In this paper I will critically examine the psychological continuity criterion for personal identity. I will largely focus on the R-relation as described by Parfit[1] and Lewis.[2] First I will explain the R- and I-relations, and the connection Lewis suggests there is between them. I will then show how a crucial aspect of the R-relation thus conceived is not relevant to personal identity or survival. Next, I will show how it was this aspect of the R-relation that allowed Lewis to reach his conclusions about the I-relation. Finally, as I believe Lewis is correct in asserting that we are not solely concerned that there will be a future individual who is R-related to us but are also concerned that there will be a future person stage that is I-related to us, I will propose an alternative formulation of the R-relation that will succeed in being coextensive with the I-relation.

Parfit holds a reductionist view of persons, that is, he believes persons are completely reducible to certain facts about them. The relevant facts are those regarding mental states. Personal identity is similarly reducible to certain facts. The relevant fact for claims of personal identity is whether there holds between a person at t1 and a person at t2 a certain relation, which Parfit calls the R-relation. It is a relation of psychological continuity and connectedness across time. In addition to R-relatedness, personal identity requires uniqueness.[3]

Person A is R-related to person B iff they are psychologically connected and continuous. But when are they psychologically connected and continuous? Parfit offers the following definitions for these terms:

Psychological connectedness is the holding of particular direct psychological connections.

Psychological continuity is the holding of overlapping chains of strong connectedness.[4]

[1] Derek Parfit, *Reasons and Persons* (Oxford: Clarendon Press, 1984).
[2] David Lewis, "Survival and Identity," in A. Rorty (ed.), *The Identities of Persons* (Berkeley: University of California Press, 1976), 17-40.
[3] Parfit, 1984, p. 263.
[4] Parfit, 1984, 206.

Examples of connectedness could be such things as remembering a previous experience, having intentions for the future, or being angry because of something that happened previously. There could be a single connection between A at t1 and B at t2, or there could be multiple. The more connections there are the stronger the connectedness. If there is strong connectedness between A at t1 and B at t2, and between B at t2 and C at t3, these overlap at t2 so there is psychological continuity between A at t1 and C at t3. For strong connectedness, having a few connections is not sufficient; a certain number of connections are required.[5] Parfit holds that any reliable cause of psychologically connected states is permissible for establishing psychological continuity.[6]

Lewis agrees with Parfit that persons are reducible to their physical and psychological states, and so psychological continuity is a necessary condition for a person to persist. But he disagrees that this means that identity is not what matters. He says: "what matters in survival is survival. If I wonder whether I will survive, what I mostly care about is quite simple. When it's all over, will I myself… still exist? Will any one of those who do exist afterward be me? In other words, *what matters in survival is identity*."[7] This raises the question of how could identity and the R-relation both be what matters; how could it be that two distinct things are what matters? Lewis answers that both mental continuity and identity can be what matter because they are not separate answers.

First he acknowledges the discrepancies between the R-relation and identity; identity is a formal relation, is one-to-one and does not admit of degrees while the R-relation need not be any of these. But he asserts that these discrepancies only show that the two relations are different relations. This is clear because they have different relatum: the R-relation relates persons-at-times while personal identity relates the temporally extended mereological sums of these

[5] From this point forward, the word connectedness is used to mean strong connectedness, and connectivity is used to mean strong connectivity.
[6] Parfit, 1984, p. 215.
[7] Lewis, 1976, p. 18.

persons-at-times. We are not concerned with the survival of these instantaneous person stages but with the "continuant persons."

At this point Lewis introduces the I-relation. When there are three members in a set, those members are related to each other in virtue of being members of the same set. Person-stages stand in a similar relation to all the other person-stages of the continuant person that they together compose. This is the I-relation. This relation is not identity, but one between stages. Lewis suggests that if identity matters for survival, then when we are concerned about survival we are really concerned that there may not be any future stage that is I-related to our current stage.

Having a new relation that is linked to identity but without the same formal structure, permits us to equate it with the R-relation. Lewis suggests that the I- and R-relations are necessarily coextensive, which entails that they are the same relation. This permits Lewis to propose a definition of a person: something is a continuant person iff it is an aggregate of R-related person-stages that itself is not a member of a larger R-related aggregate.[8]

Because the I-relation is tied to identity, it would seem that the I-relation would not permit branching cases, which would make it distinct from the R-relation. Lewis shows that this is not the case. He says that this conclusion makes a false assumption that every person-stage is a part of only one continuant person. This is a mistaken inference based on the connection between identity and the I-relation. Every person is only identical with one person but this does not mean that some of one's constituent person-stages do not also constitute another person.

In the case of fission, Lewis explains that the set of temporal parts prior to the split are actually I-related (and R-related) to both sets of parts after the split. B and C are not R-related to each other because, although this relation is transitive, it is not symmetrical, nor are they I-

[8] Lewis, 1976, p. 22.

related and for the same reason. While identity is transitive, symmetrical, and can go only from one to one, this does not require that the I-relation be both transitive, symmetrical or prohibit it from going from one to many because they are different relations.

However, this all depends on a mistaken interpretation of the psychological criterion. The psychological criterion requires direct psychological connection between person-stages and psychological continuity. When Parfit considers the position that only continuity matters for the R-relation, he finds it to be inadequate. This is because it is clearly important to us. He points out that "if our lives have been worth living, most of us value highly our ability to remember many of our past experiences."[9] When we have intentions or desires, it is important to us that we continue to have those intentions or desires. When we value aspects of our character "we will want these *not* to change. Here again we want connectedness, not mere continuity."[10] In short, Parfit argues that while psychological continuity is necessary, it is not sufficient for the R-relation and there is the additional necessary condition of being directly connected. Parfit also discusses at some length the moral implications of personal identity requiring direct connection. If it were only continuity involved in the R-relation, then these considerations Parfit advances would not hold, because identity would not admit of degrees.

While Parfit is correct in asserting that connectedness is important to us, he is mistaken in *how* it is important to us. If our lives have been worth living, it would increase the quality of the remainder of our lives to be able to recall our past experiences. It would be demoralizing if we knew that all our current intentions will not be fulfilled because in the future we will change them. None of this has any bearing on the issue of personal identity, but instead presupposes personal identity. If it is the case that I am not R-related to future persons with whom I am not

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[9] Parfit, 1984, 301.
[10] *Ibid*.

directly connected, then why should I be concerned that those future people do not share my desires and intentions? Unless I believe either that everyone ought to share these or that some future person will be *me*, it should not matter to me. When I am concerned that a future person might not share my intentions, desires and character traits, or remember my life, it is only because I already believe that future person will be me.

Additionally, continuity plays no significant role in the R-relation when connectedness is always allowed to trump it. It can be the case that A is psychologically continuous with B, that is, they are indirectly connected through a series of strong direct connections, without being directly connected, and so they are not R-related. However, there can never be a case that A is directly connected to B without being psychologically continuous as well. This series would consist of only one strong connection, but this is enough for continuity. This shows us that direct connection both necessary and sufficient for the R-relation. This means that A is R-related to B iff A is D-related to B, where the D-relation only requires holding direct connections between stages. Because the R-relation and the D-relation are necessarily coextensive these two relations are really one and the same, and continuity does none of the philosophical heavy lifting.

However, as Reid showed us with his Brave Soldier thought experiment, requiring direct connectedness conflicts with the transitivity of identity.[11] It could be suggested that Parfit avoids this problem because he holds that the R-relation admits of degrees, and so does identity. By having less direct connections we gradually become less the same person until the point where we are no longer connected and we are no longer the same person. At points between there is a range of connection where it is indeterminate whether or not we are the same person. The soldier would have a high degree of connectivity to both the boy and the general, but there would be a low degree of connectivity between the general and the boy. This fails to avoid Reid's

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[11] Thomas Reid, *Essays on the Intellectual Powers of Man* (Cambridge, MA: The MIT Press, 1969), p. 235*f*.

objection because there are facts of the matter regarding the relation between the soldier and both the boy and the general, but it is at best indeterminate regarding the boy and the general. The R-relation is not transitive when we require direct connectedness, so there is not yet a problem. But when we consider that there has been no psychological branching we see that the uniqueness criterion has been met. This means that identity holds and we are faced with Reid's objection.

It could be said that because the general is not R-related to the boy, neither is uniquely R-related to the soldier. This would mean uniqueness is not only synchronic, but also diachronic. But this would be detrimental to concept of identity. It is rarely the case that one person-stage of one continuant person is directly connected to all of her other stages. This would mean that there generally are diachronically competing R-relationships on our person-stages, and so in general there is not personal identity. Furthermore, if stage A is directly connected to stage B and B is directly connected to stage C, but A and C are not directly connected this precludes the possibility of A being identical with A. This does not completely eliminate the occurrence of personal identity because there could be an aggregation of person stages which are all directly connected to each other but not connected to any stage outside of that aggregation.

Furthermore, some of the undesirable moral implications of Parfit's position are avoided when we do not require direct connectedness.

For the sake of clarity, I will call the variant that only requires continuity the R'-relation. This new relation again permits Lewis to form a non-circular definition of persons, as well rescues him from some implausible claims about the I-relation. Because the R'-relation does not admit of degrees Lewis is not required to show that the I-relation does, in order to demonstrate their coextensiveness.[12] If being I-related means that two person-stages are members of the same set of person-stages, then any two stages either are or are not I-related. It does not make sense to

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[12] See Lewis's discussion of the degrees of the I-relation, 1978, pp. 32-26.

say that being included in a set admits of degrees. By analogy, two playing cards are C-related iff they are members of the same deck. Either they are members of the same deck or they are not, so either they are C-related or they are not. There is no indeterminacy or degrees.

Unfortunately, the use of the R'-relation creates its own problems for coextensiveness with the I-relation. The R-relation was not transitive because it had the requirement of direct connection, which is symmetrical but not transitive. Continuity, however, is by nature both symmetrical and transitive. If A is continuous with B and also with C, then B will also be continuous with C. This means that the fusion and fission cases that Lewis describes no longer consist in two overlapping people. If A divided into B and C and is R'-related to both, then they are R'-related to each other *through* A. Because Lewis's definition of personhood requires a maximal aggregation of person-stages it would no longer be the case that there is one person with stage B and a different person with stage C who share the person-stage A. This is because such a description would not be a maximal aggregation. As they are each R'-interrelated, the maximal aggregation is the one that includes A, B and C. However, this result is easily avoided.

Lewis points out that the symmetrical R-relation is really two asymmetrical relations that when taken together can be considered one symmetrical relation. To avoid calling the products of fission the same person we can appeal to the asymmetry of the divided R-relations. We now have two R'-relations, forward (R^f) and backward (R^b). Memories of previous events are examples of the R^b-relation, and intentions are examples of the R^f-relation. Neither of these relations is more significant than the other, so we could focus on either direction or both. As we experience time unidirectionally and so only experience current connections to the past, I will focus on the backwards relation, R^b.

Now the R-relation variant we are considering is no longer coextensive with the I-relation. The I-relation is symmetrical, so that if A is I-related to B then B is I-related to A and vice versa, but the R^b-relation cannot be. If A is R^b-related (backwards) to B, then B is *not* R^b-related to A. This is not really a difficulty, because we need not try to match the unqualified I-relation with the qualified R^b-relation. Instead we can appeal to being I-related to a previous stage, the I^b-relation. Using the I^b-relation restores coextensiveness with the R^b-relation. With the I^b-relation as a bridge, we can now show the connection between being R^b-related and being I-related. If A is I^b-related to B, then B is I^f-related to A and both are I-related to each other.

Appealing to the directionality of the R^b-relation resolves the problems fission and fusion create for maximal aggregations of R'-related persons and preserves Lewis's claim that in a case of fission there were two continuant people sharing person-stages prior to the split. This is because unlike the R'-relation, the R^b-relation is not symmetrical. The symmetry was problematic for the R'-relation because when combined with transitivity it entailed that for any two person stages if they are R'-related they are also R'-related to every person stage that the other is R'-related to. The R'-relation resembles the relation of equality, whereas the asymmetrical versions of the R- and I-relations resemble the relation of "is greater than or equal to." When one person stage is R^b-related to two previous stages (as in a case of fusion), because of the lack of symmetry, we cannot deduce any relation between the two other stages. If A is R^b-related to both B and C, we cannot conclude that B and C are R'- or I-related to each other. This also resembles the "greater than or equal to" relation. Thus, acknowledging the directionality of psychological continuity allows us to avoid the problems that arose from removing direct connectedness from the R-relation while maintaining a symmetrical R'-relation.

Parfit suggests an appealing reductionist account of persons that entails a psychological criterion of personal identity. He formulates this criterion in terms of a relation of psychological continuity and connectedness and in doing so errs in several ways. When continuity and connectedness are both necessary conditions connectedness becomes a sufficient condition and continuity becomes trivial. This exposes Parfit to the standard criticisms of personal identity as connectivity. When we remove the requirement of direct connection we find new problems due to the transitivity and symmetry of simple continuity. Simple continuity commits us to saying that the products of a case of fission would be continuous with each other, and thereby parts of the same maximal aggregation of person-stages. Because continuity actually consists in two directional relations that are transitive but not symmetrical we are able to preserve both a psychological continuity account and Lewis's perdurantist analysis of I-interrelated aggregations of person stages.