Can the Self Divide?[1]

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BROW*N*, Jones, and Smith enter the hospital for brain-rejuvenations. (In a brain rejuvenation, one's brain is removed, its circuitry is analyzed by a fabulous machine, and a new brain is put back in one's skull, just like the old one in all relevant respects, but built of healthier gray matter. After a brain rejuvenation one feels better, and may think and remember more clearly, but the memories and beliefs are not changed in content.) Their brains are removed and placed on the brain cart. The nurse accidentally overturns the cart; the brains of Brown and Smith are ruined. To conceal his tragic blunder, the nurse puts Jones's brain through the fabulous machine three times, and delivers the duplicates back to the operating room. Two of these are put in the skulls that formerly belonged to Brown and Smith. Jones's old heart has failed and, for a time, he is taken for dead.

In a few hours, however, two individuals wake up, each claiming to be Jones, each happy to be finally rid of his headaches, but somewhat upset at the drastic changes that seem to have taken place in his body. We shall call these persons "Smith-Jones" and "Brown-, Jones." The question is, who are they?[2]

1. A problem for the mentalist?

One thing is clear: they are not each other. Smith-Jones is lying down, Brown-Jones is sitting up; Brown-Jones is thinking of his nurse, Smith-Jones is thinking of Jones's companion (they both think of the nurse while being nursed, the companion otherwise, but right now the nurse is in Brown-Jones's room). So all sorts of things are true of the one but not true of the other. Perhaps we could sort

these things out in some way consistent with the single-person hypothesis: a certain person is sitting-in-room-102- I -and-lying-in-room- 104, etc. But there is no motivation for such maneuvering, for there is no unity of consciousness. Brown-Jones cannot tell by introspection what Smith-Jones is seeing, thinking, wishing, etc., and vice-versa.

Smith-Jones and Brown-Jones each claim to be Jones. Certain philosophers--John Locke[3] Anthony Quinton,[4] and H. P. Grice,[5] to mention just three-hold theories of personal identity that seem to commit them to agreeing with both Smith-Jones and Brown-Jones. They analyze the identity of persons in terms of memory or "continuity of consciousness," or memory and potential memory. Each would surely want to say in a simpler case of apparent bodily transfer (such a case as we would have if either only Smith-Jones or only Brown-Jones survived) that the resultant person is who he remembers being. These analyses, when applied to the case at hand, give us the result that both Smith-Jones and Brown-Jones were Jones. Each did all the things Jones did. They used to be the same person.

My intuitions agree. I do want to say of this case, that Brown-Jones and Smith-Jones did all the things they seem to remember doing, that they both were Jones, and so were one another.

But certain philosophers maintain that it is at least almost as clear that we should not say that Smith-Jones and Brown-Jones are who they claim to be, as that we should not say that they are a single person--the former, in fact, following directly from the latter. And, according to these philosophers, what Locke, Grice, and Quinton are committed to saying simply shows that their theories of personal identity are wrong. For consider. We agreed that (1) was clearly true:

(1) Smith-Jones is not the same person as Brown-Jones.

But the claims of Smith-Jones and Brown-Jones, and the results of applying the analyses of personal identity mentioned, seem to come to (2) and (3):

(2) Smith-Jones is the same person as Jones.

(3) Brown-Jones is the same person as Jones.

But from (2) and (3), by the symmetry and transitivity of identity, we obtain (4):

(4) Smith-Jones is the same person as Brown-Jones.

Thus (2) and (3) lead us to (4), which is known to be false as surely as (1) is known to be true. The theories of personal identity that led us there must then be wrong (Adapted from Williams, 1957, p. 8ff.; see also Flew, 1951, p. 67.)

In this paper, I defend the theories of personal identity in question against this argument. I shall not say anything about the respective merits of Grice's and Quinton's analyses, or others for which this case appears to pose a problem, being content to defend these various plausible analyses against this particular argument. I shall refer to such analyses as "mentalist analyses of personal identity," and shall speak of a defender of such as "the mentalist." Of course, there are analyses of personal identity that might be called "mentalistic" besides Quinton's and Grice's, and some of these do not commit us to saying, of this case, that Brown-Jones and Smith-Jones used to be Jones.[6] They seem to me to be wrong for that reason. I agree with Quinton that mentalist analyses of personal identity need not be incompatible with behaviorist or materialist theories of mind; the problems of mind and body and personal identity, though related, should not be conflated.

2. *Idea for a solution.*

To defend the mentalist, we need to become dearer about the nature of a philosophical theory of personal identity and about the nature of the objection being considered.

Let me begin with a simpler problem, that of table identity. Suppose Alf has a limited understanding of what we mean by 'table'. If we point to a certain part of a given table, and ask him what color the table is at that spot, he will give the correct answer. Thus, if we point first to one leg of a brown table, and ask, "'Is this table brown here?" and then to another spot on the same table, and ask the same question, Alf will answer "yes" both times. But if we then ask him, "Is there a single table that is brown here and also brown here?" (pointing successively to the same legs we pointed to before), he will shrug his shoulders. What does Alf lack? He does not know what counts as a single table. We might want to express this by saying, "Alf doesn't know what relation must obtain between this table and that table (pointing twice to the same table) for them to be the same." But this is wrong, for Alf might know quite well that the relation in question is identity. His problem is with the concept of a table, not with the concept of identity. Alf doesn't know what relation must obtain between a number of table parts, for there to be a single table of which they all are parts. The rest of us do know what that relation is, although of course articulating it in a nontrivial way would be a philosophical exercise of some difficulty. I shall call the relation that obtains between two table parts, if and only if there is a table of which they are both parts, the spatial unity relation for tables. When Alf learns what counts as a single table, he learns to recognize when this relation obtains.

Now take a somewhat different case. Suppose Alf can now very well say whether this table part and that table part are parts of a single table. But suppose we point to a table and ask him, "Is that table brown?" He answers, "Yes." We then move the table to a different room, paint it green, and ask, ("Is that table green?" He gives the right answer in both cases. We then ask him, "Is there a single table that was brown and now is green?" Alf shrugs his shoulders, and cannot answer.

Alf still lacks mastery of the concept of a table. He doesn't know what counts as a single table, or the same table, through time. Again, he knows what

relation the table that was brown must have to the table that is green for the right answer to the question to be "yes." The relation of course is identity.

But Alf does not know what relation must obtain between temporal parts of a table for them to be temporal parts of a single table. It may be objected to this that we have no notion of a temporal part of a table; what I glance at when I glance at a table is a whole table, and not just a part of it. But we do have the notion of the history of an object--a sequence of events in which it is, in some sense, a main participant. When we glance at a table, we see the whole table, but we witness only a portion of its history. Alf's problem, then, is that he doesn't know what relation must obtain between two portions of table histories for them to be portions of the history of a single table. And now we can simply introduce the notion of a temporal part by saying that a is a temporal part of *b* if and only if a is a part (in the ordinary sense) of the history of b. Alf doesn't know what relation must obtain between two temporal parts of a table for them to be temporal parts of a single table. This relation I call the temporal-unity relation for tables. To analyze it in a non-trivial way is the problem of table identity.

Notice that I am not merely imagining Alf to be in a poor position to re-identify tables he hasn't seen for a while. It's not just that he's unclear about what would be good evidence for table identity. Rather, he's unclear about what this state of affairs amounts to.

Now we all know, in a sense, what the temporal-unity relation for persons is. But the philosophical problem is, I take it, to articulate this knowledge in some nontrivial way, to say what the relation is that obtains between temporal parts (or, as I shall call them, person-stages) of a single person. This relation is what Grice and Quinton give explicit analyses of, and what Locke suggests an analysis of.[7]

It is extremely important not to confuse the unity relation for an object with the relation of identity. Of course the two are connected in an important way. If *a* and *b* are (temporal or spatial) parts of an object of certain kind *K*, and

R_K is the (temporal or spatial) unity relation for *K*s, then, if the *K* of which *a* is a part is identical with the *K* of which *b* is a part, *a* must have R_K to *b*. But, nevertheless, R_K is not the relation of identity, and must not be confused with it.

The logical properties of identity are well known: identity is necessarily transitive, symmetrical, and reflexive. *N*ow our example shows that the relations suggested by some philosophers as an analysis of the temporal-unity relation for persons are not transitive.[8]

For let *j* be a person-stage of Jones that occurs before the operation, and let *b-j* and *s-j* be temporal parts of Brown-Jones and Smith-Jones, respectively, that occur after the operation, and let *R* be the relation suggested by Quinton or Grice. Then *j* has *R* to *b-j*, and *s-j* has *R* to *j*. But *s-j* does not have *R* to *b-j*. *N*ow, if we confuse identity with the unity relation, it will seem clear that *R* is an incorrect analysis. Once we have made the distinction, however, it seems a legitimate question whether *R* must necessarily be transitive.

The answer, however, may still seem quite obvious. A simple argument seems to show that, since identity is a necessarily transitive relation, so with any unity relation. Suppose *a, b*, and *c* are *K*-parts, and R_K the unity relation for *K*s. Then if we have a counterinstance to the transitivity of R_K:

a has *R* to *b*

b has *R* to *c*

not-(*a* has *R* to *c*)

it seems to follow that

The *K* of which *a* is a part is identical with the *K* of which *b* is a part.

The *K* of which *b* is *a* part is identical with the *K* of which *c* is a part.

*N*ot-(the *K* of which *a* is a part is identical with the *K* of which *c* is a part).

But since this consequence is absurd, so must be the supposition.

This argument is, however, mistaken. To shed some initial doubt on the dogma that a unity relation must be transitive, consider the following case. Suppose there to be Siamese twins joined at the thumb. *N*ow consider the three thumbs, *a, b*, and *c* (*b* is the shared thumb). There is a single body of which both a and *b* are thumbs. That is, the (spatial) unity relation for human bodies holds between *a* and *b*. And similarly there is a single human body of which both *b* and c are parts. But there is not a single human body of which both *a* and c are parts. So, if R_B is the spatial-unity relation for human bodies, *a* has R_B to *b*, *b* has R_B to *c*, but not-(*a* has R_B to c). Thus the spatial-unity relation for human bodies is not transitive.

Why does this not lead to a breakdown of the transitivity of identity? The reason is simple and instructive. It seems that we should be able to infer:

The body of which a is a part is identical with the body of which b is a part.

The body of which b is a part is identical with the body of which c is a part.

Not-(the body of which a is a part is identical with the body of which c is a part).

which violates the transitivity of identity (given its symmetry).

But given the case in question, the referring expression 'the body of which *b* is a part' is, of course, improper. There is no unique body of which *b* is a part. Thus, given any reasonable theory of definite descriptions, the first two sentences of our inconsistent triad are not true, and the transitivity of identity is saved.

This point contains the essential insight that seems to me to lead to a satisfactory reply to the objection in question. But, as we shall see, its application to the more complicated case of identity through time is not a simple and straightforward matter.

3. The Branch Language

To apply the point made in section ii to the case of the apparently dividing self, the mentalist. might argue as follows. The objection is based on my alleged commitment to (1), (2), and (3):

(1) Smith-Jones is not the same person as Brown-Jones.

(2) Smith-Jones is the same person as Jones.

(3) Brown-Jones is the same person as Jones.

I seem to be committed to these because I analyze personal identity in terms of a relation, *R,* which does obtain between the person-stages *j* and *b-j*, and the person-stages *j* and *s-j.* But in fact this does not commit me to (2) and (3). These sentences contain a proper name, 'Jones.' But this proper name turns out, contrary to what everyone thought, never to have been assigned to a person at all. The person-stages of Jones (as we say) that occurred before the operation were stages of both Smith-Jones and Brown-Jones. Thus any attempt to name a person by identifying one of these stages would have miscarried: although we had identified a single person-stage, we would not have identified a single person and so would not be in a position to assign the name. Thus (2) and (3) turn out on my analysis to be untrue. I can say that both Smith-Jones and Brow*n-J*ones did all the things done (as we say) by Jones; they did the things they remember doing. But there is no single person Jones they both were. And there was no single person doing the things they did, just as no one person would have pushed a button if that button were pushed by the shared thumb of the Siamese twins mentioned in the last section. Thus, although my analysis of the relation that holds between person-stages when they are stages of a single person is not logically transitive, this does, not commit me to the absurd denial of the transitivity of identity.

Before considering the merits of this response, I must make a methodological digression. The mentalist's problem is that he seems to be committed to an inconsistent set of sentences. But sentences can be judged inconsistent only in the framework of a theory about their truth conditions. The sentences in question state that persons had in the past or will in the future have certain properties. Any solution to the mentalist's problem will then be a theory about the truth conditions of such sentences, which shows either that the

particular sentences in question are consistent or that the mentalist is not committed to them.

The method I shall use, to analyze alternatives, is to state the truth conditions of sentences about past and future properties of persons, in terms of statements about the properties of person-stages and the temporal-unity relation for persons, which I shall refer to as "R." It turns out that, even if we agree upon the analysis, of the unity relation and upon the properties of the various person-stages in our example, there are still alternatives as to the account we give of a person having a property at a time. It is my intention to consider these alternatives, and to argue that one of them solves the mentalist's problem.

I need first to explain, however, under what conditions a person-stage has a property. To do this, I must first distinguish between basic and nonbasic properties. A person's basic properties, at any time, are those properties which he has in virtue of events that occur at that time. His nonbasic properties are those which he has wholly or partly in virtue of events that occur at other times. If a person is now in room 100, but in a few minutes will be in room 102, then he has both the properties *being in room 100* and *being about to be in room 102*. The first is basic, the second nonbasic.

Let '*P*' designate a basic property. Then a person-stage *x,* which occurs at time *t,* satisfies the conditions for having *P* if and only if every person of which *x* is a stage satisfies the conditions for having *P* at *t*. Alternatively, *x* has *P* if and only if "This person has *P*," uttered while pointing to *x,* is true.

This method of assigning properties to person-stages does not presuppose a prior understanding of personal identity-of what a person is. The conditions under which an ostensively identified person has a basic property may be known or stated without knowing or stating the conditions under which a person will have or has had that property. This is the point that was made in the discussion of Alf and table identity. Alf knew that every table before him was green, although he did not know whether the table that was brown a moment before

was before him, and did not even know under what conditions that would be true.

Without the distinction between basic and nonbasic properties, the method of assigning properties to person-stages would be circular. In order to assign a nonbasic property to a person at a given time, one would have to know under what circumstances certain things happened to *that same person* at other times.

I assume that the nonbasic properties that a person has at a given time are a function of the basic properties he has at that and other times. Having made this assumption, I feel free to ignore nonbasic properties in the sequel. The project is to examine accounts of the truth conditions of sentences of the form '*N* has *F* at *t,* where `*N*' names a person, `*F*' designates a basic property, and `*t*' designates a time.

The defense suggested in this section amounts to one theory of this sort. It asserts that we speak what I shall call *the branch language*. Let us say that a set of person-stages is a *branch* if and only if all the members of the set have *R* to one another, and no stage that has *R* to all the members of the set is not a member. Given a mentalist analysis of *R,* all the person-stages thought to be of Jones, plus all the post-operative stages of Smith-Jones form a branch, and all the person-stages thought to be of Jones plus all the post-operative stages of Brown-Jones form another. The set containing all the person-stages in both of these branches is not itself a branch. The view suggested is that the history of a person forms a branch; there is a one-to-one correspondence between persons and branches, the branch of each person containing just his person-stages. To say that a person has a certain property at a certain time is Just to say -that there is a person-stage belonging to that person's branch, which occurs at that time and has that property. The view needn't be that persons are branches, but for the stake of simplicity we shall suppose that that identification is made.

Now suppose that persons acquire names in the following way. Names are assigned to person-stages---say at baptism. The name names the person (branch) of which that person-stage is a member. A sentence

N has F at t

is true if and only if *the* branch named by *N*, that is, *the* branch containing the person-stage to which *N* is assigned, contains a person-stage that occurs at *t* and has property *F*. If there is no such branch-as there would not be if the person-stage to which *N* is assigned is a member of two branches-the sentence is false. A sentence of the form

N is identical with M

is true if and only if the branch containing the person-stage to which *N* is assigned is identical with the branch containing the person-stage to which M is assigned. If there is no unique branch for *N* or M, the sentence is false. The language for which this sketch is correct I shall call *the branch language*. In the response above, the mentalist was supposing that English is the branch language.[9] What are the merits of this view? Is our concept of a person the concept embodied in the branch language? I think not. The mentalist, in adopting this solution, would be leaving the ordinary man far behind; for the ordinary man is not willing to admit that there was not a single person, Jones, before the operation, doing all the things Smith-Jones and Brown-Jones seem to remember doing. Metaphysical considerations also seem to weigh against this view. Consider the possible world just like the world described in section i1, except that Jones dies the day before the operation. In that possible world there is a single person Jones before the operation, even according to the branch language. But before Jones's death there is, by hypothesis, no difference between that possible world and the world described in section 1. Whatever the merits of this last argument, it seems clear that we are reluctant to abandon the principle that each person-stage identifies a person, so that if we assign a name to a person-stage, we cannot but have named a person.

Nevertheless, I think this response suggests a more promising line. The next three sections are devoted to its development.

4. Another Strategy

Can the mentalist use the impropriety of 'Jones' to save himself from self-contradiction, without giving up the view that Jones was a single person before the operation? It seems that he might if he can give sense to the view that 'Jones' was proper before the operation, but improper after. He could then reject (2) and (3):

(2) Smith-Jones is the same person as Jones.

(3) Brown-Jones is the same person as Jones.

on ground of the impropriety of 'Jones', but assert nevertheless (2') and (3'):

(2') Before the operation, Smith-Jones was Jones.

(3') Before the operation, Brown-Jones was Jones.

(2') and (3') answer the reasonable question, "Which of the persons who existed before the operation were these two persons?" They were both the person, Jones. (21) and (31) do not lead directly to the objectionable (4):

(4) Smith-Jones is the same person as Brown-Jones.

They lead only to

(4') Before the operation, Smith-Jones was the same person as Brown-Jones.

But can the mentalist assert (2'), and (3') and (4'), without contradicting himself, given his commitment to (1)?

(1) Smith-Jones is not the same person as Brown-Jones.

At first sight, the prospects for this seem slim. A variety of arguments can be given to show that (1), (2'), and (3') lead, along with certain other things the mentalist wants to say, as surely to self-contradiction as do (1), (2), and (3). The

essential reasoning behind any of these arguments will be something like this. (2') and (3') say that Smith-Jones and Brown-Jones were the same person before the operation. That means that, uttered before the operation, (4) would have expressed a truth: [10]

(4) Smith-Jones is the same person as Brown-Jones.

(Of course, only someone who knew what was going to happen would have bothered to say it.) But from (4) it would follow that everything that was true of Smith-Jones was true of Brown-Jones. But now suppose that after the operation Smith-Jones is in room 102 and Brown-Jones in room 104. Then the mentalist surely wants to say that (5) and (6) expressed truths before the operation:

(5) After the operation, Smith-Jones will be in room 102.

(6) *N*ot-(After the operation Brown-Jones will be in room 102).

But then something, namely, the open sentence 'After the operation, __will be in room 102' was true of Smith-Jones but not true of Brown-Jones. So (4) cannot have been true.

In the rest of this section, I discuss the moves the mentalist must make if he is to evade this argument; these moves are in fact simply consequences of the view that 'Jones' can be proper at one time, improper at another. In the next two sections, I consider whether the mentalist can give an account of what a person is---that is, an alternative to the branch language---that justifies making these moves.

First let us consider what we should say in a case the mentalist might find similar. The definite description, 'the senator from California' is occasionally proper, although usually it is not. Suppose Murphy resigns as senator Saturday, and Tunney is not sworn in as his successor until Tuesday. In the interim, 'the senator from California' is proper, and denotes Cranston. *N*ow, if on Monday we

wanted to say of the unique person who is then the senator from California, that he will be in Washington Tuesday, we might try (7):

(7) The senator from California will be in Washington on Tuesday.

This we could distinguish from (8):

(8) Tuesday, the senator from California will be in Washington.

(7), we might say, requires a person to uniquely fit the description on Monday, and be in Washington on Tuesday; (8) requires that a person both uniquely fit the description and be in Washington on Tuesday. This would not be a report of ordinary usage, but a pardonable regimentation thereof. (7) is true, (8) false. Thus on Monday we could not infer from the truth, then, of (9):

(9) Tuesday, Cranston will be in Washington.

and of (10):

(10) *N*ot-(Tuesday, the senator from California will be in Washington).

to the falsity of (11):

(11) Cranston is the senator from, California.

That is, we could not at any time infer from (9) and (10) the falsity of (12):

(12) Monday, Cranston was the senator from California.

The point is that temporal adverbs have two roles. In initial position, they state that the sentence that follows is true at the time indicated With (12) we can express at any time the proposition that ,we express Monday with (11). Within the predicate, the temporal adverb indicates at what time the subject has the property expressed by the predicate. When the time at which the sentence is true is the time of utterance, no initial adverb is needed; when the time at which the property predicated is to be possessed is the same as the time indicated by the initial adverb, or lack of it, no adverb is called for in the predicate.

The fact that 'the senator from California' can be proper at one time, improper at another, is of course just a special case of the more general fact that

'the senator from California' may denote different objects when used at different times, or in the scope of different temporal adverbs in initial position. Similarly, if we can show that it makes sense for a proper name to be proper at one time, improper at another, that will be a special case of the more general fact that such names may name different entities at different times, or when in the scope of different temporal adverbs in initial position. If so, the argument:

(5) After the operation, Smith-Jones will be in room 102.

(6) *N*ot-(After the operation, Brown-Jones will be in room 102).

Therefore,

(13) *N*ot-(Smith-Jones is the same person as Brown-Jones).

is fallacious. The names 'Smith-Jones' and 'Brown-Jones' do not occur in (13) in the scope of the temporal operator 'After the operation' as they do in (5) and (6). So they cannot be assumed to name the same entities, and so (5) and (6) cannot be seen as establishing that something true of one of the entities named in (13) is not true of the other. All that can be inferred is

(14) After the operation, Smith-Jones is not Brown-Jones. But the mentalist readily admits this; in fact, he insists upon it.

I believe that, by distinguishing between (2) and (3) and (2') and (3'), and distinguishing between the two roles of temporal adverbs, the mentalist can say everything he needs and wants to say about the case in section I without self-contradiction. The latter maneuver blocks the arguments that derive a contradiction from (1), (2'), and (3').

This defense, however, will not be very powerful until we have said more about the relationship between temporal adverbs in initial position and names. It's fairly clear why 'the senator from California' denotes differently in (8) and (12). Intuitively, the temporal adverb completes the definite description, it tells us when the property in question, being a senator from California, is to have

been possessed by the denotation. But it is not clear why a temporal adverb is needed to "complete" the name 'Jones', nor how exactly this works.

In the next two sections I sketch two alternative accounts of our language, each of which provides an explanation of the way in which temporal adverbs and names function, and each of which assigns, to the sentences in question, truth conditions that do not lead the mentalist to inconsistency. The first account I reject; the second, I argue, is essentially correct.

5. *The Person-stage Language*

In discussing the notion of "strict identity" J. J. C. Smart once remarked:

> When ... I say the successful general is the same person as the small boy who stole the apples I mean only that the successful general I see before me is a time slice of the same four-dimensional object of which the small boy stealing apples is an earlier time-slice (Smart, 1959, p. 37) [11]

The intuition behind the branch language was that persons are enduring objects in some way composed of person-stages; although we may always identify one or more person-stages in ostensively identifying a person, the words 'this person' denote not the person-stage occurring at the time, but the larger whole of which he is in some sense a part. But Smart's remarks suggest a radically different theory: we really refer, each time we use a personal name, to a particular person-stage. Persons are just person-stages and not the "four-dimensional" objects these compose. When I say, "the person you danced with last night is the person sitting on the sofa," the 'is' does not express identity, but simply the relation *R*. The sentence says that this relation obtains between two distinct persons, the-girl-you-danced-with-last-night and the-girl-sitting-on-the-sofa. If we use 'is' to express identity, the girl you danced with last night is not the girl sitting on the sofa. But in such contexts., we would use 'is' not in this way, but just to express *R*. In that sense, the one girl is the other. We might object to this theory by pointing out that we say, for instance, that the girl you danced with last night is now on the sofa. How could she be doing anything now, if she

was no more than a person-stage who barely survived the night with you? Here the person-stage theorist can respond that 'the girl I danced with last night is sitting on the sofa' can be understood as an abbreviated version of 'the girl I danced with last night is someone sitting on the sofa', where 'is' again just expresses the relation *R.* Thus the sentence says that a certain dancing person-stage has the relation *R* to a certain sitting person-stage. We might object further that a single name, 'Hilda', names both girls, and names are presumed to stand for single objects. But the person-stage theorist denies the presumption. 'Hilda' is systematically ambiguous; it names different persons at different times, so it is ambiguous, but the persons it names share the name by virtue of having the relation *R* to a certain person(-stage), say, Hilda-being-baptized, and so the name is systematically and coherently used, in such a way that we are easily misled into supposing that it names a single entity.

Thus we can sketch the person-stage language. As with the branch language, each name is assigned to a person-stage. *N*ow, however, instead of supposing that the name then names the branch of which that person-stage is a member, we suppose that it ambiguously names all the person-stages that have *R* to the assigned stage. But the ambiguity is systematic. At any given time of utterance, or within the scope of any temporal adverb, the name will name only those person-stages which occur at the time of utterance, or at the time indicated by the temporal adverb, and have *R* to the assigned stage. If and only if there is exactly one such person-stage at a given time, the name is *proper at that time*.

A sentence of the form

N has F at t

uttered at time *t*', is true if and only if the person-stage named by *N* at t' has *R* to some person-stage that occurs at *t* and has *F*. A sentence of the form

N is identical with M

is true at t' if and only if the person-stage named by *N* at *t*' is identical with the person-stage named by *M* at *P*. A sentence with an initial temporal adverb,

At t', N has F at t

or

At t', N is identical with M

is true if and only if the sentence following the adverb is true when uttered at the time indicated by the adverb.

Thus consider (15) and (16):

(15) Jones will be in room 102 after the operation.

(16) After the operation, Jones will be in room 102.

The first is true, before the operation, if and only if (15TC) is true:

(15TC) The person(-stage) named by 'Jones' before the operation has *R* to some person(-stage) which occurs after the operation and is in room 102.

(We are assuming that 'before the operation' and 'after the operation' pick out definite times.) The second is true if and only if (16TC) is true:

(16TC) The person(-stage) named by 'Jones' after the operation is in room 102.

Given our example, (15) is true, (16) false; for "the person(-stage) named by 'Jones' after the operation" is improper---that is, 'Jones' is improper after the operation---there being two person-stages at that time, *s-j* and *b-j*, which have *R* to Jones-being-baptized.

If we speak the person-stage language, the mentalist is in good shape. The three sentences which the mentalist claims to express truths before the operation but which seemed to lead him into contradiction, are clearly consistent:

(4) Smith-Jones is the same person as Brown-Jones.

(5) After the operation, Smith-Jones will be in room 102.

(6) *N*ot- (after the operation, Brown-Jones will be in room 102).

(4) is true if and only if the person-stage named before the operation by 'Smith-Jones' is the person-stage named before the operation by 'Brown-Jones'; all that can be inferred from (5) and (6) is that the person-stage named after the operation by 'Smith-Jones' is not the person-stage named after the operation by 'Brown-Jones'.

On this theory, it seems that (17)-(20) are all true before the operation:

(17) Jones will be in room 102 after the operation.

(18) Jones will be in room 104 after the operation.

(19) Jones will not be in room 102 after the operation.

(20) Jones will not be in room 104 after the operation.

This means only that (19) and (20) must be carefully distinguished from the negations, of (17) 'and (18), which are false. (19) is true if and only if the person-stage named by 'Jones' has *R* to some person-stage that occurs after the operation and is not in room 102. This complication arises from the complicated nature of the facts, given the example in section 1 and so is hardly an objection to the person-stage language.

Similarly, the person-stage language must distinguish (21):

(21) Jones will be in room 102 after the operation and Jones will be in room 104 after the operation.

from (22):

(22) Jones will be in room 102 and room 104 after the operation.

(21) requires that the person-stage named before the operation by 'Jones' have *R* to some person-stage occurring after the operation who is in room 102 and also have *R* to some person-stage occurring after the operation who is in room 104. But (22) requires that Jones have *R* to a single person-stage occurring after the operation who is in both room 102 and room 104. There is no such person-stage; so (22) is false.

The person-stage language allows the mentalist to say just what he wants about the example of section 1. *N*evertheless, I think it would be a serious mistake to suppose that English is the person-stage language---that our notion of a person is just that of a person-stage.

The person-stage language and the branch language represent two very different ways of looking at the function of sortal terms like `person'. According to the branch language, when we say, "This person will have *F* at *t*," the word 'person' is a part of the referential apparatus of the sentence. Together with the demonstrative, it identifies a certain enduring object, which has property *F* at time t. Such analyses of sortals I call *subject* analyses.

The person-stage language suggests what I shall call an adverb analysis of the function of a sortal. In the sentence, "This person will have *F* at *t*," we are to think of the word 'this' as identifying the subject of the sentence---a person-stage---and the remainder of the sentence as telling how, in what manner, that person-stage will have *F* at t. To be, as we might put it, personally *F* at *t* is not to be a person(-stage) that has *F* at *t*, but to have *R*, the relation of personal identity (now opposed to "strict identity," rather than a restriction of it to the domain of persons), to some person(-stage) that has *F* at *t*. Being personally *F* at *t* is like being married to a janitor; it's not being the janitor, but having a certain intimate relation to someone who is.

The adverb analysis of sortals is radically mistaken. The apparatus that must come with it-that 'is the same as' does not mean *is the same as*, that the little boy stealing apples is strictly speaking not identical with the general before me---seems to be, however consistently it may work out in the end, the progeny of confusion. Usually the confusion takes this line: we think that the general before us is big, but the little boy was small; if they were identical---*strictly identical*---every thing true of the one would be true of the other. So they are not strictly identical. Nevertheless, we say that the general is just the same person as the little boy; so 'is the same person as' must not mean strict identity. This is all

confusion. There is nothing true of the general that is not true of the little boy. They were both small, and neither was a general at that time. The general and the little boy both had the property of being small, neither has it now. If we pick a temporal perspective and stick to it, not ignoring tenses, there is no difficulty. If we choose a timeless perspective, we must build dates into the properties we ascribe. We shall find that both the general and the small boy have the property of (say*) being small in 1920*. Only if we ignore both tenses and dates do we get into trouble, and that is mere carelessness.[12]

It seems, therefore, a mistake for the mentalist to take refuge in the view that we speak the person-stage language.

6. The Lifetime Language

The mentalist cannot take refuge in the theory that English is the branch language, for it allows what cannot be: that before the operation, in talking to Jones, we were not, in a perfectly clear sense, talking to a single person. It violates our linguistic intuitions-what we want to say about our example.

He cannot take refuge in the person-stage language, for it denies what clearly is true: that when I say of someone that he will do such and such, I mean that he will do it. The events in my future are events that will happen to me, and not merely events that will happen to someone else of the same name. The theory that English is the person-stage language violates our semantic intuitions; it gives an unduly complicated account of our language.

Is there any middle ground? Well, what entity is there that meets these two conditions: (i) there is, in a perfectly clear sense, just one of these entities identified by an ostension to Jones before the operation; (ii) everything that is in Jones's future (that is, everything that will happen to Smith-Jones or Brown-Jones) happens to a person-stage belonging to this entity? Clearly, one entity that meets these requirements in the "Y-shaped" structure composed of the branches of both Smith-Jones and Brown-Jones. I shall call any set of person-stages that meets the following condition a lifetime: there is some member in the set such

that all and only members of the set have *R* to that person-stage. The Y-shaped structure, although not a branch is a lifetime; for all person-stages in it have *R* to *j*, the pre-operative stage of Jones. But the two branches that compose the Y-shaped structure are also each lifetimes.

At first sight the suggestion that persons are lifetimes seems quite unpromising, leaving the mentalist worse off than the hypothesis that persons are branches. *F*or the pre-operative stages of Jones being to three lifetimes: the Y-shaped structure and each of its branches. If it was implausible to suppose that Jones was two persons all along, surely it is more implausible by at least a half to suppose that he was three.

But notice that each person-stage does identify a unique lifetime -the lifetime containing all person-stages that have *R* to it. Thus the principle that when we have identified a person-stage we have identified a person, violation of which made the branch language seem implausible, is not violated by the lifetime language.

Let us say that a person-stage *determines* the lifetime it identifies in the way just described-the lifetime containing all person-stages With *R* to it. This is not the *only* way that a person-stage may identify a lifetime. There is another, and the different ways *may*, in bizarre circumstances, lead to different results. *N*otice that, although each person-stage *determines* one and only one lifetime, it may be a member of several. *j*, the pre-operative stage of Jones, *determines* the Y-shaped lifetime. But in addition, it is a member of both branches of the Y, and each of the branches is also a lifetime. *N*either of these is *determined* by *j*, but they both *contain j*.

Now, at any given time *t,* only a certain number of lifetimes will be *determinable*, in the sense that they are determined by some person-stage occurring at that time. Before the operation, neither of the branches are determinable in this, sense: there is no person-stage occurring which has *R* to all

and only their members. The Y-shaped lifetime is similarly not determinable *after* the operation.

Consider the person-stage *b-j*---a post-operative stage of Brown-Jones. *b-j determines* a lifetime, one of the branches of the Y-shaped lifetime, the *b-j branch*. Before the operation, the *b-j* branch is not determinable. *N*evertheless, there *is* a lifetime determinable before the operation that contains *b-j.* There is in fact, one and only one such lifetime-the Y-shaped lifetime. Thus *b-j* can be used to identify the Y-shaped lifetime: it is the unique lifetime, determinable before the operation, that contains *b-j*

For any time *t* and any person-stage *s*, we can speak of *the lifetime identified by s at t*. This description will denote the unique lifetime determinable at *t* which contains s, if there is such; otherwise it is improper. In normal circumstances, *if* there is a lifetime *identified by s at t,* it will just be the lifetime *determined by s*. But in bizarre circumstances, such as those at issue in this paper, this identity will not hold. The lifetime identified by *b-j* before the operation is not the lifetime determined by *b-j*, but the lifetime determined by *j.* In normal circumstances, if s is contained in any lifetime determinable at *t,* the lifetime determined by s will be determinable at t. But, in bizarre cases, this will not be so: the lifetime determined by i is not determinable after the operation, but *j* is contained in a lifetime determinable at that time-as a matter of fact, in two; for both the *s-j* branch and the *b-j* branch are lifetimes.

Given these notions, we can sketch an account of a final and I think satisfactory refuge for the mentalist, the theory that English is *a lifetime language*. The lifetime language embodies a subject analysis of sortals. A person has a property *F* at *t* if and only if his lifetime contains a person-stage that occurs at *t* and has *F*. But the lifetime language also retains a systematic ambiguity of personal names reminiscent of the person-stage language. Indeed, it assigns exactly the same truth conditions to the relevant sentences as does the person-

stage language. The lifetime language justifies the line of defense drawn in section 4.

Again we assume that names are directly assigned to person-stages. Where *u* is the person-stage to which *N* is assigned, the lifetime determined by *u* is *the primary referent* of *N*. But *N* will also have a number of *secondary referents*, which probably will but may not be identical with its primary referent. *The secondary referent of N at time t* is the lifetime identified by u at t. If u does not identify a lifetime at *t*---if there is no unique person-stage at *t* with *R* to *u*---then *N* has no secondary referent at *t,* and *N* is *improper* at *t*. Thus, in the ordinary case, the secondary referents of *N* and its primary referent will be one. But in unusual cases, they will not.

A sentence of the form

N has F at t

uttered at time t', is true if and only if *the* secondary referent of *N* at t' contains a person-stage that occurs at *t* and has *F*. A sentence of the form

N is identical with M

is true at t' if and only if the secondary referent of *N* at t' is identical with the secondary referent of M at t'. A sentence with an initial temporal adverb,

At t', N has F at t.

or

At t' N is identical with M.

is true if and only if the sentence following the temporal adverb is true when uttered at the time indicated by the temporal adverb.

Thus consider:

(15) Jones will be in room 102 after the operation.

(16) After the operation, Jones will be in room 102.

(15) is true before the operation if and only if (15TC') is true:

(I5TC') The secondary referent of 'Jones' before the operation contains a person-stage that occurs after the operation and is in room 102.

(16) is true if and only if (16TC') is true:

(16TC') The secondary referent of "Jones" after the operation is in room 102.

(15) is true, (16) false; for 'Jones' has no secondary referent after the operation.

The sentences (4), (5), and (6), to the truth of which before the operation the mentalist is committed:

(4) Smith-Jones is the same person as Brown-Jones.

(5) After the operation, Smith-Jones will be in room 102.

(6) *N*ot-(After the operation, Brown-Jones will be in room 102).

are consistent. (4) is true if and only if the secondary referents of 'Brown-Jones' and 'Smith-Jones' before the operation are one; all that can be inferred from (5) and (6) is that the secondary referents of 'Brown-Jones' and 'Smith-Jones' after the operation are distinct.

As before, (17)-(20):

(17) Jones will be in room 102 after the operation.

(18) Jones will be in room 104 after the operation

(19) Jones will not be in room 102 after the operation.

(20) Jones will not be in room 104 after the operation.

all come out true before the operation. Again we must distinguish the negations of (17) and (18), which are false, from (19) and (20). (19) is true if and only if the secondary referent of 'Jones' before the operation contains a person-stage that occurs after the operation and is not in room 102.

As before, we must distinguish (21) from (22):

(21) Jones will be in room 102 after the operation and Jones will be in room 104 after the operation.

(22) Jones will be in room 102 and room 104 after the operation.

(21) requires that the secondary referent of 'Jones' before the operation contain a person-stage occurring after the operation which is in room 102 and contain a person-stage occurring after the operation which is in room 104. (21) is true. But (22) requires that the secondary referent of 'Jones' before the operation contain a single person-stage occurring after the operation which is both in room 102 and in room 104. (22) is false.

Now what is the answer to the fair question, "How many persons were there in Jones's room (room 100) before the operation?"?

On the one hand , "one" seems to be the correct answer; for there was only a single person, Jones, in the room. On the other hand, Smith-Jones and Brown-Jones were both there; so "two" seems like the correct answer. But, after all, three lifetimes (the Smith-Jones branch, the Brown-Jones branch, and the Y-shaped structure) contain the person-stage in room 100; so the answer would appear to be "three."

All three answers are correct-but they are answers, to different, and distinguishable, questions. Consider open sentences of the form

x has F at t

A person satisfies such an open sentence *at a time. z* satisfies the given open sentence at time t', if and only if z is identifiable at t' and contains a person-stage that occurs at t and has F. The open sentence

x is in room 100, before the operation

is satisfied by exactly one person before the operation; so the answer to the question, "How many persons are in room 100,?" asked before the operation (and to the question, "Before the operation, how many persons were in room 100?" asked at any time), is "one." After the operation, two distinct persons satisfy the

open sentence; so the answer to the question asked at that time (and to the question, "After the operation, how many persons were in room 100, before the operation?" asked at any time) is "two." There is no one time at which the correct answer to the question, "How many persons were in room 100 before the operation?" is "three." But the lifetime language will have to allow us to make assertions such as

At some time, Brown-Jones was in room 100 before the operation.

which will be true just in case there is some time *t* such that

At t, Brown-Jones was in room 100 before the operation.

is true. The open sentence

At some time, x was in room 100 before the operation.

will be satisfied by person *z* if and only if *z* is identifiable at some time and contains a person-stage occurring before the operation in room 100. This open sentence is satisfied by three persons, and so the answer to "At any time, how many persons were in room 100 before the operation?" is "three."

Can these three persons be identified within the lifetime language? *N*ot simply by the names 'Smith-Jones', 'Brown-Jones', and 'Jones'; for these identify persons only in conjunction with temporal adverbs or times of utterance. *N*ot by definite descriptions, of the form

the x such that x has F at t

for these too may denote different persons at different times or in the scope of different temporal adverbs. We can identify them, however, by use of definite descriptions built up from more complicated open sentences. A definite description of the form

the x such that at t1, x has F at t

denotes the person, if any, who is determinable at *t,* and contains a person-stage that occurs at *t* and has *F*. And it denotes this person at any time. Thus, the three characters in our story may be identified as:

the person *x,* such that, before the operation, *x* was in room 100 before the operation

the person *x,* such that, after the operation, *x* was in room 102 after the operation

the person *x* such that, after the operation, *x* was in room 104 after the operation

These three persons, are distinct, and never were identical-and nothing I have said denies that, nor do (2') and (3').

What of fusions? In a convincing case of person fusion, in which a single person-stage has *R* to two simultaneous but distinct antecedent person-stages, I would argue that we should say the survivor was both of his precursors and had done everything each of them had done. The lifetime language gives this result. In cases of combined fusion and fission that I have considered, the lifetime language seems to remain adequate.

Thus the suggestion that persons are lifetimes (or at any rate entities correlated one-to-one with lifetimes) proves satisfactory. In any normal case, the lifetimes are just branches. This explains our propensity for making inferences valid in the branch language but not quite valid in the lifetime language, as when we infer that, tomorrow Smith will be in Dubuque from the fact that Smith will be in Dubuque tomorrow. Further, the lifetime language., like the person-stage language but unlike the branch language, allows us to assign names to persons with confidence, without fear that future events will present us with the choice of contradicting ourselves or deeming many statements that seemed to be true false because of unforeseen improprieties. Whenever we isolate a person-stage we have isolated a person, namely, the person (lifetime) determined by that person-stage. Finally, the lifetime language, like the branch language but unlike the person-stage language, allows us to mean by our words what we think we mean, to wit, identity by 'is the same as' and so forth. It embodies a subject analysis of sortals. The lifetime language, then---or, more precisely, the theory that English is

a lifetime language---satisfies both our linguistic and our semantic intuitions. Moreover, it has a certain naturalness. Who is Jones? The person who did all the things in Jones's past and will do all the things in his future. Jones's future includes both Brown-Jones's and Smith-Jones's, for it is true of Jones that he will do all the things they do. This is what the mentalist wants to say, and the lifetime language allows him to say it.

As was pointed out, the lifetime language and the person-stage language do not differ in the truth conditions assigned to sentences, but do differ in the assignment of entities to the parts of the sentence. In both we have a rather elaborate system of identification. At each time, an entity is identified by a person-stage u or a name N assigned to it. In the person-stage language the entity is the unique person-stage occurring at that time with R to u. In the lifetime language, the entity is the unique lifetime determinable at that time and containing u. The difference is that, in the lifetime language, the entities identified by u at any two times when it identifies anything at all will very probably be the same; in the person-stage language they will certainly be different. To the extent that there is no branching, the lifetime language is more economical than the person-stage language, in having fewer entities in its domain of discourse.

7. Conclusion

In speaking of a case of a dividing self, Jonathan Bennett has remarked, "the fission of a mind, if it could happen, would involve the concept of identity in the same way (whatever that is) as the fission of an ameba (Bennett, 1967, p. 112)."

This remark seems to me to conceal a mistake. It may be that, if selves divided as often as cells or amoebas divide, we would develop a concept for dealing with the phenomena our concept of a person now deals with that resembles, in matters of individuation and identification, the concept of a cell or an ameba. In a language embodying such a concept, it would apparently be correct to say that Jones died, and two new "persons" were born, at the time of

the operation (See Carnap (1958) Ch. G). [13]Whether we would develop such a concept is, I suppose, a matter for speculative linguistics. It might be rational for us to do so in those circumstances. That is a difficult philosophical question, difficult in part because of the importance of memory in questions about persons. I have not dealt with either of these questions directly, although what I have said may have some relevance to them. I have dealt with the question whether the mentalist account of the concept we have can survive an objection based on what appears to be logically possible. I claim it can. Whether the concept itself could survive, would survive, or should survive, if that logical possibility became commonplace in actuality, is another question.[14]

Our "choice" of a language reflects certain pervasive empirical facts, and the transitivity of *R* is one such. A tribe that spoke the person-stage language might rationally, for the sake of economy, decide to adopt the lifetime language, if empirical facts were such (as they are) that in doing so they would, for all practical purposes, be speaking the branch language. But if dividing (or fusing) selves were commonplace, not only in the minds of the philosopher members of the tribe but in reality, there would be little to recommend the lifetime language over the person-stage language. The comparative economy of the lifetime language is an empirical matter. How often selves would have to divide, before its retention became more trouble than it was worth, is a matter on which I shall not speculate.

Given the nature of our world, the lifetime language shares the advantages of both the branch language and the person-stage language. Insofar as *R* remains transitive, it gives us the same economy as the branch language. But should there be counterinstances to the transitivity of *R,* the branch language would let us down. If we spoke it, we would have to check deep into the past and future to assign a name with confidence. We would have, as it were, no spot check for identity. We could not assume that we could tell whether *A* and *B* were identical merely by isolating them (him) at a particular time and conducting an

examination. Here the lifetime language shares the advantages of the person-stage language. In the person-stage language one cannot go wrong in assigning names; if you have isolated a person-stage, you have isolated a person. The same is true of the lifetime language, for every person-stage determines a lifetime.

The evidence that the lifetime language is a correct approximation of that portion of English in which the mentalist describes the case with which we began is: (i) *R* (some mentalist analysis of the relation between person-stages that are stages of a single person) seems to give the correct analysis of personal identity; (ii) the case described in section I is conceivable; (iii) speakers of English without an overdeveloped fear of self-contradiction are perfectly willing to describe this case by (1), (2') and (3') and unwilling to swallow the story that there were two persons all along; (iv) a subject analysis of sortals is more natural and economical than an adverb analysis. At one point Arthur Prior was willing to abandon the transitivity of identity itself in order to preserve the point of view of (i) through (iv).[15] I believe the [1]solution I have outlined is much less drastic. If we want the economy of the branch language and the nominal security of the person-stage language we should speak the lifetime language. Is it so surprising that we do?

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[1] I am heavily indebted to many persons for comments on earlier versions of this paper, especially David Lewis, John Vickers, David Kaplan, John Bennett, Richard Rodewald, Sydney Shoemaker, and Jaegwon Kim.

[2] I first heard this case described by Sydney Shoemaker in a seminar. Shoemaker discusses a body-transplant case in his book, *Self-knowledge and Self-identity* (1963). Body transplants may some day be medically as well as logically possible. See the remarks of Christian Barnard quoted in *N*ewsweek, December 23, 1968, p. 46.

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[3] Locke discusses personal identity in chapter XVII of book ii of his *Essay concerning Human Understanding* (1694). He says at one point, "…as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person…(p. 39)."

[4] In "The Soul," (1962), Quinton argues that persons are "'fundamentally" souls, a soul being a series of mental states, Roughly, two soul-phases belong to the same soul if they are "connected by a continuous character and memory path" (p. 59). (Quinton gives a more precise account of this relation.)

[5] Grice gives his analysis in "Personal Identity," (1941), in terms of the notion of a "total temporary state" which is composed of "'all the experiences any one person is having at a given time" (p. 86). Grice's analysis (pp. 87-88) is equivalent to the following. Let *Sxy* be the relation between total temporary states:

> x contains an experience such that, given certain conditions, y would contain a memory of it.

Then two total temporary states belong to the same person if and only if - they are both members of a set closed under the relation *Sxy* v *Syx*. This analysis gives the result that both Smith-Jones and Brown-Jones would have had all of Jones's experiences. Unfortunately, it also gives the result that Smith-JONES and Brown-Jones are one. It could be amended to avoid this unfortunate result by requiring (as Grice's preliminary analyses seem to) that no two members of the set in question occur at the same time.

[6] One such is that developed by Sydney Shoemaker in (1970a). Shoemaker would deny that either Brown-Jones or Smith-Jones was Jones (see p. 278n). At least part of Shoemaker's motivation for denying this is his belief that it involves "'modifying the usual account of the logical features of identity" (279 n). That I deny; this paper is my argument for that denial. Shoemaker's analysis builds into every claim of the form "This is the person who did A" the negative-existential claim that no one else in the entire universe has the criterial relation to the doer of A, and this seems implausible to me. In (1970b) Shoemaker argues that this objection [which was made by David Wiggins in (1967) does not apply if the criterial relation requires a causal chain, for 'it can be established without a survey of the entire universe whether some other person's memories are connected . . . by the same sort of causal chain"' (543). But it's not the difficulty of the survey that is the point. Rather, it is that the question whether Smith-Jones brushed his teeth before the operation shouldn't depend on whether Brown-Jones lives or dies.

[7] For Quinton (1962) the relation would be the relation of indirect continuity, with the understanding that each soul-phase is indirectly continuous with itself. For Grice (1941) as

amended in note 18, it is the relation of co-membership in an appropriate set closed under *Sky* v *Syx*. In both cases, the analysis is stated in a format not precisely like the one I have suggested; Quinton talks about soul-phases, and Grice about total temporary states, rather than person-stages. I shall not attempt to discuss the comparative merits of these approaches; the points I make in this paper could be made in the terminology of either Grice or Quinton.

[8] Richard M. Gale (1969) argues persuasively that (as I would put it) the temporal-unity relation for human bodies is not logically transitive either, and so Williams' objection is not a good argument in favor of a bodily continuity analysis of personal identity. I tend to agree, but this does not solve the problem of the dividing self; it merely enlarges the number of philosophers who should be bothered by it.

[9] I have not, of course, given anything like a complete account of the branch language, nor do I of the person-stage language or the lifetime language, which are described later, but I believe I have said enough to make the solution advanced in this paper to the problem at hand clear.

Schematic letters such as '*N*', '*F*', and '*t*' are used in displayed sentences as metalinguistic variables for the appropriate classes of object-language expressions; such displayed sentences should be regarded as in quasi-quotation. Elsewhere these same letters are sometimes used as object-language variables for the appropriate entities; thus I say "The property *F*" and "the time *t*" rather than "the property expressed by *F*" and "the time designated by *t*."

[10] I take it that sentences express propositions at times, and some sentences express different propositions at different times. When I say a sentence is true at a time or true when uttered at a time, I mean that the proposition the sentence would express at that time is true.

[11] To attribute to Smart exactly the theory embodied in the person-stage language as I develop it would be unfair; he remarks that he is permitting himself to "speak loosely."

[12] For discussions of the relation between identity and the unity relation (as I have called it) or gen-identity (as Carnap calls a similar notion), see Gottlob Frege (1884/1960), sec. 62ff.; Rudolf Carnap, (1958), ch. G; and W. V. Quine, (1953), pp. 65ff. For a criticism of the Frege view, see Peter Geach (1967). I discuss Geach's views in Essay 1.

[13] See Carnap, op. cit., chapter H.

[14] Derek Parfit, (1971) argues that a single instance of self-division is more than our ordinary concept of a person can handle. This I have in effect argued against. Parfit argues interestingly that consideration of such cases, and other even more bizarre possibilities, leads us to see that our concept of a person is unimportant and should perhaps be replaced with other "'ways of

thinking." I would rather say our concept of a person is important in large part because our world does not realize such possibilities.

[15] Prior discussed this problem in two places. In "Opposite Number" (1957) he advocated abandoning the principle that '*P*' and '*n*-moments ago it was true that *n*-moments from then, *P*' are logically equivalent. In "Time, Existence, and Identity," (1956) he pointed out the inadequacy of his earlier suggestion, and suggested abandoning the transitivity of identity. I hope the reader will agree without extended argument that a less drastic solution than this is desirable. My solution has some resemblance to one suggested but summarily rejected by Prior in "Opposite Number," p. 199.

References

Carnap, Rudolf, 1967. *The Logical Structure of the World.* Berkeley: University of California Press.

Carnap, Rudolf, 1958. *Introduction to Symbolic Logic and Its Applications*. New York: Dover.

Flew, Anthony, 1951. Locke and the Problem of Personal Identity. *Philosophy* (January 1951): 53--68.

Frege, Gottlob, 1884/1960. *Grundlagen der Arithmetik*. Breslau, 1884; trans. by J.L. Austin. *The Foundations of Arithmetic*, 2nd ed. New York: Northwestern University Press. 1960.

Gale, Richard, 1969. A Note on Personal Identity and Bodily Continuity. *Analysis* XXIX (1969): 193--195.

Geach, Peter, 1967. Identity. *Review of Metaphysics* vol. 21, no.1 (1967): 3--12.

Grice, H.P., 1941. Personal Identity. *Mind* 50 (1941). Reprinted in Perry, 1975: 73--95.

Locke, John, 1694. Of Identity and Diversity. Book II, Chapter 27 of Locke, 1694E. Reprinted in Perry, 1975: 33--52.

Parfit, Derek, 1971. Personal Identity. *Philosophical Review* LXXX (1971). Reprinted in Perry, 1975: 199--223.

Parfit, Derek, 1973. Later Selves and Moral Principles. In Alan Montefiore (ed.), *Philosophy and Personal Relations*. London: Routledge and Kegan Paul. 1973.

Prior, Arthur, 1966. Time, Existence and Identity. *Proceedings of the Aristotelian Society* (1965/6): 183--192.

Prior, Arthur, 1957. Opposite Number. *Review of Metaphysics* (1957): 196--201.

Quine, W.V., 1953. *From a Logical Point of View*. Cambridge, Mass.: Harvard.

Quinton, A., 1962. The Soul. *Journal of Philosophy* 59 (1962). Reprinted in Perry, 1975: 53--72.

Shoemaker, Sydney, 1970a. Persons and Their Pasts. *American Philosophical Quarterly* (1970): 269--285.

Wiggins, David, 1967. *Identity and Spatio-Temporal Continuity*. Oxford: Blackwells.

Williams, Bernard, 1957. Personal Identity and Individuation. *Proceedings of the Aristotelian Society* (1956-57).