

Spring 1-1-2013

On Merricks' Definition of 'Whole Presence' and the Alleged Contradiction that Arises between Eternalism and Endurantism

Walter Samuel Gorsuch

University of Colorado at Boulder, mypolicy9@yahoo.com

Follow this and additional works at: https://scholar.colorado.edu/phil_gradetds

 Part of the [Metaphysics Commons](#)

Recommended Citation

Gorsuch, Walter Samuel, "On Merricks' Definition of 'Whole Presence' and the Alleged Contradiction that Arises between Eternalism and Endurantism" (2013). *Philosophy Graduate Theses & Dissertations*. 26.

https://scholar.colorado.edu/phil_gradetds/26

This Thesis is brought to you for free and open access by Philosophy at CU Scholar. It has been accepted for inclusion in Philosophy Graduate Theses & Dissertations by an authorized administrator of CU Scholar. For more information, please contact cuscholaradmin@colorado.edu.

ON MERRICKS' DEFINITION OF 'WHOLE PRESENCE' AND THE ALLEGED
CONTRADICTION THAT ARISES BETWEEN ETERNALISM AND ENDURANTISM

by

WALTER SAMUEL GORSUCH

B.A., University of Colorado at Boulder, 2007

A thesis submitted to the
Faculty of the Graduate School of the
University of Colorado in partial fulfillment
of the requirement for the degree of
Master of Philosophy
Department of Philosophy

2013

This thesis entitled:
On Merricks' Definition of 'Whole Presence' and the Alleged Contradiction that Arises between
Eternalism and Endurantism
written by Walter Gorsuch
has been approved for the Department of Philosophy

Michael Tooley, Chair

Robert Rupert

Date _____

The final copy of this thesis has been examined by the signatories, and we
Find that both the content and the form meet acceptable presentation standards
Of scholarly work in the above mentioned discipline.

Gorsuch, Walter Samuel (M.A., Philosophy)

On Merricks' Definition of 'Whole Presence' and the Alleged Contradiction that Arises between
Eternalism and Endurantism

Thesis direct by Professor Michael Tooley

A view of persistence known as *endurantism* says an object persists through changes in its parts and properties in virtue of that object at one time being 'strictly' *identical* to itself at another time, and is to be distinguished from a view of persistence known as *perdurantism*, which says an object persists through changes in its parts and properties in virtue of one or more distinct (non-identical) temporal *phases* or temporal *parts* of an object being causally or mereologically *related* to one another across times. A view of time known as *eternalism* says all times are equally real, and is to be contrasted with the view of time known as *presentism* which says only the present time is real. Trenton Merricks argues that a contradiction arises between the conjunction of endurantism and eternalism, and that endurantism entails *presentism*. I will argue both claims are false, and false for the same reason: Merricks introduces a notion of 'whole presence' in his formulation of the concept of endurance, illicitly using the notion of *parthood simpliciter* when parthood relations for enduring objects are supposed to be irreducibly *temporally relative*.

CONTENTS

| | |
|--|----|
| Introduction..... | 1 |
| Eternalism versus Presentism..... | 2 |
| Change..... | 4 |
| Enduring versus Perduring Objects..... | 6 |
| The Problem and Merricks' Solution..... | 11 |
| An Alternative Account of Endurance..... | 21 |
| Conclusion..... | 29 |
| BIBLIOGRAPHY..... | 31 |

Introduction

It has been argued that there is a problem of temporary intrinsics—the problem of explaining how it is possible for one and the same enduring object to have successively contrary properties and to successively gain and lose parts—if a certain theory of time, eternalism, is true. In two articles, ‘On the Incompatibility of Enduring and Perduring Entities’ (1995) and ‘Endurance and Indiscernibility’ (1994), Trenton Merricks argues that the problem does not concern the idea of an enduring object having and then lacking a property or part *per se*, but only when this notion is combined with *eternalism*,¹ the view that all times exist; for together, the two entail a contradiction.² Since Merricks is the most vocal (to my knowledge) about the alleged contradiction that arises from the two, I want to address his argument that eternalism and endurantism are incompatible, and that endurantism entails presentism. I will argue both claims are false, and false for the same reason: Merricks adopts an account of ‘wholly present’ that utilizes parthood *simpliciter* when parthood relations for enduring objects are supposed to be irreducibly *temporally relative*. He makes this move in reaction to Ted Sider’s criticism that any

¹The possibility of enduring objects would be incompatible with *any* view which held times other than present times exist, including the ‘growing block theory’ of time, which says present and past times are real but future times are not.

² Various places in the literature concerning temporary intrinsics suggest that a consistent solution requires us to make one of three moves. Either (i) reject eternalism in favor of presentism, (ii) reject the notion of seemingly intrinsic properties like being bent and having shape in favor of construing them as disguised relations to times, or (iii) reject the idea that changing three-dimensional things endure in favor of the idea that changing four-dimensional objects perdure. For a concise introduction of the problem and range of possible solutions see especially David Lewis’ *On the Plurality of Worlds* (1986), and “Rearrangement of Particles: A Reply to Lowe”, *Analysis* (1988), pp. 65-72. For replies to Lewis see especially E.J. Lowe, “The Problem of Intrinsic Change: Rejoinder to Lewis”, *Analysis* 48 (March 1988) pp. 72-7, and Sally Haslanger, “Endurance and Temporary Intrinsics”, *Analysis* 49 (1989), pp. 119-25.

While those like Trenton Merricks favor (i) and Lewis favor (iii) because they both find (ii) unacceptable, others like Lowe, Haslanger, and van Inwagen prefer an account that resembles (ii), but in a way that preserves an object’s intrinsic properties intact while introducing an adverbial-style analysis in terms of a three-place relation of exemplification between an object, its property, and a time. In addition to the sources above, see also Trenton Merricks, “On the Incompatibility of Enduring and Perduring Entities”, *Mind*, (1995), pp. 523-531, and Peter van Inwagen, “Four-dimensional Objects”, *Noûs*, (1990), pp. 245-255.

definition of ‘wholly present’ utilizing a temporally indexed notion of parthood is incapable of distinguishing enduring from perduring entities.³ Though I think Sider’s criticism correctly applies to those theories of endurance which have the notion parthood at a time built into them, I will argue for an account of endurance that neither requires parthood *at a time* nor parthood *simpliciter*, and one that more charitably captures what we mean by ‘wholly present’.

First, I will offer some straightforward definitions of the concepts of *eternalism* and *presentism*, definitions that ought to be accepted in most of the literature. Then I will offer a definition of the concept of *change* accepted by most endurantists, distinguishing it from the concept of *change* accepted by perdurantists. Next, I will present rough definitions of *endurance* and *perdurance*, neither of which are straightforward or even clear, but will nevertheless set the stage for addressing Merricks’ argument which utilizes these notions. What will emerge is that endurantism cannot be adequately defined in terms of Merricks’ understanding of ‘whole presence’, and that his understanding of ‘whole presence’ is incompatible with endurantism construed on eternalist views of time. I will finally give a definition of *endurance* that I think is the bare minimum needed to avoid charges Sider brings against it for being either ‘incoherent’ or ‘inadequate.’

Eternalism versus Presentism

Eternalism is the view that all times are on the same ontological footing, and that all things, *whenever* they exist, are equally real. In contrast, presentism is the view that only the present time exists or is real. Presentism has controversial implications and is not a trivially true or trivially false doctrine. For instance, some philosophers innocently presuppose there cannot be entities and times other than the those existing in the present, so that Julius Caesar and the

³ Theodore Sider, ‘Four-Dimensionalism’, *Philosophical Review*, 106, Reprinted in *Persistence* (2006), p. 65.

50th president of the United States are not on the same ontological par as you existing in the present since they do *not* exist as robustly as you do; instead, Julius Caesar and the 50th president of the United States are on the same ontological par as the Easter Bunny—simply non-existent. Since presentism entails that Julius Caesar, the 50th president of the United States, and the Easter Bunny are all on the same ontological par, if presentism is true, then presentism is not *trivially* true. On the other hand, some philosophers innocently presuppose there can exist entities and times other than those that presently exist, so that Julius Caesar and the 50th president of the United States *do* exist as robustly as you do, although not at the same time as you, unlike the Easter Bunny who exists at no past, present, or future time. So if presentism is false, then presentism is not *trivially* false. However, others like Lombard still hold that presentism is not a substantive thesis distinct from eternalism. Lombard argues,⁴

Presentism is a view that I am not certain that I understand. Is it that the present time is the only time that exists? Of course, it is the only time that exists *now*. Of course, it is not the only time that exists at some time or other. So, presentism seems either trivially true or trivially false. Similarly, if the first occurrence of the word “has” in the claim that “an object has only those properties it has at the present time” is in the present tense, the claim seems trivially true; if it is not, the claim seems trivially false.

Of course,

(P) Necessarily, if *x* presently exists, then *x* presently exists,

would be trivially true. And it is not enough to say,

(P1) Necessarily, if *x* exists, then *x* *presently* exists,

because the first occurrence of the word ‘exists’ is ambiguous as to whether it is to be interpreted *tensedly* or *tenselessly*. So suppose we take the first occurrence of the word ‘exists’ to express tense, so that, like Chisholm and Zimmerman, we take ‘*x* exists’ to mean:⁵

(D) *x* exists =Df *x* *presently* exists, *x* *did* exist, or *x* *will* exist.

⁴Lombard, ‘On the Alleged Incompatibility of Presentism and Temporal Parts,’ p. 254.

⁵ ‘Theology and Tense,’ 265, 262. Cf. Q. Smith, *Language and Time*, (1993), p. 165

If we substitute ‘x exists’ with the definiens of (D), we get the following result:

(P2) Necessarily, if *x presently* exists, *x did* exist, or *x will* exist, then *x presently* exists,

But (P2) turns out to be trivially false. That Mozart *did* exist does not imply that Mozart *presently* exists; and that the 50th president of the United States *will* exist does not imply that 50th president of the United States *presently* exists. Even presentists who hold the view that tensed statements are basic and unanalyzable would agree (P2) is false. So ‘x exists’ must be taken to mean ‘x exists tenselessly.’ We can therefore define ‘presentism’ as the view that,

(P3) Necessarily, if *x* exists (tenselessly), then *x* presently exists.

Because even presentists agree that (P2) is trivially false, presentists will either reject (P3) as an acceptable formulation of presentism and accept (D), or accept (P3) and deny (D) claiming that (D) is not an acceptable formulation of tenseless existence because tenseless existence cannot be reduced to tensed existence. But because there is no other way that I can see to define presentism as a substantive thesis distinct from eternalism, (P3), I will say, ought to be the standard formulation of presentism—and eternalism the denial of it. Whether true or false, (P3) has controversial implications contrary to Lombard’s claim.

Change

How the concept of *change* is interpreted by various philosophers in the landscape differs, particularly between endurantists and perdurantists. For an endurantist, at the bare minimum, a thing changes just in case it has properties (or parts) at times that it lacks at other times.⁶ Change thus involves properties that are temporary; a thing cannot change with respect

⁶ This conception of change has the advantage of dispensing with the A-series view of change which says that a thing or event changes just in case it is future, becomes present, and recedes into the past, which McTaggart has shown to involve a contradiction. I believe he succeeds, but will not defend that here. For a defense of McTaggart’s proof see D. H. Mellor, *Real Time II*, New York: Routledge, 1998, p. 70-83.

to a property (or part) it cannot lose. Four-dimensionalists can make use of this notion of change, but only derivatively. They maintain that change consists in the continuous succession of temporal parts of an object, temporal parts none of which gain or lose their properties at any time. Though it is true that I am bent at one time, and not bent at another (in virtue of my distinct non-overlapping temporal parts being bent and not-bent), it is not true that I am just plain bent or that I am just plain straight. I am neither bent nor straight (unlike my temporal parts one of which is bent and another which is straight). So I can only bear the *bent-at* relation to one temporal part of me that is bent and bear the *straight-at* relation to another temporal part of me that is straight.

I take this four-dimensionalist account to be partly true of events, but not of objects.⁷ So I make a distinction between things and events. Things change, but events do not. Things have no temporal parts, unlike events, even when their dates span extended intervals of B-series time.⁸ In other words, things are ‘wholly present’ throughout their lifetimes, and events are not. In normal contexts it does not make sense to talk of events changing or staying the same. Events are what *happen* to things which continue through time, things which either change or stay the same. For instance, Caesar altering his position from standing to sitting is a

⁷ I say ‘partly true’ because, though I hold events are extended in time, I am not committed to them having temporal parts. That is not to say I deny events have temporal parts. Events may have temporal parts; I am just not committed to them having any. Some think it is a conceptual truth that anything extended has parts (see Hofweber and Velleman, ‘How to Endure,’ *Philosophical Quarterly*, pp. 9), so I would deny this is a conceptual truth. As we will see, nothing about events having temporal parts affects the distinction between perdurance and endurance as I describe them below.

⁸ The B-series view of time dispenses with the A-series characteristics of ‘past,’ ‘present,’ and ‘future,’ and is the view of time that the temporal location of events, objects, and moments in time consists only in irreducible facts about their earlier-than/later-than relations to one another. Thus, ‘is past’ in ‘an object *O* lies in the past at time *t*’ is taken, not to denote any *tensed* fact about the past, but only a *tenseless* fact about where the object is temporally located relative to other times or objects. Thus an analysis of ‘an object *O* lies in the past at time *t*’ will be taken to mean ‘an object *O* is earlier than time *t*, and *t* lies in the present at time *t*.’ Likewise, an analysis of ‘an object *O* lies in the future at time *t*’ will be taken to mean ‘an object *O* is later than time *t*, and *t* lies in the present at time *t*.’ See Michael Tooley, *Time, Tense, and Causation*, New York: Oxford University Press, 1997, pp. 194-195.

real instance of a change in *Caesar*. At one time, Caesar is straight, and at another time, Caesar is not straight. On the other hand, *Caesar sitting* is an event, and there is nothing about this particular event that changes. It might be said that the event of Caesar sitting *can* change, namely, when he crosses his legs while remaining seated so that the event of Caesar sitting changes from being *not cross-legged* to *cross-legged*. But this is because a part of the event of Caesar sitting had the property of being cross-legged, and another part of the event had the property being not cross-legged. But in talking about the event of his sitting, we are talking about the *whole* of the event of his sitting—not just a part of it—and at no time is the whole event of his sitting either cross-legged or not-cross-legged.

Another commonplace understanding of ‘change’ is captured by the *flow of time*, that is, when an object or event ‘moves’ from the future, into the present, and then into the past forever (the A-series). McTaggart pointed out that no object or event can be future, present, and past if ‘pastness,’ ‘presentness,’ and ‘futurity’ are taken to denote real tensed facts, because these are incompatible properties.⁹ Even if we held it were possible for an object or event that *was* future, *is* present, and *will be* past to be future, present, and past *at different times*, we still cannot escape the contradiction. For in this case we have a future object or event that is a state of affairs of lying in the future—a past state of affairs—and the state of affairs of the same object or event lying in the past—a present state of affairs—and those two states of affairs are mutually incompatible.

Enduring versus Perduring Objects

The intuitive distinction goes something like this: Enduring objects are standardly described as being ‘wholly present,’ three-dimensional, and/or lacking temporal parts. Perduring

⁹ McTaggart, p. 457-84.

objects are standardly described as being ‘spread out in time,’ four-dimensional, and/or having temporal parts. Typically, that objects perdure, or are spread out in time, is taken to require temporal parts. On the other hand, that objects endure, or are wholly located at every time they exist, is usually taken to be at least in part a *denial* that objects have temporal parts supplemented with a definition of what ‘wholly present’ may mean.

Another distinction between endurance/perdurance often made is put in terms of a difference between a strict identity relation holding for enduring things on the one hand and a looser unity relation called ‘genidentity’ which holds between a perduring object’s parts on the other hand. So a thing endures iff at each time the thing is located there is something identical to that thing. And a thing perdures iff for two distinct times at which a thing is located there are temporal parts of that thing standing in the *genidentity* relation to one another.

However, there is a substantive issue about whether the notion of ‘wholly present’--and thus ‘endurance’--can be given an adequate definition in contradistinction to the notion of ‘perdurance.’ This is because definitions of ‘whole presence’ that employ (i) the notion of *parthood at a time* and (ii) the notion that an object is identical to something at that time, are true both of enduring *and* perduring objects.

For these two reasons, I will argue that eternalists/endurantists must reject the notion of ‘wholly present’ in their accounts of endurance, and that the only definition of ‘endurance’ that is sufficient for anyone’s purposes is a definition that, first, denies objects have temporal parts and, second, commits one to the existence of a set whose members compose an object at any given time, a characterization not open for the perdurantist (as we will see). Thus the definition would have two consequences. One consequence would be that the notion of temporal parthood would play a purely *negative* role in definitions of ‘endurance.’ The second consequence would be that

what was classically thought to be a distinguishing characteristic of perdurance is actually a distinguishing characteristic of endurance.

There are two intuitions driving endurance theory, but the second and not the first is fundamental to endurance. The first intuition already mentioned is that objects are *wholly present* at each time they exist. Merricks is right that his construal of ‘wholly present’ is incompatible with eternalist views of time and, if fundamental to an account of endurance, entails presentism. However, he is wrong that ‘whole presence’ is an essential feature of objects that endure. Let me explain. In our ordinary understanding of the concept of an ‘enduring object,’ the concept in the very least requires that a persisting object *exist at more than one time*. So if ‘whole presence,’ as Merricks construes it, requires us to adopt presentism to avoid contradiction, and if presentism is true, then objects do not actually endure because there would be no time at which an object exists other than the present. Every object would be instantaneous, and would cease to exist the very moment it came into existence. It is inconceivable that those instantaneous objects which are continually being created and destroyed *persist at all*, much less endure. I cannot make sense of it, and any presentist who says he can, in my opinion, is being willfully obtuse. So, all endurantists should abandon Merricks’ construal of ‘whole presence.’

The second intuition is that objects persist through changes in their parts by being located at multiple times, yet having no temporal extent. It is *this* notion which is more fundamental. An object can be located at more than one time by analogy with a Catholic saint or a point-sized particle being located in more than one place. On this proposal, an object exists in an interval of time only in the sense that the object is located at each and every moment throughout the interval, although it is not located at the extended region of the interval or any extended sub-region of the interval. Gilmore and Sattig, for example, define the location relation as a many–

one relation.¹⁰ They formulate their proposals not in terms of ordinary spatial notions but in terms of a primitive ‘location’ relation *L*. One object has this relation to many *moments* in time, but does not have it to any *extended region* of time. Thus, they argue, the object persists, since it is located at each moment of an interval, but not extended, since it is not located at any extended region. Gilmore introduces the term ‘exact occupation’ as one of his primitives, and notes, ‘Importantly, the relation is intended to be such that there is nothing contradictory or *obviously* impossible about a single thing’s exactly occupying each of two or more regions’.¹¹ An object exactly occupies a region *R* only if the object has or has-at-*R* exactly the same shape and size as *R*, and stands, or stands-at-*R* in the same spatiotemporal relations as *R*. Furthermore, he says ‘It is not obviously impossible for a multi-located entity to fail to exactly occupy the union of its locations’.¹² With this notion one can then define the extent of an object as the extent of the region(s) it exactly occupies. So it is possible for an object to be located at many unextended regions, but not also at an extended region. Thus a persisting object can be unextended.

Now I will offer two commonsensical definitions of ‘whole presence’ to show why they fail, and then offer Merricks’ account of what it means for an object to *endure* and *perdure* respectively. Doing so will set the stage for later assessing the merits of Merricks’ argument that endurance and eternalism are incompatible. It will also help us come to grips with a characterization of endurance that is not only compatible with eternalism, but also more faithful to the second intuition above that is the heart of endurance.

¹⁰ For such proposals, see C. Gilmore, ‘Where in the Relativistic World Are We?’, in J. Hawthorne (ed.), *Philosophical Perspectives*, 20: *Metaphysics* (Malden: Blackwell, 2006), pp. 199–236; T. Sattig, *The Language and Reality of Time* (Oxford: Oxford University Press, 2006).

¹¹ Gilmore, p. 200.

¹² Ibid, p. 201. Alternatively, a multi-located entity could exactly occupy the union of its location, but fail to exactly occupy any one location.

Adopting the notion of *having a part at a time*, we might take the claim that *x is wholly present* at time *t* to mean,

(WP1) Necessarily, for every *x* and every time *t*, everything that is at *any* time part of *x*, exists and is part of *x* at *t*.

But this makes endurantism too strong because it makes the change of parts impossible. Suppose object *O* exists at three different consecutive times, *t*, *t**, and *t***, has a part *P* at *t*, and loses *P* as a part at *t** because *P* was annihilated at *t**. This story of a changing object losing parts over time would be consistent with *O*'s enduring but would be impossible if (WP1) were true since *P* would have to be a part of *O* at *t*** which it is not. Some three-dimensionalists may accept this consequence, but most endurantists are not mereological essentialists. So mereological essentialism should not be built into the definition of 'wholly present.'¹³

Perhaps a more likely definition of 'wholly present' is:

(WP2) Necessarily, for every *x* and every time *t* at which *x* exists, every part of *x* at *t* exists at *t*.

The problem with (WP2), however, is that it is utterly trivial. No one would deny that every part of an object at a given time exist at that time. But the claim that an object is wholly present at every moment of its existence is supposed to be a point of controversy between three- and four-dimensionalists.

So far, it seems the notion of *having part at a time* is not sufficient for distinguishing endurance from perdurance. It is for this reason that Merricks requires that a formulation of 'whole presence' be given in terms of having parts *simpliciter*.¹⁴

¹³ It does not follow from 'at every time, *O* exists if and only if *O*'s parts exist' that 'at every time, *O* exists, if and only if its parts at every time exist.'

¹⁴ Merricks, 'Persistence, Parts, and Presentism,' p. 7.

[. . .] there is no way to construe the disagreement between endurantists and perdurantists as a disagreement about whether all of a presently existing persisting object's parts at some particular time *t* exist at the present time. Their disagreement is, instead, about whether all of a presently existing persisting object's parts *simpliciter* exist at the present time. The endurantist says they do; the perdurantist says they do not.

With this reasoning above, Merricks gives the following account of the distinction between enduring and perduring objects, utilizing the notion of 'the present':

(ER) For any presently existing object *O*, *O* endures if and only if *O* persists and all of *O*'s parts *simpliciter* exist at the present time.

(PER) For any presently existing object *O*, *O* perdures if and only if *O* persists and some of *O*'s parts *simpliciter* do not exist at the present time.¹⁵

If (ER) is correct, then *all* of an object's parts are before you now; object *O* is 'wholly present.'

If (PER) is correct, then only *some* of an object's parts are before you now, its current temporal part (and its temporal part's parts), with the remaining parts located in the past or future. I will use Merrick's formulation of 'whole presence' for purposes of drawing out the alleged inconsistency. Next, I will critique his argument. Finally, I will critique his formulation of endurance.

The Problem and Merricks' Solution

It has been argued that there is a problem with the very idea of a persisting object changing its intrinsic properties. Merricks notes that the problem does not concern the idea of an enduring object having and then lacking a property *per se*, but only when this notion is combined with *eternalism*,¹⁶ the view that all times exist; for together, the two imply a contradiction.

Suppose object *O* is *F*. Suppose further that *O* existed at some time in the past and was not *F*. The perdurantist understands these facts as amounting to *O*'s having a present temporal

¹⁵ Ibid, p. 5.

¹⁶ Merricks dubs this view that all times are equally real 'indexicalism', in contrast to presentism, since the word "present", rather than picking out some genuine property that a time has and others lack, functions simply as an indexical term that picks out the time that one inhabits when one uses the word. A moment in time is no more privileged *being the present* time than any other moment in time ('Incompatibility', p. 523).

part that is *F* and another distinct temporal part that exists in the past that is not *F*. Analogous to one and the same three-dimensional object having a spatial part that is *G* and another, distinct spatial part that is not *G*, the claim that one and the same four-dimensional object has a temporal part that is *F* and a temporal part that is not *F*, does not have the appearance of contradiction.

However, endurance, it is alleged, does not fare well with this representative example of object *O* being *F* at one time yet failing to be *F* at some other time. The endurantist will presumably say that whole object *O* (not some proper part of *O*) is *F* at one time, and that the whole object *O* (not some proper part of *O*) is not *F* at some other time. But this, so the charge goes, implies a contradiction, since the whole of object *O* is both *F* and not *F*. Similarly, for parts *simpliciter*: if an enduring object *O* could have a part *simpliciter* and lack it later, then we would have the contradiction that *O* both does and does not have a part *simpliciter*.

This has led some philosophers to say that the possibility of change implies the denial of endurance altogether. But Merricks thinks this line of reasoning is easily undermined if we adopt the view of presentism. Since presentists say that the only properties (or parts) an object has are those it has *at the present time*, an object's having or lacking a property (or part) at a time other than the present does not imply that an object has or lacks that property (or part). Notice that this result falls out of the definition of *presentism* (P3) above that, necessarily, *x* (tenselessly) exists only if *x* *presently* exists: For any time *t* and for any object *O*, if *t* is not the present time and object *O* has or lacks a property (or part) at time *t*, it is not the case that *O* has or lacks that property (or part) since, according to the definition above, there is *no object O at t* to have or lack a property (or part). So if the presentist is going to accept the idea that one and the

same object endures with respect to being F and not F ,¹⁷ then he can perfectly avoid contradiction because his view implies that if an object is F in the present, and since there is no other time at which x is F nor any other time at which x is not F , then there is no sense that can be made of the contradiction that x is both F and not F .

Even though endurance combined with presentism can allegedly avoid the problem of temporary intrinsics, it seems that endurance combined with eternalism allegedly cannot escape this charge. Eternalism, according to Merricks, is supposed to be inconsistent with the existence of enduring things which change. Again, suppose that some enduring thing persists through a change from being F at time t to not being F at a later time t^* , where F is a temporary intrinsic and all times are equally real. To generate the inconsistency between endurance and the possibility of change, Merricks offers the following argument:

- (A) (1) O at t is identical with O at t^* (assume for reductio)
- (2) O at t is bent
- (3) O at t^* is not bent
- (4) If O at t is identical with O at t^* , then O at t is F if and only if O at t^* is F .
(indiscernibility of identicals)
- (5) O at t is bent and not bent (RAA 1, 2, 3, 4)

Since endurantists are committed to the truth of (1), since (2) and (3) capture the possibility of an enduring object which changes and (5) is a contradiction, Merricks argues one must either reject (1) and the possibility that objects endure, or reject (2) or (3) and the possibility of change.

Thus the only way for an *eternalist* to avoid contradiction while preserving (1), (2) and (3), Merricks argues, is to deny that an object is wholly present at each time that it exists and thereby adopt the four-dimensionalist doctrine of temporal parts.

¹⁷ Endurantism is actually incompatible with presentism, contrary to what Merricks thinks. If no time exists other than the present time, it makes no sense to say that an object *endures* from one time to the next since, according to the presentist, there are *no past times*. Far from the truth of endurantism entailing the truth of presentism, endurantism entails presentism is false. More on this below.

Before I give Merricks' presentist 'solution' to this argument in response to a more charitable interpretation of the contradiction he was trying to show, I must address some unclarity cropping up in this *reductio ad absurdum* above.

First, (4) is not an instance of the indiscernibility of identity, since identity is not a cross-temporal relation. Leibniz' Law states (without reference to times) that,

(LL) If $x=y$, then for all properties F , x is F if and only if y is F .

In other words, x is identical to y only if x and y have all their properties in common. If we were to state (LL) involving times while avoiding the implication that identity were a cross-temporal relation, we might say something like, at any two distinct times t and t^* , x is identical to y only if all the properties (parts) of x are the properties (parts) of y . But this is just an innocuous way of saying (LL) holds at all times—which if it does so hold—would be obviously true. (LL) does not imply that for any existing object it must have all its properties (parts) in common at all times that it exists. This incorrect way of stating (LL) is just a version of the doctrine of mereological essentialism,¹⁸ reminiscent of (WP2) above, which says that whatever is a part (property) of O at any time at which O exists is a part (property) of O at *every* time at which O exists, making change impossible for enduring objects existing across times. This entails that P is a part of O at t if and only if P is a part of O . But eternalism together with the claim that enduring objects are wholly present at each time they exist does not entail this, and therefore does not commit one to mereological essentialism.

¹⁸ If mereological essentialism were true for objects across possible worlds, it would certainly be true for objects across times. Though 'mereological essentialism' in this context is concerned solely with the identity conditions for objects across times so that necessarily, if x has y as a part at t then x has y as a part at all times, it is usually understood across possible worlds: for all objects x , for all objects y that are parts of x , x has y as a part in every world in which x exists. A weaker version might state that in every world in which x exists, y is a part of x at *some* time in that world. And a stronger version might state that in every world in which x exists, y is a part of x at *all* times in that world that x exists.

Second, contrary to Merricks claim, (1) is not enough to distinguish endurance from perdurance since even perdurantists would agree (1) is true. Of course, the perdurantist could choose to think ‘ O at t ’ refers to the temporal part of O existing at t , and ‘ O at t^* ’ to a different temporal part of O existing at t^* , and then (1), expressing an identity between two distinct temporal parts, would be false. But the perdurantist obviously holds that an object is identical to itself at two different times; only if his semantics were such that he took ‘ O at t ’ and ‘ O at t^* ’ to refer to distinct temporal parts, would the perdurantist reject (1). So even perdurantists can hold that (1) is true.

The line of thought I think Merricks has in mind goes rather something like this: Assume enduring objects are wholly present at each time they exist. If objects are wholly present at each time they exist, then objects have their properties and parts *simpliciter* at each time they exist.

So if an object is F at one time, but not- F at another, then that object is both F and not- F

simpliciter:

- (B) (i) O at t is identical with O at t^* .
- (ii) If O at t is bent, then O is bent *simpliciter*.
- (iii) If O at t^* is bent, then O is not bent *simpliciter*.
- (iv) O at t is bent and O at t^* is not bent.
- (v) If $x=y$, then for all properties F , x is F if and only if y is F .
- (vi) O is both bent and not bent *simpliciter*. [RAA (i)-(iv)]

The argument is valid, and (i), (iv), and (v) are true. The question is whether (ii) and (iii) are true. Before addressing whether enduring objects can have properties and parts at a times, I want to present Merricks’ argument that presentism is the only view that can diffuse the contradiction. I take this strategy because it will help us decide whether enduring objects indeed have properties and parts at times, and help us flesh out a fundamental feature of endurance for

our purposes later. He writes:¹⁹

When do I have the property 'being bent at t '? If I ever exemplify that property, I exemplify it at all times. That is, no matter what time is present, so long as I exemplify any property, I exemplify the property 'being bent at t '. This is because whenever I exist it is true that, when t is present, I am bent. And if it is true at both that I exist at t^* and that I exist at t^{**} , I can sensibly say that I exist at different times (that is, t^* and t^{**}) *at the same time* (that is, at t). [. . .] The most natural reading of (2) is that, at t , O exists and has the property 'being bent'. In other words, when t is present, O (exists and) is bent. Reading (3) in like manner, we see that when t^* is present, O is not bent.

Merricks resolution is that statements (2), (3), and (4) should be reformulated to express the facts that times t and t^* both exist, that object O exists at times t and t^* ,²⁰ and that O is bent when t is present and O is not bent when t^* is present:

- (2') t exists, and O is bent when t is present
- (3') t^* exists, and O is not bent when t^* is present
- (4') If O at t is identical to O at t^* , then O at t is F if and only if O at t^* has the property of 'being F at t .' (indiscernibility of identicals)²¹

Since (1) together with (2') and (3') do not imply the contradiction that ' O at t is both F and not F ' Merricks claims presentism can avoid it, preserving the idea that enduring objects can change.

However, there is a serious problem with Merricks' reconciliation of presentism with the idea that enduring objects change. In what sense of 'exist' do the times t and t^* exist? And in what sense of 'exist' does O exist at t and t^* ? Presentism is the denial that any times (or any objects) other than present times (or present objects) exist. And in what sense of 'has' is it true that F -less O *has* at t^* the property of 'being F at t '? I am not sure I understand what this alleged instantiation at t^* amounts to, nor does Merricks explain this any further. Does he not mean

¹⁹ Merricks, 'Endurance and Indiscernibility,' p. 178-179.

²⁰ Further confirmation that he really *does* think this can be found in his semantic analysis of ' O at t ' and ' O at t^* ' in statement (1) in the same paper: " O at t is identical to O at t^* ' [diachronic identity] can be read "There is one object O , and it exists at t and t^* ". Similarly, " O at t is identical to O at t " [synchronic identity] can be read "There is one object O , and it exists at t ." (Ibid, p. 176).

²¹ Merricks writes, "Much of what I say in this paper involves having properties at times. My claim that the only properties an object has are the ones it has now is consistent with the claim that an object O can have a property F at a time t other than the present—just so long as O 's having F at some time t means that O *now* has the property 'being F at t .'" (Ibid, p.178)

instead that ‘it is true at the present time t^* that O is F at t ?’²² Still, as a presentist, he would have no *truthmaker* for this statement because times other than time t^* , which is stipulated to be the present time, do not exist. So there is no sense that can be made of the F -less O *having* (or ‘exemplifying’) tenselessly *or* tensedly the property ‘being F at t .’

So, are propositions (ii) and (iii) above true of persisting objects? Merricks is explicit that whoever takes the statement ‘ x is red at t ’ as *more basic* than the statement ‘ x is red *simpliciter*’ has got the order of analysis backward. Though I think this is true, so that ‘ x is now red’ can be analyzed as ‘ x is tenselessly red at time t ’, and ‘ x is tenselessly red at time t ’ can be analyzed as ‘ x is tenselessly red,’ and not vice versa,²³ the fundamental issue of temporary intrinsics should not boil down to whether one takes tensed or tenseless statements as basic, since one could hold a tenseless view of the nature of propositions together with the idea that what facts there are changes depending on the time.²⁴

What other motivations might there be for holding that objects have properties and parts

²² If it is true at t^* that an object O has F at t , then it is true at all times that an object O has F at t , and the notion of ‘truth at a time’ is superfluous. In other words, it is just true that an object O has F at t . But the question above is ‘what makes this proposition true if future and past times do not exist?’

²³ It is quite natural for those who think that what facts there are vary from moment to moment to adopt a *tensed* construal of the nature of propositions. On this view, the sentence “I am bent” could now be used by me to express a true proposition; but the proposition in question has not always been true, and it will not be true when I stand up. However, those who think the proper concept of truth is the concept of truth at a time are mistaken. As Ducasse says in ‘Truth, Verifiability, and Propositions about the Future.’ *Philosophy of Science*, 8 (1941), ‘[. . .] the truth or falsity of a proposition is not the sort of thing that has a place or date at all, for it is not an event [. . .] That the truth and falsity have no place or date seems at first sight refutable by urging, for instance, that at the moment at which rain begins falling at a given place, it becomes true that it rains at that place at that time, whereas a moment before it was false. But to say this is only to mistake a propositional function for a proposition’ (p. 334).

A proponent of *tensed* truth-bearers will insist that the true proposition is composed of a disjunction of three propositions: either x is red now, x was red, or x will be red, only *one* of which is true, and *all* of which concern what is *now* the case. A *tenseless* account of propositions, on the other hand, takes them to be like statements made using tenseless verbs: each is either ‘always’ true, or ‘never’ true since propositions making reference to times—like ‘ x is red at $t1$ ’ and ‘ x is not red at $t2$ ’—at no time change their truth value.

²⁴ Various philosophers hold these views in conjunction, namely, van Inwagen, Mellor, Tooley, and others, but I will not argue for this conjunction here because which view of the nature of propositions one holds should have no bearing on the question of whether enduring objects can have *irreducibly temporally relative properties*.

simpliciter rather than *at a time*? One motivation is an argument such that an object which does not have a property or part *simpliciter* is an object which does not have any *intrinsic* properties or parts. An intrinsic property (or part) is a property of an object such that the object has the property independent of what other things outside the object exist or fail to exist. Though this argument is intended to be an argument for the existence of temporal parts and the alleged truth of perdurance, it also ends up being an argument for the claim that enduring objects indeed have their properties and parts *at times*. David Lewis says,²⁵

Imagine trying to draw a picture of two different times t_1 when I sit, and t_2 when I stand. You draw two circles, overlapping because I exist at both times so you want to draw me in the intersection. But then you have to draw me bent and also straight, which you can't do; and if *per impossible* you could, you still wouldn't have done anything to connect the bentness to t_1 and the straightness to t_2 instead of vice versa. What to do? The first solution says to draw the circles overlapping, draw me in the intersection as a mere dot or shapeless blob, draw a line labeled 'bent-at' from me to the t_1 circle and a line labeled 'straight-at' to the t_2 circle. A queer way to draw a shape!

The argument seems to be that if the enduring thing has a particular shape, for example, being bent, to say that *it*—the enduring *bent thing*—is *straight* results in a contradiction. So we must say that a shapeless thing has a shape by either being related to bentness and straightness at times, or by bearing the bent-at relation to a time and the straight-at relation to a time. So what we have given this model is a bare substratum (assuming it has no unchanging intrinsic characteristics) whose temporary intrinsics are fundamentally relational. If this is right, then endurance cannot do justice to the notion of an object *being shaped*, but must construe it as standing in some relation to shape.

It is not surprising that the 'shapeless blob' we depict in the intersection of the circles appears to be incomplete. The assumption driving this model is that *how an object is* abstracted from its changing properties can be depicted timelessly once and for all. But if some of the

²⁵ David Lewis, 'The Problem of Temporary Intrinsics: an Excerpt from *On the Plurality of Worlds*', in *Metaphysics: the Big Questions*, pp.268

object's intrinsic properties such as *shape* are temporary, then depicting the object 'timelessly' in this way is impossible. The endurance theorist denies that the description which characterizes the object 'timelessly' is the description which captures all of the intrinsic properties of the object. But why is this problematic? If we insist, like Lewis and Merricks, to find some characterization of an object's intrinsic properties timelessly one and for all, perdurantism fares no better, since a four-dimensional person is neither bent nor straight.²⁶

Merricks' requirement that enduring objects bear their parts *simpliciter* fails to capture the difference between parthood and property exemplification as they are applied to perduring and enduring objects. Notice the following patterns in the above example. Non-temporal predications such as 'x is (tenselessly) round' cannot be true of *any* object that persists, whether enduring or perduring. Non-temporal predications can *only* be true of non-persisting objects like abstract geometrical objects such as circles and temporally located instantaneous objects like red after-images often seen in one's visual field after staring at a bright light. However, non-temporal propositions expressing parthood *simpliciter* such as 'x (tenselessly) has P as a part' *are* true of perduring objects. But they are not true of enduring objects. So propositions indicating property-possession and parthood *simpliciter* cannot apply to enduring objects since enduring objects are those objects that, not only exist at multiple times, but also have incompatible

²⁶ I do not share Lewis' confidence that perdurantism solves the problem of temporary intrinsics. Notice further consequences of Lewis' illustration above. Though it is true an object's temporal parts are bent *simpliciter* or straight *simpliciter*, so we can talk about the temporal parts of an object having its properties timelessly, it is still the case that the *whole* object on the perdurantist view is neither bent nor straight. If the object were bent and straight, we would be left with the original problem. Certainly, the perduring object has the property of having a part that is bent, and the property of having a part that is straight, but these properties involve relations between the perduring object and one of its momentary parts. But such properties of the perduring object are not temporary. So the object itself is not what has the relevant temporary intrinsic. Like the other 'solutions' Lewis faults for not being able to accommodate temporary intrinsics, Lewis might want to say begrudgingly that it is not possible for an object to persist through a change in *its* intrinsic properties on the perdurantist view either, but for a different reason, namely, that perduring objects never *change*. See Haslanger, pp. 123-4, for more criticism here.

properties and parts at different times. The only propositions that can be true of such objects are those propositions that express objects having properties and parts *at a time*: ‘*x* is (tenselessly) round at time *t*’ and ‘*x* (tenselessly) has a part at time *t*’. Therefore, there is really no good reason for thinking (ii) and (iii) above are true for enduring objects, and those, like Merricks, who would in this way deduce a contradiction from claims about change in enduring things do so by imposing a requirement on the concept of ‘endurance’ that is, not only unnecessary, but also impossible to meet with any adequate definition.

However, Merricks’ other reason for adopting parts *simpliciter* for enduring objects, is that he thinks no account of enduring objects can be formulated using parthood at a time that would succeed in distinguishing enduring from perduring objects. This was already mentioned in the quote in the previous section:²⁷

[. . .] there is no way to construe the disagreement between endurantists and perdurantists as a disagreement about whether all of a presently existing persisting object’s parts at some particular time *t* exist at the present time. Their disagreement is, instead, about whether all of a presently existing persisting object’s parts *simpliciter* exist at the present time. The endurantist says they do; the perdurantist says they do not.

Merricks’ line of reasoning here is suspect to say the least. Although Merricks is correct that there is no disagreement between endurantists and perdurantists concerning the trivial truth that all of an object’s parts at time exist at that time, it does not at all follow that an endurantist is forced to make use of the notion of having parts *simpliciter*, since ‘wholly present’ as Merricks understands it may not even be a necessary for condition what it means for an object to *endure*. One would think an account of endurance is *supposed* to be able to accommodate the ordinary intuition of an object having (and not-having) parts at times other than the present, and thus the

²⁷ Merricks, ‘Persistence, Parts, and Presentism,’ p. 7.

possibility of one and the same object gaining and losing parts over time—hence *changing*.²⁸

But an object that has its parts *simpliciter* is a perduring object, an object that has its parts without temporal indexing. What parts a perduring object has, it has *simpliciter*. And these parts have the *further* property of being located at a time. But we cannot state which parts an *enduring* thing has without mentioning the times at which it has those parts. So there is a tension between two concepts implicit in endurance, namely, *whole presence* and *the possibility of one and the same object gaining and losing parts (properties) over time*. Since Lewis' illustration above successfully shows that no enduring object can be captured 'timelessly' once and for all, and since it is not clear what 'whole presence' even amounts to, yet the latter notion is clear, it is the latter notion which is more fundamental. So a necessary constraint on any account of 'endurance' will be that,

(N) Necessarily, if an object *O* endures, then *O* does not have parts *simpliciter*.

In the very least, for any account of 'endurance' we should construe 'parthood', not as parthood *simpliciter*, but as parthood *relative to a time*. However, as we have seen, the endurantist does not have a strategy available using the notion of parthood relative to a time either. Sider concludes from this that no coherent definition of what it means for an object to 'endure' is available. But this conclusion is unwarranted since it rests on the assumption that 'whole presence' is a condition necessary for enduring objects. So let us reject 'whole presence' and try to find that distinction elsewhere.

An Alternative Account of Endurance

I find the distinction between endurance and perdurance in the notion of *temporal*

²⁸ To suppose otherwise is to assume a temporal version of mereological essentialism, namely, that an object exists at a time if and only if all of its parts at every time exist at that time. But most endurantists are not mereological essentialists. So mereological essentialism should not be built into an account of what it means for an object to endure.

parthood simpliciter. I take this route using temporal parts for two reasons. First, the notion of *temporal parthood simpliciter* has long been associated with the notion of perdurance, and *temporal parthood simpliciter* is defined in terms of the appropriate notion of parthood for perdurance, namely, *parthood simpliciter*. Second, in contrast, eternalists/endurantists will want to *deny* that enduring things have temporal parts as temporal parts are construed in the framing of perdurance, so any mention of temporal parts in the framing of endurance will play a purely *negative* role.

Sider offers the following account of perdurance using the notion of parthood at a time:²⁹

(PER) x perdures iff x persists, and for any two disjoint sets of times, $T1$ and $T2$ whose union is the timespan of x , there is a y and z such that (i) x and y have the same parts at every time in $T1$, (ii) x and z have the same parts at every time in $T2$, (iii) the timespan of y is $T1$ and the timespan of z is $T2$.

Though temporal parts are not mentioned in this definition, Sider takes his definition to further entail the existence of temporal parts. But since the definition and entailment are different, the entailment requires two further assumptions, namely, (a) unrestricted mereological composition and (b) the assumption that any two ways of partitioning an object's time-span into two sets reveals two things which are parts of that object. Building (a) into an account of perdurance rules out the possibility of a perduring object whose only temporal parts are instantaneous since (a) ensures that for any two pair of instantaneous entities there is a mereological sum. So if the perduring object has mereological sums of instantaneous entities, it will have to have non-instantaneous entities as well. Building (b) into the account disallows for the possibility of a perduring object with no instantaneous parts, but just smaller and smaller ones tending toward a limit.³⁰ Though I question whether either of these assumptions are

²⁹ Sider, p. 59.

true, I will not argue against them, but rather present one type of perduring object, if metaphysically possible, requiring the denial of both. Since Sider's account of what it means for an object to perdure cannot capture this possibility, his definition of 'perdurance' is inadequate.

Both perdurantists and endurantists agree that the notion of a having a part relative to a time is intelligible. The only difference is that parthood is irreducibly temporally relative for the endurantist but not for the perdurantist since the perdurantist, as we have seen, ultimately reduces all talk about parthood *at a time* to talk about parthood *simpliciter*. For example, Sider takes the atemporal notion as basic and characterizes temporary parthood using that notion:³¹

(P@T) Necessarily, x is part of y at t if and only if x and y each exist at t , and x 's temporal part at t is part of y 's temporal part at t .

A four-dimensionalist treats 'having parts at times' in the same way he would treat property exemplification. Sitting down at one time and standing at another is taken to involve having a sitting temporal part (tenselessly) located at a time and a standing temporal part (tenselessly) located at another time. Endurantists, on the other hand, will take parthood as irreducibly relative to times without making use of temporal parts so that what is sitting at one time is the object itself, and what is standing at another time is the object itself. So a definition of temporal parthood open both to endurantists and perdurantists using the notions of parthood at a time and overlap at a time can be stated in a neutral language which presumably does not prejudge one view of persistence over another.³²

³⁰ See Zimmerman for more on this, p. 122 (Dean Zimmerman, 'Persistence and Presentism', *Philosophical Papers*, 25 (1996), pp. 115-26.) Even Sider allows that some people might want to modify his account of perdurance so that it does not require (b) (Sider, p. 70-4).

³¹ Sider, pp. 57-58.

³² As Sider says, '[. . .] it is desirable to state opposing views in a neutral language, so that the opponents may agree on the identity of the proposition under dispute. Moreover, we do not want to hide [perdurance] in the very language we use to raise the question of its truth' (Ibid, pp. 57-59).

(TP) x is an (instantaneous) temporal part of y at t iff (i) x is a part of y at t , (ii) x exists at, but only at, t , and (iii) x overlaps at t everything that is part of y at t .³³

As we can see, we can easily move from an atemporal to a temporal reading by substituting talk of parthood and overlap simpliciter in terms of their temporally indexed relatives.

With this characterization of temporal parthood (TP) in place, we can say that an entity perdures iff it has temporal parts. And an entity endures iff it persists and has no temporal parts. This seems like a good starting point. Unfortunately, however, this simple account is flawed because the ‘enduring’ piece does not allow us to distinguish between perduring and enduring entities on the one hand, and the ‘perduring’ piece does not allow us to distinguish between perduring and perduring/enduring entities on the other.

Take the latter flaw. We ought not deny that enduring temporal parts of perduring objects—parts that exist at more than one time—are at least possible. Given an eternalist view of time, mereological composition that is unrestricted, and ordinary objects that endure, an entity that endures/perdures is surely within the vicinity.³⁴ For instance, given these conditions there would be perdurer/endurers like Washington-Lincoln-Bush since this entity would be the mereological sum of the temporally non-overlapping enduring persons Washington, Lincoln, and Bush. But the above account fails to differentiate this perduring/enduring entity from a perduring entity.

This simple account also mistakenly classifies some perduring objects as enduring

³³ Ibid pp. 59-60. This account can be easily generalized to cover non-instantaneous temporal parts: x is a temporal part (extending through the temporal interval T) of y iff (i) x is a part of y , (ii) x is located only throughout T , and (iii) for any time in T , x overlaps every part of y that is located at that time.

³⁴ Neil McKinnon, ‘The Endurance/Perdurance Distinction,’ *Australasian Journal of Philosophy*, Volume 80, Issue 3, 2002, p. 294.

objects since it is possible to have a perduring entity persisting through time without any temporal parts—in other words, a temporally extended mereological simple. Though Sider would deny this is possible because he holds the doctrine of *arbitrary non-detached parts*, Sider's claim that perduring entities must have temporal parts still faces a decisive objection from Merricks.³⁵ Consider a world where every cell is a perduring thing with temporal parts. Next, consider an organism composed entirely of such cells, and that these cells and their parts are the *only proper parts* this organism has. Since the organism is composed entirely of its cells and their parts, we ought to say that the organism perdures. Unfortunately, the organism has no temporal parts. To see this, none of the organism's parts at a time satisfy the above account of what it means to be a temporal part. As we saw with (TP) above, in order for x to be a temporal part of y at t , x must overlap every (spatial) part of y at t —to be 'big enough' for all of y 's parts at t . For any time t during the organism's life, the various parts of the organism at that time are temporal parts of the *cells* that compose the organism. But none of these parts compose anything. So none of the organism's proper parts at time t satisfy the necessary condition of what it means to be a temporal part. Yet, the organism is a perduring entity because it is a four-dimensional object composed of four-dimensional cells and their parts. Therefore, the account given of perdurance in terms of an organism persisting by having temporal parts is inadequate.

Perhaps we could revise it by saying that perduring objects *either* have proper temporal parts (i.e., temporal parts that are 'big enough') at each time interval that they exist *or* have proper parts that do have such temporal parts. This amendment would allow this organism to be a perdurer, but we can still change the counterexample so that the revised account fails. Why not say neither the organism nor any of its parts have temporal parts? In Merrick's example, at

³⁵ Merricks, 'Persistence, Parts, and Presentism,' p. 431

each time t during the organism's life the organism's cells have temporal parts, but it is stipulated that none of these temporal parts composes anything. Why not treat each cell the same way we treated the organism? Each cell has various parts at that time, but none of the cell's parts at that time compose anything. So again, each cell is a perduring entity that lacks temporal parts. And we can apply this situation to any object no matter how small.

On the supposition that Merrick's organism is possible, an interesting fact emerges that we can use to qualify the distinction between endurance and perdurance. If there is an enduring thing located at a certain time, necessarily there is a set whose members compose the thing at that time. But with respect to Merrick's organism, there is no corresponding fact that obtains for perduring entities. His organism perdures, but for each time the organism is located, nothing composes the organism at that time. The distinction is as follows:³⁶

(E) x endures iff (a) x persists, (b) x has no temporal parts, and (c) for each time x exists there is a set whose members compose x at that time.

(P) x perdures iff (a) x persists, (b) there is a y and z such that, y and z are parts of x , y and z have temporal location, and there is no t such that y and z are both located at t , and (c) x has no temporal parts that endure.

(E/P) x endures/perdures iff x has at least one enduring temporal part.

The above account classifies Merrick's organism as a perduring thing. It does not count as an endurer since it violates (c) of (E). And it does not count as an endurer/perdurer since it has no temporal parts, and so no temporal parts that compose x at some time. (b) of (P) simply insures the perduring object is extended in time since it says at least one part of the object is not located at the same time as another part of the object. But the use of the word "part" in (b) of (P) is non-committal about the existence of temporal parts due to the possibility of a Merrick's organism, a

³⁶McKinnon, p. 298. I borrowed the above distinction from McKinnon but omitted his *presentist* interpretation of it.

perduring entity none of whose parts at a time overlaps all of the entity's parts at that time.

Now we can see why the 'strict identity' approach mentioned earlier has initial intuitive plausibility. The 'strict identity' approach says,

(E*) x endures iff for any two times t and t^* there is y and z such that y is located at t , z is located at t^* , and $x=y$ and $x=z$.

(E*) is held to be true of enduring objects, but not of perduring objects. (E*) is very close to (E) since it incorporates (a) and (b), and clearly entails (c). This 'strict identity' feature of endurance is crucial to notice. We have already seen it is sometimes objected that even a perduring object could be formulated using (E*) above because a perduring object is also identical to itself at all times that it exists. This continuity of identity at times, it is said, holds in virtue of the genidentity relation holding between a perduring thing's temporal parts. However, an object's genidentity relation between its temporal parts would be vulnerable to Merricks' problem case since there would be nothing that composed a perduring object at a given time, and thus no temporal part at any given time.

Let me address another objection to this distinction. Sider will take issue with endurance formulated in terms of *lacking* temporal parts because he says some three-dimensionalists will admit the possibility of enduring things with temporal parts.³⁷ Sider invites us to imagine the possibility of an instantaneous statue composed of some lump of clay coming into, and going out of, existence at some point in the interval of the lump's existence. If this is indeed possible (being made by a god, let's say)—and nothing suggests it is not—the example would violate (b) of (E), since the statue is part of the lump. As shown above, a temporal part of the lump at t is anything that is a part of the lump at t , exists only at t , and overlaps at t anything that is part of

³⁷ Sider, p. 64.

the lump at t . That the statue is part of the lump is given by a principle that Sider calls the ‘Calculus of Individuals’.³⁸

(CI) If x and y exist at t , and x is not a part of y at t , then x has a part at t that does not overlap y at t .

Since every part of the statue at t shares subatomic particles with the lump at t , there is no part of the statue at t that does not overlap y at t .

This argument may look convincing, but those who would be inclined to believe that there could be a lump of clay and an instantaneous statue occupying the same region at the same time would say that this was a case of the statue at that time being constituted by, but not identical with, the lump at that time. Also, whether the statue is part of the lump is controversial. Fred Doepke, for instance, would say that though every part of the lump is part of the statue, it is not the case that every part of the statue is part of the lump,³⁹

Consider you and the collection of atoms of which you are now composed. Appealing to intuition, I suggest that your heart is a part of you but not a part of this collection of atoms. Similarly, Theseus’ ship, but not the wood of the ship, is composed of boards. Though every part of the collection of atoms is a part of you and every part of the wood is a part of the ship, you and the ship have ‘additional parts’ not shared by the collection of atoms and the wood.

Similarly, the thought is that the statue has various parts the lump lacks, such as an eye, an ear, a nose, etc. There are some parts that they share, namely, the same microstructures such as having the same shape, being composed of the same atoms, etc. But whereas it is appropriate to describe the statue as being beautiful since beauty is the way certain parts of the statue interrelate, it does not seem appropriate to describe the lump of clay as being beautiful for the simple reason that the lump of clay does not have eyes, ears, and a nose. If this is right, then Sider is wrong for thinking he has shown that the statue is part of the lump, since the statue has

³⁸ Ibid, p. 64

³⁹ Doepke, Frederick, ‘Spatially Coinciding Objects’, *Ratio*, 24 (1982), pp. 45-60

properties and parts the lump lacks.

Conclusion

So it seems there is a coherent distinction between perdurance and endurance open to endurantists committed to the existence of multiple times, and open to both kinds of perdurantists, those committed and those not committed to perduring objects having temporal parts. The fundamental distinction between the two theories of persistence is not in terms of the distinction first outlined above, that is, in terms of objects having and not have all their parts simpliciter at all times they exist, but rather in terms of enduring things lacking temporal parts together with the view that each time the object exists, something composes that object at that time.

We have also seen that (ER) is misguided because it is not committed to the existence of multiple times as any account of endurance must. Merricks rebuts this charge on the grounds that it assumes mereological essentialism since, according to Merricks, it amounts to requiring from an account of endurance that all of an enduring object's parts exist at every time at which it exists. Though Merricks is correct if by 'wholly present' he means having all of one's parts simpliciter, since any object that has all of its parts simpliciter at every time it exists would never fail to have a part so long as it existed. But Merricks misconstrues what the objection is supposed to be. The objection to (ER) is that (ER) does not satisfy a constraint holding for all accounts of 'endurance.' That constraint is that objects exist at more than one time, since it is only by having multiple temporal locations that an object can be said to endure through changes in its parts. But the presentist has no way of formulating what it means for an object to be multiply located at times because he thinks no time exists other than the present time. He should have no problem with this result. Since he holds there are no times other than the present

at which objects exist, having parts simpliciter just is having parts at the present time. Of course, this is exactly what Merricks wants. The problem, however, is that (ER) is not an account of what it means for an object to endure, much less persist at all. That presentism allows for an enduring object to gain and lose parts over time is false, because, endurantism requires the existence of more than one time.

Finally, there is no contradiction to be derived from eternalism together with endurantism since it is possible for persisting objects to have and then lack properties at different times. Also, eternalism and endurantism together do not imply mereological essentialism, the doctrine that an object has its parts essentially, because this rests on Merricks' illicit use of parthood simpliciter in his formulation of 'endurance' at the cost of abandoning the very heart of what it means for an object to survive changes in its parts and properties.

BIBLIOGRAPHY

- Doepke, Frederick. 'Spatially Coinciding Objects'. *Ratio*, 24 (1982), pp. 45-60.
- Ducasse, C.J. 'Truth, Verifiability, and Propositions about the Future.' *Philosophy of Science*, 8 1941, pp. 329-37.
- Gilmore, C. 'Where in the Relativistic World Are We?' in J. Hawthorne (ed.), *Philosophical Perspectives*, 20: *Metaphysics*. Malden: Blackwell. 2006, pp. 199–236.
- Haslanger, Sally. 'Endurance and Temporary Intrinsic'. *Analysis* 49 (1989), pp. 119-25.
- Hofweber and Velleman. 'How to Endure'. *The Philosophical Quarterly*. Oxford: Blackwell Publishing, Vol. 61.1. (January 2011), pp. 37-57.
- Lewis, David. *On the Plurality of Worlds*. Oxford: Blackwell, 1986, pp. 202-3.
- Lewis, David. 'Rearrangement of Particles: A Reply to Lowe'. *Analysis* 48 (March 1988), pp. 65-72.
- Lewis, David. 'The Problem of Temporary Intrinsic': an Excerpt from *On the Plurality of Worlds*, in *Metaphysics: the Big Questions*. Oxford: Blackwell Publishing, 2008, pp. 267-9.
- Lombard, Lawrence. 'On the Alleged Incompatibility of Presentism and Temporal Parts'. *Philosophia*. 27, 12, (March: 1999), pp. 254.
- Lowe, E.J. 'The Problem of Intrinsic Change: Rejoinder to Lewis'. *Analysis*, 48 (March 1988), pp.72-7.
- McKinnon, Neil. 'The Endurance/Perdurance Distinction,' *Australasian Journal of Philosophy*, Volume 80, Issue 3, 2002, pp. 288-306.
- McTaggart, J. M. E. 'The Unreality of Time'. *Mind*, 18, 457-84.
- Merricks, Trenton. 'On the Incompatibility of Enduring and Perduring Entities', *Mind*. Vol. 104, No. 415 (July, 1995), pp. 523-531.
- Merricks, Trenton. 'Endurance and Indiscernibility'. *The Journal of Philosophy*. Vol. 91, No. 4 (April, 1994), pp. 165-184.
- Merricks, Trenton. 'Persistence, Parts, and Presentism'. *Nous*, 33 (1999), pp. 421-438.
- Mellor, D.H. *Real Time II*, Routledge: New York, 1998.

- Sattig, T. *The Language and Reality of Time*. Oxford: Oxford University Press, 2006.
- Sider, Theodore. 'Four-Dimensionalism'. *Philosophical Review* 106 (1997), Cornell University, Reprinted in *Persistence: Contemporary Readings*. Ed. Sally Haslanger and Roxanne Marie Kurtz. Oxford: MIT Press, 2006, pp. 55-87.
- Smith, Quentin. 'Theology and Tense'. *Language and Time*, 265, 262. New York and Oxford: Oxford University Press, 1993.
- Tooley, Michael. *Time, Tense, and Causation*. New York: Oxford University Press, 1997 p. 194-195.
- van Inwagen, Peter. 'Four-dimensional Objects'. *Noûs*. Vol. 24, No. 2, (1990) A.P.A. Central Division Meeting (Apr., 1990), pp. 245-255.
- Zimmerman, Dean W. 'Persistence and Presentism'. *Philosophical Papers*, 25, 2, (1996), pp. 115-126.
- Zimmerman, Dean W. 'Temporary Intrinsic and Presentism'. *Metaphysics: the Big Questions*. Oxford: Blackwell Publishing, 2008, pp. 269-81.