The first of these can be found in Michael Dummett's discussion of McTaggart.[56] McTaggart, notoriously, argued that time is not real.[57] His argument came in two parts. In the first part, he argued that time requires that events, in addition to standing in the relations of *earlier to later than*, must also bear the properties *being past*, *being present*, and *being future*. In other words, he argues, in the first part, that time requires that the world have the sort of structure described by a Moving Now Theory. In the second part, he argued that this sort of structure is incoherent, that is, it is a structure the world cannot have.

[56] Dummett 1960.

[57] McTaggart 1908; 1927: chapter 33.

And so, putting the two parts of the argument together, he concluded that the world lacks the sort of structure that is necessary for time: that is, he concluded that time is not real.

A lot has been written on McTaggart's argument, most of it focused on McTaggart's purported demonstration of the incoherence of the Moving Now Theory. I do not intend in this section to take up this old saw. I'm interested instead in the moral that Dummett draws.

The Moving Now Theory is incoherent, according to McTaggart, because it requires each event to be past, present, and future, but *being past*, *being present*, and *being future* are mutally incompatible properties: nothing can have any two of them. Now—skipping past details of whether or not this is correct exegesis of McTaggart—we can imagine that McTaggart's claim is that, in the final analysis, we need a description of each event that captures not just how it is represented as being in a single snapshot, but how it is represented in *each* snapshot. But, as we know, for any given event *E*, that event will be represented in some snapshots as instantiating *being future*, in at least one, as instantiating *being present*, and in others, as *being past*. So, given that each representation is inconsistent with the others, there is no coherent description or representation that combines all of this information about the event into a single, coherent, whole.

Dummett's suggestion, in light of this reading of McTaggart, is that McTaggart is assuming that "reality must be something of which there exists in principle a complete description," i.e., an "observer-independent" description that captures reality not just as it is from some one temporal perspective or other, but how it is independent of any

temporal perspective (1960: 356), a description, in other words, that captures in a single coherent whole all the information represented in each of the snapshots.

If that is the assumption that leads to McTaggart's result, Dummett says, then we should consider the alternative. The alternative, he says, is to suppose that there is no single, coherent, complete description of reality: that every "maximal description of reality" must embody a temporal perspective, and so describe one event as present, and the others as not.

Tooley sees this view as of a kind with his own.[58] The insistence that no one temporal perspective is any better than any other, that each complete description is as good a description of temporal reality as any other, even though each is inconsistent with every other, is plausibly interpreted by Tooley as the view that our conception of reality must be temporally relativized: for every time *t*, you get a different reality, reality as it is *as of t*.

The relevance of this for present purposes is that it provides another reason why one might try to treat existence *as of* a time as ontologically significant: something would go missing, the thought goes, if we treated differences in temporal perspective as mere indexicals, which did not reflect any real objective difference in the world. One way to treat differences in temporal perspective as reflecting real objective differences is to suppose, in essence, that corresponding to every possible temporal perspective, there is a different world, a different reality: reality *as of* that time. And so from the idea that there is

[58] See Tooley 1997: 15.

something essentially perspectival about temporal reality, we get the idea that reality is essentially relativized.

Sometimes, I think, when people discuss the proposal that reality is *tensed*, they have something like this in mind: the view that the basic facts must include facts that specify a privileged moment of time—the present—and so that there is no single, coherent, set of basic facts, but instead different facts for different times. The view suggests the idea that each moment of time is a world unto itself—the world that exists *as of* that time. Each of these "moment-worlds" is ontologically isolated from all the others, since there is no common concept of existence under which they both fall: such a concept, after all, would lead to inconsistency. In other words, these "moment-worlds" do not properly *coexist* in any sense. We might say that each is ontologically on a par with the other, meaning simply that each exists *as of* its own time, and none has any non-relative ontological privilege over the other, simply because there is no such thing, on this view, as a non-relative ontological privilege.

All of this, then, has been by way of trying, first, to motivate in the abstract the move from "reality varies with time" to "reality is temporally relativized", and, second, to provide some insight into what it might mean to take a temporally relativized concept of reality seriously as an ontological primitive.

The Failure of the Relativizing Approach

The idea that the world is "tensed" in the way just described—the picture according to which, for each moment of time, there corresponds a moment-world that exists *as of* that

time, that these moment-worlds don't in any sense coexist, and that no one moment-world exists any more than any other, does not seem to be the same as the idea that the world is dynamic—the idea that reality is subject to change.

The view actually looks quite a bit like the comprehensive proposal. The comprehensive proposal, like the relativizing proposal, has us hold that, for each moment of time, there is a corresponding moment-world—understood as that which would be captured in a snapshot of the world, taken at that time—and that no one of these moment-worlds exists any more than any other. Unlike the relativized view, however the comprehensive view holds that each of these moment-worlds is just a part of the greater comprehensive whole—the world as a whole, we might say. So every moment-world exists together with every other: they are not, as it were, ontologically isolated.

That is an important difference, and I don't want to claim that the relativized view is really just the comprehensive view in disguise. The process of combining all the moment-worlds into a single whole will typically require compromises. If the very same event has the property *being present* in one moment-world, and lacks that property in another, then, in order to avoid the embarrassment of saying that it both has and lacks the property, we will either have to distinguish the event in the one world and the event in the other, so that it is not the very same thing that both has and lacks the property, or the property will have to be recast, so that the property had is not the very same property as that the property lacked. The relativizer avoids these compromises by rejecting the

demand for a single, overarching, comprehensive realm of existence: there is no sense in which each moment-world co-exists with every other.[59]

By emphasizing the difference between the comprehensive and the relativizing approach, I want to emphasize that I do not object to the relativizing proposal on the grounds that a relativized concept of existence cannot be taken as an ontological primitive, or that a relativized concept of instantiation cannot be taken as an ideological primitive. That is not my beef with the view.

My beef with the view lies instead with the fact that it seems to lack anything corresponding to the idea that the world is dynamic. What we have, on the view, are several, ontologically isolated moment-worlds. Presumably something can be said about how they are ordered, so that one is, in some sense, earlier than another. But even then, we seem to have, at best, a static structure that might provide the grounds for a kind of reductive analysis of change; we don't have genuinely dynamic structure—a structure that itself changes.

The key feature that has gone missing, it seems to me, is any sort of non-relative ontological or ideological privilege that passes from one moment-world to the next, so that we can say that one of the moment-worlds is how things really are, and the others simply represent how things once were or will be. Every moment is, so to speak,

[59] Tooley's appeal to existence *simpliciter* may seem to be a counter-example to this. But Tooley doesn't think that, for example, the non-existence of some event E (as when E does not exist *as of T*, because it is future *as of T*) is something that co-exists or co-obtains with the existence of that event E (as when E exists *as of T**, because it is past *as of T**). Likewise, he doesn't think that E's being present—i.e., it's being later in the series of events than any other events—is something that co-exists or co-obtains with E's being past—i.e., it's being earlier than some other events. So there are features of each of the moment-worlds—the worlds *as of* times—that, for Tooley, get washed out when all those worlds are combined into a single world that exists *simpliciter*.

privileged *as of* itself, but no moment stands out from all the others. Each is, from its own perspective, special, but none stands out from the others as being special in a way that the others are not: they are all, in this sense, on a par.

To make this more concrete, consider the relationship between a snapshot that represents Clinton as instantiating the property *being President*, and one that represents him as he is today, as, say, *living in Harlem*. How are these two snapshots related? The natural thing to say, I think—the thing that seems to be in the spirit of the idea that these are snapshots taken of a reality that keeps, as it were, changing out from underneath us—is that the one snapshot represents how things *are*, while the latter represents how things *once* were.

The cash value of this, on the relativizing approach, is this: the one snapshot represents how things are *as of* one time, the other, how they are *as of* another. We can add, if we wish, an indexical account of why we, speaking *as of* this time, will say that one snapshot represents how things *are*, full stop and without qualification, and the other does not. When we use these absolute forms of speech, the relevant qualification is implicit: unqualified claims about how things are should be interpreted as claims about how things are *as of* some contextually given time *t*. So what has gone missing is the thought that how things are *as of* one time—say, when Clinton was President—is something that, while it once was real, has since ceased to be: the world has, as it were, moved past that stage.

Once we lose the idea of an absolute privilege, we lose the idea that such an absolute privilege might pass from one thing to another. At best, we can mimic that idea by means of the static idea that some property or privilege might be had relative to one

time, but not relative to another. But when we lose the idea of an absolute privilege, and attempt instead to mimic that idea by means of a static structure, we lose the idea that the world is dynamic, or, at least, we lose the idea I had in mind when I said I was interested in the idea that the world is dynamic.

Chapter 4

An Absolute Reality, Subject to Change

We've seen that, if the world is dynamic, we must make claims about the past and future ontological and ideological status of the world. We've seen that such claims cannot be recast as claims about the current ontological or ideological status of the world. And we've seen that we cannot capture what we are after by supposing that ontology and ideology are fundamentally relativized to a time. So where does this drive us: how, given a dynamic world, are we to understand the past and future?

The aim of this chapter is modest: I do not intend to lay out a complete account of the past and future that satisfies the demands made in chapters 2 and 3. Instead, I will try, first, to sketch out some of the contours of the resulting view; second, to address some common confusions about existence that can make it seem as though there is no logical space for the view to occupy; third, to explain the attraction of primitive tense operators given the contours of the view; and, fourth, to briefly describe how the view fairs against some of the standard objections to dynamic theories.

Contours of the View

The relativizing proposal failed because it could not capture the idea that there is something special about the *current* ontological and ideological status of the world, as

opposed to its past or future status. If we reject the relativizing proposal, we return to the traditional position that ontology and ideology are absolute, non-relative matters: a thing either exists or it does not, full stop, end of story; and, likewise, a thing either instantiates a property or it does not, full stop, end of story.

Granted that existence and instantiation are absolute, capturing what is special about the current ontological and ideological status of the world is not a problem: the current status is *the* status; the only things that exist are those things that currently exist, the only properties and relations things instantiate are those they currently instantiate.

But if the world is dynamic, then we still have to face up to the fact that neither the ontology nor ideology of the world are fixed: for any given statement we might make about what there is and how things are, even if it is true when we make it, the world may change, so that the facts it once correctly reported may, as it were, slip out from underneath us. The problem is not with our claim—e.g., that we used absolute concepts of existence or instantiation when we should have used relativized concepts. The problem—insofar as it is a problem—is with the world: the world changed, so that our description of the world, while it once was true—and absolutely so—it no longer is—and so absolutely is not.

From this perspective, the relativizer's proposal, that once we allow change, we must recognize that what is at issue is not absolute existence (or existence *simpliciter*) but existence *as of* a time, seems to amount to changing the subject. Recall Tooley's quick and easy path: any concept of existence whose extension is subject to temporal variation, he argued, must therefore be a relative concept of existence. Against this, I wish to claim

that if we are going to do justice to a dynamic world, we must assume that existence and instantiation are absolute but nevertheless subject to change.

Existence: Some Confusions

I've been working with a distinction between absolute and relativized concepts of existence and instantiation, and want to propose, in terms of this distinction, that the concepts proper to capturing a dynamic world are absolute, yet subject to change. This is not a radical proposal—I think it is the position most proponents of a "tensed" or "dynamic" conception of reality have in mind, even if they mistakenly go on to try to make do without direct appeal to past or future. But even if it is not a radical proposal, it is a proposal that has trouble fitting in to a rather widespread picture of how we should classify concepts of existence in this context.

In the context of time and change, people often contrast a *tensed* concept of existence with a *tenseless* concept. This terminology can cut in two different ways, and, if both cuts are taken together, it can leave little room for an absolute concept of existence that is subject to change.

Recall from Chapter 1 the traditional distinction between "tensed" and "tenseless" conceptions of reality. According to the tenser, a "tensed" sentence—a sentence whose truth value is subject to change with time—expresses the very same "tensed" proposition, no matter when it is uttered or evaluated. The change in truth-value of the "tensed" sentence, therefore, is traced to a change in truth-value in the "tensed" proposition, and the change in truth-value in the "tensed" proposition is, in turn, traced

to a change in the fundamental facts—that is, a change in the ontology or ideology. These facts, then, are "tensed' facts, reflecting a "tensed" ontology and/or a "tensed" ideology.

According to a detenser, by contrast, a "tensed" sentence expresses different propositions at different times. The propositions expressed are "tenseless", in the sense that they bear their truth-values in a fixed and unchanging way. Because of this, the detenser can claim that the fundamental facts—the facts that settle the truth or falsity of the propositions expressed—are "tenseless" (i.e., fixed and unchanging), reflecting a "tenseless" ontology and a "tenseless" ideology.

If we stick to this distinction, then it is clear that an ontology characterized by an absolute concept existence which is subject to change is a "tensed" ontology, characterized by a "tensed" concept of existence.

On the other hand, the terminology strongly suggests something else in addition: a "tenseless" sentence, one naturally assumes, is a sentence that lacks a "tense"; a "tensed" sentence, by contrast, is one that has a "tense". The presence or absence of a "tense", in this context, is frequently, but not always, understood as a matter of the proper interpretation of the main verb. In particular, when the main verb is in the grammatical present tense, as in:

(S) Socrates is wise.

there are said to be two interpretations, one that treats the verb as "tensed", the other as "tenseless". To interpret the verb as "tensed" is to suppose, roughly, that (S) says that Socrates is *now* wise. To interpret the verb as "tenseless", on the other hand, is to suppose

that (S) does not tell us anything about *when* Socrates is wise: it merely ascribes wisdom to Socrates, without adding any temporal information about when he is wise.[60]

Notice that this is not the same distinction as our original distinction between "tensed" and "tenseless" sentences, as it was no part of the original distinction that the division between "tensed" and "tenseless" sentences is due to the presence or absence of "tenses", understood as the things that "tensed" sentences or verbs have and "tenseless" sentences or verbs lack.

But the labels are suggestive, and have led some to suppose that the contrast between "tensed" and "tenseless" concepts of existence is a distinction between a concept that "builds time in" and a concept that "leaves time out". Hence when Tooley opposes existence *as of* a time with existence *simpliciter*, he says that existence simpliciter is a kind of existence that is non-relative and invariant, but, furthermore, a kind of existence that "involves no relation to time" (1997: 40). Read strictly, with the emphasis on "relation", all that Tooley is saying is that existence *simpliciter* is non-relational, i.e., absolute. This is how I have read him. But it is easy to read more into this characterization, sliding from "involves no relation to time" to "involves no time"—whether or not one supposes that the proper way to "involve time" is to temporally relativize.

All of this leads to a general picture—a picture that I hesitate to attribute to Tooley, but a picture that seems to have some real grip on many members of the

[60] Crisp 2004: 16 is a good example of someone using "tensed" and "tenseless" in this way.

philosophical community at large—according to which we have, on the one hand, a clean and simple concept of existence, existence *simpliciter*, which is "tenseless" both in the sense that its extension is fixed and not subject to temporal variation *and* in the sense that it lacks a "tense", and so lacks the complexity that would be involved in a concept that had a "tense" built into it. On the other hand, then, we have a "tensed" concept of existence, a concept that must somehow have something further—a "tense"—built into it to, that is responsible for its "tensed" nature, that is, for the fact that its extension is not fixed but is subject to change.

But we have two different ways of cutting up concepts of existence (and instantiation) here: on the one hand, there is the original distinction between "tensed" and "tenseless" sentences, propositions, and facts, which has to do with whether or not the fundamental facts, and so the fundamental ontology an ideology, are subject to change. On the other hand, there is this other distinction, between sentences, verbs, and concepts that have a "tense" and those that lack a "tense".[61]

If one conflates these two distinctions, then the kind of existence I want—absolute, but subject to change—must be "tensed", since it is subject to change, and therefore must be somehow complex, albeit not complex in virtue of being relativized. But that is the wrong way to understand the view. If the world is dynamic, then existence will be "tensed" in the first sense, but not in the second: existence (and instantiation) is simple and absolute, but nevertheless subject to change.

[61] Do we need any better reason to give up the traditional distinction between "tensed" and "tenseless" conceptions of reality, and replace it with the dynamic/static distinction?

Tense Operators: the Attraction

But our question remains: given a dynamic world—and given concepts of existence and instantiation that treat each as absolute but subject to change—how *do* we make sense of claims about how things were and how they will be?

Consider the sentence:

(B) George W. Bush is President.

Suppose we interpret (B) as making an absolute claim about George W. Bush, to the effect that he instantiates the property *being President*. On the assumption that the world is a presentist dynamic world, (B), so interpreted, is true, but, of course, its truth-value is not fixed and unchanging: it will cease to be true when Bush ceases to be President.

Likewise, consider the sentence:

(C) Bill Clinton is President.

Again, interpret (C) as making an absolute claim about Bill Clinton, to the effect that he instantiates the property *being President*. On the assumption that the world is a presentist dynamic world, (C), so interpreted, is false, but, of course, its truth-value is not fixed and unchanging: it once was true, because Clinton once was President.

The standard way to deal with this sort of complexity—the complexity introduced by supposing that we have a language that makes absolute claims about a world that is subject to change—is, following Arthur Prior, to introduce primitive tense operators.[62]

[62] It seems silly to provide a reference for something that so deeply pervades Prior's work. For one brief description of this use of operators, see his 1968, especially p. 78, first paragraph.

To see how this works, suppose that we begin with a language that we interpret as allowing us to express simple absolute claims about what exists and what properties and relations things instantiate—say, for example, the language of standard first order predicate logic. So, for example, in this language, (B) might be represented by something like:

(B1) President(Bush)

Where 'President' is a predicate that is satisfied by all and only those things that instantiate the property *being President*, and 'Bush' is a singular term referring to George W. Bush. Likewise, (C) gets represented as something like:

(C1) President(Clinton).

Suppose, then, that this language provides us with the means to say everything we want to say about the current ontological and ideological status of the world.

In much the same way that we might introduce the familiar modal operators '□' and '◇' in order to extend our language to allow us to make claims not just about how things actually are, but how they could be, so too we can introduce tense operators in order to allow us to make claims not just about things currently are, but how they were and how they will be.

The simplest extension introduces two new operators, '<P>' and '<F>'. '<P>' can be read as "it was the case that" and '<F>' as "it will be the case that" respectively.[63] Using these operators, we can generate new sentences, such as:

[63] To complete the analogy with the modal operators '□' and '◇', we can define the "box-like" operators '[P]' and '[F]', to be read as "it has always been the case that" and "it will always be the case that", respectively.

(PC) <P>President(Clinton)

and:

(FnB) <F>~President(Bush)

Intuitively, (PC) is supposed to express the claim that Clinton once was President—that he once instantiated the property *being President*, while (FnB) is supposed to express the claim that Bush will not be President—that is, he will not instantiate the property *being President*.

By contrast to the relativizing proposal, this introduction of operators appears to allow us a way of introducing temporal modification—or, at least, introducing a contrast between how things are, and how they were or will be—without introducing any relativity to a time. The sub-sentence within the scope of the operator—e.g., the sentence 'President(Clinton)' found within the scope of '<P>' in (PC)—is the very same sentence that, when taken on its own, expresses an absolute claim about what properties Clinton instantiates. So it is natural to interpret the sentence as a whole as expressing the claim that things once were as the sub-sentence says they are: that Clinton once instantiated the property *being President*.

The operators offer this *if* they are understood in a certain way. We need to understand the operator '<P>', for example, as a device that allows us to, as it were, reach back to make a claim about how the world was—as, for example, represented in a past snapshot of the world. A claim like (PC), for example, is true just in case, back in the day, Clinton did indeed instantiate the property *being President*. This seems to be precisely the kind of claim we are after, a claim that allows us to reach out and describe the no

longer real past, rather than a claim that leads us instead to some present trace or surrogate of the once real.

But there are other ways to understand tense operators, even if they are taken as primitive. For example, there is a form of presentism—call it Tensed Facts Presentism—that is close kin to, yet importantly different from, Tensed Properties Presentism.[64] The Tensed Facts Presentist maintains that the world, as it currently is, contains brute tensed facts, facts like the fact that Clinton was President, but resists any analysis of these facts in terms of the present instantiation of tensed properties. These tensed facts, the Tensed Facts Presentist insists, are neither facts about what exists, nor facts about what properties or relations things instantiate, but they are nevertheless facts that describe the current state of the world.

This is a difficult view to understand. Part of the problem with the appeal to "facts", in metaphysics, is that it can sometimes seem as though facts are cheap and easy, that one can appeal to the existence of facts without thereby undertaking any obligation to explain in what the existence of such facts consists.

But one way to be a Tensed Facts Presentist of this sort would be to insist that the tensed facts are facts whose proper expression requires primitive tense operators, so that among the primitive facts is the fact that it was the case that Clinton instantiated *being President*, and that this fact should be understood as a present fact—a fact that would

[64] I borrow the label "Tensed Facts Presentism" from Tooley 1997, 238-240. This is again unfortunate usage: the tenser's notion of tensed facts, as facts which are subject to change, is not the same as the Tensed Facts Presentist's notion of a tensed fact, as a fact which somehow involves a brute "tense".

show up in the current snapshot of the world, though not quite by way of an ontological feature of the world, nor quite by the way of an ideological feature of the world.

A Tensed Facts Presentist who makes use of primitive tense operators in this way is understanding their operators in a way that is quite different from the way I wanted to suggest. For the Tensed Facts Presentist, the use of primitive operators reflects the peculiar metaphysical nature of brute tensed facts: they aren't quite facts concerning what exists: they aren't quite facts concerning what properties and relations things instantiate, but, nevertheless they are among the facts that currently constitute the world.

The alternative I am proposing here is that we take the use of tense operators to reflect the dynamic nature of the world, and our consequent need to make claims that "go beyond" what is real, and describe what was, but no longer is, real, and what will be real but is not yet. So they are not devices that allow us to describe a peculiar set of primitive tensed facts that currently constitute the world, but are instead devices that allow us make claims that go beyond the facts that currently constitute the world, in precisely the way demanded by the arguments of Chapter 2.

Tense operators are not without their problems. For one thing, it is not obvious that we can say everything we want to say about the past and future simply using the operators '<P>' and '<F>'. It is well known that language I've described, which extends the language of first-order predicate logic by introducing these two operators is, when compared to a language that instead involves quantification over times, is expressively weak. It is, I think, an open question whether or not there are ways of further extending the language—either by adding additional operators, or by other means—that remain true

to the motivations that led us to introduce operators in the first place, and allow us the expressive power necessary to say everything we want to say about the past and future.

I mention these problems because I want to express an attitude toward primitive tense operators that I have not seen expressed in print. We are working with a metaphysical view—the view that the world is dynamic—that seems compelling and coherent. I suppose that this could be an illusion: it cannot be denied that there is a long history—from Parmenides, through Plato and Augustine, McTaggart, and into the present day, of philosophers doubting its coherence. Even so, I think it would be very surprising if the metaphysics could not be saved.

From this perspective, tense operators are attractive: the language of operators appears to fit well with the idea we want to talk not about how things are, but how they were or will be. But their attraction may have its limits: they may ultimately fail to capture what we need. If they do fail, that does not show that the metaphysical view fails; it simply shows that tense operators were not the right way to express the claims that the view requires us to express. I'm inclined to think that tense operators are, in several important ways, on the right track, but I'm also willing to admit that they may not be, in the final analysis, exactly what we want.

Pointing Beyond the Real

It is worth mentioning, in this connection, a standard objection to views that appeal to primitive tensed properties, primitive tensed facts, or primitive tense operators. The objection is that all such views posit irreducibly "hypothetical" properties or facts, which

are objectionable: "a proper ontology," as Sider puts it, "should invoke only categorical, or occurrent, properties and relations" (2001: 41).

Sider mentions several examples of objectionably hypothetical properties and facts (2001:40). The two most vivid examples, for his purposes, are, first, brute dispositions, as posited by one who says that dispositions are ungrounded in non-dispositional properties, e.g., the disposition of a wine glass to shatter if dropped, held to be ungrounded in the actual, non-dispositional properties of the glass and its environment. The second example, much like the first, are brute counterfactual facts, as posited by one who says that counterfactual facts are ungrounded in the actual, occurrent, properties of the things involved, e.g., the fact that this match would light if struck, held to be ungrounded in the actual, non-counterfactual facts about the match and its environment.

Likewise, Sider says, with tensed properties, like the property *having been President* as instantiated by Bill Clinton, when held to be ungrounded in the non-tensed, occurrent properties that Bill Clinton instantiates. And likewise, Sider says, of tensed facts, like the fact that Clinton was President, when held to be ungrounded in the non-tensed, occurrent facts about Clinton.

All views which posit such hypothetical properties or facts are, Sider says, cheats: ways of trying to get something from nothing, or ways of trying to get something to which one is not, given one's views, properly entitled. Here is what he says by way of an objection to such cheats:

> What seems common to all the cheats is that irreducibly *hypothetical* properties are postulated, whereas a proper ontology should invoke only *categorical*, or occurrent, properties and relations. Categorical properties involve what objects are actually like, whereas hypothetical properties 'point beyond' their instances. The presentist's primitive tensed properties (or operators, or whatever) would be hypothetical. Whether the world has the property *previously containing dinosaurs* is not a matter of what the world itself is like, but points beyond itself, to the past. (2001:41)

I couldn't agree more with Sider on this point, and I take it to be very much in the spirit of my objection to presentists who attempt forego appeal to the no longer real past, and not yet real future, by positing primitive tensed properties or facts.

But that is no part of what I want out of tense operators. My aim, with tense operators, is not to find a way to build the past and future into the present. Nor is my aim, with tense operators, to introduce some new and strange "hypothetical" features—a new set of brute tensed facts—into the world, that are not properly grounded in what exists and how things are. My aim with tense operators is instead precisely to find a way of speaking that, to borrow Sider's phrase, "points beyond" reality, as it currently is, and

allows us to make claims directly about how matters once stood, and how matters will stand. There may be a "cheat" here, but it is not the cheat Sider describes.[65]

So we need to distinguish two possible objections to the invocation of primitive tense operators, or, for that matter, primitive tensed predicates. One objection is that such devices are used to build ungrounded hypothetical features into the world. This objection only applies to those—like the Tensed Properties Presentist and the Tensed Facts Presentist—who wish to use these devices to forego making claims that "go beyond" what is captured in the current snapshot of the world, and so who wish to build these "hypothetical" features into the world as it currently is. And, in any case, it is not the best objection against such views: the better objection is the objection pushed in Chapter 2, that such views lack the resources to capture the dynamic nature of the world to which they are committed.

But even if we suppose that the primitive operators are not being used to build ungrounded hypothetical features into the world, an objection remains. Someone who says, as I am suggesting, that we can make true claims using primitive tense operators whose truth does not depend on how things are, but on how things once were (but are not), violates a principle that many philosophers hold dear: the so-called "Truthmaker Principle".

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[65] Similar comments apply to Tooley's objection to Tensed Facts Presentism, that it "fails to take seriously the notion of a state of affairs" (1997: 239). This may be a good objection to Tensed Facts Presentism, but it is not a good objection to the view I want to defend, which admits that sentences involving tense operators are not being used to express claims grounded in the present existence of a "tensed fact" or state of affairs.

The Truthmaker Principle comes in many different forms, some stronger and some weaker. Put in terms of vivid metaphor, the principle says that one cannot suppose that there are propositions whose truth or falsity "swings free" from reality. A bit more precisely, the principle tells us that there cannot be differences in truth-value that fail to reflect some difference in reality: either a difference in the sum total of what exists, or a difference in that taken together with all the facts concerning what properties and relations things instantiate. In order for it to be false, for example, that Bush is President, something would have to be different in the world that reflected that difference in truth-value.[66]

Whatever attractions this principle may have in the abstract, it has no attraction, as far as I can see, when used as a way to insist that, for a presentist, claims about the past or future must be grounded in how things presently are. Suppose, for example, that in 401 BCE, on August 12th, at 9 a.m. in the morning, Socrates scratched his head. Suppose that the world is dynamic. Suppose, for simplicity, that it is a *presentist* dynamic world, so that Socrates no longer exists, and is no longer instantiating any of the properties or relations that he once instantiated so as to make it the case that he was scratching his head.

It seems obvious that, in such a situation, the proposition that Socrates once scratched his head is true. But it also seems obvious that its truth has nothing to do with how things now are, or what properties and relations things now instantiate. Those in the

[66] For discussions of the Truthmaker Principle, see Bigelow 1988 and Lewis 1992. For discussions that employ the principle in application to presentism, see Bigelow 1996, Tooley 1997: 236-237, Sider 2001: 36ff., Crisp 2003, Keller 2004, Parsons 2003, among others.

antecedent grip of Truthmaker Principle will point to this as evidence that, in a dynamic world, the Truthmaker Principle is violated. But those in the antecedent grip of the idea that the world is dynamic—as, I think, any Presentist should be—ought instead to say that, in a dynamic world, the Truthmaker Principle fails, because, in a dynamic world, we must make claims that reach beyond how things are, to describe how things were or will be.

The Truthmaker Principle is just one of many abstract metaphysical principles that are used—by presentists and non-presentists alike—to bludgeon presentism into bizarre and implausible forms (Tensed Properties Presentism, Tensed Facts Presentism, etc.), whether (when done at the hands of non-presentists) in the name of declaring presentism false, or (when done at the hands of presentists!) in the name of declaring it, once so bludgeoned, at least coherent, though admittedly unattractive.[67]

Something has gone seriously wrong here. Those who come to presentism with an antecedent commitment to principles like Truthmaker, I think, are failing to take seriously the idea that, in a dynamic world, we make sense of a shifting domain of things and facts. Making sense of a shifting domain of things and facts requires—or so I hope to

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[67] Here are two samples of the glowing praises recent "defenders" of presentism have heaped upon their view, after showing that, at the substantial cost of making the view bizarre and implausible, they avoid violating the Truthmaker Principle:

> "Presentism in not refuted by a simple *reductio ad absurdum*: it is at least a logically consistent theory" (Bigelow 1996: 47).
>
> "The truthmaking problem does not refute presentism, but it does leave the presentist with the twin burdens of choosing an account of what underlies past- and future-tensed truths and of showing that it is worth making *the unattractive commitments that such an account will inevitably involve*" (Keller 2004: 102, my emphasis).

have argued in this dissertation—making sense of things and facts that were but no longer are, along with things and facts that are not but will be, and that is something that we cannot do so long as we hang on to principles that force us to recast the once or not yet real in terms of what is now real.

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