



Causation, Extrinsic Relations, and Hume's Second Thoughts about Personal Identity

Louis E. Loeb

Hume Studies Volume XVIII, Number 2 (November, 1992) 219-232.

Your use of the HUME STUDIES archive indicates your acceptance of HUME STUDIES' Terms and Conditions of Use, available at <http://www.humesociety.org/hs/about/terms.html>.

HUME STUDIES' Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the HUME STUDIES archive only for your personal, non-commercial use.

Each copy of any part of a HUME STUDIES transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

For more information on HUME STUDIES contact humestudies-info@humesociety.org

<http://www.humesociety.org/hs/>

Causation, Extrinsic Relations, and Hume's Second Thoughts about Personal Identity

Louis E. Loeb

According to the account offered in *Treatise* 1.4.6, "Of personal identity," the identity of a mind over time consists in a sequence of perceptions related by causation. In both of Hume's two definitions of cause, causation is an external or extrinsic relation. Hume is explicit that this result is tolerable. If causation is an extrinsic relation, and personal identity is analysed in terms of causation, then personal identity is an extrinsic relation. I suggest that Hume finds this consequence intolerable, and that his finding it so is the source of his famous misgivings in the appendix in regard to his section on personal identity.¹

In the appendix, Hume indicates that "there wou'd be no difficulty" in regard to his section concerning personal identity, if the mind perceived some "real connexion" among perceptions.² In book 1, however, Hume maintains that causation does not involve a real connection, and that personal identity depends on causation; and he seems content with the result that personal identity does not involve a real connection. At 1.3.14, "Of the idea of necessary connexion," Hume insists that there is no "real connexion" between causes and effects and, more generally, that there is no "real intelligible connexion" between external objects (T 168; cf. T 103). At T 169-70, he offers two ("exact") definitions of the relation of cause and effect. Hume thinks there are causes and effects, even though there are no real connections. At 1.4.6, Hume writes that whether or not the relation of personal identity is a "real bond" or "real connection" among perceptions is a "question we might easily decide, if we wou'd recollect what has been already prov'd at large, that the understanding never observes any real connexion among objects, and that even the union of cause and effect, when strictly examin'd, resolves itself into a customary association of ideas" (T 259-60). A mere three paragraphs later, Hume writes that "the true idea of the human mind, is to consider it as a system of different perceptions or different existences, which are link'd together by the relation of cause and effect, and mutually produce, destroy, influence, and modify each other" (T 261). So Hume's view, at 1.4.6, is that personal identity requires causation, but does not require a real connection. It is curious that in the appendix Hume takes the claim

that there is no real connection between perceptions to ruin his account of personal identity, whereas in book 1 he treats this result with equanimity.

This puzzle can be generalized somewhat. Hume observes in 1.3.14 that “the terms of *efficacy, agency, power, force, energy, necessity, connexion, and productive quality*, are all nearly synonymous” (T 157). His principal negative claim in that section is that (taking efficacy, and the other nearly synonymous concepts, to require something in objects over and above constant conjunction) there is no efficacy, necessity, or connection in causation. Hume targets a number of the nearly synonymous notions not only in 1.3.14, but also at T 246-51 of 1.4.5, and T 632-33 of the appendix. In the discussion of personal identity in the appendix, Hume seems to be in search of the sort of bond or connection that he has forcefully rejected, as if he has a lingering commitment to real connections, or to necessity, despite himself. From this perspective, his misgivings easily appear to constitute a retrogression, or lapse, into a mode of thought, or metaphysical picture, that he has taken pains to reject.

This is not an attractive explanation of Hume’s misgivings. It has the consequence that Hume simply changes his mind, or is of two minds, in regard to the role of real connections in an account of personal identity. Although I do not think these possibilities are to be dismissed out of hand, much of their support would have to derive from the failure of alternative accounts of what is bothering Hume. At the same time, a solution ought in some way to relate to Hume’s thinking about real connections. Hume does write in the appendix,

In short there are two principles, which I cannot render consistent; nor is it in my power to renounce either of them, viz. *that all our distinct perceptions are distinct existences*, and *that the mind never perceives any real connexion among distinct existences*. Did ... the mind perceive some real connexion among [perceptions], there wou’d be no difficulty in the case. (T 636)

Why does Hume come to hold that personal identity, unlike causation, requires a real connection, and hence that causation, as he conceives it, is not ultimately sufficient to ground personal identity?³ The answer must derive from some relevant difference in Hume’s conceptions of causation and personal identity.

Let us look further at Hume’s discussion of real connections. Although Hume frequently writes of a “*connexion*” between objects, the phrase “*real connexion*,” and the related phrases “*real bond*” and “*really bonds*,” occur only eight times in the *Treatise*. All but one of these

occurrences are located in the discussions of personal identity in the appendix and in 1.4.6, and in the discussion of necessary connexion in 1.3.14.⁴ At 1.3.14, Hume argues that there is no "connexion" between cause and effect. In arguing against efficacy, necessity, connection, and the like, Hume has a variety of loosely related targets in view. One such target emerges in the following passages:

We must distinctly and particularly conceive the connexion betwixt the cause and effect, and be able to pronounce, from a simple view of the one, that it must be follow'd or preceded by the other. This is the true manner of conceiving a particular power in a particular body: ... Now nothing is more evident, than that the human mind cannot form such an idea of two objects, as to conceive any connexion betwixt them, or comprehend distinctly that power or efficacy, by which they are united. Such a connexion wou'd amount to a demonstration, and wou'd imply the absolute impossibility for the one object not to follow, ... the other. (T 161-62)

Suppose two objects to be presented to us, of which the one is the cause and the other the effect; 'tis plain, that from the simple consideration of one, or both these objects we never shall perceive the tie, by which they are united, or be able certainly to pronounce, that there is a connexion betwixt them. (T 162)

the simple view of any two objects or actions, however related, can never give us any idea of power, or of a connexion betwixt them. (T 166)

Although these passages are cast in terms of what we can demonstrate, perceive, and the like, they entail that a "connexion" must satisfy two metaphysical conditions. In the first place, a connection must be an internal or *intrinsic* relation between two objects. When Hume writes, for example, that a "connexion" must be discernible on the basis of "the simple consideration of one, or both these objects," he intends that it is a relation that depends on the two objects alone, on the two objects and no other objects. Thus, to consider objects other than the cause and the effect in a single instance is to "enlarge" one's view (T 155; cf. 162-65). In the second place, a connection must be a *necessary* relation between two objects. A connection requires "the absolute impossibility for the one object not to follow, ... the other." It is against the background of the passages I have cited that Hume claims, at T 168, that there is no "real connexion" between cause and effect.⁵ A real connection has two

metaphysical elements: it is a relation between two objects that is both *intrinsic* and *necessary*.

Two pages later, Hume presents his two definitions of "cause," and raises an objection to them:

We may define a CAUSE to be 'An object precedent and contiguous to another, and where all the objects resembling the former are plac'd in like relations of precedency and contiguity to those objects, that resemble the latter.' If this definition be esteem'd defective, because drawn from objects foreign to the cause, we may substitute this other definition in its place, *viz.* 'A CAUSE is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other.' Shou'd this definition also be rejected for the same reason, I know no other remedy, than that the persons, who express this delicacy, shou'd substitute a juster definition in its place. But for my part I must own my incapacity for such an undertaking.
(T 170)

Hume introduces an objection to both definitions, that they are "defective, because drawn from objects foreign to the cause." The objection is that on either definition, whether one object causes another depends upon facts about objects other than the cause and effect—facts about other pairs of objects resembling the cause and effect, or facts about the associative propensities of the mind.⁶ On either definition, causation is an extrinsic relation.

This objection can easily strike one as rather out of the blue. This explains why the overwhelming majority of discussions of Hume's two definitions do not so much as pause to take note of it.⁷ Hume's discussion of real connections at T 161, 162, and 166, however, prepares the way for the objection. As we have seen, in these passages Hume represents the doctrine of real connections as requiring an intrinsic relation. At T 168, he concludes that there are no real connections. At T 170, he offers the two definitions of cause.⁸ The immediate argumentative background serves to highlight a feature of these definitions, that they render causation an extrinsic relation. Hume has just argued that causation does not involve a real connection. He then notices, at T 170, that causation, on his definitions of it, does not even involve an intrinsic relation, necessary or otherwise. This strikes him as potentially problematic.

Hume has sufficient interest in the objection to raise it again in the *Enquiries*: "so imperfect are the ideas which we form concerning

[the relation of cause and effect], that it is impossible to give any just definition of cause, except what is drawn from something extraneous and foreign to it."⁹ Hume proceeds to offer versions of the two definitions. He immediately adds, "But though both these definitions be drawn from circumstances foreign to the cause, we cannot remedy this inconvenience, or attain any more perfect definition, which may point out that circumstance in the cause, which gives it a connexion with its effect" (E 77).

The question arises whether Hume feels the force of the objection, or whether he merely anticipates that others might raise it. In the *Treatise*, Hume treats the objection as a "delicacy" (T 170). This suggests that Hume does not share the intuitions behind it. On the other hand, it is an objection that Hume thinks to raise, that he takes to bear repeating in the *Enquiries*, and that he there represents as an "inconvenience." These considerations suggest that Hume himself has the intuition that causation is an intrinsic relation, though he is prepared to sacrifice the intuition in light of the body of argument that leads to the two definitions. My argument is neutral on the question of the extent to which Hume shares the intuitions behind the objection.

What matters is that there is an asymmetry in Hume's views about whether causation, on the one hand, and personal identity, on the other, are extrinsic relations. The references in the appendix to a "real connexion" harken back to Hume's discussion of real connections at T 161-68 of 1.3.14, and to the objection, at T 170, that the two definitions of cause are drawn from extraneous objects. I think that Hume held a relatively strong or firm intuition that personal identity requires an intrinsic relation between earlier and later perceptions, or between earlier and later temporal parts or stages of a person. This explains his misgivings in the appendix. At the same time, Hume either did not hold, or did not as firmly hold, the intuition that causation requires an intrinsic relation between an earlier and a later object.¹⁰ Here we have the relevant difference in Hume's conceptions of causation and personal identity.

Postulating this asymmetry has a good deal of explanatory power. It explains how Hume could have had misgivings about his analysis of personal identity in terms of causation, without having the same misgivings about his analysis of causation itself. It also explains how real connections are germane to his misgivings about personal identity. Real connections (at least at T 161, 162, and 166) are relations that are both intrinsic and necessary. Hume's misgiving is that the first of these two elements of a real connection is not captured in his account of personal identity.¹¹ David Pears has nicely observed that the relation of cause and effect "did not seem to [Hume] to demand as close a bond" as the unity of a person over time, that Hume was looking for "a

stronger connection between the impressions and ideas of a single person" than provided by cause and effect.¹² Pears notes that it is difficult to see how Hume could find what he was looking for, short of admitting the real connections he rejects.¹³ We need not construe Hume, in the appendix, as looking to reinstate real connections, or necessary connections, as such. The closer bond or stronger connection could simply be an intrinsic relation, so that personal identity, unlike causation, would not depend on extrinsic relations.

It is easy to grasp the force of some version of the intuition I am attributing to Hume. Consider theories of personal identity on which a person consists of a sequence of temporal parts, or person-stages, related by continuity (whether spatial, temporal, psychological, or causal). On some versions of continuity theories, an earlier person-stage can bear the appropriate continuity relation to *two or more* subsequent person-stages that are concurrent with each other. For example, two or more "duplicates" (or near duplicates) might be continuous with an earlier person-stage they duplicate. Are *all* the duplicates the same person as the original? Suppose a proponent of a continuity theory wants to answer in the negative. Suppose the theory is defended by requiring that only *one* person-stage at a given time stand in the relevant continuity relations to an earlier person-stage. An obvious reply to this defence is that whether one duplicate is the same person as the original should not depend upon such "extrinsic" facts as whether other duplicates exist.¹⁴ This reply seems to rely on some version of the intuition that personal identity is an intrinsic relation.¹⁵

Resemblance, unlike causation (on Hume's view of it), is an intrinsic relation. If personal identity consisted in relations of resemblance, the intuition that personal identity requires an intrinsic relation would be satisfied.¹⁶ It is therefore essential for my interpretation that Hume does not regard resemblance among perceptions as sufficient for personal identity. At T 259 of 1.4.6, Hume sets out "to explain the nature of *personal identity*." Hume observes that it is "on some of these three relations of resemblance, contiguity and causation, that identity depends," and announces that contiguity "has little or no influence in the present case" (T 260). Although Hume suggests that memory is the chief source of resemblance among perceptions (cf. T 260-61), he maintains that "memory does not so much *produce* as *discover* personal identity, by shewing us the relation of cause and effect among our different perceptions" (T 262). It is at the preceding page where Hume writes that "the true idea of the human mind, is to consider it as a system of different perceptions or different existences, which are link'd together by the relation of cause and effect"

(T 261). Thus, I think Hume does hold that resemblance is not sufficient for personal identity, and that causation is essential.¹⁷

We need to test my interpretation against an important remark in the appendix. Hume writes, "Did our perceptions either inhere in something simple and individual, or did the mind perceive some real connexion among them, there wou'd be no difficulty in the case" (T 636). I have suggested that real connections matter to Hume, at this point, insofar as they are intrinsic relations. A perception's *inhering in* (or being *supported by*) something simple, an immaterial substance or substratum (cf. T 232-34, 634-35), is presumably an intrinsic relation as well. Hume claims, then, that the difficulty would be removed if there were either intrinsic relations between perceptions, or between perceptions and substance.

There is the appearance of a shortfall here. Whereas identity is a relation over time, inherence is most naturally construed as a relation at a time. So even if inherence is an intrinsic relation, its presence does not obviously generate intrinsic relations over time. There is a reply, if we bear in mind that Hume is concerned with two problems: "But having thus loosen'd all our particular perceptions, when I proceed to explain the principle of connexion, which binds them together, and makes us attribute to them a real simplicity and identity; I am sensible, that my account is very defective" (T 635). In 1.4.6, Hume distinguishes the putative simplicity of the mind at a time and the putative identity of the mind over time (T 253), providing distinct associationist accounts of how we come to feign identity and simplicity (T 253-58 and 263, respectively). Hume's thought in the appendix is that a satisfactory account of either the mind's simplicity or identity depends upon the existence of appropriate intrinsic relations.

This is right, as far as it goes. Hume wants to say, however, that if there were either real connections between perceptions, or substances in which perceptions inhere, we could account for both the simplicity and identity of the mind. So the difficulty remains as to how inherence generates intrinsic relations within a mind over time. It seems that the existence of a substance in which perceptions inhere could account for the mind's identity over time only insofar as the substance itself persists, or has identity, over time. Hume thinks of a simple substance as an uninterrupted object that in itself is unchanging or invariable, in which changing perceptions inhere (T 251-52, 253-55; cf. T 220-21). What would the persistence of such an object consist in?

This question seems to lead to a dilemma for my interpretation. Contiguity, resemblance, and cause and effect (cf. T 260) are the only relations available to Hume in analysing the persistence of an unchanging object. Suppose Hume held that the identity of an

unchanging object consists in a sequence of earlier and later object-stages related by causation.¹⁸ Suppose Hume held, in other words, that the persistence of an unchanging object is simply a monotonous causal process. Causation, for Hume, is an extrinsic relation. If personal identity depends on the persistence of an unchanging object, and if the persistence of an unchanging object is itself analysed in terms of causation, then personal identity would be an extrinsic relation after all. In that case, the existence of a substance in which perceptions inhere would not solve Hume's difficulty, on my account of it, in the appendix. But Hume says that the existence of such a substance would remove the difficulty. This is the first horn of the dilemma.

Suppose Hume held that the persistence of an unchanging object consists in a series of perfectly resembling (and, perhaps, contiguous) stages. But if the persistence of an unchanging object can be analysed in terms of perfect resemblance (and contiguity), why cannot the persistence of a changing object be analysed in terms of near resemblance (and contiguity)? In that event, there would be no need for causation to play an essential role in the account of personal identity at T 260-62 in the first place. On the present supposition, my interpretation would leave unexplained why causation has an essential role in the account of the persistence of a changing object, but not in the account of the persistence of an unchanging object. This is the second horn of the dilemma.

We can escape both horns. The solution lies in Hume's position that, strictly speaking, an unchanging object does not have temporal parts that are related, whether by causation, resemblance, or (temporal) contiguity. This position is a consequence of Hume's views about change and time or duration.¹⁹ Hume writes in 1.2.3:

I know there are some who pretend, that the idea of duration is applicable in a proper sense to objects, which are perfectly unchangeable; ... But to be convinc'd of its falsehood we need but reflect on the foregoing conclusion, that the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by any thing stedfast and unchangeable. For it inevitably follows from thence, that since the idea of duration cannot be deriv'd from such an object, it can never in any propriety or exactness be apply'd to it, nor can any thing unchangeable be ever said to have duration. (T 37)

He returns to the theme in 1.2.5:

As to the doctrine, that time is nothing but the manner, in which some real objects exist; we may observe, that 'tis liable to the same objections as the similar doctrine with regard to extension. If it be a sufficient proof, that we have the idea of a vacuum, because we dispute and reason concerning it; we must for the same reason have the idea of time without any changeable existence; ... But that we really have no such idea, is certain. For whence shou'd it be deriv'd? Does it arise from an impression of sensation or of reflexion? Point it out distinctly to us, that we may know its nature and qualities. But if you cannot point out *any such impression*, you may be certain you are mistaken, when you imagine you have *any such idea*. (T 64-65)

In part 2 of book 1, Hume presses empiricism about meaning very hard, to the conclusion that we have no idea of the duration of a particular object, unless that object itself changes.²⁰ Thus we find in Hume's discussion of the "constancy" (as distinct from the "coherence") of perceptions in 1.4.2, "Of scepticism with regard to the senses":

I have already observ'd, that time, in a strict sense, implies succession, ...

Thus the principle of individuation is nothing but the *invariableness* and *uninterruptedness* of any object, thro' a suppos'd variation of time. (T 200-201)

Hume takes seriously the claim that an unchanging object has no duration; it is not confined to the discussion of space and time in 1.2.²¹

The dilemma arose because it seemed that Hume must analyse the persistence of an unchanging substance in terms of relations (either of causation, or of resemblance and temporal contiguity) among its temporal parts. In Hume's view, however, unchanging objects do not, strictly speaking, have temporal parts. An unchanging substratum, were one to exist, would have no duration, or persistence over time. As Hume puts it, "One single object conveys the idea of unity, not that of identity" (T 200).²² The identity of a substratum over time, therefore, is not to be explained by any relation, extrinsic or intrinsic.²³ (In light of this result, it is not quite apt to say that Hume's intuition is that identity requires an intrinsic relation; rather, his intuition is that identity, unlike causation, precludes an extrinsic relation.) The dilemma mistakenly presupposes that Hume would grant that an unchanging object has duration.

Hume supplements his metaphysical claim that unchanging objects have no duration with a psychological explanation of how we

come to attribute duration (and identity) to unchanging objects by a fiction of the imagination. The explanation, in part, is that we imagine that an unchanging object participates in the changes of coexisting objects that do change (cf. T 65 and 200-201).²⁴ At T 37, Hume refers to the presentation of the explanation at T 65, and, as far as I can see, he was well satisfied with it. My response to the dilemma is not undermined by the fact that Hume both granted, and (by his lights) explained, our attributing a fictional duration and identity to unchanging objects. On my interpretation, Hume's misgivings in the appendix concern the metaphysical, rather than the psychological or associationist features, of his account of personal identity at 1.4.6.²⁵

Let us review. Hume was prepared to accept that causation, on his account of it, is an extrinsic relation. If causation is an extrinsic relation, and personal identity requires causation, then personal identity is an extrinsic relation as well. In the appendix, Hume was not content with this result. He allows that the difficulty would be removed if either there were real connections among perceptions, or there were unchanging substances in which perceptions inhere. In the latter case, the identity in a succession of perceptions would be explained by the perceptions' inherence in an unchanging substratum, where inherence is an intrinsic relation. An unchanging substance, on Hume's views, would have no duration, so that it would have no identity over time to explain with reference to any relation.²⁶ In the former case, identity would be explained with reference to real connections, and real connections, as Hume conceives of them at 1.3.14, are intrinsic relations. In either case, personal identity would be explained without reference to any extrinsic relation.²⁷

The University of Michigan

1. I do not attempt to review the extensive literature on this topic. For pieces that discuss a number of lines of solution, see: Don Garrett, "Hume's Self Doubts about Personal Identity," *The Philosophical Review* 90, no. 3 (July 1981): 337-58; and Robert Fogelin, *Hume's Skepticism in the "Treatise of Human Nature"* (London, 1985), chap. 8.
2. David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge, 2d ed., rev., ed. P. H. Nidditch (Oxford, 1987), 636 (hereafter cited as "T").
3. In *Hume's System: An Examination of the First Book of his Treatise* (Oxford, 1990), David Pears formulates a version of this puzzle: "Why, we may wonder, was [Hume] dissatisfied with his account of personal identity, but not with his account of causation? They

- were both the results of applying the same principles in much the same way" (p. 120).
4. The remaining occurrence is at T 178 of 1.3.16, "Of the reason of animals." There is related terminology elsewhere in the Treatise: "real power and energy" (T 160), "real force and energy" (T 161), "link'd" (T 261), and "tie" (T 162, 266).
 5. Though Hume contends that there is no "connexion" between cause and effect (T 103, 161, 162, 166, 247, 248, 249, 260, 266, 632, 635), he often writes of a "connexion" between cause and effect, and seems to mean a connection between the objects, not merely an associative connection in the mind. (There are prominent examples at T 89, 91, 107, 195, and 207.) Hume can help himself to this language, construing the attack on "connexions" as an attack on "real connexions."
 6. In "The New Hume," *The Philosophical Review* 100, no. 4 (October 1991): 541-79, Kenneth Winkler maintains that one reason why the first definition invokes foreign objects is that it "defines the cause in relation to its effect" (p. 568). I doubt Hume thinks that the first definition treats causation as extrinsic for this reason; Hume has told us that he is defining "the relation of cause and effect" (T 169)—it is difficult to see how the effect could be extrinsic to that relation.
 7. I know of two exceptions, prior to 1989: Norman Kemp Smith, *The Philosophy of David Hume* (New York, 1966), 400-402; and Jonathan Bennett, *Locke, Berkeley, Hume: Central Themes* (Oxford, 1971), 299. In *The Secret Connexion, Causation, Realism, and David Hume* (Oxford, 1989), 208ff., Galen Strawson seizes on features of the parallel discussion in the *First Inquiry* (see below) to support his view that Hume did not hold a regularity theory of causation. This has spawned further discussion of the objection; for example, Winkler (above, n. 6), sec. 5.
 8. Kemp Smith (above, n. 7) is clear that Hume's defining causation with reference to "foreign" objects is a consequence of the preceding negative argument (p. 204).
 9. David Hume, *Enquiries Concerning Human Understanding and Concerning the Principles of Morals*, ed. L. A. Selby-Bigge, 3d ed., rev., ed. P. H. Nidditch (Oxford, 1975), 76 (hereafter cited as "E").
 10. Though I attribute to Hume this asymmetry in intuitions, I do not think he possessed a systematic account of a distinction between intrinsic and extrinsic relations. He was clear that causation is extrinsic (T 169-70; E 76-77); and in 1.3.14 he intends to contrast causation, in this respect, with contiguity in time and place, and temporal precedence (cf. T 155). For recent attempts to characterize intrinsic relations, see David Lewis, "Extrinsic

- Properties," *Philosophical Studies* 44, no. 2 (September 1983): 197-200; and Lewis, "New Work for a Theory of Universals," *Australasian Journal of Philosophy* 61, no. 4 (December 1983): 343-77, esp. 355-58.
11. Of course, Hume could have formulated his misgivings more perspicuously by saying directly that, on the account at 1.4.6, personal identity depends upon objects that are foreign and extraneous to the person. I do not know any plausible interpretation of Hume's misgivings according to which he directly says what he means.
 12. Pears (above, n. 3), 123, 151.
 13. *Ibid.*, 123 n. 5, 151 n. 26.
 14. For an introduction to these sorts of issues, see John Perry, *A Dialogue on Personal Identity and Immortality* (Indianapolis, Indiana, 1978), esp. 31-36. For explicit discussion of the idea that personal identity should be an intrinsic fact about a person, see Derek Parfit, *Reasons and Persons* (Oxford, 1987), esp. sec. 91, pp. 266-73.
 15. This is not to say that it supports Hume's version of the intuition.
 16. As A. J. Ayer points out in *Hume* (New York, 1980), perceptions that are not necessarily connected might stand in empirical relations that constitute the self (p. 53). On my interpretation, Hume could grant this, provided the relations are intrinsic. The problem for an analysis of personal identity in terms of resemblance is that it is not extensionally adequate.
 17. For a relevant discussion, more detailed than most, of the role of resemblance see John Bricke, *Hume's Philosophy of Mind* (Princeton, New Jersey, 1980), 85ff.
 18. I omit qualifications, for example, that the causal relations have to be "of an appropriate kind." Hume does not bother with such qualifications in providing a causal theory of the identity of changing objects in 1.4.6.
 19. David Wood brings these views to bear on 1.4.6, for a rather different purpose, in "Hume on Personal Identity," *Australasian Journal of Philosophy* 57, no. 1 (March 1979): 69-73, esp. pt. 2.
 20. Excellent discussions of this claim are to be found in a series of papers in *Hume Studies*: Philip J. Nevjahr, "Hume on Identity," 4, no. 1 (April 1978): 18-28; Ronald L. M. Baxter, "A Defense of Hume on Identity Through Time," 13, no. 2 (November 1987): 323-42, esp. sec. 2; and Michael J. Costa, "Hume, Strict Identity, and Time's Vacuum," 16, no. 1 (April 1990): 1-16, esp. sec. 3. Also see John Laird, *Hume's Philosophy of Human Nature* (London, 1932), 73-74.

21. In "The Import of Hume's Theory of Time," *Hume Studies* 6, no. 2 (November 1980): 119-32, Robert McRae rightly emphasizes the impact of Hume's views about time on 1.4.
22. In much recent discussion of personal identity, unity is a relation among temporal parts of an object, so that distinct temporal parts are unified into a temporally extended object. This is not Hume's usage.
23. Terence Penelhum observes in *Hume* (London, 1975): "It is essential to recognise that Hume does not think that the associative connections of resemblance and causation constitute real bonds among the perceptions that they connect. They merely provide an explanation of our overlooking the numerical distinctness of those perceptions from one another; they do not remove the numerical distinctness. (Presumably a real bond between them would do just that ...)" (pp. 79-80). This is very much on the mark, even though the parenthetical remark overstates Hume's requirements for a real connection. For Hume, the existence of an unchanging substance would remove numerical distinctness, at least in the sense that the substance would not itself have temporal parts.
24. For discussion, see Bennett (above, n. 7), 239-40; Fogelin (above, n. 1), 71-73; Kemp Smith (above, n. 7), 474-76; H. H. Price, *Hume's Theory of the External World* (Oxford, 1940), 38-41; and Barry Stroud, *Hume* (London, 1977), 100-105. Also see Wan-Chuan Fang, "Hume on Identity," *Hume Studies* 10, no. 1 (April 1984): 59-68, as well as the articles in this journal listed in note 20.
25. There is perhaps some ambiguity when Hume writes in the appendix: "But all my hopes vanish, when I come to explain the principles, that unite our successive perceptions in our thought or consciousness" (T 635-36). Hume might be referring to the associationist principles by which, in our thought, we unite successive perceptions. Or he might be referring to the metaphysical principles in virtue of which successive perceptions in our thought are united. On my interpretation, Hume is referring to the latter. For versions of the opposing view, see Bricke (above, n. 17), 95-99; and Daniel E. Flage, *David Hume's Theory of Mind* (London, 1990), 145-54.
26. Evidently, did substances exist, successive perceptions would inhere in a single durationless object. Hume never confronted this matter, as he did not think substrata exist.
27. I am indebted to Sally Haslanger and David Velleman for their helpful and extensive comments on a draft of this paper.