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Comments on Sider

I. Introduction

Congratulations to Ted on the APA Prize. Ted's book *Four Dimensionalism* is an impressive piece of work, and it is an honor to be included in this session. The book is a paradigm of systematic work in analytic metaphysics. It demonstrates a comprehensive understanding of a variety of debates over time, persistence, material constitution, as well as a sensitivity to background issues concerning methodology in metaphysics. It is a significant accomplishment.

I'll start by giving a very brief summary of Sider's position and will identify some points on which my own position differs from his. I'll then raise four issues, viz., how to articulate the 3-dimensionalist view, the trade-offs between Ted's stage view of persistence and endurance with respect to intrinsic properties, the endurantist's response to the argument from vagueness, and finally more general questions about what's at stake in the debate. I don't believe that anything I say raises insurmountable problems for Sider's view; and in fact, I'm sure he's in a better position to defend his view more convincingly than I'm able to defend mine. However, there is plenty worth discussing further.

Sider defends what he calls "four dimensionalism," but we should start by being clear how he understands this position.¹ He defines "four dimensionalism" as "an ontology of the material world according to which objects have temporal as well as spatial parts." (xiii) So the thesis of four-dimensionalism Sider is interested in is a thesis about *objects and their parts*. Note that the term 'four dimensionalism' is also commonly used for a thesis about the structure of reality as a whole, and in particular about time and existence. For example, Michael Rae in his recent essay in the *Oxford Handbook of Metaphysics*, defines four-dimensionalism as the view that there are past and/or future objects that are "ontologically on a par with present objects."² (Rea 2003, manuscript p. 1) This version of four-dimensionalism is opposed to presentism, viz., the view that only present objects exist. Now Sider is a four-dimensionalist in both senses of the term: he believes that past and future objects exist—though this view he calls *eternalism*—and also that these objects have temporal parts at those times they exist.

A third issue to be distinguished from both of these is the semantics of tensed statements. The presentist's ontological claims concerning the unreality of non-present things is often connected to a semantic thesis asserting the irreducibility of tensed to untensed predication. On this view, to say that something exists, or walks, or is red, is

¹ Josh Parsons in his "Review of Four Dimensionalism," emphasizes the potential confusions caused by the name of the book. This prompted me to set out some of the terms of the discussion here.
<http://ahpc-jp30.st-and.ac.uk/~josh/papers/sider-review.pdf>

² Michael Rae, "Four Dimensionalism," in *The Oxford Handbook in Metaphysics*, Oxford University Press, 2003. (Manuscript p. 1).

to say something about how it is in the present, and statements about what is, was, or will be the case, cannot be reduced to statements in a “timeless” idiom. The possibility or impossibility of such reduction may depend on whether ‘now’ is irreducibly indexical.

The semantic debate over tense is further related to a metaphysical debate concerning the existence of tensed facts or, some might prefer to say, concerning the nature of propositions (or whatever one takes the bearers of truth to be): are propositions tensed entities that concern how things were, are, and will be, or are do they concern how things timelessly *are*? A *serious tenser* holds that propositions are tensed entities and are not timelessly true or false: they were, are, or will be true or false.

It is important to note that an eternalist is not committed to the reduction of tensed to non-tensed discourse; and eternalism is also compatible with serious tensing. Sider suggests the moving spotlight view of time an example of a view committed to both eternalism and serious tensing (17): past, present, and future objects are equally real, but the present is metaphysically privileged in some way. Keep in mind: eternalism/presentism is a debate over what exists. Serious tensing/detensing is a debate over what is what is the case about, or what is true or false about what exists.

A further issue to be considered is whether and how things persist. The standard terminology in debates concerning the nature of continuants takes ‘persists’ to be the neutral word. There are several ways to persist, however; the two longstanding options have been:

X perdures iff x persists by having parts present at different times.

X endures iff x persists by being wholly present at different times.

Sider (and recently also Katherine Hawley) have introduced a further option, what we might call “exdurance” (and ugly word...in keeping with the ugliness of “perdurance”).

X exdures iff X is a momentary stage and x persists by having counterparts present at different times.

It is important to emphasize that the current defenders of the stage theory do not disagree with perdurantists over ontology: both views agree that there are stages and composites of stages (“worms”). Stage theory differs from the perdurance view in two important respects: (i) it allows exdurance to count as a form of persistence, and (ii) it maintains that *ordinary* things, viz., continuants, are stages that persist by exduring, rather than composites that persist by perduring.³

On persistence, there are three main contenders in the current literature:

Perdurance Theory: Objects persist only by perduring. There are perduring, but no enduring or exduring particulars.

Exdurance Theory (AKA Stage Theory): Ordinary objects persist by exduring. There are (weird) perduring particulars, and no enduring particulars.

³ In principle there could be a version of the stage theory which denies that there are perduring things and claims instead that there are only stages and the only way for something to persist is by exduring. (This might be a promising strategy for someone who favors an ontology without enduring things, but is also opposed to unrestricted mereological composition.) But as it stands, the debate between the perdurance and exdurance theorists does not concern the existence of perduring things.

Endurance Theory: Ordinary objects persist by enduring. There are enduring particulars, and there may or may not be perduring or exduring particulars as well.

OK, so given these options, here's where Sider stands. He defends⁴:

Four-dimensionalism: material objects have temporal parts

Eternalism: past, present, and future objects are equally real

Detensing: No tensed facts/propositions.

Stage Theory: Ordinary objects exist by exduring.

I am sympathetic to a different cluster of views:

Three dimensionalism: some material objects don't have temporal parts

Eternalism: past, present, and future objects are equally real

Detensing: ??? (I'm undecided.)

Endurance theory: There are both perduring and enduring things.

II. Articulating 3Dism

Sider argues that it is difficult to state three-dimensionalism and, in fact, attempts to do so using the notion of being wholly present fail. Being the generous sort, however, he allows that the debate is nonetheless worth continuing, though challenges the 3Dist to say what 3Dism is. (68)

We've seen that Sider uses the term 'four dimensionalism' for the view, roughly, that objects have temporal parts. More precisely, he proposes:

"necessarily, each spatio-temporal object has a temporal part at every moment at which it exists." (59)

He proposes that we understand what it is to have a part at a time this way:

P@T: x is part of y at t iff x and y each exist at t, and x's instantaneous temporal part at t is part of y's instantaneous temporal part at t. (57)

It would seem that the relevant alternative would be that objects don't, or don't necessarily, have temporal parts. Let's set aside the issue of necessity and focus on how things actually are. A 4Dist can allow that there are some 3D entities, e.g., instantaneous entities, providing that they have temporal parts (presumably they are temporal parts of themselves). And someone who endorses an eternalist view of time, and so the existence of past, present, and future objects, need not be a 4Dist, if at least some of those objects don't have temporal parts.

As suggested above, endurantists have tended to articulate their view using the notion of *wholly present*. I endure because I was wholly present in Cambridge at 6am this morning, and am wholly present here now. Sider offers the endurantist two options for understanding what this might mean, given that endurantists must articulate their view taking time into account (64):

- 1) Everything that is part of x at t, exists at t.
- 2) Everything that is part of x at any time, is part of x at every time.

⁴ Does Sider also accept the semantic reduction of tense? I'm not sure Since Sider doesn't clearly distinguish the semantic from the metaphysical reductionist program. As I read him, however, he would maintain that tensed discourse can be reduced to untensed discourse. See, pp. 12-25.

He argues that the first is too weak: If we allow a “neutral” notion of being a part of x at a time, then “no one would deny that a part of an object at a given time must exist then” (64), including the 4Dist. The second is too strong: a sensible endurantist who rejects mereological essentialism must allow that objects gain and lose spatial parts.

An eternalist 3Dist will find something fishy here, however, for even at a given time t , we want to be able to talk about how things are at other times. At t (now) it is the case that at a time prior to t (in the past), Socrates exists. One of the virtues of eternalism is that past and future things exist to be talked about now.

Sider suggests that in talking about parts of things at times, we should accept (57):

P@T: x is part of y at t iff x and y each exist at t , and x 's instantaneous temporal part at t is part of y 's instantaneous temporal part at t .

This is one useful way of thinking about how y is at t : consider y 's occurrent t -state. But if y persists and so is in different states at other times, there should be a way to capture this amongst the facts about y at t . Suppose A is a persisting thing (recall that ‘persists’ is the neutral word), perhaps an apple that was green but has ripened to become red at t ; perhaps A is an accordion whose replacement of its middle-C key was completed at t . It is the case *at t* , it seems to me, that at a time prior to t the apple was green, and at a time prior to t the accordion had a different middle-C key.

If A has temporal parts that exist at (are present at) times prior to t , then what are A 's parts *at t* ? We could consider A 's occurrent t -parts, or we could consider the parts of the persisting A from the point of view of t , so to speak. If A is a perduring thing, then it would be plausible to say that at t , A has temporal parts that do not exist at t . In other words, at t , A has a t -part, a t' -part, a t'' -part, some of which do not exist at t . This suggests that (P@T) is not adequate to capture all of the ways that something can have a part at t , and there are some who do deny that a part of an object at a time must exist then. If we allow that at t , a t' -part of x is in at least one sense part of x , then (1) can help distinguish 3Dists from 4Dists.

Neil McKinnon has suggested a promising statement of 3Dism compatible with this.⁵ Start with a slight variation of Sider's definition of temporal part:

(TP): x is an instantaneous temporal part located at t of y iff (i) x is a part of y , (ii) x is located only at t , and (iii) x overlaps every part of y that is located at t . (Section 1.1)

Then:

McKinnon proposes that an entity perdures iff it has temporal parts; we should modify this to say that an entity perdures iff it has temporal parts at different times. Relevant to our concerns here, he proposes that an entity endures iff it persists and has no temporal parts. (McKinnon, section 2)⁶

⁵ <http://www.geocities.com/trolleylauncher/Distinction.html>

⁶ McKinnon and Merricks are interested in the possibility of things that might persist by enduring for some part of its life and persist in other ways for the rest, so McKinnon goes on to complicate the view. However, an endurantist might simply state their view by saying that there are some things that endure, allowing that they might not endure for some parts of their life (but rather perdure or exdure).

On this account, there can be no enduring object that has a momentary part that exactly coincides with it at that moment.⁷ (Momentary non-persisting objects are not a problem because of the persistence condition; and enduring objects have themselves as temporal parts.) But that, I think, is something endurantists would be willing to accept.

III. Stage Theory and Lasting Intrinsic⁸

Note that the exdurance or stage view has many of the same benefits as the perdurance account, without some of its disadvantages. As on the perdurance account, the stage view provides a simple way to avoid the predication of incompatible properties in cases of change: the subjects of the incompatible properties (different stages at different times) are distinct, so no contradiction arises. It also accommodates temporary intrinsics, allegedly a serious problem for endurantists of various sorts: intrinsic properties are instantiated in enduring objects (which are stages); the candle's *being bent* or *being straight* is not construed relationally (it is neither a relation to times, nor a relation to parts that have the intrinsics, as in Lewis's story). Moreover, the stage theory appeals to certain ontological minimalists by not needing to postulate sums of stages over and above the stages themselves. (For further advantages see (Hawley 2001; Sider 2001).

Note, however, that the stage view does not appear to accommodate *history-dependent* intrinsics. If it is reasonable to insist that an adequate account of alteration do justice to temporary intrinsics, such as *being bent*, then it would seem that it should also do justice to history-dependent intrinsics such as being a horse, or being a chair. Plausibly horses and chairs are horses and chairs, not simply by virtue of their occurrent properties, but by virtue also of properties they have had and/or will have. In other words, something's currently being a horse is an intrinsic property that depends on how *it* is at other times. But on the exdurance account, strictly speaking there is no way that *it* (the stage) is at other times. *It* is some way or another at other times by virtue of counterparts at those times. So *its* being a horse is not intrinsic (to its proper subject, viz., the stage), but depends on how other things are. Although an exdurantist could insist that temporal counterpart theory provides resources for saying that counterpart-dependent properties are full-fledged properties of the stage, it is not reasonable to maintain that they are *intrinsic* properties of the stage, for the underlier for the historical claim crucially involves the properties of a distinct counterpart.

Having seen that there are numerous ways to rethink the notion of intrinsicness, there are no doubt ways for the exdurantist to respond. But the response will require some trade-off in our intuitions.

III. Argument from Vagueness: Strategies of Abundance and Conservatism

Although many commentators have been especially impressed by the argument from vagueness, I must admit I find the argument puzzling. In particular, it seems to make assumptions about what an endurantist is committed to that are not entailed, as far as I

⁷ If a portion of clay is made into a statue for a moment, the statue wouldn't be a part of the clay. If the clay statue is momentarily constituted by bronze and returned to clay, it isn't clear that the bronze is a part of the statue...the bronze lump composes the statue for that moment and the bronze is part of the lump. But is it part of the statue?

⁸ This section is taken from my essay "Persistence through Time" in the Oxford Handbook in Metaphysics. Also available at: <http://www.mit.edu/~shaslang/papers/ptttimeFIN.pdf>

can see, by the thesis that there are enduring things. Perhaps this is one of those points where the lack of clear statement of endurantism/3Dism caused problems.

Let's look at the argument, however (very very roughly here!). The 4Dist starts by establishing unrestricted mereological composition by claiming that anything less would require drawing arbitrary boundaries around proper segments of continuous series. Since such boundaries would be "implausibly sharp" we should either accept vague boundaries or unrestricted composition. Ontological vagueness, Sider holds, is intolerable, so unrestricted composition is our only option.

Given unrestricted composition, however, then for anything x of kind K existing at t , there is a momentary K -like thing at t exactly overlapping it. If we accept Sider's principle (PO), then this momentary thing must be part of x :

PO: If x and y exist at t , but x is not a part of y at t , then x has some part at t that does not overlap y at t . (58)

But then x has a temporal part. Therefore we should conclude 4Dism.

There are a variety of possible responses:

- i) Accept ontological vagueness.
- ii) Take tiny differences in a series to make a difference.⁹
- iii) Deny (PO).

Note that the perdurantist's strategy is to postulate ontological abundance—unrestricted composition—allow that all fusions are objects, but distinguish ordinary continuants from gerry-mandered fusions by counting some fusions as more "natural" than others, or by taking some (but not all) to correspond to our ordinary predicates. The vagueness then is not a matter of *existence*, but of some property of existents, e.g., being natural, being a cloud, being a cat.

The stage theorist also adopts a strategy of abundance and accounts for distinctions between continuant stages and others by virtue of counterpart relations. Are such relations vague? Perhaps vagueness here doesn't matter. Or perhaps vagueness is again located in our ordinary predicates, not ontology.

As I've argued elsewhere, the endurance theorist can also opt for a strategy of abundance and then sort enduring things into natural (or ordinary) and non-natural (or non-ordinary).¹⁰ This, I believe, is Yablo's approach¹¹. Alternatively, one could maintain that insofar as there is a metaphysical *fact* of naturalness that grounds the distinction between natural and non-natural objects, e.g., a fact that underlies the stage theorist's counterpart relations, this could be used to distinguish those sequences of

⁹ See, e.g., Ned Markosian, "Two Arguments from Sider's *Four Dimensionalism*." Online at <http://ac.wvu.edu/~markosia/mypapers.htm>. See also <http://ephilosopher.com/article539.html> for more online papers on Sider's book.

¹⁰ I discuss strategies of abundance and conservatism in my "Humean Supervenience and Enduring Things," *Australasian Journal of Philosophy* 72 (1994): 339-59.

¹¹ Stephen Yablo, "Identity, Essence, and Indiscernibility," *Journal of Philosophy* 84 (1987): 293-314.

stages (or distribution of point-qualities, as on Lewis's view) on which an enduring thing supervenes from those on which it doesn't. This would give us a sparse theory of enduring objects with at least as much determinacy as the 4Dist provides for continuants.

Ultimately, it appears that Sider's argument from no-vagueness to 4Dism does not rest on concerns about vagueness, but concerns about coincidence. Consider again the key premise (PO):

PO: If x and y exist at t , but x is not a part of y at t , then x has some part at t that does not overlap y at t . (58)

Clearly this is a principle that 3Dists will reject. 3Dists embrace multiple-occupancy; coincident objects are differentiated by their modal properties, historical properties, and the like. As Katherine Hawley puts it: "...if an object can avoid being identical with a second even though they share all their proper parts, why shouldn't the object avoid being a part of the second in just the same way?"¹²

Sider's arguments against coincidence are mostly familiar. The bottom line is that it is hard to understand the relationship between coincident entities: they are so similar, so intimate, and yet distinct. Can't we make do with just one? When exactly is there more than one, and what (non-arbitrary) factor determines what ones there are? These arguments do not convince those who find advantages in 3Dism. Coincident objects are similar because they share parts; they are distinct because they do not share all their properties. The existence and boundaries of enduring things are no more arbitrary and mysterious than the existence and boundaries of continuants on the stage view: there are determinate conditions for the persistence of stages as defined by the relevant counterpart relations. Likewise there are determinate conditions for the persistence of enduring things as defined by the identity conditions for kinds. Endurantists tend to be friends of the many and the messy, but from our point of view the world is much more complex and, yes, arbitrary, than some might like to think.

IV. What's at stake?

Although I believe in the possibility of metaphysics and the importance of resolving ontological aporia, my main complaint against Sider and others engaged in the debate as it has evolved is that it is no longer clear what's at stake in the discussion. The goal is not descriptive metaphysics in a Strawsonian sense: we are not doing conceptual analysis, not attempting to elucidate our ordinary understandings of persistence and change. (This should be clear, I think, from where we end up. The stage view has many virtues, but correspondence with our ordinary notions is not one of them.) Rather, we are doing a form of revisionary metaphysics. But Strawson's conception of revisionary metaphysics was not simply a metaphysics that improves upon our ordinary conception of things; as Strawson understood it, it would have to be one that we are committed to by virtue of our theoretical practices. He took revisionary metaphysics to offer something like transcendental arguments for ontological results.

¹² Hawley, *Critical Study of Four Dimensionalism* by Theodore Sider, forthcoming in *Noûs*, manuscript, p. 20.

This is not Sider's project, and I'm not suggesting it should be. But at least Strawson saw the need to set some principled constraints on the terms of the debate, constraints that opposing sides could agree upon and so use as a basis to settle their disagreements. What, other than consistency, are we attempting to achieve in this discussion? Allowing that there are a variety of consistent ways to resolve the puzzles, what, if anything, can be offered to resolve the debate? Is our goal intelligibility? Systematicity? Ontological parsimony?

My own view is that each of these factors can be overrated, for example, unintelligibility tends to be a bubble under the rug: you get rid of it in one spot and it pops up in another. And there must be some limits to the intelligibility of the world: those who seek intelligibility often resist primitives and brute facts. But isn't it much more plausible that much of the world is, even at the metaphysical level, inexplicable? Systematicity is a fine and lovely thing, but makes harsh demands that sometimes we'd be better off, I think, not to meet. And I can't see any reason whatsoever to favor ontological parsimony. Is there nothing to be said across such differences of priorities?