

There Are No Criteria of Identity Over Time*

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I. Introduction

Consider the following:

A ship's old planks are replaced, one by one, by new planks. Eventually, that ship (as we might say) is composed of entirely new planks. But then the old planks are reassembled into a second ship. Which of the two ships—the one composed of the new planks, or the one recently assembled out of the old planks—is identical with the original ship? Many think the answer to this question will turn on facts about criteria of identity over time. For instance, if a criterion of identity over time for ships is “having all the same planks”, then we have a solution to this puzzle.

Is intermittent existence possible? That is, is it possible for an object to go out of existence and then, sometime later, for that very same object to exist again? Some say “no” because, they say, temporal gaps in an object's history would violate any reasonable criterion of identity over time.

The mere possibility of fission (as when one amoeba divides into two) shows that it is possible that two distinct objects existing after fission be spatiotemporally continuous with a single (pre-fission) object. If spatiotemporal continuity is a criterion of identity over time, then fission, which is clearly possible, seems to have the impossible result that one object is identical with two.

Successfully elucidating the criteria of personal identity over time is one of the

central goals of contemporary discussions of personal identity. Among the many who currently advance criteria of personal identity are David Wiggins, John Perry, and Derek Parfit; there are very few philosophers who explicitly deny that there is some criterion or other of personal identity over time.¹

Some of the above cases can be used to illustrate the familiar point that necessary and sufficient conditions for identity over time are criteria only if one can, at least in principle, assert that they are satisfied without presupposing the identity for which they are said to be criteria. In other words, they can be used to illustrate that criteria of identity over time are informative necessary and sufficient conditions for identity over time.²

For example, the puzzle of the ship would not be solved if we said that the original ship is identical with any later ship with which it is identical. While “being identical with the original ship” is obviously a necessary and sufficient condition for identity with the original ship, it is no criterion of identity, and so is not useful in solving the puzzle. Nor would the puzzle be solved if we added that the original ship is identical with any later ship that exemplifies the original ship’s “essence”, assuming that the ship’s essence must itself be defined in terms of the ship’s identity. Similarly, one cannot sensibly claim to have discovered the criterion of a person P’s identity over time, if all one has to offer is that P at t’s being identical with P* at t* is necessary and sufficient for P at t’s being identical with P* at t*. Nor can it be that a criterion for P at t’s identity with P* at t* is P at t’s having genuine memories of the experiences of P* at t*—if genuine memories are themselves defined in terms of the identity over time of the person in question.

So some of the above cases can help us to see that criteria of identity over time must be informative. And they all seem to show that criteria of identity over time have a significant place in our understanding of identity in particular and metaphysics in general. I will argue, however, that the most reasonable position is that there are no criteria of identity over time for any object. I will argue that criterialism—the doctrine that there are criteria of identity over time—is false. I will argue that the reasons typically given for embracing criterialism fail, including, most

importantly, reasons stemming from facts about kind membership. And if there is no good reason to endorse criterialism, I will argue, then we ought to reject criterialism. Along the way, we will get a better picture of what criterialism amounts to, and so a better picture of what its denial amounts to as well.

II. Criteria and Evidence

Criteria of identity over time are not to “presuppose” the facts of identity of which they are criteria. Insofar as the notion of “presupposing” is epistemic, there is an epistemic component to criteria of identity. But this does not mean that criteria of identity are “epistemic criteria”. To see this, consider the familiar suggestion that spatiotemporal continuity is a criterion of identity over time. The idea behind this suggestion is not that we first learn that an object at t is spatiotemporally continuous with an object at t^* , and are only then justified in believing that the object at t is identical with the object at t^* . So criteria of identity over time, in the sense at issue in this paper, are not the grounds or evidence by which we judge facts of identity. It should be clear, therefore, that in rejecting criterialism I am not denying that there are grounds or evidence for commonplace judgments like “the tree in my yard today is the same tree that was in my yard yesterday”.

It should be clear. But some philosophers charge that rejecting criterialism renders knowledge of identity occult.³ Showing that this charge is misguided will allow us to avoid confusion over what is, and what is not, at stake in the debate over criterialism. It will also provide us with some points that will prove valuable in the discussion to follow.

Consider the following facts. Almost everyday I identify my daughter. I make judgments like “the toddler in front of me at dinner is identical with the toddler I saw earlier at noon”. And there are grounds upon which these judgments are based. The most obvious is her physical appearance, which is constituted by shapes and colors. Also relevant are facts about her personality, the sound of her voice, habits she has, her ability to recognize me, and so on.

My judgments with respect to my daughter’s identity over time are sensible, justified, rational, and warranted. (What would be epistemically objectionable is withholding such beliefs

in normal circumstances.) Yet the evidence and grounds for these judgments are not foolproof. Imagine that at I see her toddle into the next room and out of sight. Unbeknownst to me, she is then whisked away by aliens who leave behind, in her stead, an exact duplicate. A few moments later I join the duplicate in the next room and make the (false) judgment that this duplicate is my daughter. The grounds for this judgment are the very same grounds that would have held were my daughter actually present: facts about shapes, colors, the sound of a voice, and so forth.

The point is that it is possible for the duplicate—who is not identical with my daughter—to exemplify the very properties I now rely on in making judgments of identity over time about my daughter, judgments like “this is the child I saw last week”. Therefore, exemplifying the properties that serve as grounds or evidence for my judgments like “this is the child I saw last week” is not sufficient for the truth of those judgments. And there is nothing special about the case of my daughter. In general, the facts that inform and justify one’s judgments of identity over time about people (and other physical objects) are not sufficient for the corresponding facts of identity over time.⁴ A similar, equally general, point holds about these facts failing on the side of necessity. For example, it is possible for my daughter to develop amnesia (and therefore behave rather differently) or to change in physical appearance. With respect to any fact that I usually rely on in making judgments of identity, it is possible for her to continue to exist but for that fact no longer to hold true of her.

Since the evidence and grounds that inform our judgments of identity over time are neither necessary nor sufficient for the corresponding facts of identity, the evidence and grounds cannot themselves be criteria of identity over time. So in denying that there are criteria of identity, I am not thereby denying that there are evidence or grounds for judgments of identity. In philosophical contexts, the way I am using the expression ‘criteria of identity over time’ is now standard;⁵ but this expression is sometimes used to mean the evidence or grounds that inform and justify our judgments about identity. I think this ambiguity is to blame, at least in part, for the widespread but rarely defended assumption that there must be criteria of identity over time.

III. Criteria and Analysis of Identity

A central aim of epistemology is to discover the correct analysis of knowledge. And it is generally taken for granted that knowledge is analyzable. A successful analysis would result in informative necessary and sufficient conditions for knowledge. Perhaps we might say that a successful analysis will deliver “criteria of knowledge”.

These observations about epistemology are relevant to the claim that there are (or are not) criteria of identity. For one could argue that identity over time is no different from knowledge or any other possible object of philosophical analysis—we might debate about what the correct analysis is, but that there is some analysis or other is taken for granted, and rightly so. The assertion that there is no analysis of identity over time, one might continue, makes identity over time hopelessly obscure. Any successful analysis would presumably issue in informative necessary and sufficient conditions—that is, criteria—of identity over time. We should therefore, this argument concludes, maintain that there are some criteria or other of identity over time.

One might mean by ‘analysis of identity over time’ any set of informative necessary and sufficient conditions for identity over time. But if that is all that is meant by ‘analysis’, the strategy of defending criterialism—the doctrine that there are informative necessary and sufficient conditions for identity over time—by asserting that there must be an analysis of identity over time is obviously circular.

So suppose, instead, we understand an analysis to be, roughly, an account of the nature of some concept or property. Then one could, without begging the question, first claim that there must be some account of the nature of identity over time—just as we think there must be some account of what constitutes, for example, knowledge—and then note that this account would result in criteria of identity over time. And facts like O at t is identical with O* at t* can be analyzed in this way, along the following lines: O is identical with O*, exists at t and exists at t*. Unfortunately for the criterialist, however, that O is identical with O* and exists at t and t* is not an informative condition for O at t’s being identical with O* at t*.

So while facts of identity over time can be analyzed in terms of identity and existence at a time, facts of identity-cum-existence at a time (our “analysans”) cannot be taken to be criteria of identity. It would appear, then, that if one wants to get at criteria of identity over time by way of this kind of analysis, one cannot stop at analyzing identity over time in terms of identity and existence at a time. Instead, one must develop the analysis further; that is, one must analyze identity or existence at a time, hoping to find the sought-for criteria among the terms of these further analyses.

Identity over time will yield a criteria-generating analysis only if such criteria can be found by analyzing either identity or existence at a time. I think all sides in this debate should accept the claim that identity is unanalyzable. Some have, perhaps, tried to analyze identity ($x=y$) in terms of indiscernibility (Fx if and only if Fy), but such an analysis of identity fails on two counts. First, it avoids possible counterexamples only if non-qualitative, individual essence-like properties are included, which would then render the conditions of identity uninformative (Cf. Black, 1952). And, more seriously, if it is meant to give an analysis of identity, it is circular since it relies on sameness of properties in the analysans (Cf. Lowe, 1989a, 23-24).

Criteria are not to be found in an analysis of identity. What of existence at a time? I think the best way to understand O’s existence at a time is that when that time is (was, will be) present, then O does (did, will) exist. But this holds little promise of yielding criteria. After all, that O is identical with O*, and exists when t is present and also exists when t* is present is clearly not an informative condition for O at t’s being identical with O* at t*.⁶ While we might grant that there is, in some sense, a “criteria”-generating analysis for knowledge, we should deny that there is any such analysis for identity over time.⁷

But most criterialists will not be disturbed by these claims. For they do not maintain that there are criteria that hold for the identity over time of all persisting objects generally; so they would not expect identity over time simpliciter—which all persisting objects enjoy—to issue in criteria of identity over time. Most criterialists hold that criteria of identity are specific to a particular kind—or sort—of object.⁸ So if we are to look to an analysis of identity over time as a

source of criteria, we ought not to look to an analysis of identity over time simpliciter. Rather, we should look to analyses of identity over time for each particular kind (or sort) of thing.

An analysis of atom identity over time, for example, is supposed to tell us what atom identity over time is. I think we already know. To be atom identical over time with is simply to be identical over time with and to be an atom. Likewise, plant identity over time is nothing more, and nothing less, than identity over time had by plants. In general, kind K-identity over time is simply identity over time enjoyed by members of kind K.⁹ Of course, that O at t is identical over time with O* at t* and is a member of kind K is certainly not an informative condition for O at t's being K-identical over time with O* at t*. So analysis of kind-relative identity over time looks like a dead end, so far as criteria of identity are concerned.¹⁰

Some criterialists might be getting bored at this point. For they will insist that this, too, is unsurprising. They will claim that most criterialists do not find kind-relative criteria of identity over time in analyzing kind-relative identity, but rather find them in analyzing kind membership. In response, while this is true, it is also true that many defenders of kind-relative criteria do say that identity over time for members of a certain kind consists in such and such criteria of identity (e.g., Parfit (1984, 202), Locke (1975, 334), and Lowe (1989b, 2)). They say that satisfying a kind's criteria of identity over time is constitutive of identity over time for members of that kind. Some also say that, for example, personal identity over time just is the satisfaction of the criteria of personal identity over time (Parfit, 1984, 216). These claims are tantamount to (or at least sound exactly like) the claim that kind-relative criteria of identity provide an analysis of identity over time for members of that kind. But one cannot have it both ways. One cannot deny that criteria of identity over time for members of kind K provide an analysis of identity over time for members of kind K and then, in the next breath, claim that criteria of identity over time for members of kind K tell us what identity over time for members of kind K consists in.¹¹

IV. Criteria and Analysis of Kind Membership

The standard view is that kind-relative criteria of identity over time flow from analysis, but from neither the analysis of identity over time simpliciter nor the analysis of kind-relative

identity over time.¹² Rather, the standard view is that criteria of identity over time are generated by analyzing kind membership. I shall begin by arguing that the very idea that kind membership analysis generates criteria of identity over time for kind members should strike us as odd. This alone does not mean that the standard view is false. Sometimes truth is stranger than fiction. But it will, I hope, start us off on the right foot; it will start us off with the defender of criteria-generating kind membership analysis where she ought to be: On the defensive.

Consider the following, very natural, interpretation of the project of giving kind-relative criteria of identity over time. We first identify a certain kind of entity, perhaps even giving an account of what it is to be a member of that kind. We then make a substantive claim about what the persistence conditions are for that kind of entity. For example, one might set out to provide criteria of identity over time for composite objects. One might analyze being a composite object as being an object which has proper parts. One could then embrace the criterion of identity over time for such objects embraced by, for example, the mereological essentialist. Criterialism, of which mereological essentialism is a species, can then be understood as a substantive claim about the persistence conditions for an already identified and analyzed kind of entity.

I think I have just described the most natural way of looking at the enterprise of providing kind-relative criteria of identity over time. It is the enterprise of identifying, and even analyzing, a certain kind, then going on to make substantive claims about the persistence conditions of that kind's members. But the defender of criteria-generating kind membership analysis cannot possibly accept this interpretation of her project. She thinks that once we have explained the kind in question we have ipso facto given the criteria of identity. So she must reject the most natural view of what it is to give kind-relative criteria, and that is a mark against her. I want to reinforce this point by asking us to imagine the following conversation:

- A: C is a criterion of identity over time.
- B: Is C a criterion of identity over time for every persisting entity?
- A: No; it is a criterion of identity over time for only one particular kind of entity.
- B: Which kind?

A: The kind of entity that, er, has C as its criterion of identity over time.

Above I suggested a non-criteria-generating analysis of “composite object”, one of the relevant kinds here. And that kind is not anomalous in admitting of a non-criteria-generating analysis. Consider the following examples of kind membership analysis, which are, I suppose, at least live options. To be a cat is to have certain DNA. To be a cat is to have a certain evolutionary history. To be a person is to have a particular array cognitive skills such as the ability to use language in certain ways. To be a person is to enjoy memory of one’s continued existence and consciousness, memory understood in a way that presupposes personal identity, and so cannot be a criterion of personal identity over time. To be a statue is to be an inanimate object fashioned by an artist with certain intentions.

So there are many plausible analyses of kind membership that do not issue in informative persistence conditions for kind members. This is important for two reasons. First of all, it shows us that the fact that kind membership can be analyzed does not in itself support the claim that there are criteria of identity over time. And secondly, the “natural picture” of the project of giving kind-relative criteria that I endorsed above is made more plausible by each plausible analysis of kind membership which does not itself issue in persistence conditions. If to be a cat is to have certain DNA, it seems quite reasonable to take criteria of identity over time for cats to be a facts about what it takes for those things—animals with the DNA that makes them cats—to last over time.

I think the above comments cast doubt on the notion that persistence conditions for kind members are to be found by analyzing kind membership. And more doubt can be cast. Recall the interlocutor’s suggestion above that, even if we do not have an analysis of identity over time in hand, we ought to think there is one. This suggestion was followed by the claim that such an analysis would presumably provide informative necessary and sufficient conditions (i.e., criteria) for identity over time. We saw above that there is no criteria-generating analysis of identity over time. But I do not object to the conditional that if identity over time (kind-relative or otherwise) were to have a certain kind of illuminating analysis, then criteria of identity over time would

follow.

With this in mind, consider the following chain of reasoning: There is some analysis or other of being a member of kind K; that analysis—whatever it turns out to be—will deliver informative necessary and sufficient conditions for being a member of kind K; that analysis will therefore deliver “criteria” for being a member of kind K; that analysis, therefore, will issue in criteria of identity over time for members of kind K. This reasoning is flawed, and it goes wrong in its very last step. The mere fact that there are informative necessary and sufficient conditions for being a member of kind K does not, in and of itself, give one reason to think that there are such conditions for the identity over time of members of kind K. Again, that kind membership can be analyzed does not in itself provide a reason to think that there are criteria of identity over time for members of the kind in question.

It seems that if we are looking for the criteria—not of being a member of kind K—but of identity over time for those members, we will probably not find it in the analysis of being a member of kind K. After all, being a member of a certain kind and lasting over time are disparate features of an object. Above I said I wanted to put my opponent on the defensive, and I think I have. I think she must give us positive reasons for thinking that kind membership will generate criteria of identity over time. If she cannot do that, then, for the reasons noted above, the reasonable assumption is that the analysis of kind membership will not generate kind-relative criteria of identity. The remainder of this section will consider suggestions in defense of the claim that, surprisingly, kind membership analysis will generate criteria of identity over time.

I say that being a member of a certain kind and lasting over time are disparate features of an object. One might respond that they are not, however, unrelated. For instance, one might insist that it is impossible for an object both to be a person and to last for but an instant. And this, one might think, implies that an account kind membership for persons will tell us about persistence conditions for persons.

In response, suppose it is true that it is impossible for a person to exist but an instant. If so, then being a member of a certain kind, being a person, entails lasting over time. But this does

not imply—indeed, does not even hint at—the claim that an analysis of being a person will issue in criteria of lasting over time for persons. Consider, for comparison, the claim that being a person entails having knowledge. This does not imply that an analysis of personhood will issue in criteria of knowledge, not even (and this may be redundant) criteria of knowledge for persons. Or again, consider the claim that being a human person entails being a physical object; this does not imply that an account of what it is to be a human person will in and of itself issue in informative necessary and sufficient conditions for a human's being a physical object.

One might respond that we know not only that being a member of some kinds implies persisting, but it implies persisting in a certain manner. For instance, one might hold that anyone who knows what it is to be a mountain knows that mountains cannot survive liquefaction. So, one might think that this gives us a reason to think kind membership implies criteria of identity over time.

But it does not give us such a reason. Suppose it is true that mountains cannot survive liquefaction, and suppose knowing this is part of knowing what it is to be a mountain. All that follows is that in knowing what a mountain is, we know that, necessarily, if something is a mountain, then it has the property of not being liquid. It does not follow that in knowing what a mountain is, we thereby know what the criteria of identity over time for mountains are. Quite the contrary. I know what a mountain is, and so do most or all of the people with whom I am acquainted. But none of us (aside from a few philosophers committed to one or another substantive and controversial theory) would endorse, or claims to have knowledge of, informative necessary and sufficient conditions for the identity over time for mountains.

Early in the paper, I showed that the evidence and grounds for our judgments of identity are not themselves criteria of identity over time. Nevertheless, a criterialist might add, there is an epistemic motivation for endorsing criteria of identity. To see this, she might say, consider the case of fingerprints and the identity over time of persons. We are entitled to take fingerprints as providing evidence of personal identity because we know certain truths about the identity of human beings over time. For instance, we know that human beings can survive a loss of

consciousness, as in sleep. If we thought otherwise, then we would have to abandon fingerprints—which persist through sleep—as a reliable indicator of personal identity.

In general, she might continue, evidence of identity over time for members of kind K only counts as evidence in virtue of one's knowing other facts about the nature of Ks and their persistence. Without recourse to a criterion of identity for Ks, one is unable to explain what it is that justifies our taking certain evidence as being evidence for K-identity. If one denies that there are any criteria of identity over time, nothing entitles one to appeal to fingerprints, and other bits of evidence, in justifying judgments of identity over time.

In response, I agree that our knowledge of what counts as evidence for claims of identity over time depends in some way on our knowing certain other facts. But there is no reason to think that those facts are insights into criteria of identity over time. On the contrary, there is reason to deny it. Crucial to my treating fingerprints as evidence for personal identity, for example, is my knowing that persons can survive loss of consciousness in sleep. But that persons can survive loss of consciousness is not itself, nor does it entail, any criterion of identity over time.

One might want to recast this defense of criterialism based on our evidence by pointing out that the kinds of evidence which we do in fact rely on in making judgments of diachronic identity differ for different kinds of things (e.g., persons and mountains). The criterialist might claim she has a way to explain the fact that there are differences between the kinds of evidence that are appropriate to identity judgments about persisting things of different kinds. She might say that the differences in the sorts of evidence for identity judgments are explained by differences in the criteria of identity over time of those things. And, she might add, one who rejects criterialism has no such explanation available.

In response, one can explain why, at least in large part, evidence for facts of identity over time differs from kind to kind, and can do so without recourse to kind-relative criteria. Fingerprints, for example, would not be a good mark of identity over time for automobiles. The explanation, obviously enough, is that automobiles don't have fingers. Similarly, I can use

sameness of personality as a mark of personal identity over time but not as a mark of mountain identity over time, because persons have personalities (that in ordinary circumstances remain fairly constant over short stretches of time) and mountains do not. Suppose that a misguided manufacturer put the same serial number on all of his toasters. Then sameness of serial number would not be evidence for toaster identity over time, yet it would serve as good evidence for sameness of dollar bill identity over time.

So there is much that one who rejects criterialism can say to explain the fact that what serves as evidence for the identity over time of one kind of thing does not serve as evidence for the identity over time of another kind. Not only can we explain this fact without recourse to criteria of identity over time, it is not clear that having recourse to criteria would add anything at all. It is not clear that criteria of identity over time—even if there were any—would provide any deeper or further explanation of this fact.

So there is no support for criterialism in the fact that what counts as evidence for identity differs from kind to kind. Rather, I think this fact cuts against criterialism by explaining why one might be attracted to criterialism even though it is false. That is, the fact that our evidence for identity over time differs from kind to kind helps to explain why one might initially, and mistakenly, incline toward the view that there are criteria of identity over time which differ from kind to kind. The explanation is that one is conflating the notion of evidence for identity over time and the notion of necessary and sufficient conditions of identity over time. Because of the aforementioned ambiguity of ‘criteria of identity’, we should not find this conflation too surprising.

The kind-relative criterialist might defend her position by focusing on the semantics of kind terms. The granddaddy of all kind-relative criterialists, John Locke, begins his important discussion of personal identity by telling us that we must consider first “what Person stands for” (1975, 335). The modern day criterialist could answer Locke’s question by asserting that ‘person’ just means, among other things, an object that persists in such and such a manner. Thus, she says, it follows immediately that lasting in such and such a manner is the criterion of

identity over time for (what she will call) persons. And she might add, similar things are true about terms like ‘organism’, ‘artifact’, and so on.

I wish to make two points in response. First of all, for most of our kind terms, terms like ‘person’ and ‘organism’ and ‘artifact’, I think it is just false that those terms have the meaning the criterialist says they do. I offer as evidence the fact that I competently use all these words while denying that there are any such criteria. And I offer as further evidence the fact that most people who competently use these words have never even considered what the informative broadly logically necessary and sufficient conditions for the identity over time of persons, organisms, or artifacts might be.

But I don’t want to dwell on this part of my response, because there may be kind terms that do have criteria of identity built right into them: ‘Mass’ and ‘aggregate’ might be such terms. (It is no coincidence that ‘mass’ and ‘aggregate’, understood so as to imply criteria, are semi-technical philosophical terms). But the existence of such terms does not usher in criterialism. To see why, note that I might choose to use the word ‘God’ to mean an all-powerful, all-loving, all-knowing, and necessarily existing being. But this has no implications as to whether such a being exists or even possibly exists; nor would the fact that everyone uses the word ‘God’ in this way have such implications. Similarly, suppose that by ‘mass’—or for that matter ‘person’—one means any member of a kind, all the members of which share criteria C of identity over time. This alone would have no ontological import.

If ‘mass’ (or ‘person’) means an object which enjoys identity over time just in case certain criteria of identity are satisfied, the relevant question would then become: Are there any masses (or persons) in the stipulated sense of the word? Simply saying what one—or even what everyone—means by the word ‘mass’ (or ‘person’) does not answer that question. And, of course, simply to assert that there are masses—in the stipulated sense that entails criterialism—is not to argue for the truth of criterialism; it is to assert it. Merely focusing on what we mean by a word, or even what our concepts are like, will not tell us whether criterialism—a metaphysical thesis about informative persistence conditions for objects in the world—is true.

V. The Criterialist Claim

Consider some object O for which, according to the criterialist, there are criteria of identity over time. Another way to put her claim is:

The Criterialist Claim Necessarily, O at t's being identical with O* at t* obtains if and only if there is some criterion of identity over time C such that O at t's satisfying the criterion C with O* at t* obtains.

This means that the obtaining of one state of affairs (O at t's being identical with O* at t*) is broadly logically necessary and sufficient for the obtaining of a distinct state of affairs (O at t's satisfying the criterion C with O* at t*). Assuming O does not exist necessarily, both these states of affairs obtain contingently, if they obtain at all.¹³

That, necessarily, one contingent state of affairs obtains if and only if another one does is not itself an unusual claim. Consider the following examples:

(A) Necessarily, water's being in the bucket obtains if and only if H₂O's being in the bucket obtains.

Because something's being water is analyzed in terms of, or is reduced to, its being H₂O, it is a matter of debate whether (A) involves two distinct states of affairs. But even if there are two distinct states of affairs here, (A) is clearly true. Consider some other examples:

(B) Necessarily, God's believing that p obtains if and only if p's being true obtains

(C) Necessarily, x's being a three-sided planar figure obtains if and only if x's being a three-angled planar figure obtains

and

(D) Necessarily, Clinton's being President obtains if and only if Clinton's being president and 2+1's equaling 3 obtains

As we can see from (A) though (D) above, some claims that one contingent state of affairs obtains if and only if another does are unproblematic. Is The Criterialist Claim likewise unproblematic? No. First, while we understand one of the two contingent states of affairs

involved—O at t's being identical O* at t*— we are in the dark as to what the other state of affairs amounts to. We are in the dark, that is, absent a spelling out of what the criterion C is. Concrete plausible examples of criteria are hard to come by. Moreover, once we know a criterion is neither evidence for, nor an analysis of, identity over time, it is not clear how, exactly, we are to think of the informativity criteria are thought to embody.

A second and more serious worry is the lack of motivation for The Criterialist Claim. Assuming certain very plausible principles regarding analysis or reduction, (A) will be obviously true. Some think that God exists necessarily and is, again of necessity, omniscient. Any such person will then have strong motivation for thinking that (B) is true. Presumably, everyone who understands (C) will agree that it is obviously true. And, finally, the truth of (D) can be seen to follow from the fact that it is a necessary truth that 2+1 equals 3. So (A) through (D) are all well motivated, and are to be contrasted with, for instance:

(E) Necessarily, the Pacific Ocean's being larger than the Atlantic Ocean obtains if and only if Columbus's sailing to North America at some time or other obtains.

One good reason for not endorsing (E) is that there is no reason to endorse it.¹⁴ Presumably we should not, without some compelling reason or insight, endorse the claim that, necessarily, one contingent state of affairs obtains if and only if another does. At the very least, I think, the burden of proof is on anyone who endorses such a claim.

Is The Criterialist Claim more like (E), or more like (A) though (D)? It certainly is not like (A); as we have seen, criterialism cannot be thought of as providing an analysis of identity over time (kind-relative or otherwise). The Criterialist Claim is unlike (C), because it is not obviously true. The Criterialist Claim also differs from (B) and (D), since it cannot be seen to follow from some other previously accepted proposition. Furthermore, no positive defense has been successfully mustered on behalf of The Criterialist Claim. The Criterialist Claim is, so it seems, without any motivation and therefore, like (E), ought to be rejected.¹⁵

Note that I am not suggesting that any position which is unmotivated ought therefore to be rejected. That would have absurd results, such as our rejecting a claim and rejecting its

denial, if both the claim and its denial were unmotivated. I am suggesting something much more plausible. I am suggesting that we ought to assume, for any distinct and contingent states of affairs S and S*, either that S can obtain in some possible world where S* does not obtain or vice versa, unless there is some reason to think otherwise. (And just seeing that it must be otherwise, as in the case of (C) above, counts as a reason in the sense at issue here.) This is a reasonable assumption, and I think it is presupposed by a great deal of our reasoning about what is broadly logically possible.

VI. Objections

Let's consider some objections—especially objections that, at their heart, hope to respond to my claim that criterialism is unmotivated.

Criterialist Objection One: Suppose I grant, for reductio, that there are no criteria of identity over time. From this it follows that you could be identical with simply anything. Tomorrow, for instance, you could be a cat, and a cat could be you. Or you could be a hatbox. But this is obviously absurd, therefore there must be criteria of identity.

Response: Your objection could be taken two ways. Let me address both of these, starting with the weaker.

Perhaps your objection is that if criterialism is false, then it is possible that I become identical with some particular cat that exists now, or some hatbox presently in my closet. But I think that, necessarily, I am identical with only one object—me. So I cannot be identical with just anything—like the neighbor's cat or my favorite hatbox—tomorrow, but rather tomorrow, and the next day, and in all possible worlds, I can be identical with only myself. This truth is in no way threatened by rejecting criterialism.

But your objection is probably not that if criterialism were false, I could violate the necessity of identity and become, at some later time, identical with a cat or hatbox that, at the present time, is not identical with me. Rather, you are probably worried that if criterialism were false, then tomorrow I could have all the (intrinsic) properties now had by a hatbox and it could have the (intrinsic) properties now had by me. But nothing of the sort follows from a rejection

of criterialism. It is consistent to maintain that criterialism is false and that persons (and cats and hatboxes) have essential properties. Among my essential properties are, I think, being a person and failing to be a cat or hatbox.

Criterialist Objection Two: If criterialism is false, then facts of identity over time have absolutely no grounding. Suppose you exist right now, and suppose that some person existing at some later time is identical with you. What explains the fact that the person who exists at the later time is identical with you and not someone else? If you reject criterialism you must say “nothing” and the identity in question is purely arbitrary. Facts of identity over time are brute and unexplained and uncaused if criterialism is false—nothing makes them true.

Response: If the person existing at that later time is identical with me, then he could not possibly be identical with anyone else (he is, after all, me). What could be less arbitrary than something that could not possibly be otherwise? Why would it bother you if it turns out that my being identical with myself is “brute and unexplained and uncaused”?

Criterialist Objection Three: That’s not what I was objecting to. Let me try to be more perspicuous. Suppose that you are identical with yourself at some future time, t^* . This, as you claimed above, should be understood as meaning that you are identical with yourself and that you exist now and that you exist at t^* . And suppose I concede that the fact of identity does not need explanation or cause. Still, there is the fact that you exist at t^* . If criterialism is false, then there is no explanation for why, given that you now exist, you exist at t^* . Your persistence from now to t^* would be, if we criterialism were false, a brute fact. While I might grant you that the identity with you of someone existing at t^* can, in some sense, be brute and unexplained, I deny that your existing at t^* is brute, uncaused, and unexplained.

Response: I agree completely. But the fact that I exist at some time t^* is not, according to me, brute or uncaused or unexplained. And nothing in a rejection of criterialism implies that it must be. For instance, the fact that I exist at t^* is explained by the fact that, at some time before t^* , my parents engaged in procreative activity, and between then and t^* no disaster befell me. And here are some examples of what might cause or explain my persistence over time, that is,

my existence at some future time, given that I now exist: I get plenty of oxygen, receive adequate amounts of food, avoid stepping in front of moving trains, am granted a stay of execution by the governor, and so on. Nothing in a rejection of criterialism precludes my providing these sorts of explanations, so nothing in a rejection of criterialism makes my persistence or my existence at a time brute, uncaused, or unexplained.

Maybe you are interested in something grander than what merely causes or explains my existence at a time, or what causes or explains my persistence. Perhaps you are concerned with what is necessary and sufficient for my existence at various times (and so for my persistence). The only conditions that I think are necessary and sufficient for me to exist at any time are “uninformative”, such as my existing at that time, the exemplification of my individual essence at that time, and so on. But, as we can see from the previous paragraph, the lack informative necessary and sufficient conditions for existence at a time, and so for persistence, does not imply that such persistence or existence at a time must be unexplained and mysteriously “brute”. Not all explanations—consider causal explanations, for example—need to take the form of informative broadly logically necessary and sufficient conditions for what is being explained.

Criterialist Objection Four: Doesn't one who, like the mereological essentialist, endorses some particular criterion of identity thereby have a good reason to be a criterialist?

Response: Whether or not she has a good reason to be a criterialist depends on how good a reason she has to be a mereological essentialist. Likewise for those who endorse any other particular criterion of identity. I think I have responded to the sorts of reasons that one might give for endorsing criterialism in general. But I do not claim to have canvassed and blocked every single possible argument for some particular criterion of identity or other. I concede that anyone who has good positive reasons for espousing some particular criterion of identity over time—reasons that do not presuppose that there must be some criterion or other; reasons other than the claim that one's favored criterion is the best candidate; reasons other than “this suggested criterion cannot be shown false”; reasons not brought into question by the above discussion—has reason to be a criterialist. But how many of us are in that position?

VII. Conclusion

So we (at least the vast majority of us) should deny that there are criteria of identity over time. Denying that there are criteria of identity over time has no untoward epistemic consequences; nor does it make identity over time random or arbitrary; nor does it entail that I could be identical with absolutely anything; nor does this imply that I could have, or lack, any property whatsoever; nor does it preclude providing an explanation for my existence at different times. But rejecting a doctrine as deeply entrenched as criterialism does have interesting results. Let me, in closing, highlight some of these.

The lack of criteria of identity over time makes it extremely difficult to come up with a reason for rejecting certain kinds of possibilities. Reconsider one of the questions the paper opened with: Can an object “jump” through time? Suppose I affirm that this is possible. One could, of course, deny this. But one could not pretend to defend this denial by arguing that objects which cease to exist entirely and then come back into existence cannot satisfy any reasonable criterion of identity over time. Nor can I defend my affirmation by suggesting a criterion that would make such jumping possible.

I think these remarks about “jumping” through time illustrate a more general point. Because there are no criteria of identity, one may not build into one’s thought experiments the claim that some criterion of identity has been satisfied (or violated), and then go on to conclude that identity over time has (or has not) been preserved. Constructing non-question-begging thought experiments which generate conclusions about identity over time is more difficult than we might initially expect.

At the outset of the paper I noted that the possibility of fission entails that it is possible that two distinct objects existing after fission be spatiotemporally continuous with a single (pre-fission) object. If spatiotemporal continuity were a criterion of identity over time, then fission, which is possible, would have an impossible result. More generally, the impossible would follow if there were any criterion of a pre-fission object’s identity over time that could be satisfied (simultaneously) by both resultants of fission.¹⁶ But there is no criterion of identity of

this sort, because there are no criteria of identity over time at all. While fission may be a source of interesting and perplexing problems, it doesn't seem to threaten us with contradiction.

And finally, what is one to make of the puzzle about the ship—this is, of course, the famous Ship of Theseus—in light of a rejection of criterialism? Some ways of responding to this puzzle are certainly ruled out by this rejection. However, the way one ultimately understands this puzzle depends on much more than merely one's attitude toward criterialism. One may, for instance, be a "reductionist" about ships, holding that a ship is nothing over and above the planks (or perhaps the atoms) that compose it. The "reductionist" would simply assert that once we have all the fact about the planks, we have all the facts—there are no further facts regarding ship identity to be discovered. If this were one's view, rejecting criterialism would have very little effect on one's approach to the Ship of Theseus. Or one might hold that objects cannot cease to exist, and then exist again at some later time, in which case the ship reassembled out of the old planks could not be the original ship.¹⁷ Many issues in addition to criterialism are relevant to one's view of the Ship of Theseus, and the puzzle neither resolves itself, nor becomes intractable, by the rejection of criterialism alone.

Notes

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¹Although some do; see for instance Lowe (1989a, 121-137) and Madell (1981). And I think most dualists, although they rarely explicitly affirm this, hold positions which entail that there are no criteria of identity over time for persons. None of the prominent dualists (for instance, Swinburne or Chisholm) offers anything like a criterion of identity over time for simple, unextended, indivisible souls; since persons are, according to these philosophers, simply souls, if there is no criterion of identity over time for souls, there is none for persons.

²Here and throughout, ‘necessary and sufficient’ means broadly logically, or metaphysically, necessary and sufficient.

³Anyone who identifies our evidence or grounds for judgments of identity with informative necessary and sufficient conditions for that identity will, naturally, hold that in denying there are criteria, we are thereby denying that there are evidence or grounds for identity judgments. According to Albritton (1959), this was Wittgenstein’s view. And Mark Johnston (1987, 62-63) seems to think that we must identify evidence with criteria, since he asserts that any view according to which our evidence for identity is distinct from what “constitutes” that identity renders our judgments “extremely problematic”. Parfit, too, seems to think that knowledge of personal identity would be undermined if what constitutes personal identity were not also able to serve as evidence for that identity (1984, 228); this is rather odd, given that Parfit elsewhere explicitly denies that a ‘criterion of identity over time’ is that by which we judge a fact of identity, but is, rather, what “constitutes” it (see fn. 5). The considerations noted in this section of this paper should show that even if there are informative necessary and sufficient conditions for personal identity over time, any identification of those conditions with our actual evidence for personal identity is simply mistaken.

⁴First-personal judgments of identity are no less based on fallible grounds or fallible evidence than their third-personal cousins. Bertrand Russell’s famous five minute hypothesis—“There is no logical impossibility in the hypothesis that the world sprang into existence five minutes ago, with a population that ‘remembered’ a wholly unreal past” (1921, 159)—shows that all of the evidence that informs us of our own (and, of course, others’) identity over time is not sufficient for that identity.

⁵Consider the following two passages, one from the most influential recent book to deal with personal identity, and the other from a book meant to serve as an introduction to these matters:

Many writers use the ambiguous phrase ‘the criterion of identity over time’.

Some mean by this ‘our way of telling whether some present object is identical

with some past object'. But I shall mean what this identity necessarily involves, or consists in. (Parfit, 1984, 202) (Parfit's emphasis)

The problem of personal identity over time is the problem of giving an account of the logically necessary and sufficient conditions for a person identified at one time being the same person as a person identified at another. Otherwise put, it is the problem of specifying the criterion of personal identity over time. On an alternative use of the term 'criterion', to specify a criterion of personal identity over time would be to say something about what could count as evidence for personal identity. It is important to be aware at the outset that this is not what philosophers are interested in when they debate the problem of personal identity. Their concern is with the constitutive, the metaphysical-cum-semantic, not the evidential, criterion of personal identity. (Noonan, 1989, 2)

⁶Other accounts of existence at a time also fail to provide informative conditions of identity over time. For example, none of the following are informative conditions for O at t's being identical with O* at t*: O is identical with O* and stands in the exists at relation to t and to t*; O is identical with O* and exemplifies exists-at-t and exists-at-t*; O is identical with O*, and has a temporal part existing at t and another part existing at t* (but see fn. 10).

⁷Sydney Shoemaker (1979) argues, in a different way, for a similar point; see especially Section VII. He argues that identity over time can be analyzed in terms of "immanent causation", which, in turn, must be analyzed in terms of identity over time. And Wiggins (1980, 49) seems to agree that there is nothing like what I called "a criteria-generating analysis of identity over time" when he says "identity is a primitive notion, transcending any philosophical reduction..." (But he does follow up this comment with "I shall also try to show that the primitiveness of '=' in no way excludes discursive elucidation in terms that are collateral or coeval". His discursive elucidations turn out to be kind-relative criteria of identity.)

⁸See, for instance, Wiggins (1980), especially Chapter Three. There is disagreement among criterialists over which sorts are relevant here. The mereological essentialist may countenance at most two sorts in this context: simples and composite objects. Others may think that there are as many relevant sorts as there are natural kinds. And so on.

⁹This is fairly uncontroversial, but not wholly so; for the dissenting opinion, see Geach (1983).

¹⁰It is certainly a dead end if, as I think, objects endure (for a detailed account of endurance, see my (1994)). The four-dimensionalist, however, may have more room to maneuver here. For she can say that identity over time just is a relation—a relation other than identity—relating one temporal part existing at one time to another, distinct, temporal part existing at another time. So criteria of identity over time can, for the four-dimensionalist, be characterized as necessary and sufficient conditions for, or even an analysis of, a composition relation, tying temporal parts together so that they compose four-dimensional wholes; this, in turn, gives the four-dimensionalist reasons for endorsing criterialism that are not available to the endurantist. This contrast between endurance and four-dimensionalism regarding analysis of identity over time is developed at much greater length in my “Endurance, Psychological Continuity, and the Importance of Identity”.

¹¹One might object that when a philosopher says that K-identity over time “consists in” such and such criteria (or that such and such criteria are “constitutive of” diachronic identity for members of kind K), all she is saying is that such and such criteria are necessary and sufficient for K-identity over time. If so, I think her use of ‘consists in’ is quite misleading. But never mind. In light of this understanding of ‘consists in’, consider the claim that a good reason to believe that there are criteria of identity over time is that such criteria would tell us what the identity over time of some sort of entity “consists in”. This is no reason to believe in criteria of identity, for it says only that criteria would be (surprise!) necessary and sufficient for identity over time. Consider also the charge that the rejection of criterialism implies that we do not know what identity over time “consists in”. All this “charge” amounts to is the claim that rejecting

critierialism implies the rejection of (informative) necessary and sufficient conditions for identity over time; but we knew that all along; that's the whole point of rejecting critierialism.

¹²The standard view has deep roots in both Locke (1975) and Frege (1953) (Cf. Lowe, 1989b, 2ff).

¹³Some philosophers maintain that if, necessarily, one state of affairs S obtains if and only if some state of affairs S* does, then S is identical with S*; that is, there is just one state of affairs in question. This would be fatal to critierialism. For it would make the satisfaction of the criteria of identity the very same state of affairs as the identity itself. The only way to make sense of this, I think, is to assert that the fact of O at t's identity with O* at t* is somehow analyzed in terms of, or reduced to, the satisfaction of the criteria. But this sort of analysis was rejected above.

¹⁴Another reason to reject (E) is that we might just see that (E) is false. But this is not to deny that having no reason to endorse (E) is also reason to reject it.

¹⁵Whether there are criteria of identity over time for concrete, particular objects has been the standard focus of debates over criteria of identity. For that reason, the topic of this paper is restricted to criteria of identity over time for concrete particulars. However, the arguments of the paper up to this point have touched on three distinct issues, each of which sheds a little light on why the focus on concrete entities, but not abstracta, is not entirely arbitrary.

First, the argument of this section of the paper trades on the fact that claims of criteria of identity are claims that, necessarily, one contingent state of affairs obtains if and only if another does. But this would not be the case for a claim about criteria of identity over time of many abstract entities, which, if they exist at all, exist at all times—and so enjoy identity over time—necessarily.

Secondly, that the number two existing at time t is identical with any number existing at t* that is an even prime is obviously true. Similarly, that the set that has A as its sole member is identical with any set existing at any time that has A as its member is also obviously true.

(Alleged criteria of identity for concrete objects are always, by comparison, wildly controversial.) Moreover, we can provide arguments for both of these claims of criteria of identity, arguments that have premises which themselves make no explicitly diachronic assertions. Those premises would be: necessarily, two is an even prime; necessarily, no number other than two is an even prime; a set has its members essentially; and necessarily, no two distinct sets can have exactly the same members.

And finally, above I noted that one who competently uses, for example, the word ‘person’ need not thereby endorse a criterion of identity over time for persons. But it is plausible to assert that anyone who knows what ‘set’ means will understand that any set S at t is identical with any set S^* at t^* if and only if S and S^* have exactly the same members. (Of course, the mere fact that ‘set’ is used in this way does not imply that there are entities that persist as sets would; for the mere fact that ‘set’ is used in this way does not imply that there are sets.)

¹⁶That is, contradiction follows from fission if: First, an object which exists at t is identical with an object which exists at t^* if and only if some property F is exemplified at t^* , or some relation R holds between the object existing at t and some object existing at t^* ; and, secondly, it is broadly logically possible that two distinct objects, at t^* , either exemplify F , or stand in the relation R to the object at t . To get a real contradiction here, we would also probably need to reject the claim that objects are four-dimensional (Cf. Lewis, 1976). (And for the record, I think fission offers reasons, independent of those raised in this paper, to reject criterialism. See my (1997))

¹⁷I assume that the ship made out of the old planks did not exist immediately before the old planks were reassembled. One might deny this, holding that that ship did exist then, but as a “scattered object”. Again, one’s response to the Ship of Theseus depends on more than a rejection of criterialism.

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