ENDURANCE, PERDURANCE, AND PSYCHOLOGICAL CRITERIA OF PERSONAL IDENTITY

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Introduction

Some philosophers have argued that psychological connectedness and continuity are of utmost importance to personal identity. A criterion for personal identity stated *solely* in terms of psychological connectedness and continuity will have the following form: (PI) If x and y are persons, then x is identical to y if and only if $x\mathbf{R}y$ (where **R** is the relation *is forward or backward psychologically connected and/or continuous with*). Two rival theories about how objects persist are *endurantism* and *perdurantism*. If persons are perduring objects with person-stages (constituted by temporal parts), then the following criterion is feasible: (*) If x and y are persons, then x is identical to y if and only if x and y are the same maximally **R**-interrelated aggregate of person-stages. No identity criterion stated solely in terms of **R** (or, solely in terms of **R** and aggregates) can be given for enduring persons unless **R** is construed as a *non-branching* relation. My main objective in the present essay is to examine this difference in more detail.

The Difference between Enduring and Perduring Objects

For the sake of this essay, I will assume the following about perduring and enduring objects. x is a *perduring object* only if it is true of x that: (i) x is an aggregate of temporal parts and (ii) x persists over time in virtue of being identical to an aggregate of temporal parts. x is an *enduring object* only if it is true of x that: (i) x is wholly present at each time it exists, and (ii) x persists without having temporal parts.[1]

An important difference between perduring and enduring objects follows from this characterization of them: a perduring object is spread out over time and, so, can only be numerically identical to an object spread out in time. Thus, the *relata* of the identity relation for perduring objects are aggregates of temporal parts. Since perduring objects are aggregates, it is the case that:

> (A) For any two perduring objects, A and B, A is *identical* to B if and only if all parts of A are parts of B and all parts of B are parts of A.

One important consequence of (A) to notice is that: a (non-instantaneous) perduring object is never identical to itself at any one time it exists. On the other hand, since an enduring object is wholly present at each time it exists, it can only be identical to an object which exists at the present moment.

This concludes my brief review of some important differences between the characterization of enduring objects and perduring objects. In the following section, I will discuss branching cases and what branching cases reveal about the relationship between **R** and the identity relation.

Psychological Connectedness, Continuity, and Branching

Several philosophers have defended the view that relations of psychological connectedness and continuity are of central importance to a correct account of personal

identity.[2] I believe that, as a first try, several of these philosophers would propose that a viable analysis of personal identity can be given as follows:[3]

(PI) If x and y are persons, then x is identical to y if and only if $x\mathbf{R}y$.

There is a well-known group of counterexamples to (PI), namely, those cases involving fission, or branching, cases. For example, consider the following branching case: At time t Smith undergoes a procedure that extracts and stores all of his psychological traits/properties (e.g., memories, desires, life goals, etc.) to a machine. By time t^* (after t) Smith is destroyed and the machine completely transfers all of Smith's psychological features to two new bodies. Let us suppose that these two bodies are duplicates and, so, have all their intrinsic properties in common. Let us call the two persons that coincide with these two bodies, B1 and B2. In this scenario, Smith is **R** related to both B1 and B2. By (PI), if Smith is **R** related to B1 and Smith is **R** related to B2, then Smith is identical to B1 as well as to B2. By transitivity of identity, B1 is identical to B2. This conclusion, however, may strike many of us as incorrect. I take it that our 'commonsense' view of the matter is that B1 and B2 must be different persons, albeit perfectly similar to one another at t^*. (For instance, we would ordinarily think it possible that B1 die before B2, or the other way around, but neither is a possibility if B1 is identical to B2.) If this conclusion is not to one's liking, there are some others available. Another conclusion could be that, at t^*, Smith is identical one (and only one) of the two products of branching (i.e., either B1 or B2). This conclusion, however, is problematic. *Ex hypothesi*, there is neither any difference in the intrinsic properties of B1 and B2 nor any psychological or relational differences between Smith and B1 (at t^*) versus Smith and B2 (at t^*) that we would be able to appeal to in order to give some reason for our identification of Smith with B1 as opposed to B2, or vice-versa. A third conclusion about the branching case involving Smith is that he dies at t^* and two new people, B1 and B2, come into existence. Parfit (261-262) has argued that this third solution cannot be correct either. Consider an alternate scenario (I will call this "scenario 1") where Smith will undergo the same operation he did, but will only have his psychological features transferred to one body, B1. (That is, I am supposing that in this scenario B2 does not exist at t^*.) In this scenario, there is no controversy that Smith is **R** related to B1 and it seems unproblematic to suggest that Smith is identical to B1 at t^*. Why is it that in scenario 1 Smith survives as B1, but in the branching scenario Smith dies? What has been preserved in scenario 1 that insures Smith's survival that has not been preserved in the branching scenario? Nothing at all. All that is preserved in Smith's survival in the first scenario (namely, his psychological connectedness and continuity with B1) is preserved in the branching scenario. Really, we could say that in the branching cases Smith's survival was assured twice over, because he is not only psychologically continuous with B1 in this scenario but with B2 as well. Therefore, it would seem quite irrational for us to believe that he dies when he branches. If anything, it should seem to us that Smith survives twice over.

Branching cases expose the fact that **R** can diverge in its formal properties from those of identity. Identity is a one-one relation which is reflexive, symmetric, and transitive, while **R** can be a one-one, one-many, or many-one relation which is reflexive, symmetric, and intransitive. Identity and **R** do not share the same formal properties and, thus, are not co-extensive relations.

Perdurantism and (*)

We can give the following identity criterion for aggregates: If *A* and *B* are aggregates, then *A* is identical to aggregate *B* if and only if *A* shares all its parts with *B* and *B* shares all its parts with *A* (where 'parts' is understood to include both the spatial and temporal parts of *A* and *B*). Recall the branching case we considered above. (Henceforth, I will call this branching case "the Smith-case".) It was assumed that Smith is both **R** related to B1 and **R** related to B2. I also reviewed three possible conclusions to the Smith-case: (i) Smith dies and two new persons, B1 and B2, come into existence; (ii) Smith goes on to be identical to both B1 and B2 (which in turn implies that B1 is identical to B2); or, (iii) Smith is identical to B1, but not B2 (or vice versa). There is one more response that I have yet to consider: (iv) There were two people all along but we mistakenly thought there was only one person before the branching occurred. According to this fourth alternative, up to time *t* these two persons perfectly overlapped but at *t** they diverged by having distinct temporal parts at *t**.

According to (iv), when we used the term "Smith" up to time *t* we were unknowingly referring to, not one, but two persons, C1 and C2, which perfectly coincided up to time *t*. From time *t** onward, C1 and C2 diverge spatiotemporally from one another (that is, from *t** onward they do not share temporal parts with one another). C1 is not the same person as C2 because C1 is an **R**-interrelated aggregate that does not share all of its parts with C2 and C2 is a distinct **R**-interrelated aggregate that does not share all of its parts with C1.

Let us say that an aggregate, *A*, is a *maximally* **R**-interrelated aggregate if and only if (I) all pairs of temporal parts that constitute *A* are **R** related to one another to a degree greater than zero and (II) *A* is not a proper part of any larger **R**-interrelated aggregate. With the notion of *maximally* **R**-*interrelated aggregate* defined we can give the following criterion for personal identity:

> (*) If *x* and *y* are persons, then *x* is identical to *y* if and only if *x* and *y* are the same maximally **R**-interrelated aggregate of temporal parts.

It is obvious that (*) will not be falsified in instances where **R** does not branch. However, if (*) is feasible on a perdurantist metaphysic, then it must be the case that branching and fusion cases do not falsify it either. This can be shown. Consider the Smith case again. The perdurantist observes that C1 and C2 are not identical aggregates since they differ in at least some of their temporal parts; and, if C1 and C2 do not share all their temporal parts, then there will be a pair of **R**-interrelated temporal parts in C1 which is not constitutive of C2, and vice-versa. Therefore, on pain of violating part (I) of the definition of *maximally* **R**-*interrelated aggregate*, C1 cannot be the same maximally **R**-interrelated aggregate as C2. Generalizing this result, we can say that (*) is not falsified by any branching cases with two fission products. Whether a branching case has two products, or *n* fission products, does not affect the plausibility of the perdurantist's response to branching cases—that is, in the case of *n* branching persons, a perdurantist can still argue to a conclusion similar to (iv) but amended to suit *n* partially coincident objects and *n* fission products instead of two. Thus, there is no reason to suppose that (*) is falsified by *n*-product branching cases. Given that on a perdurantist metaphysic fusion

cases are treated like reverse instances of fission, they too will pose no problem. Therefore, (*) is feasible on a perdurantist metaphysic.

Endurantism and (PI)

On the other hand, it is not so clear that (*) is feasible on any endurantist metaphysic. One may suggest that (*) is not a possible criterion for enduring persons because it is a statement which applies solely to perduring objects. After all, (*) says that persons are maximally **R**-interrelated aggregates of temporal parts, but no endurantist would believe this for they reject the proposal that persons are constituted by temporal parts. This suggestion is surely reasonable. I have yet to find in the literature to date an endurantist who believes that persons are aggregates of temporal parts. I submit that (*) is not a statement an endurantist would accept. In place of (*), I offer the following criterion in its place:

(PI) If *x* and *y* are persons, then *x* is identical to *y* if and only if *x***R***y*.

In order for (PI) to be feasible the following must be true: if **R** has the same sort of *relata* as the identity relation, then it cannot be the case that a**R**b holds and a = b does not, or a = b holds and a**R**b does not. The perdurantist is able to avoid this worry because **R** and (aggregate) identity did not hold over the same class of *relata*. Identity and **R** are not comparable relations on a perdurantist metaphysic. However, this type of response is not available to the endurantist. Recall that the identity of an enduring object at a given time holds between that object and itself at that time. When applied to persons, the identity relation relates an enduring person at a given time to himself at that time. Similarly, the **R** relation holds at a given time between a person P and itself at that time. In other words, if persons are enduring objects then identity and **R** are comparable relations. Both relations are comparable because they have the same *relata*: a wholly present object at a given time. Recall, though, that branching cases expose the fact that identity and **R** diverge in their formal properties. Three of the alternative conclusions we considered to branching cases implied that identity cannot be co-extensive with **R**: namely, conclusions (i)-(iii) considered in section IV above. An endurantist which is also a proponent of the psychological criterion of personal identity may bite the bullet at this point and admit that (PI) is unsatisfactory. In its place they may propose a revised version of (PI), for example, (PI*).

(PI*) If *x* and *y* are persons, then *x* is identical to *y* if and only if *x***R***y* and **R** is *one-one*.

By requiring that **R** be one-one, an endurantist will be able to block branching cases from falsifying (PI*) from the start. Hence, something like (PI*) may be a viable criterion for an endurantist to endorse. But if he goes this route, he will surely be expected by others to offer his reasons for saying that **R** is one-one when it seems quite uncontroversial that **R** can both be a many-one and one-many relation.

Nonetheless, with some good argument for taking **R** as a one-one relation, an endurantist may be able endorse something like (PI*). What I would like to find out, however, is whether the endurantist can endorse an identity criterion that is stated in terms of **R** without placing further restrictions on it. I will consider two possible approaches that an

endurantist may want to try. (1) Suppose we grant that enduring persons can coincide, or overlap. With this assumption in place, maybe we can reason to the conclusion that (PI) is a feasible criterion of personal identity for enduring persons. (2) Suppose we reformulate (*) in a way that does not presuppose the existence of temporal parts. This may look something like:

> (PI-2) If *x* and *y* are persons, then *x* is identical to *y* if and only if *x* is the same *maximally* **R**-interrelated aggregate as *y*. (Notice that on this formulation we leave it an open question whether an aggregate is constituted by temporal parts. An endurantist will want an account of aggregate that avoids any mention of temporal parts.)

The next step would be to show that (PI-2) is a plausible criterion on an endurantist metaphysic.

I do not believe that either of the two possible routes I suggested above is successful. Let me take them in reverse order. Suppose persons are enduring things and suppose that (PIA) is true. Then persons are aggregates of parts which are wholly present at each moment they exist. The identity of an aggregate is lost when we add or remove a part. Thus, P cannot lose or gain a part without losing its identity. Assuming that a person P's loss of old or acquisition of new beliefs and memories coincides with a loss or gain of parts, it follows that P cannot change its beliefs from any one moment to the next, or even gain or lose a memory, without losing its identity. But persons are the sorts of things which *can* and *do* forget and remember things from one day to the next, and they *can* and *do* change their beliefs over time—to convincingly argue to the contrary would require some very skilled maneuvering indeed. My reason for rejecting the plausibility of route (2), then, is that it leads to a radical (and, as far as I can tell, implausible) view of persons according to which persons are the sorts of things which cannot persist through the loss and acquisition of beliefs and memories.

Let us turn, then, to route (1). If the endurantist understands the Smith case as two people coinciding with one another at a time *t*, then it seems to me that these two people would have to completely coincide in all their parts at *t*; or, at least, I think that they would have to coincide to such a high degree that it becomes an unquestionable matter that they are **R** related to one another at *t*.

Even if we grant the possibility of coincident enduring persons, one can argue that (PI) is still an implausible criterion for enduring persons. Consider the Smith-case again. Suppose we say that at time *t**, when the branching has already occurred, we realized that at the times prior to *t** we were referring to two persons with the name "Smith". Call these two people E1 and E2. Consider E1. What is true of E1 is that at a time before the branching occurs, call it *t**-1, E1 was **R** related to E2 to a degree greater than zero—for, presumably, they coincided with one another at times prior to *t** to such a high degree that we mistook them for one person. Recall that (PI) says, "If *x* and *y* are persons, then *x* is identical to *y* if and only if *x***R***y*." Since E1 is **R** related to E2 to a degree greater than zero at time *t**-1, E1 and E2 were identical to one another at *t**-1 (by (PI)). Now, if it turns out that E1 was in fact identical to E2 prior to *t**, then we have reverted back to the original understanding of the Smith-case, namely, that one person branches into two. The endurantist is thus back at square one and can only pick from the alternatives (i)-(iii) as

possible ways of understanding the Smith-case. Earlier I established the fact that if we respond to the Smith case via proposing alternative (i), (ii), or (iii) we have already given up on (PI). Therefore, even if we allowed the possibility that enduring persons can coincide completely, (PI) is still an unfeasible criterion of personal identity for enduring persons.

I have considered some ways an endurantist might try to defend a feasible criterion of personal identity for enduring persons in terms of **R** without having to place further restrictions on **R**, and have found them all to be unsuccessful. My best suggestion is that the endurantist searching for a criterion of personal identity in terms of psychological connectedness/continuity should opt for something like (PI*) which requires restricting **R** from being a one-many or many-one relation—thereby insisting that **R** be taken only as a one-one relation. However, at first glance, offering convincing reasons for enacting such a restriction on **R** beyond that of blocking fission and fusion cases does not seem forthcoming.

NOTES

1. Several philosophers have suggested that the difference between enduring and perduring objects is that enduring objects persist while being wholly present at each time they exist (i.e., they *endure*), while perduring objects persist by having stages/temporal parts at different times (i.e., they *perdure*). Ted Sider (63) defines *wholly present* as follows: x is *wholly present* at time t =df everything that is at any time part of x exists and is part of x at t. Temporal parts are defined as follows: x is an *instantaneous temporal part* of y at instant t =df (i) x is part of y, (ii) x exists at, but only at t, and (iii) x overlaps every part of y that exists at t (60).

2. To name but a few: David Lewis, Derek Parfit, John Perry, Sydney Shoemaker, Carol Rovane, and Gilbert Ryle.

3. Of course, which particular psychological properties, states, and relations are picked out by **R** will need to be fleshed out in more detail.

WORKS CITED

Lewis, David. 1984. "Survival and Identity." *The Identities of Persons*. Ed. Amlie Oksenberg. Rorty. Berkeley and Los Angeles: U of California P, 1984.

Parfit, Derek. *Reasons and Persons*. Oxford: Oxford UP, 1984.

Sider, Theodore. 2006. "Four-Dimensionalism." *Persistence: Contemporary Readings*. Ed. Sally Haslanger and Roxanne Marie Kurtz. Cambridge: MIT Press, 2006. 55-87.