

Person, organism, brain

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Here is a passage from the famous neuroscientist Michael Gazzaniga:

If the brain of A could be transplanted into the body of B, then it is not B who would receive a new brain, but A who would gain a new body. This simple fact makes it clear that you are your brain.¹

(I'm not singling out Gazzaniga for scrutiny. The passage is interesting mainly because it expresses a widely held thought.)

The premise is that you would go with your brain if that organ were transplanted. Putting your brain into my head wouldn't reduce you to a brainless vegetable and give me a new organ. To transplant your brain is to transplant you.

Gazzaniga infers from this that you are your brain. And this is apparently meant literally. You are five inches wide and seven inches long, and you weigh about 1.5kg. You are made up entirely of soft, yellowish-pink tissue. You are not a human being, but only a part of one. Unless you have had brain surgery, no one has ever really seen you, or any part of you. (Most people wouldn't want to.)

I want to ask three questions about this argument. First, does the conclusion actually follow? Second, is the premise true? Third, is the conclusion true?

1.

Many philosophers--probably most--accept the premise, but few accept the conclusion. And no philosopher that I know of accepts the conclusion on the basis of the premise. That is, no philosopher that I know of accepts Gazzaniga's argument. Are the philosophers just being stupid?

The premise says that if your brain were cut away from the rest of you, you would go with the brain and not with the rest. Does it follow that you ARE your brain, and that the rest was never a part of you? It doesn't logically follow. Suppose we replaced 'brain' with 'right-hand complement'--that is, 'all of you but your right hand'. If your right hand were separated from the rest of you--your right-hand complement--then you would presumably go with the hand complement rather than the other part. Does it follow from this that you ARE your hand complement--that your right hand is not a part of you even now? It doesn't seem so. If it did follow, then anything that would not be a part of you after being cut away could never have

¹The Ethical Brain (New York: Dana Press, 2005): 31.

been a part of you to begin with. It would be impossible for a thing to get smaller by losing a part.

From this we should have to conclude that no atom was be a part of you. Any individual atom could be separated from you. After its separation it would not be a part of you. Take any atom, A, and replace 'brain' with 'complement of A'. The same would hold for every other atom. The conclusion would be that you have no atoms as parts, and thus that you are entirely immaterial.

It seems possible for a thing to get smaller by losing a part. Certainly Gazzaniga has provided no reason to think otherwise. So it doesn't follow from the assumption that you would go with your detached brain that you were your brain all along, and nothing else is a part of you even now.

But although the conclusion doesn't follow, the hypothesis that you are literally your brain would neatly explain why you would go with your brain rather than staying behind with an empty skull, if indeed that is the case. The explanation would be that the operation does not change your size, but merely moves you from one head to another, like repotting a plant. So maybe the argument is not entirely without merit.

2.

Suppose we accept the inference. What about the premise--that you would go with your transplanted brain? Gazzaniga gives the impression that this is a discovery of modern neuroscience. That is hardly the case. Locke made the claim, or one very like it, more than 300 years ago.

Gazzaniga boldly calls it a 'fact'. This suggests that it's well established and accepted by virtually all competent authorities. That is very far from the truth. It is a metaphysical claim, and a highly contentious one.

There's certainly nothing obvious about it. Why wouldn't you just lose an organ and stay behind in a vegetative state with an empty head? No one would suppose that you would go with your transplanted heart or liver or stomach. Why not? What's the difference? What's so special about the brain?

Prsumably Gazzaniga takes the brain to be special because it's responsible for your mental capacities. Transplanting your brain into my head would give the recipient of that organ your mental features--memories, goals, personality, etc.--and leave the empty-headed being with none. This is probably an oversimplification, and it certainly hasn't been verified by experiment or observation, but suppose for

the sake of argument that it's true.

Still, how does it follow that you would go with the organ that is responsible for your mental capacities? You're not a purely psychological being. You also pump blood, and your heart is responsible for that pumping. You digest food, and your intestinal tract is responsible for that digestion. Why not suppose instead that you would go with your heart or your digestive tract if they were transplanted, and infer that you ARE your heart or your digestive system (rather than your brain, or a whole human being)?

The assumption is apparently that thought and consciousness have some sort of metaphysical priority over our other properties or activities. When it comes to our most fundamental nature, psychology comes first, and everything else comes after. Although I also digest, pump blood, and do many other things, it's my thinking that determines what it takes for me to persist through time. This is a thought most famously associated with Descartes, who said, 'my essence is thinking' (where by 'thinking' he meant psychological activity generally). Call it the psychological priority principle.

Note that the psychological priority principle is not a scientific claim. Science may be able to tell us how psychological processes work, and how they relate to the brain and other physical systems. And it can do the same for digestive processes. But it can't tell us which of these--the mental or the digestive--has metaphysical priority--that is, which belongs to our essence. That's a paradigmatic metaphysical question. Or if science can answer it, I'd like to see how.

The only reason to suppose that thinking and nothing else belongs to my essence, or that you would go with your transplanted brain, is that it seems intuitively plausible. But of course many things that seem intuitively plausible are known to be false.

One thing that seems intuitively plausible is that I have hands. These hands are not merely attached to me, but they're parts of me. I extend all the way out to my skin. To my mind, that seems just as compelling as the claim that a person goes with her transplanted brain, or that our most fundamental nature is psychological. If anything, it seems more compelling. But that I have hands as parts is incompatible with my being a brain.

So it's unclear whether the argument's premise is true. There is nothing obvious about it, and it's not something that neuroscience could establish. It is a metaphysical claim, and one that metaphysicians disagree about.²

²For a summary of some of these debates, with references, see E. Olson, 'Personal

3.

The claim that my primary essence is psychological, and that I would go with my transplanted brain, is intuitively attractive, if controversial. And maybe one could infer from this that I am my brain. Yet it's also plausible that I have hands as parts, and thus that I'm not literally my brain: my brain is only a part of me among many others. I couldn't both be my brain and have hands as parts, since no brain has hands as parts. Which is more likely? Is it true that we are brains? What would it mean if it were true?

The claim that we are brains leads to a sort of metaphysical dualism. If I am my brain, this can only be because the brain is the subject of my mental properties: it's conscious and thinking. The conscious thinking thing here is not the organism, but the brain. What we call conscious, intelligent organisms are merely organisms containing conscious and intelligent brains. The whole organism thinks only in the derivative sense of having a thinking part.

It would follow that no organism that has a brain as a part can think (except in a loose and derivative sense). Strictly speaking, it's brains that think, not organisms. Why? Why is it impossible for a human organism to think or be conscious? Why is it the brain that thinks rather than the organism? Why say that the organism thinks only in the derivative sense of having a thinking part, rather than that the brain thinks only in the derivative sense of being responsible for the organism's thinking? Why can't the organism use its brain to think, rather than letting its brain think for it?

As far as I can see, the reason would have to be this: the organism as a whole can't think because it has parts not directly involved in its thinking: hands and feet, for instance. So an organism is too large, so to speak, to think. A thinker has to be made up only of objects directly involved in its mental processes. Call this thinking-subject minimalism.

This is another important metaphysical assumption, in no way supported by neuroscience. And if we had this assumption, it would follow straightaway that we are brains (or perhaps parts of brains): we wouldn't need to appeal to dodgy arguments about brain transplants and other science-fiction scenarios.

I think this assumption is unsustainable, though the reasons are too complicated to summarize here.³

identity', Stanford Encyclopedia of Philosophy,
<http://plato.stanford.edu/entries/identity-personal/>.

³I say something about the reasons in 'The nature of people', in S. Luper, ed., The

It follows from this assumption that it's metaphysically impossible for any organism to have any mental property. That's because any organism is bound to have parts not directly involved in its mental processes. Living organisms are one thing; conscious beings are something else, and nothing could ever be both. What appears to be a single living, thinking thing must in reality be two things, one living but not thinking, and one thinking but not living (that is, not living in the sense that an organism is alive). This is a sort of substance dualism: not Descates' dualism of mind and matter, but a new and monstrous dualism of mind and life.

I don't want to accept any such dualism. I don't think anyone should. And there's no good reason why we should. It's far more sensible to suppose that we thinking beings are organisms--and thus that we have hands as parts, just as we always thought.

If we reject the dualism of mind and life, and accept that it's possible for a living organism to be conscious, then Gazzaniga's conclusion is false: we are not brains. We have brains as parts, of course, but we have other parts too, such as hands. We are not brains, but human beings: organisms.

This means that Gazzaniga's premise is also false: you wouldn't go with your transplanted brain. Putting your brain into my head would give me a new brain and give you an empty head. That's because the operation moves an organ from one organism to another. It doesn't move an organism from one head to another. That may be counterintuitive. But the alternative is even worse: it's the dualism of mind and life.

4.

You may suspect that when neuroscientists say that you are your brain, they don't mean it literally. They don't mean that you are made up entirely of soft, yellowish-pink tissue and locate inside your skull, and that you are not a human being but only a small part of one. What do they mean, then? They might mean that certain features of human beings--their psychology, behaviour, culture, social structures, and the like--are in some way determined by their brains. This does not imply that we are literally five inches across. It's compatible with our being organisms. It's not a metaphysical claim at all. We might call it brain determinism.

Since I'm not a neuroscientist, I'm not competent to pronounce on brain determinism. But I can make three useful remarks.

Cambridge Companion to Life and Death, CUP 2014. This paper is included in the MBE dropbox.

First, it gets no support from Gazzaniga's argument about brain transplants. If anything, the transplant argument presupposes a version of brain determinism.

Second, the claim is very vague. It doesn't say much about what features of human beings are determined by their brains. More importantly, there are many things that 'determined by' could mean. For instance, the claim could mean only that beings with the same brains will have the same psychology, behaviour, culture, etc. So if there were alien creatures unlike us except for their brains, their psychology, behaviour, culture, etc. would necessarily be the same as ours. Or it could mean the far stronger claim that you could in principle deduce creatures' psychology, behaviour, culture, etc. from the properties of their brains. We could replace the social sciences with neuroscience. (This doesn't follow from the first claim.) And there are many other things it could mean.

Third remark: From what I do know about neuroscience, I get the strong impression that, whatever exactly brain determinism comes to, we simply don't know whether it's true. We don't even have any good reason to expect it to be true. It tends to be held as an article of faith by neuroscientists. But that's another story.