

Shoemaker's Problem of Too Many Thinkers

I. Introduction

Psychological approaches to personal identity are distinguished from body and biological accounts of identity by the former's insistence that some kind of mind is essential for our persistence.¹ A problem arises for those psychological approaches that are committed to the person being spatially coincident with, but distinct from the human animal and body. (For the purposes of this paper, the human animal will be identified with the organic body.) If the person can think, then it would appear that the human animal can also. The person and the animal share the same brain as well as every other atom of every other organ. Given this physical identity and the fact that they both have the same causal relations to the environment and linguistic community, why then should only one of the two beings have the ability to think? Such mental duplication appears inevitable on pain of violating the supervenience of the mental on the physical, construing the latter to include causal ties to the environment as well as the physical properties of the animal. And if both can think then there arises what Olson called the "epistemic problem" of being unable to know whether one is the human animal or the person. The dilemma that both the person and the human animal can think has been labeled by Sydney Shoemaker "The Problem of Too Many Minds."² I prefer to call it the problem of too many thinkers since it could be that two thinkers share one mind much as conjoined twins could share one bruise.

Shoemaker maintains that when a functionalist theory of mind is combined with his belief about individuating properties and the well-known cerebrum transplant thought experiment, the resulting position will be a version of the psychological approach to personal identity that can avoid The Problem of Too Many Thinkers. I don't believe that Shoemaker's account has satisfactorily ruled out the biological account's solution to The Problem of Too Many Thinkers which identifies human persons and human animals while maintaining their persistence conditions are those characteristic of

an organism.³ The costs of Shoemakers' solution – that the human animal is incapable of thought - are too high. But even if I am wrong about how well his account can avoid the biological approach's concerns, The Problem of Too Many Thinkers does not go away. This is because Shoemaker has not provided an argument against there existing a merely sentient being (I am using "sentient" as a synonym for "conscious") that is not essentially self-consciousness but is spatially coincident with a person who is essentially self-conscious. Both the person and the merely sentient being will be transplanted when the cerebrum is.⁴ And another thought experiment will make it impossible for Shoemaker to identify the person and the merely conscious being. Finally, there is one last too many thinkers worry that is due to the possibility of the thinking brain that results from Shoemaker abandoning his earlier belief in a brain state transfer device that allows the person to survive without his original brain.

Part II. Shoemaker's Attempt to Avoid Spatially Coincident Thinking Beings

Shoemaker tries to avoid The Problem of Too Many Thinkers by claiming that animals do not think. Since animals don't have minds and persons are not identical to animals but instead constituted by them, there is no duplication of thought problem. Shoemaker's position that the animal does not think is in part based on his notion that properties are identified and individuated by their contribution to the causal powers of the subject or substance that possesses them. The causal powers have implications about the future of their possessors. This means that what properties a thing will have will depend upon its persistence conditions. Shoemaker argues that if there are spatially coincident entities then their different persistence conditions will mean they won't share all their properties. He insists that whatever else a person is, it surely is a subject of thought, i.e., a being that thinks. The mental properties of the person are causally efficacious, bringing forth other mental property tokens and eventually actions by way of the physical properties of the cerebral cortex that instantiate them. If

we assume that the functional role of certain mental properties is uninterrupted during the cerebrum transplant procedure in which a person leaves behind one animal and is placed into a new body, this suggests that those mental properties were never instantiated in either the new or the old animal. The mental properties contributed to the mental causal powers of the transplanted *person*, thus neither human animal thought even during the time it was spatially coincident with the body switching person.

To illustrate the above point, Shoemaker asks the reader to imagine a scenario in which a person appears to be calculating a complicated math problem before, during and after the entire transplantation procedure which, due to localized anesthesia, he is unaware is taking place. The person begins thinking about the problem when spatially coincident with one animal, continues his calculations despite being reduced to just a few pounds and inches when his cerebrum is removed, and completes his computation after becoming spatially coincident with a different animal into which his cerebrum has been transplanted. At the end he recounts each step of his reasoning. So described, it would seem that the mental processes involved in the search for a solution to the math problem began while the person possessed one organic body and ended when the person obtained a new organic body.⁵ So neither organic body was in any sense the subject engaged in the entire mathematical calculation. And since mental properties are individuated by their complete causal/functional contributions to a subject or substance, neither human animal can be said to possess the mental properties involved in the mathematical reasoning. The mental properties possessed by the person before the transplant were not possessed by the spatially coincident animal constituting that person because they were causally connected to (post-transplant) mental states that were obviously not thoughts of the original animal. Shoemaker concludes that the human animal doesn't think in this scenario or any other. Only persons have mental properties and minds. Thus there is no Problem of

Too Many Thinkers.

Part III. An Alternative Explanation of Cerebrum Transplants

I share Shoemaker's belief that there are not spatially coincident thinking entities in the above story, but don't believe that he has made a convincing case that the thinker is not a human animal, a being that is essentially alive, rather than an entity that is essentially a thinking creature and spatially coincident with the animal. Neither his causal powers account of properties, nor combining that with his functionalist account of mind has ruled this out. And more importantly, the costs of his solution are too high: animals are incapable of thought and thus there are no evolutionary pressures selecting their cognitive faculties.

Shoemaker's causal powers account won't by itself establish that the bearer of mental properties is a creature that has them essentially. In fact, the causal mental powers of one thinker may have been produced by the mental properties of another thinker. This has to be admitted because the particular instantiations of mental properties in my mind can cause certain mental states and powers in you and we obviously aren't the same substance. So causal ties between mental properties and mental powers are not enough to determine that they inhere in the same thinker. Some other independent account of the *appropriate* causal ties will determine the bearer of the mental properties since merely contributing causal powers won't suffice. So Shoemaker is assuming that in the transplant scenario there are the *appropriate* causal connections that make mental contents the contents of the same substance. And this involves the familiar appeal of the psychological approach to personal identity to psychological continuity of memories, desires, beliefs, intentions etc. A cerebrum transplant will thus appear to preserve personal identity since wherever the recipient of the cerebrum is to be found, so will what appear to be the memories, desires, intentions and beliefs of the pre-transplant person. However, there are available some plausible arguments that people's intuitions about such brain

transplant scenarios mislead them.

Although it might initially sound rather odd, the advocate of the biological approach to personal identity can claim that there is not one thinking entity calculating the entire math problem in Shoemaker's example. Instead, one being started the equation and a different individual finished it, even though neither knew of this teamwork. So even if mental properties are individuated - a la Shoemaker - by their contributions to the causal powers of the subject that has them, since they can also cause mental states in other beings as well, psychological continuity is no guarantee that only one thinker is involved. And it may be that the mental properties bestow *shorter lived* causal powers upon the animal. So while a Shoemaker-like argument might explain why an aggregate of atoms briefly constituting a person can't think because its persistence conditions don't provide for a long enough existence, the same reasoning can't extend to the animal for the period prior to the cerebrum transplant.

What the advocate of the biological approach to personal identity has to do is to explain away the appeal of the two considerations that lead most readers to maintain that the best description of the transplantation of an intact cerebrum involves a person switching bodies. The first has to do with the appearance of uninterrupted consciousness and a person's later insistence that he can remember the thoughts that he had during this transplant process and before it transpired. The second has to do with the prudential (or quasi-prudential) concern felt for the future well-being of the recipient of one's cerebrum. There are grounds for reinterpreting the phenomena that give rise to the first reason to believe body-switching is possible. The philosophy of mind literature provides us with a number of scenarios where the *alleged* recollection of certain thought content is false because there was actually no thinking going on at that earlier time. Consider Davidson's Swampman who comes into existence when lightning hits certain swamp chemicals. Let's say that the result is a being with a brain

physically identical to the reader's. Swampman doesn't initially think since he lacks the requisite causal connections to objects and perhaps also because he is not a member of a linguistic community. Later, after he has obtained the causal contacts sufficient for thought, he will insist that he had thoughts back in the swamp. But he would be wrong if a certain kind of externalist about semantic content are correct.

Something similar would be true if each of us was a duplicate in a series of short-lived beings. Each of our predecessors existed but for a split second, which isn't enough time to have a thought. Each can utter a syllable before replacement. But the replacement occurs so smoothly and quickly that observers believe that one person has persisted throughout. We, who are the last in the series differ from our short-lived predecessors in that we have existed long enough to acquire meaningful thoughts. But we will insist that we have memories of earlier events when we didn't exist but were preceded by a series of beings each existing for but a brief moment and undergoing a fraction of the physical changes that a person who persisted through the entire time would have undergone. Our "memories" are false, thus they are perhaps not memories.

The claim that a whole cerebrum transplant would not result in a person switching bodies can garner some support from the case of fissioning and transplantation. Imagine that before Adam's brain is fissioned, he is working on a mathematical problem. (Assume both hemispheres of his brain have the resources to engage in mathematical reasoning and each hemisphere has a record of the part of the calculation made possible so far by the combined hemispheres.) Then the brain is split and each hemisphere is placed in the empty skull of different beings. The cerebral hemispheres originally belonging to Adam never cease to realize conscious states during the procedure - but because of the localized anesthesia, the conscious beings supported by the removed cerebral halves, let's call them Lefty and Righty, are unaware of the surgical operation. Has the problem been continuously worked

on by one person? I don't believe so. The classical logic of identity wouldn't allow us to say that Adam survives as both the resulting beings if Lefty and Righty are distinct entities. And it would be arbitrary to state that Lefty rather than Righty is Adam or vice versa. And it seems absurd to insist that Lefty and Righty are just two parts of a separated person since there is absolutely no communication between the two. It would appear that neither Adam, Lefty or Righty continuously worked on the mathematical calculation.

Since readers have just imagined a case in which a *seemingly* uninterrupted conscious thought process is actually had by more than one being, they should be more open to doubt Shoemaker's conclusion that there is continuous thought by the same person when an undivided cerebrum is transplanted. What retrospectively appears to an individual as his own earlier thinking, need not actually be so. Of course, Shoemaker's case doesn't involve fissioning. There isn't any danger of a person fissioning out of existence with the removal of a person's entire undivided cerebrum. An intact functioning cerebrum appears sufficient to realize a person and thus the same person would seem to persist through a transplant of that cerebrum into a new body. But why think that the same person survives the transplant? Why not explain away the appearance of continuous thought as we did in the fissioning scenario? Shoemaker himself admits that in a case of fission what matters in survival can be present even though identity is not preserved. The person with the whole cerebrum could be just as mistaken about his past as the two persons who each have half a cerebrum and both think that they are identical to the pre-transplant person who is the source of their psychology.

The lesson of all of this is that what appears retrospectively to people to have been their earlier thoughts may not have been thought at all. In the case of the series of individuals, there wasn't anyone who had a thought before our appearance. In the scenario of the fissioned beings, there was no continuous subject of a thought that existed before and after the fissioning. Perhaps the two persons

resulting from fissioning, unlike Swampman and the longerlasting final person in the series, had thoughts from the first moment of their existence. What might distinguish the persons resulting from fission from those in the other two scenarios is that the former's cerebral hemispheres have possessed histories in which they each realized the thought of a person who had the ties to the environment and linguistic community required for mental content. The two persons resulting from cerebral fissioning may be able to inherit the requisite semantically significant causal connections from the prefissioned individual. But even if such people can think from the moment of their origins, it would still be wrong to believe they have any of the memories of the person who bequeaths them his cerebral hemispheres.

The second reason most people would (mistakenly) believe that they are each identical to the being that ends up with their functioning cerebrum is that this being would be the one whose future they care about if they pondered the possibility of a transplant before it occurred. Their concern is taken as tracking identity. But here the lessons of fission may again be relevant. Parfit, as well as Shoemaker, famously argued that there was something like prudential concern for the mental life realized by each transplanted hemisphere.⁶ Even the most selfish person would probably admit to caring about what would happen to each of the persons with half of his upper brain. They would have many of his beliefs, desires, concerns, values as well as the parts of his brain that are sensitive to pain. He would certainly care if one of his cerebral hemispheres were destroyed in the removal process and the only the other was successfully transplanted for then in the absence of branching (fissioning) he would appear to survive. But it is hard to imagine him caring (much) less if both hemispheres were successfully transplanted, though as a result of this double success he would not survive as either of the two resulting persons. So the quasi-prudential concern that he would feel before the fissioning for the resulting pair of beings does not indicate anything metaphysically important about his identity because he would cease to exist with fissioning. The upshot is that prudential concern doesn't matter

metaphysically. It doesn't tell us anything about our identity and probably misleads us in cases of undivided brain transplants. Shoemaker's position would be much stronger if like Unger, Baker and Velleman he claimed what mattered in survival weren't satisfied in the non-identity preserving fission scenario. Once he allows what matters to be preserved without identity in the fission case, his claim that the undivided transplant case is identity preserving is weakened.

The advocate of the biological approach to personal identity will maintain that if the lessons of Swampman, the series of short-lived duplicates, and the persons resulting from fissioning, all of whom mistakenly believe that they had thoughts before they actually did, are combined with Parfit's insight about prudential concern, we have been provided with resources to challenge Shoemaker's interpretation of a scenario of apparently uninterrupted thought during a whole cerebrum transfer. The transplant of the cerebrum would not involve a person switching bodies, only a person who wrongly thinks he once had a different body.

If a person can't be transplanted, then Shoemaker's account of the causal individuation of properties can't support his claim that organisms don't think. The cerebrum transplant would not be a case of a chain of thought beginning as the person was constituted by one human animal and ending when it is constituted by another. The causal properties of the mental properties would *not* be possessed *only* by a person capable of thinking with the cerebrum. Thus it would be plausible to maintain that the animal's cerebrum made it possible for the animal to think and that there were two thinking animals in Shoemaker's thought experiment.

Part IV. Shoemaker's Conflict with Conventional Biological Wisdom

Now some readers might think that the result is a stalemate: they have their initial transplant intuitions, but have since been provided with an alternative account to explain away the appearance of continuous thought and body switching. Maybe they still think, as I do, that the account of the

transplant offered by psychological approach to personal identity is slightly more compelling because they can't help but believe that identity is what matters and that our concern tracks identity. What is to make them favor one analysis of cerebrum transplants over the other? Perhaps the advocate of the biological approach to personal identity will maintain that this tie can be broken, or the psychological account's slightly greater appeal can be offset, if the reader considers the extent of belief revision that Shoemaker demands of biologists. Biologists are going to be quite surprised to learn that no animal can think. Shoemaker must deny thought to *any* animal, not just human animals. Shoemaker admits that removing the part of a dog's brain that is responsible for its consciousness would be the transplanting of the dog - if the dog is the sentient being that is spatially coincident with the canine animal. Shoemaker writes:

What happens if the cerebrum from the head of one dog is transplanted into the head of another, carrying with it the psychology of the first? It sounds harsh to say that dogs are not a kind of animals. It is probably not true that "dog" relates to "canine animal" the way "person" relates to "human animal," permitting the formulation of the claim that the relation of dogs to canine animals is one of constitution rather than identity. But if not, I think we could introduce a sortal term that does so relate to "canine animal" and that the claim it would enable us to formulate would be true.⁷

This means that before such a removal, the biological entity, the canine, was not conscious. A different entity, spatially coincident with the animal, was thinking the dog thoughts and feeling the dog emotions. The entity that loses its brain in the operating room of the "mad veterinarian," has not suddenly lost its capacity for sentience, it never had such a capacity. Nor did the animal ever have the capacity for actions resulting from conscious mental states. The logic of Shoemaker's thesis would entail that spatially coincident with every crow, fish, and frog and the like, there is a merely sentient

being that could be transplanted when its brain was. However, the less impressive the mind of an animal, and the less distinctive its personality, the less important the mind seems to the identity of its possessor. Because of this, readers might be more likely to resist Shoemaker's transplant thesis with "lower" animals. They may doubt that a creature with the mind of a bird is transplanted when its cerebrum is. The hope of the advocate of the biological approach to personal identity is that these readers extend such skepticism towards the transplantation of the person's cerebrum.

Any skepticism the reader harbors towards this thesis of Shoemaker's may be strengthened by considerations of ontogenetic biological development. Before and after birth the human animal, like many other animals, develops an immune system, various organs, tissues, muscles, teeth, hair etc. which enable it to survive in its environmental niche. And just as animals develop non-conscious adaptive capabilities, so it would seem that they acquire early on in their lives many conscious powers to meet the challenges of their environment.⁸ But this isn't true if Shoemaker's thesis is correct. Not only is an animal incapable of thought, but it doesn't *act*. If actions occur only when there are intentions, then all actions involve mentation, and thus it is not the canine animal that acts but only the spatially coincident thinking entity for whom Shoemaker plans to introduce a new sortal name.

The advocate of the biological approach to personal identity might further undermine Shoemaker's view by showing how poorly it fits into a evolutionary perspective or even a religious inspired account of directed evolution. Imagine the first kind of organism in natural history that had the physical structures necessary to give rise to minimal conscious. Those animals, according to Shoemaker, could not use such organs to think. However, all of their other organs will fit nicely into an evolutionary perspective where they are selected because of their advantages to the animal that possessed them. But the consciousness-realizing cerebrum is the exception. It was not a useful addition to the animal. No animal evolved a thinking organ as a part. Nor did a new species come into

existence when thinking beings came into existence. Not only did these new conscious creatures not evolve from an older species, replacing it or coexisting with it, but they weren't even animals.

While Shoemaker's account doesn't have animals evolve to where they can exemplify and possess personhood, it doesn't rule out that animals benefited from the emergence of consciousness. It is not hard to imagine organisms like the human animal reaping the rewards of being spatially coincident with a sentient person. But what is so odd is that the animal does so in the way some hosts benefit from parasites. It may actually be misleading to speak of conscious beings such as persons as being parasites, not because this unflattering term biases readers against Shoemaker's psychological approach to personal identity, but since they never existed separately from the animal and aren't alive. (I don't think Shoemaker can even allow persons to be contingently and derivatively alive a la Lynne Baker for then there would be pressure to make animals contingently persons and thus thinkers.) This absence of life makes sentient beings such as persons more akin to viruses than parasites. Persons, like viruses, reproduce and spread only by making use of the living. Now this is perhaps an even less flattering description than attributing persons parasitical status, but it does seem accurate given Shoemaker's ontology.

Readers would be mistaken if they thought that I was suggesting that consciousness on Shoemaker's account is not a product of evolution. My complaint is only that it is not a property exemplified by an evolving animal. What makes the Shoemaker story so difficult to fit into an evolutionary world view is that the genotypical basis for persons is a part of the animal but the phenotypical expression is not. And yet the phenotypical expression is not like an animal artifact that comes to exist independent of the animal like a nest or dam. Rather, it comes to exist in the same place as the animal and is composed of the exact same matter.

Part V. Mere Sentience, Self-Consciousness and The Problem of Too Many Thinkers

Unbeknownst to Shoemaker, another version of The Problem of Too Many Thinkers emerges from the transplant of a dominant cerebral hemisphere. Even if both hemispheres are capable of realizing self-consciousness, imagine that one hemisphere has lost the ability to realize more than *mere* sentience prior to the transplantation of the other hemisphere that is capable of supporting not just mere sentience but also self-consciousness. The being with the impaired cerebrum would be like a newborn, an Alzheimer patient, or lower animal that was sentient but not self-consciousness and thus unable to think about its thoughts. An important question is that if the two hemispheres just mentioned belonged to the listener, where would the listener be found if the hemispheres were separated and the one capable of supporting self-consciousness transplanted into a cerebrumless body just like that of the listener? I suspect that most listeners will not see this as a case of fissioning out of existence but will identify with the individual that has the hemisphere that is capable of realizing self-consciousness. Shoemaker himself provides reasons to take this view since he relies upon Nozick's closest continuer approach in cases of asymmetrical branching.⁹ The self-conscious individual will believe it is the listener and will have thoughts about its past, present and future. The other, devoid of self-consciousness, will be living in the present, unable to think of itself as having done anything in the past or future. What this identification suggests is that listeners are essentially self-conscious persons, not merely sentient thinking beings. This thought experiment, unlike the "normal" whole cerebrum transplant, can determine whether we are essentially self-conscious persons rather than essentially merely sentient beings that are only contingently self-conscious.

Now if the person is transplanted, what do we say about the thinking being left behind? Is it the human animal? Can the animal think low level thoughts that don't involve self-consciousness, contrary to what Shoemaker claims? Shoemaker would deny this for the same type of argument as before can be run to show that the merely sentient being is distinct from the animal. All we have to do

is to imagine that the merely sentient being with the remaining hemisphere can also be transplanted, its thought uninterrupted in the process. Of course, these thoughts would not involve self-consciousness but that doesn't mean there can't be a chain of connected thoughts about something in the world. What this indicates is that the merely sentient being is not identical to the animal. But nor is it identical to the person. This all suggests that there is another level of constitution in between the animal and the self-conscious person. It would appear that the merely sentient being existed before the injury or the fissioning. It is not a new entity that came into existence because of injury or symmetrical fission and transplantation.

Even if one insists that the merely sentient creature is new, i.e., just budded into existence while the transplanted person is not, it still seems that there are possible scenarios in which there is a sentient being that is not a self-conscious person. Shoemaker is thus wrong to claim that whenever there is consciousness there is self-consciousness.¹⁰ It seems that a late fetus or newborn is conscious but without being self-conscious or psychologically continuous with any later creature. And likewise for the brain zap victim reduced to an infant-like state that Shoemaker claims is not identical to the person who possessed the brain prior to zapping.¹¹ Moreover, the advanced Alzheimer's patient too would lack the psychological continuity, integration and self-consciousness that Shoemaker claims characterizes a person. I don't think the merely sentient individuals with the zapped or Alzheimer's riddled brains just came into existence. And it seems very implausible to maintain that a sentient baby went out of existence when the capacity for self-consciousness arose and a person emerged, and then perhaps came back into existence when an injury or disease caused the loss of self-consciousness. So if there is a thinking being that is a mere sentient being distinct from the organism and the person, there still looks like a problem of too many thinkers will arise.

We seem to be left with two spatially coincident conscious beings. Both are necessarily

thinking beings but only one is a person and essentially self-conscious, the other being contingently self-conscious and able to exist without being able to reflect upon its conscious states. An Olson-like epistemic problem of being unable to determine whether one is the essentially merely sentient being or the essentially self-conscious person could only be avoided if the sentient non-person doesn't have the capacity to become even contingently self-conscious. By why shouldn't it have that capacity if the physically identical person does? It is hard to understand why different persistence conditions should prevent two thinking beings possessing the same brain from having similar mental capacities. So even if Shoemaker's response to the biological account of personal identity is adequate - and we have surveyed some reasons to doubt that animals are mindless - he is still left with one too many thinkers.

A final worry is that Shoemaker's functionalism, his theory of individuating properties by the causal powers they bestow upon their subject, and his psychological continuity account of personal identity fail to provide the means to prevent the brain, or a part of it, from being a thinking being. The cerebrum transplant thought experiment that allegedly shows persons to have different persistence conditions and thus mental properties from animals won't show that the cerebrum (or part of it) isn't a thinking substance. If Shoemaker still believed in the possibility of brain state transfer devices then he would have a scenario in which the person survived but their brain didn't.¹² But having abandoned that belief, he can only avoid the extra thinker by either identifying persons with parts of their brains or by joining with those who have confidence that they can survive their organic brains being replaced by inorganic parts.

¹ Most philosophers of personal identity are attracted to some version of the psychological account.

Besides Shoemaker's approach, very good accounts of the psychological approach are Lynne Rudder Baker's *Persons and Bodies: A Constitution Approach* (Cambridge: Cambridge University Press, 2000), Derek Parfit's *Reasons and Persons* (Oxford: Oxford University Press, 1983) and Peter

Unger's *Identity, Consciousness and Value* (Oxford: Oxford University Press, 1990). Eric T. Olson provides the most thorough biological account of identity in his *The Human Animal: Identity without Psychology*.

² Shoemaker, Sydney. "Eric Olson: The Human Animal." *Nous*. 33:3 (1999) p. 499. Shoemaker, S. "Self, Body and Coincidence." *Aristotelian Society Supplement*. 1999. p. 79. I prefer to call the puzzle "The Problem of Too Many Thinkers." This is because the problem may take the form of two thinkers sharing one mind and the same thoughts. So whether there are two minds or just one whenever there are spatially coincident thinking beings, there will always be two thinkers.

³ See Olson's defense of the biological approach against Shoemaker in his "What Does Functionalism tell us About Personal Identity?" *Nous*, pp. 682-697.

⁴ By describing the entity as "merely sentient," I do not mean to imply it can't become self-conscious, only that self-conscious is not essential to it.

⁵ *IBID*. pp. 300-307.

⁶ Parfit, Derek. *Reasons and Persons*. (Oxford: Oxford University Press, 1983) 245-280. Peter Unger has responded to Parfit's claim that identity is not what matters in his *Identity, Consciousness and Value* (Oxford University Press, 1990). See David Hershenov's response to Unger in his "Countering the Appeal of the Psychological Approach to Personal Identity." *Philosophy* 79 (2004) pp. 445-472.

⁷ Shoemaker. "Self, Body and Coincidence." *Op. cit.* p. 303. note 14.

⁸ See Antonio Damasio's *The Feeling of What Happens: Body and Mind in the Making of the*

Consciousness (San Diego: Harcourt Press, 1999) for a biological account of the development of what he calls the “core” and “biographical selves” from an earlier “proto-self.” This continuity could contribute to undermining Shoemaker’s claim that the person is substance distinct from the organism.

⁹ See the discussion of a brain state device that makes a psychological duplicate without destroying wiping clean the person’s original psychology. “Personal Identity: A Materialist’s Account,” in Shoemaker and Swinburne’s *Personal Identity* (Oxford: Basil Blackwell, 1984) p. 131.

¹⁰ See Shoemaker’s discussion of how the unity of consciousness brings with it self-consciousness and how this fits with his functional account of mind and psychological account of personal identity. *Personal Identity*. Op. cit. p. 102

¹¹ Shoemaker. *Personal Identity*. Op. cit. p. 87.

¹² Shoemaker. “Functionalism and Personal Identity – A Reply.” *Nous*. 38:3, 2004, p. 525.