

Split brain cases & materialist views of persons

Last time we discussed Parfit's argument against standard views of personal identity, based on the possibility of teletransportation.

Today we'll be discussing his second argument, based on phenomena involving split-brain patients, and also presenting a materialist alternative to the dualist and psychological theories of persons on which we've been focusing so far.

But first, a brief discussion of the final draft of your paper, which is due this Friday in sections.

## Final draft of first paper

Due: discussion sections, Friday, September 19

In this paper, you must do three things:

1. In your own words, present what you think is the strongest version of one of Descartes' arguments for dualism in valid premise/conclusion form (i.e., with numbered premises and a conclusion).
2. In one paragraph, make what you think is the best objection to what you think is the weakest of the premises used in your version of the argument.
3. In a further paragraph, do your best to reply, on Descartes' behalf, to the objection you just raised. You may do this in one of two ways: (i) give a direct reply to the objection by saying why, despite the objection, the premise in question is plausible; (ii) reformulate Descartes' argument (again, in premise/conclusion form) in a way that avoids the objection.

You should hand in your first draft, with your TA's comments, with the paper.

This will be graded, and is worth 5% of your final grade.

Last time, we distinguished two responses to Parfit's example of teletransportation:

1. At most one of Earth-Parfit and Mars-Parfit is identical to Original-Parfit: either one is, or neither is. We might sum up this "commonsense" view of persons by saying that personal identity is always an all-or-nothing matter; any person either is you, or is not you --- there's no middle ground.
2. Strictly speaking, no person at one time is identical to a person at any other time. Personal identity (and hence survival over time) is just a matter of degree of similarity and physical and psychological connectedness. Since Earth-Parfit and Mars-Parfit are both psychologically connected to some extent with Original-Parfit, they are each to some extent that same person as Original-Parfit. And that's all that there is to say -- there's no further fact about whether one or the other *really is* Original-Parfit.

We saw last time that it is difficult for the memory/psychological theorist to hold on to the commonsense view, and that Parfit adopts the second view.

But this view can seem crazy; if it is true, then almost all of our normal beliefs about ourselves and our identity over time are wrong. For example, it seems to imply that, in at least some cases, there's no fact of the matter about when you die. We are strongly inclined to believe that there must be some fact of the matter about this sort of thing.

Parfit thinks that thought-experiments involving teletransportation help to undermine commonsense views of persons. But he also thinks that there are real-world phenomena which do the same.

These are examples of patients whose corpus callosum has been severed. Here's an initial, simplified description of such a case:

**IT WAS THE split-brain cases which drew me into philosophy. Our knowledge of these cases depends on the results of various psychological tests, as described by Donald MacKay.<sup>1</sup> These tests made use of two facts. We control each of our arms, and see what is in each half of our visual fields, with only one of our hemispheres. When someone's hemispheres have been disconnected, psychologists can thus present to this person two different written questions in the two halves of his visual field, and can receive two different answers written by this person's two hands.**

**Here is a simplified imaginary version of the kind of evidence that such tests provide. One of these people looks fixedly at the centre of a wide screen, whose left half is red and right half is blue. On each half in a darker shade are the words, "How many colours can you see?" With both hands the person writes, "Only one." The words are now changed to read, "Which is the only colour that you can see?" With one of his hands the person writes "Red," with the other he writes "Blue."**

(This is in important respects a simplification of the experimental data; for those who want a less simplified discussion, see the optional reading on the course web site by Nagel, "Brain bisection and the unity of consciousness.")

Even more dramatic examples result from consideration of speech, which is controlled by the brain's left hemisphere. Here are some examples. (The descriptions are from the Nagel article.)

If a concealed object is placed in the left hand and the person is asked to guess what it is, wrong guesses will elicit an annoyed frown, since the right hemisphere, which receives the tactile information, also hears the answers. If the speaking hemisphere should guess correctly, the result is a smile. A smell fed to the right nostril (which stimulates the right hemisphere) will elicit a verbal denial that the subject smells anything, but if asked to point with the left hand at a corresponding object he will succeed in picking out e.g. a clove of garlic, protesting all the while that he smells absolutely nothing, so how can he possibly point to what he smells.

Even more dramatic examples result from consideration of speech, which is controlled by the brain's left hemisphere. Here are some examples. (The descriptions are from the Nagel article.)

One particularly poignant example of conflict between the hemispheres is as follows. A pipe is placed out of sight in the patient's left hand, and he is then asked to write with his left hand what he was holding. Very laboriously and heavily, the left hand writes the letters P and I. Then suddenly the writing speeds up and becomes lighter, the I is converted to an E, and the word is completed as PENCIL. Evidently the left hemisphere has made a guess based on the appearance of the first two letters, and has interfered, with ipsilateral control. But then the right hemisphere takes over control of the hand again, heavily crosses out the letters ENCIL, and draws a crude picture of a pipe.<sup>6</sup>

How do these split brain cases challenge the commonsense view of persons?

In such cases -- think of the simple blue/red case -- it seems that there are two separate streams of consciousness. But it seems that one person can't have two separate streams of consciousness, at least of this sort. So it seems that, in the case of split brain patients, there are (at least) two persons inhabiting a single body.

But now imagine a surgery to repair the corpus callosum. Surely such a surgery needn't involve ending the life of a person. But then if there were (at least) two persons before the surgery, there must be (at least) two persons afterward. (Similarly, it is odd to think that severing someone's corpus callosum involves the creation of a person.)

But you and I are just like a split-brain patient after such surgery (or before having their corpus callosum severed). So if there are (at least) two persons inhabiting the body of the split brain patient, the same is true of us.

But this is absurd. What these cases show, according to Parfit, is that our concept of a person is inherently unstable; any way of "counting persons" in these cases leads to crazy results. We should conclude that all there really are are experiences with certain connections between them. Our talk about persons is just a convenient way of grouping these experiences together, but doesn't really correspond to anything in reality. (Compare this to Parfit's example of clubs.)

How should someone who does not want to take this view of persons respond?



This argument, like the example of teletransportation, is mainly directed at psychological views of the person.

But suppose that you think that persons are material things. Then it might seem that neither the teletransportation cases nor the split-brain cases should challenge our commonsense view that personal identity, and survival, is always an all-or-nothing matter.

Why is this?

But the materialist view of persons (also called “physicalism”, or “the physicalist view of persons”) also faces some difficult challenges. Here is one, as expressed by Peter van Inwagen:

. If I am, as the physicalists say, a living organism or a part of one, then I have “lost” almost all of the atoms that composed me ten years ago and I am now made almost entirely of atoms that existed ten years ago but were then parts of other things or parts of nothing at all. It is true that I have the same brain-cells I had ten years ago (minus those that have died in the interval), but each of those brain-cells is now made of atoms that were not parts of it ten years ago.

If I am a physical thing, therefore, I am made of different matter from the matter that composed the physical thing that bore the name ‘Peter van Inwagen’ ten years ago. The physicalist is forced to say that all of our statements that imply that I existed ten years ago must be, strictly speaking, false.

What is the problem here?

The problem for the physicalist which arises here is the following assumption:

If  $x$  is a physical thing which exists at some time  $t$ , and  $y$  is a physical thing which exists at some later time  $t^*$ , then if  $x$  has a material part which  $y$  does not,  $x \neq y$

This can look pretty plausible. Consider, for example, a physical thing such as the water in a glass. Call this mass of water  $W$ . Suppose you take a drink. After you take the drink, is  $W$  still in your glass? The answer seems to be 'No.'  $W$  used to be in your glass, but now  $W$  is divided between some water in your glass and some water in your mouth.

Let's call the quantity of water in your glass after you take a drink  $W^-$ . The case described above seems to show that  $W \neq W^-$ . After all, we can argue as follows:

1.  $W$  is not completely contained in the glass after I take the drink.
2.  $W^-$  is completely contained in the glass after I take the drink.
3. If  $x$  and  $y$  have different properties at some one time (i.e., if there is some way that  $x$  is and  $y$  is not, or vice versa), then  $x \neq y$ .

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C.  $W \neq W^-$  (1,2,3)

Premise (3) is sometimes called "Leibniz's Law." Is it plausible?

If this line of reasoning is correct, it seems to show that there are **some** physical things, like quantities of water, which cannot survive the loss of a single material part. If this were true of **all** physical things, then the physicalist would be unable to explain the fact that persons typically exist for more than very short intervals.

But is there any reason to think that this is true of all physical things?

Eric Olson, in the reading for today, claims that it is not.

According to Olson, among the material things which exist are *organisms*, and it is to this category that human beings belong. And, he says, it is a commonplace of biology that organisms can exist at different times despite being composed of different material at those times. So organisms are not like quantities of water. He gives the following example:

**What does it take for an organism, or at any rate a human animal, to persist through time? Consider Tim and Tom, who are ordinary human organisms until the day they wander into a philosophical thought experiment. The philosophers cut off Tim's right arm and graft it onto the place where Tom's right arm used to be, and arrange things so that Tom's metabolism assimilates the new part (the arm does not decay, is not attacked by Tom's immune system, etc.). Is the resulting human organism—the one made up of Tim's right arm and Tom's "right-arm-complement"—Tim or Tom? Or is it some third animal? It is obvious, I think, that the resulting animal is Tom. You do not destroy an animal simply by cutting off an arm (though this might cause death indirectly: the animal might bleed to death or get gangrene as a result of the amputation). Nor do we pare an animal down to a mere arm by separating that arm from the rest of the animal. When you cut off an animal's arm, that animal survives as the arm-complement, not as the detached arm. Neither does the animal become a spatially scattered object, consisting of a detached arm and a detached "arm-complement".**

But, even if an organism can lose an arm while continuing to exist, it's surely not possible for an organism to continue to exist despite the destruction of *all* of its physical parts. So where do we draw the line? What sorts of physical changes can an organism undergo while continuing to be the same organism?

The materialist can say a number of different things here. Here is Olson's answer:

**All of this suggests that an animal, or for that matter any organism, persists just in case its capacity to direct those vital functions that keep it biologically alive is not disrupted. We could make this into a general account of the identity of animals along something like these lines:**

**If  $x$  is an animal at  $t$  and  $y$  exists at  $t^*$ ,  $x=y$  if and only if the vital functions that  $y$  has at  $t^*$  are causally continuous in the appropriate way with those that  $x$  has at  $t$ .**

The vital functions of human animals are directed by the brain, and in particular by the cerebrum. So if Olson's view of human animals is correct, you continue to exist so long as your cerebrum's ability to direct your vital functions continues. In this sense, you are your cerebrum.

The flip side of this is that you cease to exist as soon as your cerebrum's ability to direct your vital functions is interrupted. One consequence of this is that "cerebrum replacement surgery" is a sort of surgery in which it is in principle impossible not to kill the patient. It isn't just impossible for us to carry out with current medical technology; if Olson is right, no matter how quick and easy cerebrum replacement might become, it is impossible for any person to survive this procedure. Is this plausible? (See §V of Olson's article for discussion.)

One further question about Olson's sort of physicalist view of persons is: Is this sort of view compatible with the possibility of you continuing to exist after your death? Many people assume that it is not. If you are interested in this question, for a defense of the idea that materialist views of persons are not only consistent with the possibility of life after death but fit the Christian doctrine of the resurrection of the dead as well as dualism, see the optional reading for today: Peter van Inwagen, "Dualism and materialism: Athens and Jerusalem?"