Fission and survival

We've spent a lot of time in this section of course on the survival question. While we've considered a number of different answers to that question, we've so been assuming that questions about **whether** one survives are, and should be, of great importance.

Today we're going to look more closely at that assumptions, in two ways.

First, we're going to look at a series of cases which challenge some basic assumptions about survival.

Second, we're going to look at what our discussion of the survival question tells us about the possibility of life after death.

The first kind of case can be approached by looking at cases of teletransportation. Here's Derek Parfit's description of such a case from the reading.

"I enter the Teletransporter. I have been to Mars before, but only by the old method, a space-ship journey taking several weeks. This machine will send me at the speed of light. I merely have to press the green button, Like others, I am nervous. Will it work? I remind myself what I have been told to expect. When I press the button, I shall lose consciousness, and then wake up at what seems a moment later. In fact I shall have been unconscious for about an hour. The Scanner here on earth will destroy my brain and body, while recording the exact states of all of my cells. It will then transmit this information by radio. Traveling at the speed of light, the message will take three minutes to reach the Replicator on Mars. This will then create, out of new matter, a brain and body exactly like mine. It will be in this body that I shall wake up.

Though I believe that this will happen, I still hesitate. But then I remember seeing my wife grin when, at breakfast today, I revealed my nervousness. As she reminded me, she has been often teletransported, and there is nothing wrong with *her*. I press the button. As expected, I lose and seem at once to regain consciousness, but in a different cubicle. Examining my new body, I find no change at all. Even the cut on my upper lip, from this morning's shave, is still there."

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This kind of case is familiar from *Star Trek* and plenty of other science fiction stories.

Could you survive 'travel' by teletransportation? What would proponents of various answers to the survival question say about this?

At least from the point of view of psychological answers to the survival question, this way of traveling to Mars looks pretty unproblematic.

But a continuation of Parfit's case shows that it is not as unproblematic as it at first appears.

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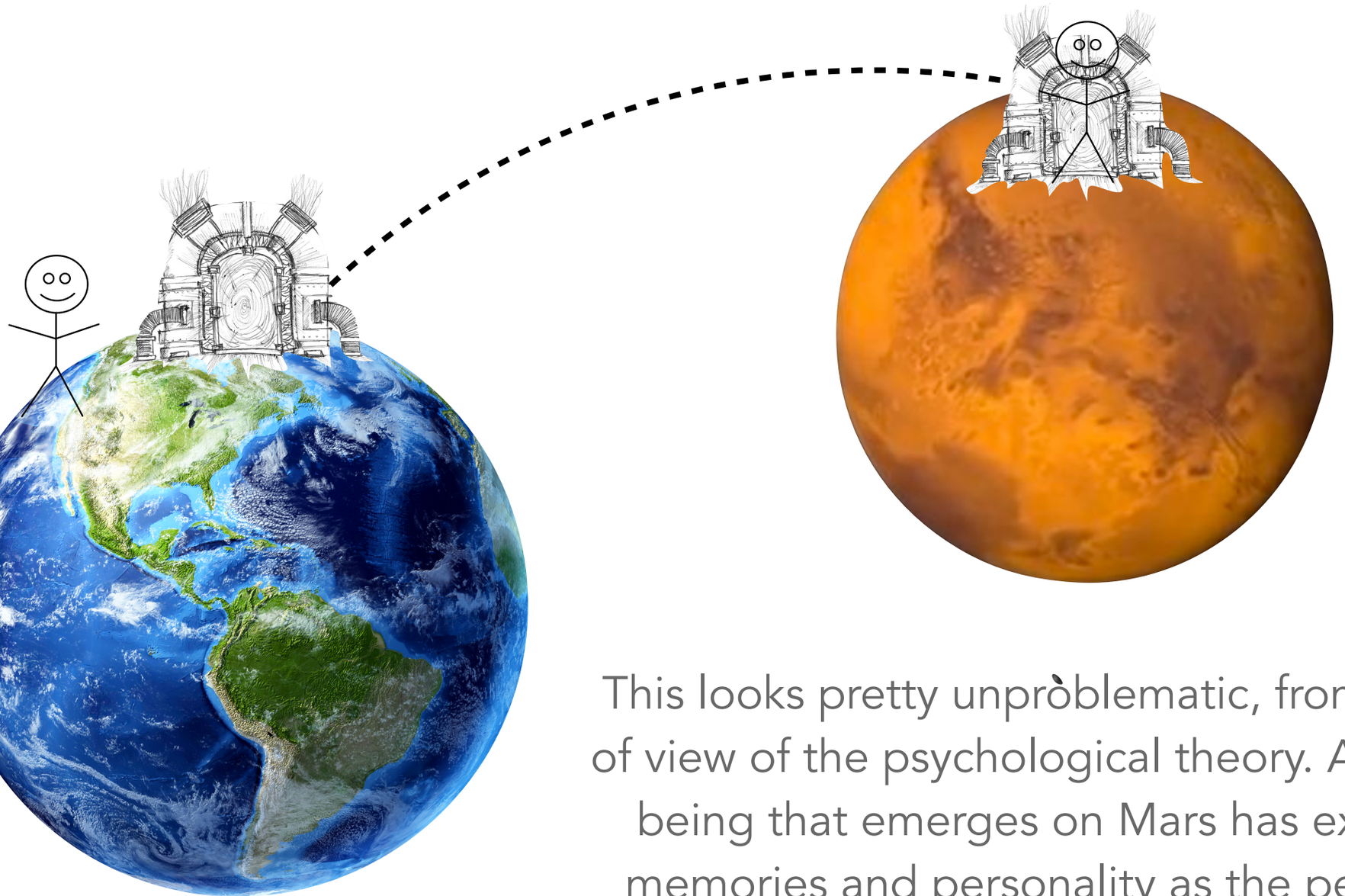
"Several years pass, during which I am often Teletransported. I am now back in the cubicle, ready for another trip to Mars. But this time, when I press the button, I do not lose consciousness. There is a whirring sound, then silence. I leave the cubicle, and say to the attendant, 'It's not working. What did I do wrong?' 'It's working,' he replies, handing me a printed card. This reads: 'The New Scanner records your blueprint without destroying your brain and body. We hope that you will welcome the opportunities which this technical advance offers.'

The attendant tells me that I am one of the first people to use the New Scanner. He adds that, if I stay for an hour, I can use the Intercom to see and talk to myself on Mars.

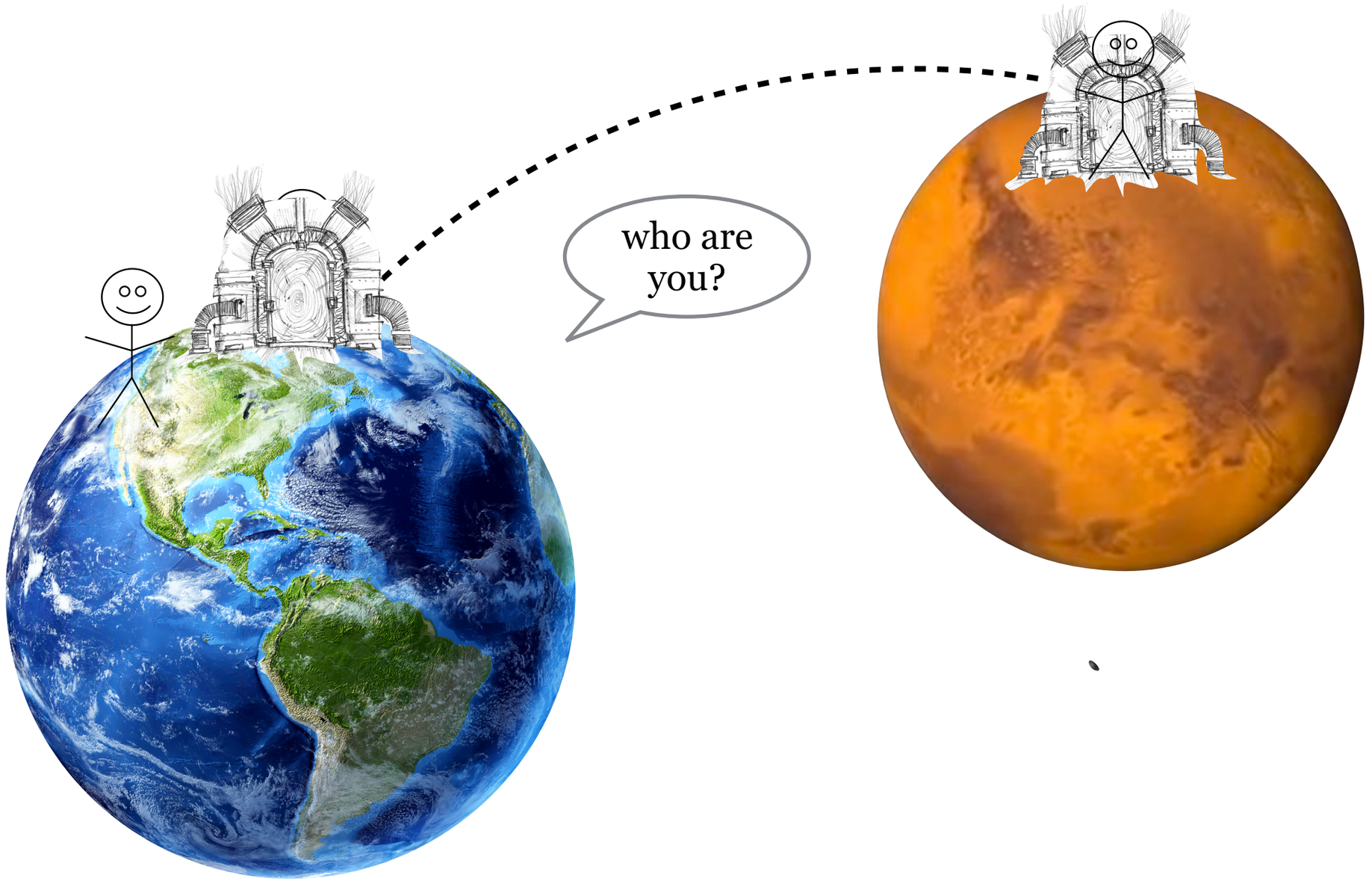
'Wait a minute,' I reply. 'If I'm here I can't *also* be on Mars.'

The teletransporter was invented as a way of traveling quickly from Earth to the now-colonized planet of Mars. One simply steps into the teletransporter on Earth, at which time all of the data about my cells is recorded and transmitted near the speed of light to Mars, at which time that data is used by the teletransporter there to reconstitute me.

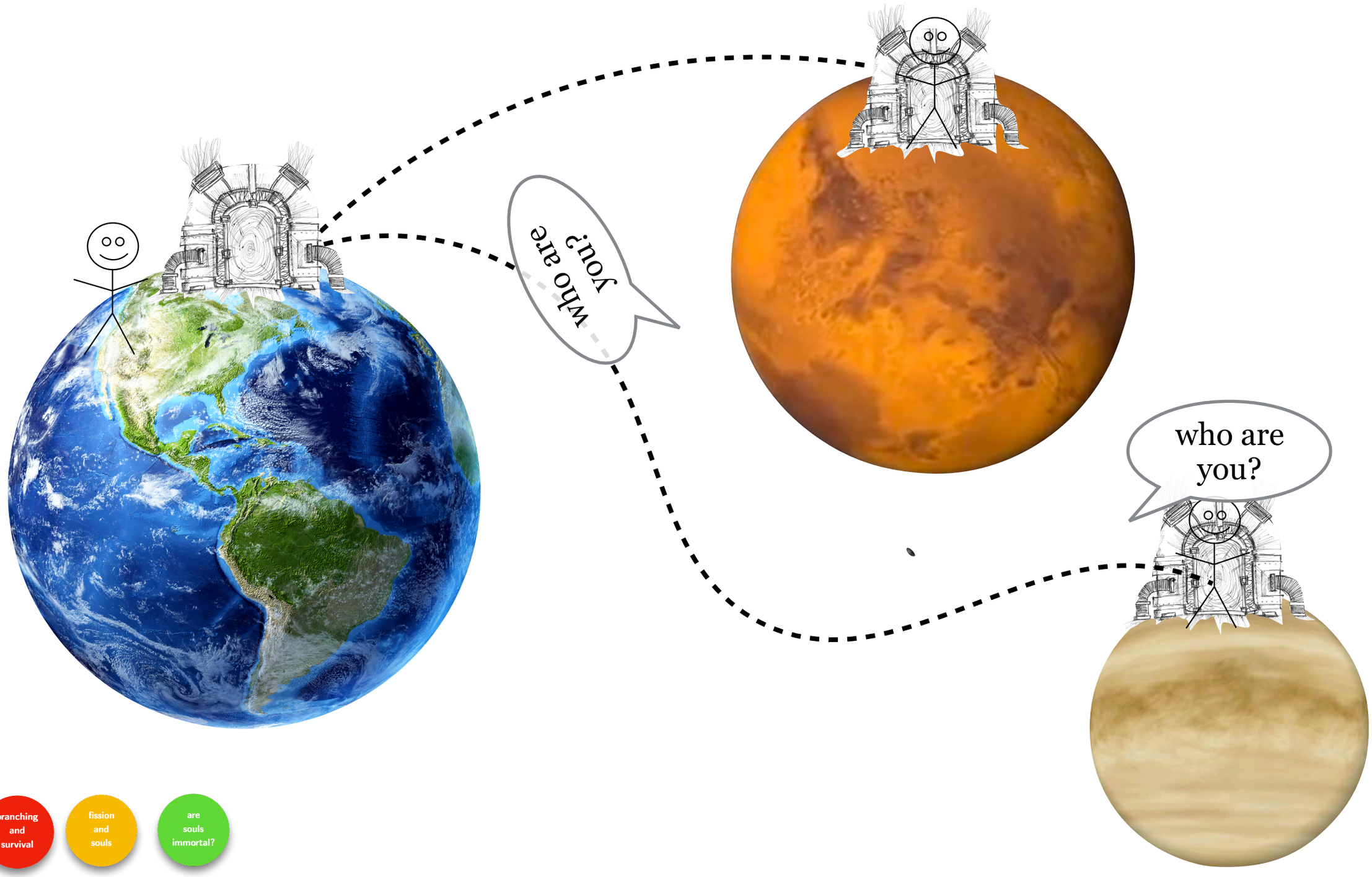


This looks pretty unpròblematic, from the point of view of the psychological theory. After all, the being that emerges on Mars has exactly the memories and personality as the person who stepped into the machine on Earth. So it is the same person.

But problems are not far away. What happens if the teletransportation machine on earth, after copying all of the information about the cells of the person who steps into the teletransporter, simply leaves the body in the teletransportation machine untouched? This is what Parfit calls the ‘New Scanner.’



Or we can imagine that there is another teletransportation machine located on the surface of Venus, to which the machine on earth simultaneously transmits the relevant cellular information.



We appear to face a problem which is in some ways similar to the problem posed by the Ship of Theseus. Let's focus on the version of the story in which there are teletransportation machines on Mars and Venus.

Let's call the person who steps into the teletransporter on Earth 'Earthy,' the one who steps out on Mars 'Marsy,' and the one who steps out on Venus 'Venusy.'

We have already seen that, if the psychological theory is true, then the idea that a single person can travel (and continue to exist!) via teletransportation is unproblematic. So we know that, if the psychological theory is true, then:

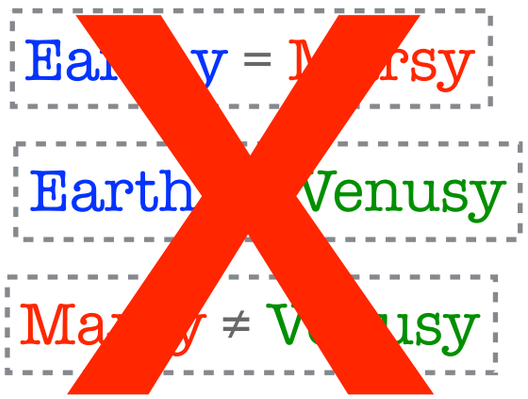
Earthy = Marsy

Earthy = Venusy

But the following seems clearly true:

Marsy ≠ Venusy

But, for reasons we have already discussed — namely, the fact that identity is transitive — these three claims do not sit well together. So it appears that the psychological theory implies a contradiction.



Basically the same point could be made about the version of the story on which, after the transmission to Mars, the individual who steps into the teletransporter on Earth steps back out. To tell that version of the story, we'd just need to introduce two names — Earthy-1 and Earthy-2 — for the individual on earth pre-teletransportation, and the individual who exists after the teletransportation.

It is easy enough to turn this into an argument against the psychological theory of survival.

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Fission argument #1

1. If the psychological theory of survival is true, then Earthy = Marsy.
2. If the psychological theory of survival is true, then Earthy = Venusy.
3. If the psychological theory of survival is true, then Marsy = Venusy. (1,2)
4. Marsy ≠Venusy.

C. The psychological theory of survival is false. (3,4)

These cases look bad for the psychological theory of survival. One might think that they provide a reason to favor a materialist view. What would a materialist say about teletransportation?

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As it turns out, though, the materialist faces a quite similar problem. This problem can be introduced by describing an ambitious new form of surgery.

We are all familiar with surgeries in which parts of one's body are removed. One might remove a tumor, or an organ, or a limb.

Let us suppose that in the future medical technology continues to improve. It is now possible to amputate half of a person's body.

Fortunately, prosthetics have also improved, so that it is now possible to make an exact duplicate of the half that has been removed, and attach that to the original half.

It seems as thought it should be, in principle, possible to survive this surgery. So the materialist, who thinks that you are identical to an organism, must also say that it is possible for an organism to survive this surgery.

So, it seems, they must endorse the following claim:

> An organism can survive even if 50% of that organism's matter is replaced.

But this assumption leads to trouble.

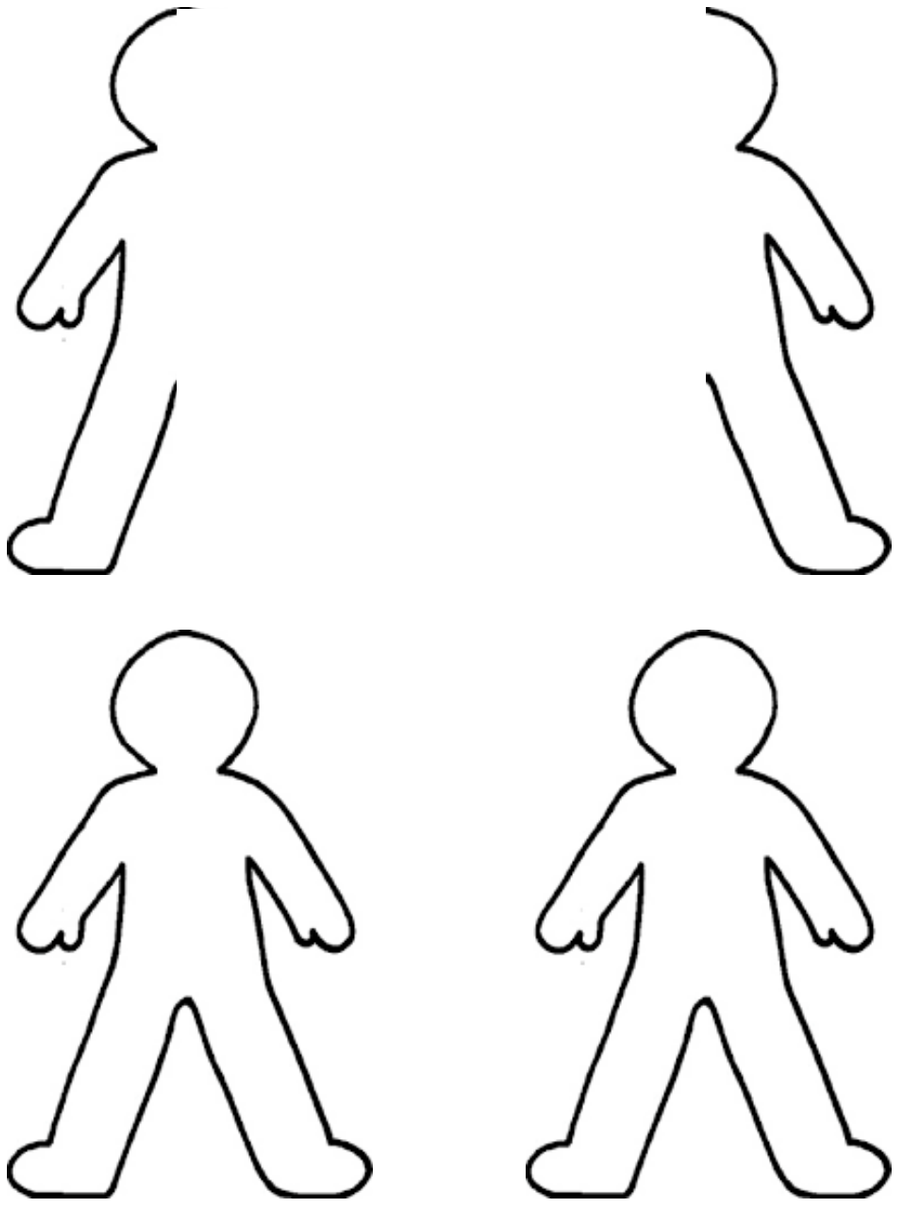
An organism can survive even if 50% of that organism's matter is replaced.

Suppose that we take a healthy patient, Sam, and cut him in half.

We then, as in the previous surgery, make duplicates of the two halves, and join them to the two severed halves.

Call the two resulting individuals "Lefty" and "Righty."

time 1



time 2

time 3

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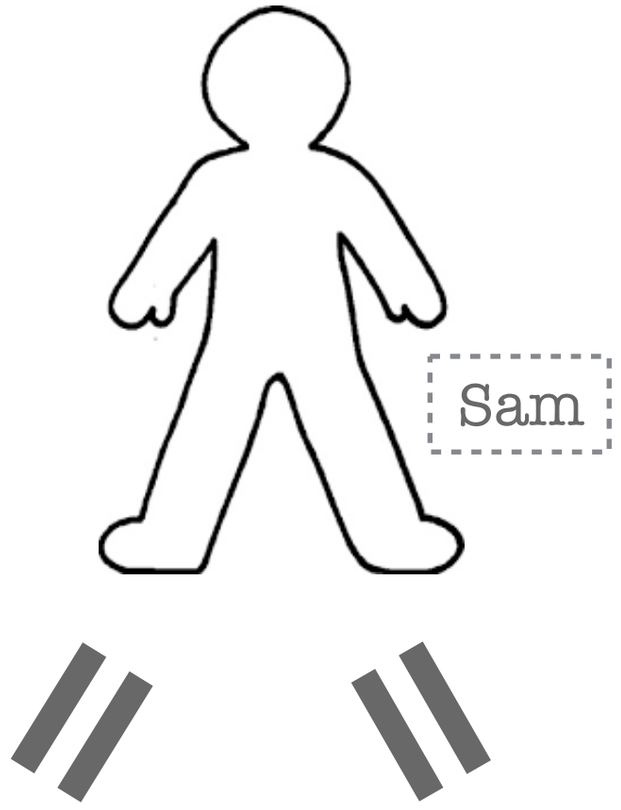
An organism can survive even if 50% of that organism's matter is replaced.

The problem is that the materialist who endorses the above principle seems forced to say that Sam=Lefty and Sam=Righty.

But, obviously, Lefty ≠ Righty.

And this is a contradiction.



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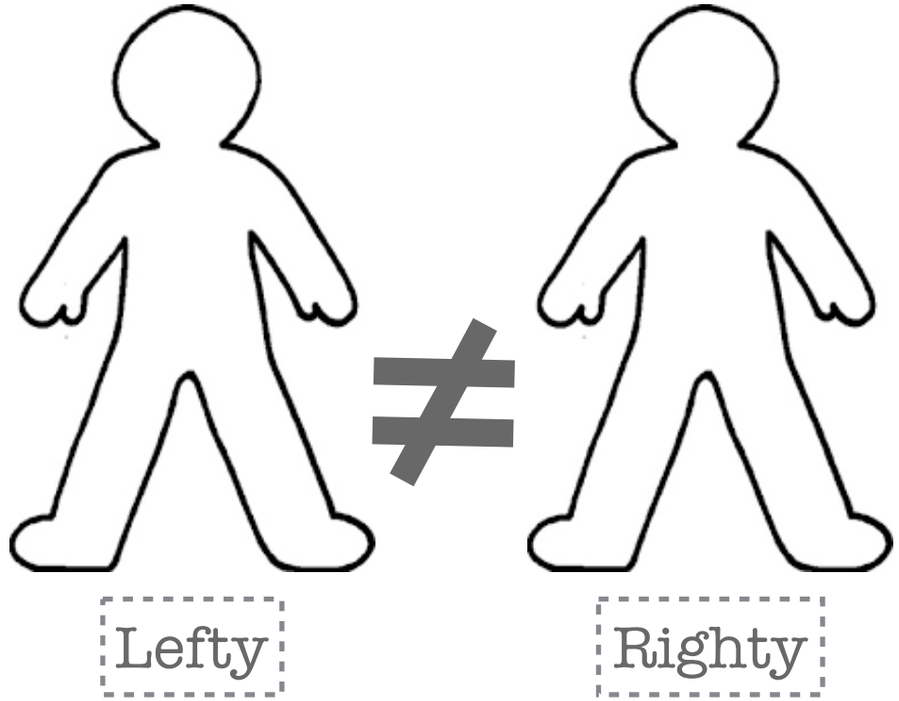

time 3

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As above, it is easy enough to turn this into an explicit argument.

Fission argument #2

1. If a materialist theory of survival is true, then Sam = Lefty.
2. If a materialist theory of survival is true, then Sam = Righty.
3. If the psychological theory of survival is true, then Lefty = Righty. (1,2)
4. Lefty ≠ Righty.

C. Materialist theories of survival are false. (3,4)

How should the materialist respond?

Is it plausible to say that 50.1% of the material of the body must be preserved, and so that premises (1) and (2) are false?

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There are two problems with this response. First, if someone had a terrible accident and had to have a >50% of their body transplant, most of us would think that it is in principle possible to survive such a thing.

Second, imagine that you had to undergo a transplant in which just about 50% of the matter in your body was replaced. The surgeon may well not be able to tell you whether the surgery was above or below the line. A reasonable attitude, it seems, would be for you and your family to not much care whether 49.9% or 50.1% of your matter was replaced.

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But if the proposed materialist theory were true, all of these people should care about that a great deal. Your parents, for example, should think to themselves that if 50.1% was replaced, then their child is dead.

They should be desperate to find out just how much was replaced -- much as parents whose child is missing are desperate to find out if that child is ok.

But that level of concern just seems bizarre in this case.

Our two fission arguments pose a serious challenge to our psychological and materialist theories of survival.

I want to look now at two main responses to those arguments.

The first is to modify these theories of survival in a way that avoids those arguments.

To see how this might work, let's look at another example from Parfit which combines the two kinds of cases of fission we have discussed.

To see how this might work, let's look at another example from Parfit:

"Suppose first that I am one of a pair of identical twins, and that both my body and my twin's brain have been fatally injured. Because of advances in neuro-surgery, it is not inevitable that these injuries will cause us both to die. We have between us one healthy brain and one healthy body. Surgeons can put these together.

If all of my brain continues both to exist and to be the brain of one living person, who is psychologically continuous with me, I continue to exist. This is true whatever happens to the rest of my body. ...

It is in fact true that one hemisphere is enough. There are many people who have survived, when a stroke or injury puts out of action one of their hemispheres. With his remaining hemisphere, such a person may need to re-learn certain things, such as adult speech, or how to control both hands. But this is possible. ... [So] I would survive if my brain was successfully transplanted into my twin's body. And I could survive with only half my brain, the other half having been destroyed. Given these two facts, it seems clear that I would survive if half my brain was successfully transplanted into my twin's body, and the other half was destroyed."

Let's call this the case of **hemisphere transplant**.

Parfit thinks that it is clear -- on either a psychological or a materialist theory of survival -- that one could survive hemisphere transplant.

But now consider a somewhat very similar case.

> *My Division.* My body is fatally injured, as are the brains of my two brothers. My brain is divided, and each half is successfully transplanted into the body of one of my brothers. Each of the resulting people believes that he is me, seems to remember living my life, has my character, and is in every other way psychologically continuous with me. And he has a body that is very like mine.

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Let's again call the resulting people Lefty and Righty. Then we seem to have four options:

(1) You survive as Lefty.
(2) You survive as Righty.
(3) You survive as both Lefty and Righty.
(4) You do not survive.

Parfit argues that none of (1)-(3) can be true, for reasons we have already discussed. The symmetry of the case seems to rule out (1) and (2), and (3) seems to be ruled out by the fact that Lefty ≠ Righty.

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But then it follows that you do not survive.

Here's the puzzle: in both Hemisphere Transplant and My Survival, one of your hemispheres is successfully transplanted into a body which goes on living. Given that, how could you survive in one case but not the other?

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Parfit endorses the psychological theory of survival. But he thinks that the required kind of psychological connection is a **non-branching connection**. For you to survive at some later time, you must stand in a certain psychological connection to that thing and **to nothing else.**

That is why, he thinks, you can survive Hemisphere Transplant but not My Division.

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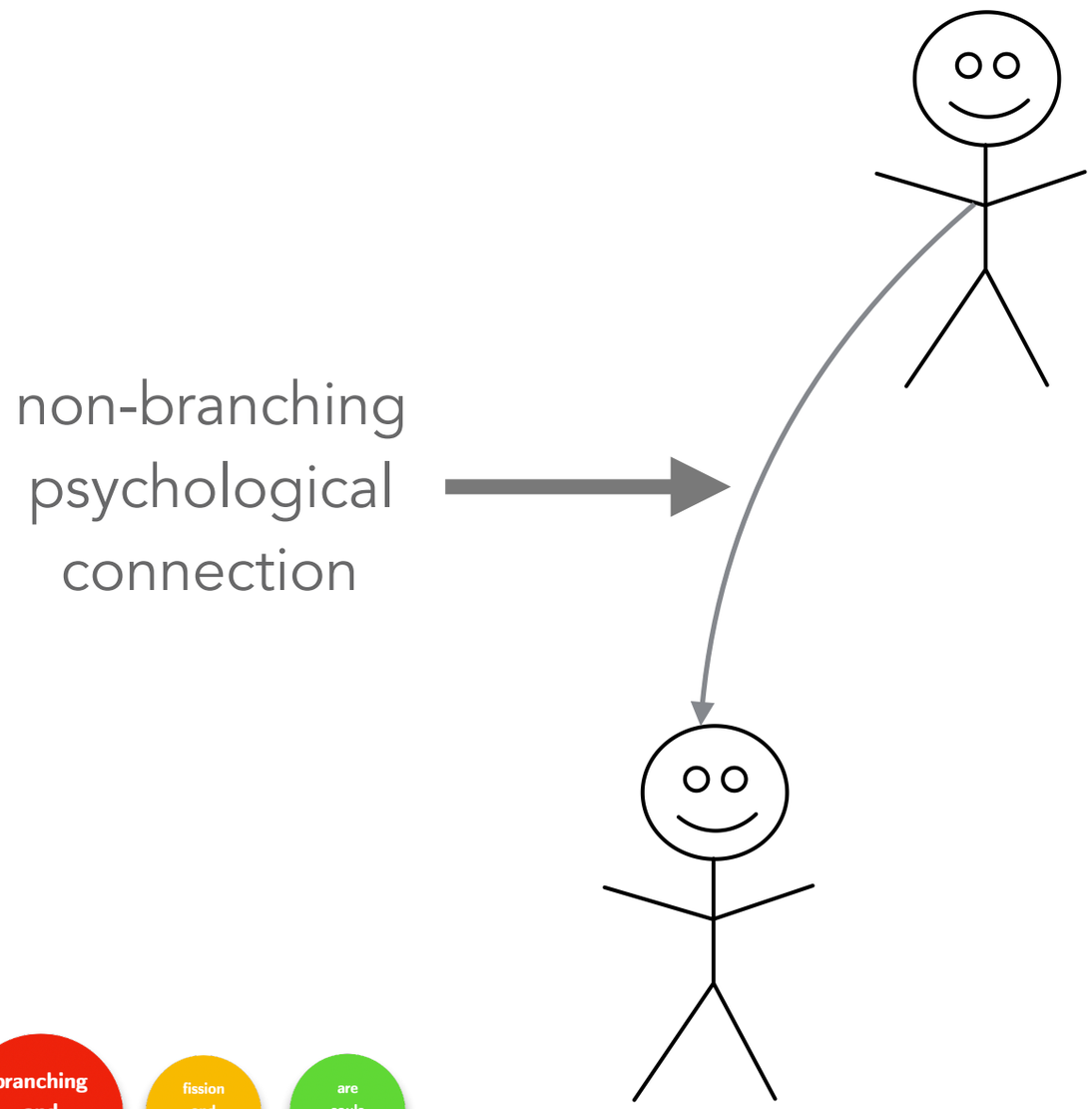

Hemisphere Transplant

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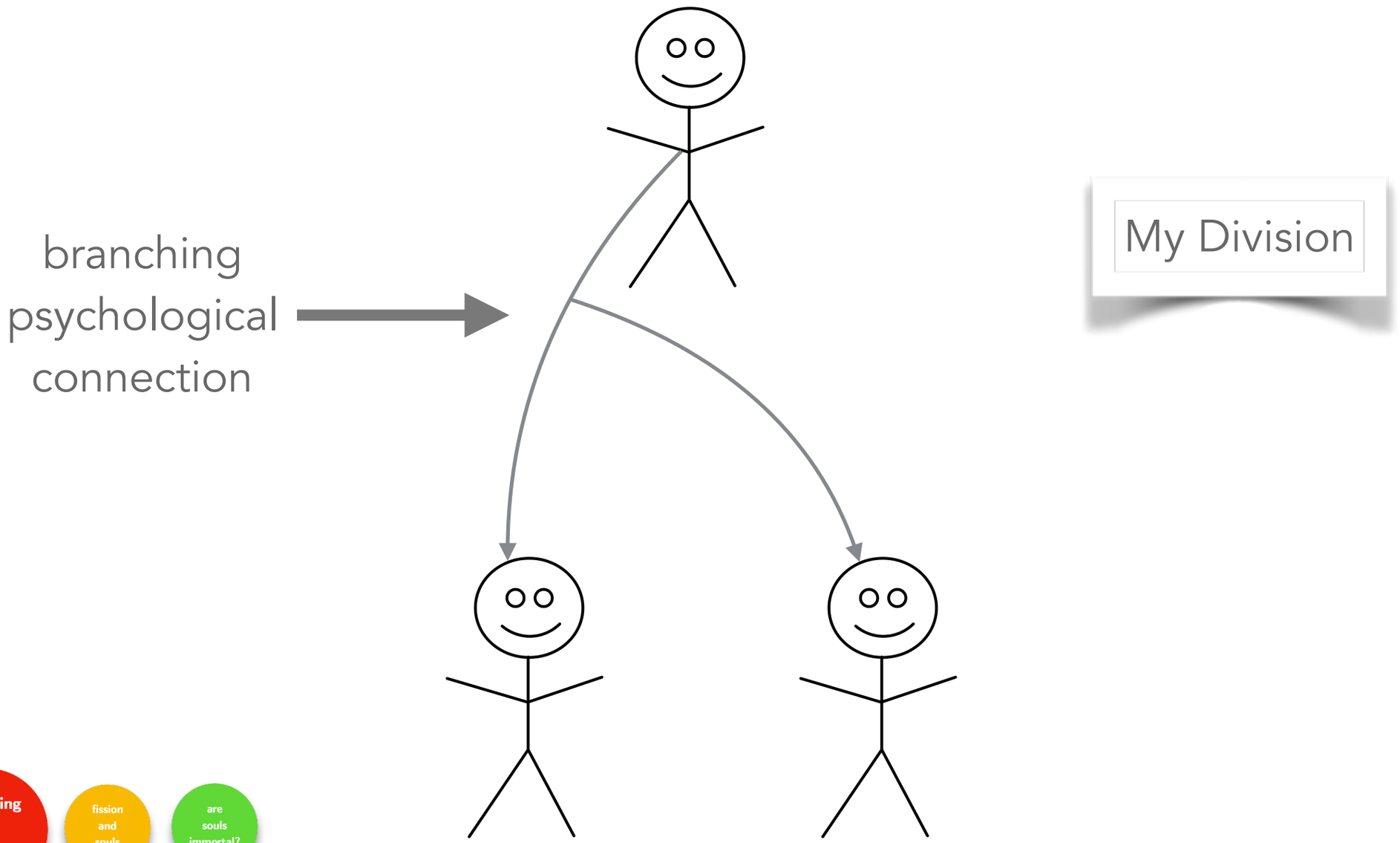

My Division

That is why, he thinks, you can survive Hemisphere Transplant but not My Division.

Notice that a materialist could say much the same thing. They could say that what is required for your survival is a non-branching material relation to some future thing.

But either view would seem to have the surprising consequence that survival matters much less than we thought that it did. For if you had to choose between Hemisphere Transplant and My Division, is it really so clear that My Division is a much worse future?

Let's focus on the psychological non-branching theory. What does this imply about the case of teletransportation with which we began?

It seems to imply that you survive the case of ordinary teletransportation, but not the case of the New Scanner.

Let's look at the conclusion of the story of the New Scanner.

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‘Wait a minute’, I reply, ‘If I’m here I can’t also be on Mars’.

Someone politely coughs, a white-coated man who asks to speak to me in private. We go to his office, where he tells me to sit down, and pauses. Then he says: ‘I’m afraid that we’re having problems with the New Scanner. It records your blueprint just as accurately, as you will see when you talk to yourself on Mars. But it seems to be damaging the cardiac systems which it scans. Judging from the results so far, though you will be quite healthy on Mars, here on Earth you must expect cardiac failure within the next few days.’

Imagine yourself in this situation. Are you consoled by the fact that your copy on Mars will live on?

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Most are not. But Parfit thinks that that is because we are in the grip of the theory that survival is what matters. When we think more closely about cases like My Division, he thinks that we can see that that is not the case.

Parfit thinks that reflection on these cases shows that we should care less about survival — and hence less about death — than we did before.

> "Thinking hard about these arguments removes the glass wall between me and others. And, as I have said, I care less about my death. This is merely the fact that, after a certain time, none of the experiences that will occur will be related, in certain ways, to my present experiences. Can this matter all that much?"

We began with fission arguments against the psychological and materialist answers to the survival question.

One response to these arguments is to add in a "non-branching" clause to the theories.

But a second response is to say that these arguments just show that these two answers to the survival question are misguided, and that to explain what it takes for us to survive, we need to bring immaterial souls into the picture.

That, of course, is the view of both simple dualists and fusion dualists.

While these views are different, both agree that for me to survive, my immaterial soul must survive.

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Could we run a fission argument against dualism? Could we imagine a case in which your immaterial soul is split into two equal halves, and then ask which one you would be?

On most dualist views, this argument won't work. That is because on most dualist views, souls are **simple** -- they do not have parts. (You might think that this follows from the fact that souls are immaterial -- because you might think that it is hard to see how an immaterial thing could have parts.)

One might use this fact to construct an argument for dualism.

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The immunity to fission arguments argument

1. Fission arguments rule out views on which we are complex things.
2. We are simple things. (1)
3. We are not simple material things.

C. We are simple immaterial things. (2,3)

But the kinds of cases used in fission arguments still can be used to generate a kind of puzzle for the dualist.

Consider again My Division.

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My Division. My body is fatally injured, as are the brains of my two brothers. My brain is divided, and each half is successfully transplanted into the body of one of my brothers. Each of the resulting people believes that he is me, seems to remember living my life, has my character, and is in every other way psychologically continuous with me. And he has a body that is very like mine.

The dualist must, it seems, say that you could survive as either Lefty or Right, or neither, but not as both.

Suppose that you are Lefty, and you are wondering whether you are the same person as the person whose body was fatally injured. If dualism is true, you must take seriously the possibilities that you are that person, and that someone else is that person, and that no one is that person.

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But is this really possible? Doesn't it seem that once we know all of the facts about the physical and psychological relations between the original person and Lefty and Righty, we know all of the facts that there are to know?

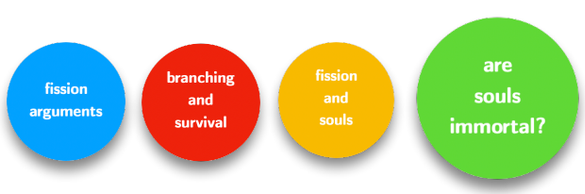
Dualism seems committed to the idea that there are facts about who is the same person as who which are, in principle, unknowable (at least to beings like us which have no access to facts about the sameness and difference of immaterial souls).

We just mentioned the fact that dualists take immaterial souls to be simple. This is what makes dualist views immune from fission arguments. It is also the feature of dualism which is used in the main philosophical argument for the reality of life after death.

This argument has its origins in Plato's *Phaedo*. This is a dialogue which takes place between Socrates and his friends, after Socrates has been sentenced to death for corrupting the youth of Athens.

Socrates is unworried, explaining to his friends that death is nothing to be afraid of; death is just the death of the body, and not the death of him.

He gives a few arguments in favor of this view; the most influential is contained in the following passage:



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'We ought, I think,' said Socrates, 'to ask ourselves this: What sort of thing is it that would naturally suffer the fate of being dispersed? For what sort of thing should we fear this fate, and for what should we not? When we have answered this, we should next consider to which class the soul belongs; and then we shall know whether to feel confidence or fear about the fate of our souls.'

'Quite true.'

'Would you not expect a composite object or a natural compound to be liable to break up where it was put together? and ought not anything which is really incomposite to be the one thing of all others which is not affected in this way?'

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Socrates begins by asking what sorts of things can be 'dispersed.' He considers two categories of things: composite things, which have parts, and incomposite things, which are simple and have no parts.

It seems clear that composite things can be dispersed, whereas simple things cannot. Being dispersed, after all, is just a matter of having your parts taken out of connection with each other, and simple things have no parts.

But, one might think, this shows that only composite things can be destroyed; for how can you destroy something other than by breaking it up into its parts?

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The key question, then, is: are we composite, or simple?

Plato was, like Descartes, a dualist — he held that we are immaterial souls. If we assume this dualist view, then the question is whether immaterial souls are composite or simple.

A reasonable argument can be made that immaterial souls are simple rather than composite. For, arguably, we have no grip on what it would take for am immaterial thing — which is not extended in space — to have parts.

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We can then give the following argument from the simplicity of the soul:

The argument from the simplicity of the soul

1. Persons are immaterial souls.
2. All immaterial things are simple.
3. Only composite things can be destroyed.
4. Immaterial souls cannot be destroyed. (2,3)

———————————————

C. Persons cannot be destroyed. (1,4)

We've already considered defenses of the first premise. Obviously, materialists and psychological theorists who reject those defenses are unlikely to be persuaded by this argument. But should dualists be convinced by it?

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The Scottish philosopher David Hume gives an interesting reply to this argument:

what is incorruptible must also be ingenerable. The soul, therefore, if immortal, existed before our birth: And if the former existence nowise concerned us, neither will the latter.

This begins with the plausible thought that if something cannot be destroyed then it also cannot be created. So, if we are things that cannot be destroyed, then we are also things that cannot be created. So, just as (according to this argument) we will exist after our death, so we must have existed before our birth.

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This poses a dilemma for the defender of the simplicity argument.

On the one hand, she can deny that we preexisted our births. But then she needs to explain why the argument for life after death is stronger than the argument for preexistence.

On the other hand, she can accept preexistence. (This was Plato's view.) But how good was your life before you were born? If life after death is just like the 'life' you had before you were born, then it does not seem to be a kind of life after death worth wanting.

Of course, there are plenty of other arguments for the reality of life after death; for example, there are arguments which are based on the claims made by various religions. But this is a serious challenge to the main purely philosophical defense of personal immortality.