

Persistence, Parts, and Presentism*

TRENTON MERRICKS

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Enduring objects are standardly described as being “wholly present,” being three-dimensional, and lacking temporal parts. Perduring objects are standardly described as being “spread out in time,” being four-dimensional, and having temporal parts. I shall defend novel but intuitively satisfying accounts of both endurance and perdurance. Rejecting the accounts I defend, I shall argue, would undermine the standard ways of describing enduring and perduring objects. The standard descriptions can, in fact, be more clearly understood—and can all be shown to flow from a single characterization of the endurance/perdurance controversy—once we accept my accounts of endurance and perdurance. And once we accept the account of endurance that I defend, we can see that endurance—or at least the existence of enduring objects that can possibly undergo change of parts—implies presentism, a doctrine about the nature of time.¹

I

Let’s begin by considering a familiar line of argument against the claim that persisting objects endure. Consideration of this familiar argument against endurance will provide a helpful context within which to explain the notion of a part simpliciter. And it is important to explain this right at the start of this paper. For understanding what it is for an object to have a part simpliciter is absolutely essential to understanding the accounts of endurance and perdurance I defend below.

Moreover, consideration of this familiar line of argument against endurance both sets the stage for my defense of the claim that endurance implies presentism and helps us to see that the doctrine of presentism is controversial. This latter point is important, because that doctrine—the claim that the only objects that exist are those that exist at the present time and the only features an object has are those it has at the present time—can seem to be an absolutely trivial and wholly

uncontroversial result of the meaning of the present tense of ‘to exist’ and of ‘to have’. And there would be little point in my showing that presentism is implied by endurance if presentism itself were both trivial and uncontroversial.²

Suppose O is F. Suppose further that O existed at some time in the past and, at that time, was not F. The perdurantist understands these facts as amounting to O’s having a present temporal part that is F and O’s having another, distinct, temporal part, existing at some past time, that is not F. And the claim that one part of a thing is F and another not F has not even the appearance of contradiction.

Endurance, according to its foes, does not fare so well with respect to this representative example of change. For the endurantist cannot accept the perdurantist’s interpretation of O’s presently being F yet failing to be F at some past time. The endurantist will insist, instead, that O itself (not some proper part of O) is F at the present time and that O itself (again, not some proper part of O) is not F at some past time. But this, so the objection goes, implies that the endurantist is forced to embrace a contradiction—the contradiction that O itself both is, and is not, F.

This line of reasoning has led quite a few very good philosophers to argue that the possibility of change implies the denial of endurance.³ But this line of reasoning is easily undermined by presentism. The presentist claims that the only properties an object has are those it has at the present time; so the presentist will insist that an object’s having (or lacking) a property at some time other than the present does not imply that that object has (or lacks) that property. She will insist that the fact that O is not F at some time other than the present no more implies that O is not F than, for example, the fact that I am forty feet tall “in some other possible world” implies that I really am forty feet tall. So, given presentism, O’s both being not F at some time other than the present and being F is not contradictory nor inconsistent nor problematic nor troubling nor filled with unresolved tensions.⁴

If presentism is true, the endurantist has a simple, direct, and decisive response to the argument that change of enduring objects implies contradiction. But, to repeat, good

philosophers have thought this argument fatal to endurance. I take this to be conclusive evidence that presentism is itself a controversial thesis. For if it were both trivial and uncontroversial, the familiar argument that change is inconsistent with endurance—which is so easily undermined by presentism—would never have been taken seriously in the first place.⁵

And not only foes of endurance reject the doctrine of presentism, but so do some friends. Of course, the non-presentist cannot avail herself of the presentist's easy rebuttal of the argument that endurance implies contradiction in the face of change. The non-presentist does, however, have her own response to this argument. That response starts with the claim that objects have their properties at times. And, as non-presentist endurantists will rightly insist, there is no contradiction in O itself's being both F at one time and not F at another.

But note that the claim that objects have properties at times, while integral to the non-presentist endurantist's position, is not what is really distinctive about it. For even the presentist should accept the obvious fact that objects have properties at times. The presentist should also accept that objects have properties at places, at distances from the moon, and either before, after, or during the American Revolution.⁶

What is distinctive about the non-presentist reconciliation of change and endurance is not what it affirms—the having of properties at times—but rather what it renounces—the having of properties simpliciter (i.e., not modified in some way by a time). The non-presentist endurantist must deny that an object can have a property simpliciter.⁷ For if an enduring object O could have a property F simpliciter and lack it later, and if presentism were false, then we'd have the contradiction that O is both F simpliciter and it is not the case that O is F simpliciter. Obviously, this is contradictory even if O has some other properties, such as being F at t.

That non-presentist endurantists must eschew the having of properties simpliciter is fairly familiar. But now I want to note something not quite so familiar, although it is an obvious upshot of the above comments. Just as the non-presentist endurantist must reject the having of properties simpliciter, allowing for only the having of properties at times, so she must reject the having of parts simpliciter and allow for only the having of parts at times. Again, for any object

O and any part P, non-presentist endurantists must deny that O can have P as a part simpliciter.⁸ Or else, given the denial of presentism and the possibility that O could cease to have P as a part, we would face the contradiction that O has P as a part and that O does not have P as a part. Indeed, one of the better ways to explain what it is to have a part simpliciter is to note that it is having a part in such a way that change with respect to having a part in that way, combined with endurance and non-presentism, results in contradiction.⁹ As we shall see, the fact that endurance-cum-non-presentism is incompatible with the having of parts simpliciter will be its ruin.

II

The endurantist's thesis, endurance, is that all persisting objects endure. The perdurantist's thesis, perdurance, is that all persisting objects perdure.¹⁰ So we can provide satisfying accounts of endurance and of perdurance just so long as we can provide satisfying accounts of what it is for an object to endure and of what it is for an object to perdure. And I think the best way to do that, the best way to state what it is endurantists and perdurantists believe about the nature of persisting objects, is to state that disagreement in terms of those persisting objects that exist at the present time.

We can begin to see why I say this by noting that endurantists and perdurantists and presentists and non-presentists all agree that a persisting object can exist at the present time. So no matter what account of persistence one defends, one ought to be able to state what it would be for an object existing at the present time to persist. There is, therefore, no reason not to present the disagreement between endurantists and perdurantists as a disagreement about the nature of all and only those persisting objects that exist at the present time.

And there is a good reason for doing so. For the presentist holds that the only objects that exist (and thus the only objects that persist) are those that exist at the present time. So when she talks about "all persisting objects" without qualification or restriction, she means to speak of only those persisting objects that exist at the present time. On the other hand, when the non-

presentist speaks of “all persisting objects” without qualification or restriction, she means to speak of at least some persisting objects that do not exist at the present time. The best way to avoid any misunderstanding (or question-begging) here is to avoid altogether talk of “all persisting objects” without qualification, and, instead, explicitly restrict ourselves to questions about persisting objects that exist at the present time, remaining silent about whether there are any other persisting objects besides these.

So suppose O exists at the present time. If O is a perduring object, then O has some parts that do not exist at the present time—all of its temporal parts, in fact, except its current temporal part. But if O is an enduring object, then—since enduring objects are “wholly present”—all of O’s parts exist at the present time. These observations capture much of the intuitive difference, implicit in our earlier discussion of change, between the view that objects endure and the view that they perdure. And these observations lead naturally to the following account of what it is for an object to endure:

(1) 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.¹¹

We can give a parallel account of what it is for an object to perdure:

(2) 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.¹²

(1) and (2) capture the intuitive contrast between enduring and perduring objects. For if (1) is correct, then if there is an enduring object before you now, all of its parts are before you now. It is “wholly present”. If (2) is correct, if there is a perduring object before you now, only some of its parts are before you—its current temporal part and that current temporal part’s parts—and the rest of its parts are scattered up into the future and/or back into the past. It is “spread out in time”.¹³

(1) and (2) each make claims about an object's parts simpliciter. As we have seen, endurance without presentism is incompatible with an object's having parts simpliciter. So endurance without presentism is—if (1) is correct—incompatible with the existence of enduring objects. If (1) is correct, endurance without presentism is inconsistent with endurance. If endurance without presentism is inconsistent with endurance, then, obviously, we should conclude that endurance entails presentism.¹⁴

III

An obvious objection to my argument for endurance's implying presentism is that there is some way to capture the intuitive contrast between endurance and perdurance other than (1) and (2), a way that neither relies on nor implies the having of parts simpliciter, relying, instead, on only the having of parts at times.

Let's explore this objection by considering a couple of attempts to formulate the doctrine of endurance, the claim that persisting objects endure, in this way.¹⁵ So imagine one's account of endurance was built upon the following account of what it is for an object to endure:

(1*) For any presently existing object O and for any time t, O endures if and only if O persists and all of O's parts at t exist at the present time.

Suppose that O exists at the present time; that O has P as a part at some past time t; and that at some time later than t, but earlier than the present, P was annihilated (and so ceased to be a part of O). All of this is consistent with O's enduring, but would be inconsistent with O's enduring if (1*) were true. So (1*) fails as an account of what it is to endure. So does:

(1**) For any presently existing object O and for any time t, O endures if and only if O persists and, if t is the present time, then all of O's parts at t exist at the present time.

For perduring objects that exist at the present time have parts at a time *t* (their *t* time slice and all of its parts), and, if *t* is the present time, all of a perduring object's parts at *t* exist at the present time. Thus (1**) mistakenly implies that perduring objects endure. This defect in (1**) could be repaired by adding the claim that *O*'s parts at *t* are all of *O*'s parts. But, of course, this is to say that *O*'s parts at *t* are all of *O*'s parts simpliciter. So again, we need parts simpliciter to explain endurance.¹⁶

The problems with (1*) and (1**) illustrate a much more general point. Every account of the endurance/perdurance controversy in terms of which of an object's parts at a time *t* exist at the present time is doomed to fail. For both endurantists and perdurantists would say that all of a presently existing object's parts at *t*—if *t* is the present time—exist at the present time. And assuming change of parts is possible, neither endurantists nor perdurantists should object to the possibility that some of a presently existing object's parts at *t*—if *t* is not the present time—do not exist at the present time. So 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.¹⁷

IV

Suppose one grants that if whether a presently existing persisting object endures or perdures comes down to whether all of that object's parts exist at a single time, the present, then spelling out endurance and perdurance requires invoking claims about parts simpliciter. But rather than embrace parts simpliciter, one might instead attempt to characterize endurance and perdurance without making any claims at all about whether all of a persisting object's parts—simpliciter or otherwise—exist at a single time. One might think that such a characterization would allow us to reject (1) and (2) and would also thereby undermine my argument for endurance's implying presentism.

Essential to endurance—so one such characterization begins—is the claim that persisting objects have exactly as many dimensions as space, and so (presuming space has three dimensions) enduring objects are three-dimensional. Essential to perdurance is the claim that persisting objects have one more dimension than space, and so (presumably) perduring objects are four-dimensional. And simply by noting these two facts, one might conclude, we have just characterized the difference between endurance and perdurance without relying on (1) or (2), and, more generally, without relying on any claim at all about parts.

Suppose we grant, for the moment, that if there are enduring objects, they are three-dimensional; and that if there are perduring objects, they are four-dimensional. What does it mean to say that an enduring object is three-dimensional or that a perduring object is four-dimensional? I think the answer to this question is pretty obvious. To say that an object is three-dimensional just is to say that it is spread out in (or “extended in”) the three dimensions of space and not spread out in the fourth dimension of time. That is, it is to say that while not all of a composite three-dimensional object’s parts exist at one point in space, all of its parts do exist at one time. A four-dimensional object, by contrast, is not only spread out in (or “extended in”) the three dimensions of space, but also spread out in the fourth dimension of time. That is, not all of a four-dimensional object’s parts exist at any one time.

This characterization of enduring and perduring objects as, respectively, three- and four-dimensional amounts to (1) and (2), at least if we restrict ourselves to considering only those persisting (spatially extended) objects that exist at the present time. For suppose a three-dimensional persisting object exists at the present time. Then surely it has some parts at the present time. But, if all of a presently existing three-dimensional object’s parts exist at a single time, and some of them exist at the present time, then all of them exist at the present time.¹⁸ Likewise, if not all of a presently existing four-dimensional object’s parts exist at any one time, then not all of its parts exist at the present time, and so some of its parts exist at times other than the present. (For reasons noted in the preceding section, the distinctions just made require that we read ‘parts’ as ‘parts simpliciter’.)

Of course, one need not explicitly articulate and endorse (1) and (2) in order to use ‘three-dimensional’ and ‘four-dimensional’ with good sense. But (1) and (2) do capture what is intuitively behind the three-dimensional/four-dimensional distinction as it applies to (spatially extended) objects that exist at the present time. And, I would add, that distinction would be utterly mysterious if joined with the claim that it does not amount to (1) and (2).

Moreover, the claim that, necessarily, all enduring objects have as many dimensions as space, and all perduring objects one more, has the unseemly result that there must be some third variety of persistence to account for the bare possibility of persisting objects that are not spatially extended. Surely it would be better to have accounts of endurance and perdurance that cover all possible persisters; and better still if such accounts—while not themselves restricted to spatially extended objects—implied that spatially extended enduring objects have three dimensions and spatially extended perduring object four. And this is just what we find in (1) and (2). So I conclude that (1) and (2) capture a more fundamental—and a more general—difference between endurance and perdurance than does the characterization of that difference in terms of a disagreement about how many dimensions a persisting object has.¹⁹

Consider another objection. One might insist that the heart of the endurance/perdurance controversy is neither about parts nor about dimensions. It is, instead, about identity and identity over time. The endurantist holds that identity over time is simply numerical identity. The endurantist thinks that an object that exists at one time is literally identical with an object that exists at another. The perdurantist, in contrast, can be construed as holding that identity over time is not really identity at all, but rather a composition relation relating a temporal part existing at one time to a distinct (non-identical) temporal part existing at another. In noting these facts, one might conclude, we have distinguished endurance from perdurance without relying on anything like (1) or (2).

Properly understood, I believe that this characterization of the disagreement between endurantists and perdurantists is both true and useful (Cf. Merricks, 1994). But it is open to a serious objection. For the perdurantist holds that a persisting object can exist at one time and

that that very same object can also exist at a later time. Because one and the same perduring object can exist at various times, a perduring object can be literally identical with itself “over time”. So, in this way, the perdurantist can say that identity over time is simply numerical identity.

Both endurantists and perdurantists can endorse the sentence ‘identity over time just is identity’ because both agree that in some sense or other one persisting object can exist at two distinct times. To characterize accurately the difference between endurance and perdurance in terms of identity over time, we need to say more about what it is for a thing to “exist at a time”. For the disagreement between endurantists and perdurantists about the nature of identity over time—and there is disagreement—is rooted in a more fundamental disagreement about what existing at a time amounts to.

The perdurantist is standardly taken to interpret existing at a time as an object’s having a temporal part that exists at that time. At least a necessary condition of a perduring object’s existing at a time t by way of having a temporal part at t is for that object to have a part, but not all of its parts, existing at t .²⁰ But this requires parts simpliciter since, for any time t , all of a perduring object’s parts at t exist at t and none of its parts at other times exist at t . It is only true of a perduring object’s parts simpliciter that some, but not all, of them exist at a time t if the object itself exists at t .

Enduring objects do not exist at a time by way of having only some of their parts existing at that time. Rather, enduring objects are “wholly present” at every time at which they exist. In order to fully explain the difference between endurance and perdurance regarding existing at a time, I need to say more about being “wholly present”. That is the subject of the next section. By the end of that section, it should be clear that the disagreement between the rival views of existing at a time—at least as far as persisting objects existing at the present time are concerned—is fully captured in the contrast we find between the view that objects endure as defined by (1) and the view that they perdure as defined by (2).

V

(1) says that all of a presently existing enduring object's parts exist at the present time. We could say that (1) amounts to the claim that a presently existing enduring object is wholly present at the present time. But this fact about (1) should raise a bothersome question. For endurance is generally, and correctly, understood as implying that an object is wholly present—that all of its parts exist—at every time at which it exists. And one might object that (1) implies only that a presently existing enduring object is wholly present at the single time that is present. So, this objection concludes, we must reject (1) because it does not imply, as any adequate account of enduring must, that an enduring object is wholly present at every time at which it exists.

To better understand this objection, note that I exist now and I existed in 1978. Presumably, I now have as a part some cell that did not exist in 1978. This presumption is—if we accept (1) as an account of enduring—consistent with my enduring. But this presumption implies that not all of my parts exist at every time at which I exist. So, a defender of the objection now under consideration might insist, my enduring according to (1) is consistent with my not being wholly present at every time at which I exist; thus (1) has not accurately captured what it is for objects to endure.

This objection trades on a misunderstanding of what it means for an object to be wholly present at every time at which it exists. And—for the moment setting aside any judgment as to the adequacy of (1) as an account of enduring—I hope it is clear that something must be wrong with the understanding of being wholly present underlying this objection. For that understanding entails that no object wholly present at every time at which it exists (and so no enduring object) could now have something as a part that did not exist twenty years ago. But surely endurance as such is not committed to that. Endurance is not to be confused with, for example, mereological essentialism. We must understand endurance—the claim that a persisting object is wholly

present at every time at which it exists—in such a way that it is at least consistent with the fact that one of the cells that now composes me did not exist twenty years ago.

So we need to get clear on what exactly it means for an object to be wholly present at every time at which it exists. My explanation of this will require that objects are wholly present at every time at which they exist only if presentism is true. Since I've already argued that the endurantist must be a presentist, I do not mind the result that objects can be wholly present at various times only if presentism is true. Indeed, if we allow change of parts, I think that there is no way at all to make sense of an object's "being wholly present at every time at which it exists" without the doctrine of presentism. And I take that to be further support for my contention that endurance implies presentism.

According to the presentist, exactly one time is present. Other times were present. Others still will be present. Suppose time t is present and that O endures and exists at time t . Since t is present, we can conclude that all of O 's parts simpliciter exist at t . Time passes. Now suppose t is no longer present, but rather that t^* is present. Suppose also that O exists at t^* . From these facts, and the fact that O endures, we can conclude that all of O 's parts simpliciter exist at t^* . Note that, given the possibility of change of parts over time, there is no reason to think that objects that were parts simpliciter of O when t was present are the same objects that are parts simpliciter of O when t^* is present. And, therefore, if t^* is present, there is no reason to think that objects that were parts simpliciter of O when t was present exist.

We can now see what the claim that an enduring object is wholly present at every time at which it exists amounts to. No matter what time is present—whether it is t , t^* , t^{**} , or any other time—it will always be that case that if an enduring object exists at the present time, then all of its parts simpliciter exist at the present time. Given that objects can change parts, which things an object has as parts simpliciter can vary depending on which time is present (Cf. Merricks, 1994, § VI).

This allows us to show what went wrong with the objection I considered at the start of this section. The objection focused on the fact that one of my parts (a cell) did not exist in 1978.

It then mistakenly inferred that I was not wholly present at 1978, and so not wholly present at every time at which I exist. But for me not to be wholly present in 1978, it would have to be that when 1978 was present, there was some thing that was both a part of me simpliciter and did not exist at 1978. But that does not follow from one of my parts simpliciter's not existing at 1978. It does not follow because the fact that a cell is a part of me simpliciter does not entail that it was a part of me simpliciter when 1978 was present.

In the preceding section, we considered the interrelated cluster of identity, identity over time, existence at a time, and temporal parts. We saw that characterizing the difference between endurance and perdurance in terms of those concepts requires explicating a further disagreement between endurantists and perdurantists, a disagreement over the way in which an object exists at a time. Endurantists hold that an object exists at a time by being wholly present at that time; they hold, that is, that no matter what time is present, if a persisting object exists at that time, it is wholly present—all of its parts exist—at that time. Perdurantists deny this.

In light of the discussion of this section, it should be easy to see that, according to the account of enduring provided by (1), presently existing enduring objects exist at the present time—no matter what time happens to be present—by being wholly present at that time. It should also be easy to see that, according to the account of perduring provided by (2), presently existing perduring objects do not exist at the present time by being wholly present at that time. (1) and (2) are, therefore, crucial to characterizing the endurance/perdurance controversy in terms of identity over time, existence at a time, and temporal parts.

The point here—much like the point in the discussion of ‘three- and four-dimensionalism’—is not that those who characterize the difference between endurance and perdurance by way of the ideas of existence at a time, temporal parts, identity over time, and being wholly present must explicitly articulate and endorse (1) and (2). Rather, the point is that that characterization of the difference is not a competitor to (1) and (2). Quite the contrary. That characterization just follows from, and is clarified by, (1) and (2). Moreover, a rejection of (1) and (2) undermines that characterization. For I think that one who explicitly rejects (1) and (2)

as accounts of enduring and perduring cannot make sense of the claim that enduring objects exist at a time by being wholly present at that time and perduring objects do not.

VI

The familiar and intuitive ways of characterizing the difference between endurance and perdurance are, I have argued, consistent with—and even clarified and motivated by—the way of characterizing that difference that flows from (1) and (2). But there are some less familiar ways of characterizing the difference between endurance and perdurance that are inconsistent with the approach I defend. These other characterizations all revolve around their defenders’ understandings of what a temporal part is supposed to be, understandings at odds with what I said about temporal parts above. So let’s begin there.

Theodore Sider (1997, 206) offers the following account, an account also endorsed by Ned Markosian (1994, 247):

x is an instantaneous temporal part of y at instant t =_{df} (i) x is a part of y , (ii) x exists at, but only at, t , and (iii) x overlaps every part of y that exists at t .

Along similar lines, Dean Zimmerman (1996, 122) recommends:

x is a temporal part of y throughout [interval] T =_{df} (i) x exists during and only during T ;
(ii) for every subinterval T^* of T , there is a z such that (a) z is a part of x , and (b) for all u , u has a part in common with z during T^* if and only if u has a part in common with y during T^* ; and (iii) y exists at times outside of T .

Note that, while these definitions of ‘temporal part’ differ some from each other—the first, but not the second, is restricted to instantaneous temporal parts—they agree that being a temporal part has something to do with size: A temporal part is as big as the persisting object it helps to compose. And Sider, Markosian, and Zimmerman take having a part of this sort to be the essence of perdurance. For all three say that an object perdures just in case it persists and has a different temporal part—i.e., a different proper part as big as the persisting object itself—at

each time or interval at which the persisting object exists. I will call the account of perdurance shared by Sider, Markosian, and Zimmerman ‘the rival account’ of perdurance.²¹

Consider a world in which every cell is four-dimensional and has multiple temporal parts. So these cells satisfy my account of perdurance. Let’s explicitly add that each of these cells has a different temporal part—of the sort the rival account invokes—at each time at which it exists. So they also satisfy the rival account of perdurance. It should, then, be uncontroversial that such cells perdure. Now consider an organism composed entirely of these paradigmatically perduring cells. Finally, let’s add that these cells—and their parts—are the only proper parts this organism has. (Perhaps we could motivate this addition by paradoxes surrounding the doctrine of arbitrary undetached parts.)

Such an organism would not come out as perduring according to the rival account. For such an organism has no proper parts that overlap entirely with it at each time or interval at which it exists, and so does not have any proper parts that are big enough to count as temporal parts according to the rival account. But the rival account has got it wrong. For this organism, being composed of four-dimensional cells, is four-dimensional and has one more dimension than space. That’s reason enough to say it perdures.²²

And there is further reason to say it perdures. For those who believe in these kinds of organisms can offer standard perdurance-style solutions to familiar puzzles. For example, if such an organism undergoes fission, one can say that both fission products share all the pre-fission temporal parts of their constituent cells but share none of the post-fission temporal parts of their constituent cells. Similarly, if this object is bent at one time and not bent at another, one can say that amounts to its cells’ temporal parts at one time being arranged bent-wise, not so those at another.

Because the rival account erroneously implies that the four-dimensional organism just discussed does not perdure—and so, presumably, endures—the rival account is flawed.²³ But rather than throw out the rival account entirely, perhaps we should simply amend it. Perhaps we should amend it to say that perduring objects either have temporal parts (i.e., parts that are big

enough) at each time/interval at which they exist or have proper parts that have such temporal parts. Thus amended, the revised rival account would have deep affinities with the original, but would—unlike the original—correctly label the four-dimensional organism discussed above ‘perduring’. I shall return to this point below.

There is another, more serious worry about the original rival account. That worry stems from the fact that the rival account allows a perduring object to exist at the present time even if all its parts simpliciter exist at the present time. (This is the most obvious way in which the rival account is inconsistent with my account of perdurance.) To see this, note that—and this is quite deliberate on the part of the rival accountants—the above definitions of ‘temporal part’ render an object’s having a temporal part at each moment at which it exists consistent with presentism.²⁴ But presentism entails that everything exists at the present time and so, as a result, entails that all of a presently existing object’s parts exist at the present time.

So let’s consider a(n alleged) perduring object all of whose parts exist at a single time, the present. Such a “perduring” object—and this is strange, to say the least—has exactly one temporal part. Moreover, we can accurately describe some world in which objects “perdure” in this manner as follows: All objects are three-dimensional; some persist; others are instantaneous; every three-dimensional persisting object is always co-located with some instantaneous persisting object or other.

I think it is quite odd—if not downright contradictory—to call the persisting three-dimensional objects of this world ‘perduring’. The oddity can be highlighted by noting that if the persisting three-dimensional objects in question were not always co-located with instantaneous objects—even if they were sometimes so co-located—then they would not, according to the rival account, have temporal parts and so would not perdure. According to the rival account, the difference between endurance and perdurance—at least in worlds in which presentism is true—comes down not to how things last, but to whether they are constantly co-located with instantaneous objects.²⁵ This shows, I believe, that the rival account has not captured the essential difference between perdurance and endurance.

Note further that, as a result of being wholly co-located with its temporal part, an allegedly perduring three-dimensional object will have all (or virtually all) the same intrinsic properties as its temporal part. Certainly they will have, e.g., the same shape. With this in mind, recall that the classic perdurantist way of avoiding contradiction as a result of change—as when, e.g., O is bent at t and not bent at t*—is to insist that O’s t-part is bent and its t*-part is not bent. But note that these claims about O’s temporal parts would not avert the threat of contradiction if O itself remains bent and also not bent. (Compare: How can God be three and one? These apples are three, this orange one.) To avert that threat, the perdurantist adds—and this is the essential move—that O’s being bent at t does not imply that O itself is bent; it implies that only O’s t-part is bent.

One who holds that a persisting object is wholly co-located with its single temporal part cannot make the essential move with respect to change of shape. For being wholly co-located, persisting object and temporal part have the same shape, and so one is bent if and only if the other is. Indeed, because all (or virtually all) of the temporal part’s intrinsic properties are also properties of the persisting object, the essential move cannot be made with respect to change of any intrinsic property. And so those who believe in allegedly perduring three-dimensional objects do not, and cannot, adopt the classic perdurantist solution to the problem of temporary intrinsics.

Another of the vaunted benefits of standard perdurance, in addition to its easy handling of the problem of change, is its ability to account for co-location at a time without requiring the sharing of all parts. For suppose that two (standard) perduring objects have many temporal parts, sharing exactly one—their t-part—but no others. Then they are co-located at t. Temporal co-location, thus understood, is no more logically problematic than partial spatial overlap (of the sort exemplified by, e.g., Siamese twins).

But the alleged species of perdurance according to which an object has exactly one temporal part—a species the rival account sanctions—cannot take temporary co-location to be sharing of some, but not all, parts. For co-location of three-dimensional “perduring” objects

amounts to the sharing of all parts.²⁶ So, when it comes to co-location at a time, this sort of (so-called) perdurance has no advantage over endurance. As a result, this sort of (so-called) perdurance cannot make use of specifically perdurantist responses to the puzzle of the statue and the clay or cases of fission, responses that—insofar as they give the perdurantist an advantage over the endurantist—involve partial overlap.

The worries I've been raising about the rival account all stem from the fact that it implies that, possibly, a perduring object has exactly one temporal part. Perhaps we should, rather than toss aside the rival account, amend it so that it no longer implies this. Perhaps we should add to the rival account the claim that perduring objects must have more than one temporal part.²⁷

This emendation would imply—because not all of an object's (more than one) temporal parts would exist at a single time—that not all of a perduring object's parts exist at any one time. And so some of a presently existing perduring object's parts would not exist at the one time that is present. This emendation diminishes the rivalry. For, given this emendation, the only relevant difference between the rival account and my (2) is that the rival also requires that perduring objects have, at each time at which they exist, a part as big as the object itself.

But recall that—in the discussion involving the organism composed only of perduring cells—we have already seen there is good reason to drop the requirement about size of parts. Once we drop that requirement, once the rival account is repaired in the ways I have suggested, the rival account of perdurance ends up looking just like my account of perdurance based on (2). And once the rivalry regarding perdurance ends, presumably any corresponding rivalry regarding endurance ends as well.

VII

(1) and (2) provide intuitively compelling accounts of what it is for objects to endure and perdure, respectively. Not only are (1) and (2) intuitively compelling in their own right, but rejecting (1) and (2) undermines the more familiar and widely accepted ways of characterizing the doctrines of endurance and perdurance. Accepting (1) and (2), on the other hand, illumines

these familiar and widely accepted characterizations of the doctrines of endurance and perdurance.

We can make a further point in defense of (1) and (2). I have argued that the more familiar characterizations of the endurance/perdurance controversy follow from (1) and (2). This allows us to see how the more familiar characterizations—which on the surface might seem to differ one from another in the distinctions they draw—actually present a unified and consistent picture of the distinction between enduring and perduring objects. Something similar can even be said regarding the rival account of perdurance. For once we repair the flaws of the original rival, the amended “rival” account looks like (2). So (2), as an account of perduring, even manages to capture what is worth saving in its only rival. Thus all the various accounts of endurance and perdurance—once their flaws are corrected—converge on and flow from (1) and (2).

To defend (1) and (2) as characterizations of enduring and perduring, respectively, is to defend a taxonomy, a way of classifying possible views of persistence as either endurance or perdurance. For the reasons just summarized in the preceding paragraphs, I think the taxonomy captured in (1) and (2) is extremely plausible and fruitful. And the only thing it costs us is that the existence of enduring objects (that could possibly undergo change of parts) ends up implying presentism. Note that that’s not a very surprising price. For one could argue—and I have argued (1994 and 1995)—that presentism offers the best endurantist solution to the problem of temporary intrinsics. This gives us a reason independent of (1) and (2) for thinking that endurance implies presentism. Those of us who find that reason compelling have already paid the only price for my taxonomy; that taxonomy comes to us for free.²⁸

For endurantists who have yet to pony up presentism, the question is whether endurance’s implying presentism is too high a price to pay for (1) and (2) (and a solution to the problem of temporary intrinsic thrown into the bargain). That depends on the market. My taxonomy would be too expensive if a cheaper, rival taxonomy offering comparable benefits were available. But none is. The only extant rival is the original (unamended) rival account of perdurance and

whatever account of endurance it brings in its wake. But, as I argued at length in the preceding section, the original rival account has unacceptable consequences. Moreover, and perhaps more importantly, the rival account does not have the most salient advantage of (1) and (2); it neither unifies nor illumines the more familiar ways of characterizing the difference between endurance and perdurance. Indeed, if we reject (1) and (2) and accept the original rival in their place, we must abandon the familiar characterizations of endurance and perdurance. The original rival account, like any account inconsistent with (1) and (2), is deeply revisionary.

All of this is, I believe, overwhelming reason to think that the way of characterizing the difference between endurance and perdurance defended above is extremely well-motivated and far superior to its only genuine rival. Therefore, we ought to accept (1) and (2). And, once we accept (1) as an account of enduring, we can see that endurance implies presentism.²⁹

Notes

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¹I offer arguments for endurance's implying presentism in my (1994) and (1995). The argument of this paper is new and, I think, significantly more compelling than my earlier arguments for endurance's implying presentism. The argument of this paper, therefore, offers new support for the overall points defended in the two papers just noted.

²I do not distinguish between presentism and "taking tense seriously." For if we take tense seriously, we'll hold that the only objects that exist—as opposed to those that existed or will exist—are those that exist at the present time. And if we take tense seriously, we'll hold that the

only properties an object has are those it has at the present time. But this just is presentism. Obviously, then, my defense of the claim that presentism is a substantive thesis (not both trivial and uncontroversial) is a defense of the claim that “taking tense seriously” is a substantive thesis. (See also Craig, 1998)

³For just three examples, see Armstrong (1980, 68-69), Lewis (1986, 202-204), and Jubien (1993, 24-27).

⁴Similarly, O’s being F at one non-present time and O’s being not F at another non-present time present no difficulty to the presentist; they are mutually consistent and neither implies that O is F or that O is not F.

⁵And the best evidence that presentism is controversial is the fact that some philosophers explicitly reject it. Two such philosophers are David Lewis (1986, 204) and W.v.O. Quine, though neither uses the word ‘presentism’. Quine’s entry on “Space-Time” in his philosophical dictionary Quiddities is of special note because, in addition to giving purely philosophical reasons for rejecting presentism, he also claims that presentism is inconsistent with the special theory of relativity. The claim that special relativity rules out presentism is quite controversial, as the extensive literature on this topic will attest. The very existence of this literature supports the claim that presentism is neither trivial nor uncontroversial.

⁶The presentist can say that, for instance, my sitting at time t amounts to my being such that, when time t is present, I am sitting simpliciter. As we shall see, the non-presentist must deny that there is any having simpliciter of properties at all, and so cannot analyze the having of a property at a time in terms of having a property simpliciter. In (1994), I argue that this is a strike against the non-presentist endurantist. For non-presentist endurantist discussions of having a property at a time, see, for example: van Inwagen (1990), Haslanger (1989), and Johnston (1987).

⁷At least, she must deny this for any “temporary” property, any property that can be gained or lost. Note that the argument to follow applies to any “temporary” property, whether intrinsic or relational. Thus the standard characterization of the objection to endurance from change as an objection about “temporary intrinsics” is a bit misleading. (Misleading, that is, when taken out of the context in which Lewis first introduced it (1986, 203ff)).

⁸At least, she must deny this for any “temporary” part, any part that can be gained or lost. While not all parts can be gained or lost—consider improper parts—I assume throughout this paper that change of some parts is possible. Change of parts requires an object’s having something as a part at one time and lacking it at another. According to the presentist, O’s having P as a part at t and lacking it at t* amounts to O’s being such that, when t is present, O has P as a part simpliciter and when t* is present, O lacks P as a part simpliciter.

⁹Thus having a part simpliciter cannot be analyzed disjunctively as having a part at t or having a part at t* or having a part at t**... For this analysis precludes the possibility of change of parts simpliciter, and thereby undermines the threat to endurance of contradiction from change of parts and non-presentism.

¹⁰What name do we give the view that some objects endure while some other objects perdure? Call it whatever you want, it matters not. For such a view is not only nowhere defended, but it can even be shown to be impossible—see my (1995)—and so will not concern us here. (The argument of my (1995) involves the claim that endurance implies presentism, and so is greatly strengthened by the arguments of this paper.)

¹¹The claim that all of O’s parts simpliciter exist at the present time should be understood to imply that O does, in fact, have some parts simpliciter.

¹²It is not enough for perdurance that a presently existing object have parts that exist at times other than the present; it must have parts that do not exist at the present. To see this, note that if my arm is one of my parts, and yesterday I had the same arm I have today, then I have a part (my arm) that existed yesterday, and so exists at times other than the present. This alone does not establish my perduring.

¹³(1) and (2) are accounts of what it is for objects to endure and perdure, respectively. But if one accepts (1) and (2), one should accept the following parallel accounts for events:

(A) For any presently existing event E, E endures if and only if E persists and all of E's parts simpliciter exist at the present time.

(B) For any presently existing event E, E perdures if and only if E persists and some of E's parts simpliciter do not exist at the present time.

¹⁴One might worry that, possibly, there are objects that endure according to (1) yet have some intuitively perduring parts; or one might worry that, possibly, there are objects that perdure according to (2) yet have some intuitively enduring parts. The possibility of such objects would be problematic for (1) and (2), since (1) and (2)'s implication that such objects would, respectively, straightforwardly endure and straightforwardly perdure seems a bit odd. Happily for (1) and (2), such persisters are simply impossible; their impossibility follows from the fact that, as argued in my (1995), there cannot be both enduring entities and perduring entities in a single world. Moreover, given (1) and (2), the transitivity of parthood makes it impossible for a presently existing enduring object to have any perduring parts.

¹⁵Given my argument for endurance's implying presentism, I am particularly interested in emphasizing that endurance cannot be formulated in a way that does not require parts simpliciter.

Alternatives to (2) that parallel (1*) and (1**) below would have problems similar to those of (1*) and (1**).

¹⁶One might suggest that we read the expression ‘parts at t’ in (1**) in such a way that it means the parts—all the parts—that it is true at time t that O has. But this helps only if ‘parts at t’ means all the parts simpliciter that it is true at time t that O has. For if we understood (1**) as only a claim about all the parts at t that it is true at t that an object has, (1**) would imply that perduring objects endure. For any time t, all of the parts at t (that it is true at t) that a perduring object has exist at t.

¹⁷Along lines similar to those I advance in this section of the paper, Theodore Sider (1997) argues that if one has recourse only to parts at times, one cannot formulate the doctrine of endurance. Sider therefore concludes that there is no single doctrine of endurance. Of course, I think that Sider’s mistake is to think that that doctrine can only be formulated if formulated in terms of parts at times.

¹⁸But what of a three-dimensional object that exists at some past time? If it exists at some past time, one might reason, then it has some parts at that past time, and if all its parts exist at a single time, then all its parts exist at that past time. But how then to account for the fact that a three-dimensional object can have different parts at different times? This worry—which recurs in the discussion of being “wholly present”—is addressed in detail in Section V below.

¹⁹(2)—like accounts of perduring in terms of being four-dimensional—is inconsistent with perduring simples, spatially extended or not. But this is no criticism, since, intuitively, perduring objects must have proper temporal parts, and so must have proper parts.

²⁰Or so I would argue. Below we’ll consider rival accounts of temporal parts that focus on their size.

²¹The rival account has three species, one corresponding to each of the above definitions of ‘temporal part’ plus a third corresponding to Sider’s “tensed” definition noted below.

²²Considering such an organism doesn’t make it possible. But—unless there is some good argument to show such an organism is not possible—that’s beside the point. (After all, it could be that only one, controversial, way of persisting is really possible.) For I take it that what is at issue in this paper is how to categorize various consistent views about persistence. And asking whether the view that organisms persist in the way under discussion is a view according to which organisms endure or perdure does not presuppose that such persistence is really possible. I am, instead, presupposing merely that it is a view someone could consistently hold.

²³Perhaps friends of the rival account will insist on a third category, betwixt endurance and perdurance. But if so, then I would argue that a further advantage (1) and (2) have over their rival—I’ll summarize other advantages in the closing section—is that they exhaustively categorize all persisting objects as either enduring or perduring. What elegance!

²⁴And in comments on a version of this paper at the 1998 Central APA Meetings, Sider even suggested a tensed version of his definition that, he claimed, the presentist should accept, thus making it all the more obvious that objects with temporal parts are, according to Sider’s definition, consistent with presentism. Sider’s tensed account:

x is an instantaneous temporal part of y =df (i) x is a part of y; (ii) x overlaps every part of y; (iii) it always will be the case in the future that x does not exist; (iv) it always has been the case in the past that x does not exist

²⁵If the rival accountants think that a persisting three-dimensional object can be co-located with an instantaneous object that is not one of its temporal parts, then they have to explain what

differentiates instantaneous objects that are merely co-located with persisting objects from those that are both co-located with, and temporal parts of, persisting objects.

Note also that many object to the claim that two numerically distinct objects could be co-located. Such objections take on special force when the objects are alleged to have differing persistence conditions (Cf. Zimmerman, 1995, 87). Those who find such objections persuasive should find the rival account's way of rendering perdurance consistent with presentism unacceptable.

²⁶Or at least to sharing of all parts at some level of decomposition.

²⁷That is, add that perduring objects must have more than one temporal part and that not all of a perduring object's temporal parts exist at a single time. To add that a perduring object must have more than one temporal part, yet to allow its many temporal parts to exist at a single time, would exacerbate, rather than ameliorate, the original rival account's problems.

²⁸The mereological essentialist can also have my taxonomy for free; for she can accept it without holding that endurance implies presentism.

²⁹That endurance implies presentism has interesting ramifications. For example, in my (1995), the fact that endurance entails presentism is a crucial step in my attack on the popular ontology of perduring events combined with enduring objects. Another example: if endurance entails presentism, then arguments for the claim that special relativity rules out presentism are arguments for the claim that special relativity rules out endurance.

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