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# Integrative Unities and the Persistence of Persons Across Time

Christian Anne Nelsen

University of Colorado at Boulder, nelsen@colorado.edu

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INTEGRATIVE UNITIES AND THE  
PERSISTENCE OF PERSONS ACROSS TIME

by

Christian Anne Nelsen

B.A., University of Colorado, 2008

M.A., University of Colorado, 2012

A thesis submitted to the  
Faculty of the Graduate School of the  
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This thesis entitled:  
Integrative Unities and the Persistence of Persons Across Time  
written by Christian Anne Nelsen  
has been approved by the Department of Philosophy

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David Boonin

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Chris Heathwood

Date\_\_\_\_\_

The final copy of this thesis has been examined by the signatories, and we  
Find that both the content and the form meet acceptable presentation standards  
Of scholarly work in the above mentioned discipline.

Nelsen, Christian Anne (M.A., Philosophy)

Integrative Unities and the Persistence of Persons Across Time

Thesis directed by Professor David I. Boonin

In this paper I argue for the position that we (human animals) are essentially human animals in virtue of the integrative unities of our bodies. These integrative unities also give rise to consciousness, which is embodied, also as a result of the integrative unities. Human animals persist through time in virtue of our vital functioning. To argue for these positions, I first consider alternate views. Primarily, I consider both the psychological view, which I ultimately dismiss, as well as the Biological Approach. The Biological Approach (argued by Eric Olson) is the most similar to the approach I sustain, and so I take some time to give an exegesis of his view, and explain how it differs from my own. Ultimately, I agree with Eric Olson that our type of being is essentially human animal, and that we persist in virtue of our vital functions. I diverge from Olson in that he centers his explanation in the brain stem, whereas I have a systemic approach. I also differ from Olson in that I attempt to give an explanation for persons, and well as human animals.

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## **Part I: Personal Identity**

### 1: Introduction

There are many questions involved in determining the nature of personal identity, and many different attempts to answer those questions. Why should the issue of personal identity matter to us, though? For one, it might be important to us in the face of scientific developments, such as cloning, or brain programming or even organ transplants. If scientists were able to reprogram someone's brain to help her forget a horrible tragedy, would the same individual exist after the treatment? If someone is horribly burnt in an accident and the only way to save him is to replace his entire body with a new material, would the same individual who went into the fire come out of the operation? It might be important to us for ethical reasons: if someone does not remember a crime he supposedly committed, should he be held accountable for the crime? If a single individual is responsible for a young child, but later her body is slowly replaced with another, then who is responsible for the child? Knowing who we are and what keeps us existing as we are is important for all sorts of reasons.

These questions are compelling enough to convince me to write a paper on what the nature of personal identity is, how identity persists, and what else might be involved in these apparently simple questions. In the following paper, I propose and argue in favor of the view that personhood is a non-essential property of human animals, and that to persist as one of these beings is to be a human body. That is, people are human animals, and being a human person can be a property of the human animal. Generally, I argue that personal identity is dependent upon an individual's specific body, and that an individual's personhood arises as a result of being that specific body. I do argue that personhood is a property of some types of bodies, including human

animal bodies. It is not personhood that allows individuals to persist across time, but rather the regular functioning of human animal bodies.

In order to argue for this position, however, I first want to be very specific as to the question I am answering in the vast field of personal identity. In Part I, I discuss various questions, how they differ from each other, and which specific question, or questions, I intend to answer. It is important to realize which questions I am trying to answer, because the end result of this paper may initially seem inconsistent with a *prima facie* idea of personal identity. Next, I spend a fair amount of time providing an exegesis of other popular accounts. The primary alternative to my view is the psychological view, especially as defended by John Locke, and more contemporarily, Derek Parfit and Richard Swinburne. Another view that I discuss, and then argue against, is the bodily/animalism view promoted by Eric Olson. I take Olson as my primary rival, and so I devote Part II to discussing and analyzing his view, the Biological Approach. It will also be briefly reviewed in Part I, in order to provide a foil to the psychological approach.

In Part III, I give my own positive argument. I distinguish a human organism from a human person, and argue that although they often overlap, they do not always. Primarily, my view is that we are essentially human animals, and accidentally human persons. Our existence as persons is dependent on our animalism. Consciousness (which is what gives us personhood) is a property of a body that functions in a particular way, but one that cannot be separated from the body in which it arises. When a body fails to function in a way that causes consciousness, a person ceases to be a person, and reverts to a mere human animal. Of primary importance is the identity of the body, which sometimes takes on specific marker, that of consciousness. While this marker is exhibited, the same person persists, although that person's identity is not dependent on

the personhood, but rather the body from which consciousness arises. This allows the person to continue to exist through any series of mental changes and states.

My last part is brief. In Part IV, I consider various objections for both Olson, and myself and show that my responses to the same objections are more satisfactory in some way than Olson's. I also consider objections that apply specifically to my account. I return to these issues later on in each part, but for now I want to focus on what specific questions I answer, and how others have answered it.

## 2: What Questions Am I Answering?

There are several different, but related questions in the general field of personal identity. Since there are many, and they all require different answers, it is important to sort out exactly what is being asked. Here are the two main questions I aim to tackle:<sup>1</sup>

**What am I?:** This is the first important question which I intend to answer. This question concerns the sort of metaphysical ontology that people and persons fill.  
**Persistence:** This question is of utmost importance to this paper, and is one of the main questions I intend to answer. It has to do with what makes a person or human last over a period of time. What is it that makes the same person the same person from year to year?

For the purpose of comparison, some other common questions from the literature are below. As may be obvious, they are related in that they all focus on individuals (or groups thereof), but differ in that they focus on different aspects of an individual. The two I focus on are closely related because together, they ask: What sort of thing am I (and others like me), and what makes me (and others like me) remain that thing? The "Who am I?" question will fall out of the answers to the questions I intend to answer (though I do not discuss this overtly). The other question

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<sup>1</sup> I derive these questions from Eric Olson's Stanford Encyclopedia of Philosophy article on Personal Identity.

below is a different sort of question from the other three – instead, it is concerned with “what matters,” a question that I have some problems understanding. Here are the questions, along with a brief explanation:

**Who am I?:** This question asks about a specific individual. I do not intend to focus my paper on specific individuals, but of course, the more general question I answer will effect this as well.

**What matters in Identity?:** This question isolates one of the practical aspects of identity; what should we or do we care about when we are considering issues in personal identity? Again, although I will not directly address it, it is of tangential importance to my paper.

As I mentioned, my primary focus is on what people and persons are, and how they persist across time. I conclude that persons are essentially identical to their bodies, which operate in a unique way, and that persons persist through their bodies. For the purposes of this paper, I revert to the majority of other literature on these topics, which generally defines “person” or “persons” as something that has consciousness and a mental life. Both Olson and I (along with many others) define “person” the same way Locke did:

“...a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places; which it does only by that consciousness which is inseparable from thinking, and, as it seems to me, essential to it: it being impossible for any one to perceive without perceiving that he does perceive.”<sup>2</sup>

I define “human/animal,” and particularly “people,” as those organisms with bodies like us, and specifically those who are of the species *Homo sapiens*. Thus, a person need not be a human animal, and vice versa.

In the next few sections, I provide some common answers to the questions I have indicated above. The two most common answers for the questions I ask are the psychological view, wherein people are identical to their psychological states. The other primary view is the

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<sup>2</sup> Locke, *An Essay Concerning Human Understanding*: Book 2: Chapter 27 #9

bodily/animal view, wherein people are identical with their bodies, or often, special parts of their bodies (particularly and most often the brain). After explaining the arguments, I provide objections and reasons that these views are not satisfactory.

### 3: Common Answers – Psychological View

The psychological view has perhaps been the most popular view in answering these questions. Generally speaking, the psychological view is the view that a person is identical with their psychological properties, such as memory, preferences, promises, temperament, relationships, interests, intelligence, and so on. There are various versions of the psychological view, which I discuss below. Importantly, the psychological view often (though not always) provides a distinction between psychological attitudes, and bodily identity. As such, this view is consistent with Freaky Friday body swap type cases, potentially an afterlife (after the body has died, somehow the psychology continues), out of body experiences, and other phenomena that could not happen with a purely bodily view of personal identity. For those who stick with a psychological view of personal identity, an individual's continued psychology is what gives that individual persistence across time. A body (or part of a body) may be related to a particular psychology, but need it not be, in order for a specific individual to continue to exist.

If a person is identical to their psychological states or consciousness (whether or not the psychological states are dependent on the brain, or a soul or immaterial mind), then what is it that makes that person persist? The memory view of persistence is a version of the psychological view. This view was famously supported and argued for by John Locke, as well as many other early modern philosophers. As I described above, Locke says that a person is something that has consciousness. In order for a person to persist, Locke argues that "...yet it is plain,

consciousness, as far as it can be extended, should it be to ages past, united existences and actions of the immediately preceding moment: so that whatever has the consciousness of present and past actions, is the same person to whom they both belong.”<sup>3</sup> What Locke is saying in this passage is that memories of past experiences are evidence of the same person’s continued existence because the person remembers that she did a particular action. For Locke, the questions of persistence and “what am I?” are answered by alluding to the nature of memories. A person persists so long as they have consciousness that extends backwards: a person is a thing that remembers.

Harold Noonan explains Locke’s view further by isolating the particular kind of memory that an agent must have:

“I can be said to remember my 7 times table... This is factual memory, retention of previously acquired knowledge. I can also be said to remember how to pilot a plane or do a handstand. This is retention of previously acquired abilities. But there is also the memory of events witnessed or participated in... memory of one’s own experiences and actions, which one will report in first-person memory claims”<sup>4</sup>

It is only the latter kind of memory that counts for Locke’s view; the memories that count must be those that the person remembers from a first-person experience. The other kinds do not count, in part because something other than a person could recall those things, and also because they do not need to be first-person memory claims.

Although this may seem like a simple and easy way to sum up what a person is, and how they persist, Locke quickly runs into problems. The primary concern with Locke’s view is that the idea of memory *presupposes* that the same person remembering is the person who did act X,

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<sup>3</sup> John Locke. *Of Identity and Diversity*. Metaphysics: Classic & Contemporary Readings ed. Hoy, Ronald C. & L. Nathan Oaklander. Wadsworth Publishing Company: Belmont, California. (1991) p 119

<sup>4</sup> Harold Noonan. Personal Identity: Second Edition. Routledge: New York, New York (2003) p 9

or was present for experience Y. This is problematic for several reasons. Most simply, Locke's notion implies that if you do not remember act X, then you did not do it. Likewise, if you do remember act Y, then you did do it. Memories are notoriously tricky things, which can be easily altered. But even simpler than that is the following issue: Since I do not remember everything that I did yesterday, does that mean I faded in and out throughout yesterday? Or that there was another person (perhaps even in the body I consider to be mine) doing the things that I do not remember doing? That is an absurd conclusion to draw. Second, suppose that there is an evil scientist who somehow removes memories from their hosts and implants them into new persons. The new persons would then apparently remember doing something that they did not actually do or experience. The list of objections runs on, but these are two of the most important.

Derek Parfit presents an alternative to Locke's view that does not fall to the same objections. Instead of memories and their other mental ilk, Parfit proposes the notion of *q*-memories. *Q*-memories have three different aspects:<sup>5</sup>

1. They seem just like memory beliefs
2. The experience being remembered (or *q*-remembered) was actually had by someone
3. The belief is dependent upon the experience in the same way memories are

*Q*-memories promise to save us from many of the complaints against Locke's view, in that they allow for gaps in memory, they allow for fission and fusion cases (more on this later) and they allow for memory-center transplants (again, more on this later). They seem to provide a way for the psychological view that Locke favored to thrive in a modern world (and Locke's own as well).

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<sup>5</sup> Parfit, Derek. *Personal Identity*. Metaphysics: Classic & Contemporary Readings. ed. Hoy, Ronald C. and L. Nathan Oaklander Wadsworth Publishing Company: Belmont, California. (1991) p 171

Parfit, though, is interested in answering a different question than the one that I am attempting to answer. Instead of addressing the questions, “What is a person and how does it persist across time?” Parfit is interested in the question, “What is it that is important to persons?” He believes that the answer is psychological continuity, rather than personal identity. Remember that psychological continuity is what provides persons with their persistence. Psychological continuity is overlapping chains of the various mental attributes (such as memory). Although Parfit is answering a different question, it is interesting and informative to see why he answers this one, in order to see if his answer can provide any clues to the questions that I am trying to answer. At the very least, it will help to clarify the difference between the two questions, and to solidify the reasons I have for answering my question in the way that I do. Finally, his notation and idea of *q*-mental entities (memories, along with their other mental phenomenal ilk) may be important and helpful to others who wish to defend a psychological view.

In his book, Reasons and Persons, Parfit concludes (after a series of arguments) that, “...personal identity is not what matters. It is merely true that, in most cases, personal identity coincides with what matters.”<sup>6</sup> He concludes, again after much argumentation, that instead of personal identity (construed several different ways), it is psychological continuity that is important. More convincingly, imagine that someone is told that her brain is to be somehow split into two separate bodies, but only one of the bodies will have psychological continuity with her original body. Moreover, one of the bodies is going to be severely tortured, and the other is to be treated like a beloved queen. It seems very rational for the woman to hope that the body with her psychological continuity is the one treated like a beloved queen, and to feel only altruistic concern for the other body. This is so even in the case that her original body is the one to be

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<sup>6</sup> Parfit, Derek. Reasons and Persons. Clarendon Press: Oxford (1986) p 282-283

tortured, and her psychological “self” is to be in a different body, but treated well. Even though she has a different body, what matters to her is her psychological continuity, because she perceives (wrongly, I think) that she is identical to her mental states. She may not technically be the same individual (for various reasons), but if she gets what she hopes to, then she has gotten what was important to her, regardless of personal identity consequences. It may be that she does not exist in either body, but rather, two new people do.

Another view promoted by many is the various brain versions of personal identity. One is a sort of mix between the psychological and physical views, and proposes that the cerebrum, the part of our brains that includes all our mental processes, constitutes what we are. The person follows the cerebrum; if the cerebrum is implanted in another person’s body, then the person has merely acquired a new body. As long as the cerebrum is the same, the person is the same, regardless of the rest of the body. The lone cerebrum, surviving on machines, could be a person. This thesis is driven by concerns from the psychological view, and as such, is a version of the psychological view, rather than the bodily view. There is another brainy version, which I discuss in detail in Part II. Ultimately, the brain version of the psychological view proves to be just as problematic as the non-brain specific view, and these issues are addressed in the following section.

#### 4: Objections to the Psychological View

I do not endorse the psychological view, and there are several reasons for this. Some of the reasons will not be clear until later, when I describe my own view, but some are because of the objections I discuss below. The first objection is the case of the severe amnesiac. Another reason is the related cases of fission and fusion, and the final objection on which I focus is the

problem of multiplicity. I only give brief responses to these objections; there are plenty of lengthy responses in the literature that I encourage the reader to explore on his or her own.

The case of the amnesiac is compelling because it highlights the significant problem that psychology can radically change (not just qualitatively). Basically, the problem with the severe amnesiac is that she loses all of her psychological continuity (the overlapping chain), but it seems odd, at least to say that she has stopped persisting. I mention that psychology can radically change apparently quantitatively because we are all familiar with cases wherein a person's psychology changes qualitatively. These cases are important to distinguish; what I am interested in here is quantitative change, and not qualitative. This is more than a friend undergoing a severe depression and, as a result, saying, "Julie just hasn't been herself since her brother died." Julie survives the depression brought on by her brother's death, even if her personality is radically different as a result. According to the psychological view, it appears that the severe amnesiac is not only radically different, but did not survive.

Let us consider a case in detail. The evil Dr. Forget has captured James Bond, and completely erased his memory, as well as all his other mental phenomena. When MI6 finally finds Bond's body wandering around Costa Rica, this man appears to have no psychological connection with 007. Instead of vodka martinis, this man prefers Coke. He has no interest in sex or fancy equipment and does not know a word of English. He does not remember Money Penny, Q, M or any of his missions. He never makes clever puns, and is startled at the drop of a hat. This man is the exact opposite in every possible psychological way of 007, and regardless of Q's attempts to reverse the changes Dr. Forget has made, throughout the rest of his life, the person who shares Bond's body has no mental connection with who 007 was. Instead, all psychological connectedness and continuity with 007 has been shattered. Should MI6 conclude that Bond has

stopped persisting, or continue to believe that the man who shares Bond's DNA, fingerprints and characteristic scars is merely radically changed? If MI6 is swayed by the psychological view, they will have to accept that Bond the person no longer exists, and this new man they have found has the same body that the Bond they knew, but is non-identical to him.

It does not seem right to me that MI6 should issue an obituary for Bond. Instead, it seems that they should issue a report that he has been found, but has undergone complete amnesia. Although this new man has no psychological relation to 007, he has a causal relationship to him, and that causal relationship is due to Bond's body. The problem here is not that causal relationship exists, but rather that the causal relationship does not suffice for psychological continuity. The overlapping chains of psychological continuity are more than causally related; to say that they are makes the problem circular. Circularity emerges because psychological continuity is supposed to cause persistence across time for an individual. Asserting that the person's persistence causes them to have psychological continuity is circular. Besides, if psychological continuity and mental states are what makes a person a person, and what makes a person persist, a mere causal relationship just is not strong enough. There must also be overlapping mental states, and for the severe amnesiac, there just are not. The same body has persisted the whole time, however, and it is at least odd to attribute a different person to the same body.

Another objection is the related cases of fission, fusion, transplant and teletransportation. These are not major problems for someone who accepts Parfit's view, but again, Parfit's view is one of what is important to persons for identity, and not identity itself. The cases of fission and fusion are derived from empirical evidence about an amazing plasticity of our brains. It seems, from research done with epileptics, that the left and right hemispheres of the brain are able to (at

least partially) function independently of each other. For most of us, this rarely, if ever, occurs, due to communication between the two hemispheres via the corpus collosum. This part of the brain helps the two halves communicate and determines which side does what. Sometimes, in cases of severe epilepsy, the corpus collosum is medically severed, in order to help manage seizures. This has led to some interesting results; namely, it appears that the left and right brain hemispheres can operate independently. Show someone who has had their corpus collusum severed a picture of a pencil with their right eye, and their left hand will grope for a pencil, while their right hand looks for the stapler the left eye has been shown.<sup>7</sup>

What this appears to suggest is that perhaps, the brain could be split and one hemisphere placed in a different body. Both hemispheres can play “catch-up” so to speak, and become fully developed as a single hemisphere. This is the case of fission, because fission refers to cases in which one thing is separated into two things. In this case, one (whole) brain has been separated into its two hemispheres. Some might argue that one person is now two, since the one brain that had an individual’s psychology is now in two different places, but each part has the same mental faculties and memories. Since it appears that psychology is primarily centered in the brain, this suggests that were the transplant to proceed without a hitch, one person could exist in two separate bodies. Both new persons could have psychological continuity with the original person. If psychological continuity is the basis of our definition, it now appears that two identical persons are also clearly separate individuals. The two individuals could even go on to have separate lives, all while both maintaining psychological continuity with the original, but not with each other.

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<sup>7</sup> Noonan (2003) 16-18

The case of fusion is the opposite (although perhaps less of a problem). Instead of one person being split into two, two people could become one. Suppose that Jack and Jill have been in a terrible accident. Jack's left hemisphere is completely destroyed, but his right hemisphere is perfectly fine. Jill's right hemisphere has also been completely destroyed, but her left hemisphere has been perfectly preserved. For some reason, the doctors attending them decide to take their saved brain hemispheres and put them into a new body. The new person, JackJill, has psychological continuity with both Jack and Jill, and yet continues psychologically forward as a single individual.

Both of these cases are problematic for the holder of the psychological view, because they involve multiple individuals that are not themselves identical. Identity is something that should be transferable,<sup>8</sup> but in these cases, it is clearly not. For example, Susan is currently an individual who has a whole brain and psychological continuity since the birth of her body. Now, imagine that Susan<sub>A</sub> is put into a teletransporter, and sent on a really nice vacation, far away from her home. This specific teletransporter allows Susan<sub>A</sub> to remain conscious the whole time she is being transferred, and she wonders what the vacation will be like the whole time. It is a brief trip but she remains conscious for it. When she finally arrives, defenders of the psychological view assert that she is the same person that left her home, because she had psychological continuity the whole time. This is the case even if the body she goes on vacation with is made up of different atoms than the body she left (the teletransporter sends bodily blueprints, but not the same atoms). Susan<sub>B</sub> has a lovely vacation, occasionally thinking of her

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<sup>8</sup> Identity in the case of personal identity is not the same as in the case of logical identity. This is understood. It might be protested here that the sort of identity that involves personal identity should not be held to the exact same standards (i.e. transitivity) as logical identity. Although this may have some force, I think (but will not argue here) that since the two identities are related in a particular way, so too are their properties (including transitivity).

friends back home and hoping that they are remembering to feed her dog. And when Susan is sent back from her vacation, the same thing happens, and Susan<sub>C</sub> goes back home.<sup>9</sup> So it appears that personal identity in this case is transitive. A is identical to B, and B is identical to C, so A is identical to C. But now imagine that when Susan gets into the teletransporter, there is an error, and instead of only sending Susan's psychological continuity and bodily blueprint through the teletransporter, to vacation, both her psychological continuity and her body remain in the teletransporter, until she steps out, confused about what just happened. In this scenario, is Susan on vacation, or confused in the teletransporter room?<sup>10</sup> It looks like A is identical to both B and D (Susan who gets confused). How can one person be identical to two separate persons, who are equally psychologically continuous with the first?

Finally, there exists a problem of duplication or multiplication for the psychological view. The duplication problem was hinted at in the case of fission, but goes one step further. Perhaps it will turn out to be the case that not only the brain is so plastic that it can begin to operate with one hemisphere only, but also the case that it can on a quarter brain, or an eighth brain. Or, perhaps some computer genius will figure out how to upload all of our psychologies onto a kind of hard drive or something, such that were the hard drive inserted into any human brain, the psychology could also be uploaded. This situation suggests that the same psychology could exist in as many human brains as it was able to duplicate. And since they would have psychological continuity with the original person, again we have run into the problem of transitivity of identity. And not just that! Even if we do not accept that transitivity is problematic, surely we still do not want to say that 2,000 persons with the same psychological continuity (to a given point, to be sure) are the same person. If the "original" person still exists, then how are we

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<sup>9</sup> Susans<sub>A,B and C</sub> are only supposed to indicate different times, not different individuals.

<sup>10</sup> I borrowed this example from Parfit, Reasons and Persons pp 199-201

to know who he is, or to single him out? They have different bodies! They are all in different places! The barrage of problems, I believe, is overwhelming.

These last two objections are where Parfit's *q*-mental properties can be helpful, and this is how many philosophers who defend the psychological view will go about defending it. *Q*-mental properties could help in this case because it might be possible to make a distinction between "real" memories and *q*-memories. Recall, however, that the definition of *q*-memories also entails real memories, so this distinction may not help so much. This is because, even if an individual knows that he may be experiencing a *q*-memory, he also knows that the *q*-memory did actually happen... but to whom? Furthermore, any particular individual would not be able to tell if she was experiencing a real memory, or a *q*-memory. She might think to herself, "I remember wanting a pony when I was a child... but wait, was that *me* or just someone I have psychological continuity with?" Likewise, she might question (more problematically) "I have a responsibility to care for this child. Or is that a *q*-responsibility? Am I, myself, responsible for this child?" If we accept that psychological continuity is what gives a person persistence, and a person cannot distinguish her psychological continuity from someone else's (due to *q*-mental states), who does she refer to when she refers to herself?

Although the psychological view might be popular, I think it has too many problems to provide a satisfactory view of personal identity. Eric Olson agrees, and provides yet another compelling argument, which I discuss in Parts II and III. I find the psychological view shortsighted, which is one reason I turn to its main rival, the physical or bodily view, in the following section.

## 5: Common Answers – The Bodily View

The primary alternative to the psychological view is the bodily view. A version of the bodily view that I discuss specifically is one of its versions, animalism. Since my view is a version of animalism, I give only a brief overview of bodily approaches in this section. I also make clear the distinctions between the bodily, biological and animalism views. Broadly speaking, the bodily view is just the view that we are identical to our bodies, in the same way that tables are identical to their physical parts. Animalism takes the bodily view one step further and asserts that we are identical to the animals that our bodies are. And Eric Olson's specific view, the Biological Approach, suggests that we are identical to our animal bodies functioning in a particular way. Part II of this paper will go more in depth as to their views, and criticisms therein. Olson is currently the primary advocate for the biological view, and thus, my primary interlocutor. It is his views that I primarily discuss in Part II. In this section, I give a general outline of the various flavors of the bodily view.

The bodily view (Olson calls it the Bodily Criterion) is the most broad. Generally speaking, it is the idea that persons (or other things) are identical to their bodies. Wherever a body goes, there is the person. This is obviously a very intuitive view, and is what we use in normal parlance. For example, if Jan and Rachel are standing across the room from each other, and Jan asks me where Rachel is, I can point at her body. I do not need to say, "Well, Rachel's body is there, but I'm not sure where Rachel is." We all presume that Rachel is where her body is. If Rachel comes up to me and shows me that she has a cut, she does not need to say, "Do you have a Band-Aid? My body is cut." Instead, she can just say that *she* has a cut, and I will know what she means. When things happen to our bodies, we report them as those things happening to us, and not to a part of us.

The bodily view is also very similar to the view that is generally attributed to artifacts and animals. A table at 3pm on December 18, 2011 is the same table at 3pm on December 18, 2012 if and only if it is made up of the same physical material, and that material has the same respective location. Of course, its position in the world may have changed, and it may have accumulated some scratches or stains, but by and large, if it is the same physical material in the same orientation, then it is the same table. Generally, we think that the same holds for a cat, or any other animal. My sister's cat Tutu is the same cat today as she was yesterday because she is the same body.<sup>11</sup>

In Olson's book, The Human Animal, Olson makes the case that people (as we know them) are a biological kind, like animals. He says:

“It may be possible to replace all of your parts, including your brain, gradually and piece by piece, with inorganic prostheses in such a way that your mental capacities were preserved throughout... The result would be a wholly non-biological person – with rationality, consciousness, free will, the works – who was both psychologically and physically continuous with you. Nevertheless, according to the biological approach that being would not be you, for you are a biological organism, and no organism could come to be a non-organism.”<sup>12</sup>

Our body types, and not our mental properties, separate us from other kinds of animals. There could be other types of persons too, that had no bodies or non-organic bodies, but that is not what we essentially are. We would be separated from those types of persons as well, again because of our bodies, regardless potential similarities in mental properties. The biological approach is a type of bodily view that places the emphasis on our specific type of body, our human bodies. The specific type of body that counts for something like us has the same biology

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<sup>11</sup> My view has an alternate way of dealing with animal identities, so I am not committed to this view. I only use this example to illustrate the simple bodily criterion.

<sup>12</sup> Olson, Eric T. The Human Animal: Personal Identity without Psychology. Oxford University Press: New York (1997) 125

as something like us. Under the biological view, a person at  $t_1$  is the same person at  $t_2$  iff she is the same biological organism at  $t_1$  and  $t_2$ .

I find this fairly persuasive, but I am not wholly convinced that it is narrow enough to help us figure out what we essentially are, and how we persist. It is useful to help us determine what it is to persist across time as a certain sort of entity (a biological one). Our persistence conditions tell us what sort of changes can happen to our bodies for them to remain the same body, which is more than the simple bodily view can do. Any change that is biological is allowed, and even necessary; being pregnant and giving birth, growing, healing wounds, certain kinds of transplants (this is trickier, but can still be accommodated), dying, developing cancers – all of these are more or less major changes that can be accommodated by the biological view. On the other hand, when we want to know whether or not the same person persists, and by person, we mean something more than just a particular type of organism, this definition is somewhat lacking. I discuss this further in Parts II and III.

The alternate brain version I promised in the previous section centers not on the cerebrum and the mental processes focused there, but rather the brain stem, and the biological processes centered therein. In Olson's words,

“But even here, for that thousandth of a second during which you have no brainstem, there is nothing to direct your life-sustaining functions...your capacity to direct them is destroyed. So for a thousandth of a second there is no self-directing event that coordinates the activities of your parts in the unique way that biological lives do...there is no living organism there, but only a corpse so fresh that its heart is still beating.”<sup>13</sup>

This is extreme. Because Olson is committed to, and argued in favor of, the biological view, he takes it one step further and instead commits himself to the view that a person at  $t_1$  is identical to a person at  $t_2$  iff that person has the same brainstem at both times, regardless of other

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<sup>13</sup> Olson (1997) 141

changes to the body or psychology. I find this view far too strong, and also do not think that it is a fair implication of the biological view.

In this section, I introduced various forms of the bodily view. The first view I explicated was the general bodily view, which is just that we (and others like us) are identical to our bodies, in the same way that artifacts are identical to themselves. Second, I discussed the biological view, which is the view that a person is the same person iff he has the same type of biologically functioning organism at  $t_1$  and  $t_2$ . Finally, I discussed what Olson sees as the natural implication of the biological view, which is the brainstem view. In Part II, I go more in depth regarding the biological and brainstem views. I discuss objections to both views, and why I reject the brainstem view in favor of a different view of the biological view. In Part III, I fully develop my view and foreseen objections to it.

## 6: Conclusions from Part I

In this section, I gave two primary answers to the questions, “What is a person and how does it persist across time?” The first view I discussed was the psychological view, which is the view that a person is identical to her psychological states and persists through her psychological continuity. This view has been popular for a long time, and is associated with many early modern philosophers (especially Locke), as well as many contemporary philosophers (notably Parfit). There are several problems with the psychological view, which is why I ultimately dismiss it.

The second answer I explicated was the various versions of the bodily view. The simplest version of the bodily view is that wherein a person is identical with part or all of his body. Notably, one major distinction between the psychological and bodily views is that the psychological view asserts that we are essentially identical to our mental states, and have bodies

accidentally, whereas the bodily view argues the opposite. I think that there are more reasons to align our essential selves with bodies rather than minds. Eric Olson is a primary defender of this view – he defends a narrow version of the biological approach. Ultimately, Olson defends the position that the brainstem is necessary and sufficient for personal identity. I find this too extreme, and will argue against it in the following part.

## **Part II: The Biological Approach**

### 1: Introduction

In this part, I discuss the argument of Eric Olson, whom I consider my primary interlocutor. In this section, I clarify Olson's position, and then give objections to his view. I give brief responses to the objections I raise, but deal with my responses more in depth in Part III. I also consider the question of whether Olson is addressing the same question as I am, or if his concerns are different from mine. Generally speaking, Olson takes a bodily position (which he calls the Biological Approach), but ultimately eliminates most of the body in favor of isolating the functioning brainstem as the main source of personal identity. He does this because the brainstem is the source of all our vital functions; it is what keeps our bodies operating in such a way that we can be said to be alive. I see several problems with this position, so after I explain his position and argument, I provide reasons to think that his account is less than satisfactory. Importantly, I argue that Olson's account ultimately sets him up for a dilemma. Furthermore, neither horn of the dilemma is acceptable to Olson's view.

## 2: Olson's Argument

Olson makes some interesting assumptions in order to get his argument afloat. Most of his assumptions are pretty widely accepted in the philosophical community, but because they are assumptions I take issue with, I want to address them directly. The first assumption that Olson and I both make is that persistent identity is dependent on physical or material considerations, rather than something like a soul, or immaterial mind. Olson and I take this view primarily because of the various problems that arise from the alternate assumption.<sup>14</sup> Olson is not committed to the view that there is any sort of dualism; just that in case there is, the biological features are the ones that are essential to both our identity and its persistence, rather than the psychological parts. As Olson says, "The Biological Approach is intended to be compatible with a 'dual-aspect' or 'property-dualist' theory of mind, according to which psychological properties are in some sense non-physical properties."<sup>15</sup> I agree that human animals must be and are essentially physical, but that we have different aspects to our physical natures. Although Olson's approach may not necessitate dualism, it is possible that doing so would enhance his argument for *personal* identity. As it is, he is primarily arguing for persistence of a particular organism, which may or may not maintain the same psychology, or what some consider personhood.

It may initially appear that the psychological view and the biological view are not actually rivals, but are in fact compatible, even complimentary. The psychological view is what makes us persons, and it explains our personhood and what it is to persist as a person. The biological approach, on the other hand, explains what makes us human animals, and how we persist as such. *Prima facie*, there may not appear to be any problems. The two views are

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<sup>14</sup> I will not make that argument here, but Olson does it quite nicely in a chapter in The Human Animal pp 94- 123

<sup>15</sup> Olson(1997) 126

describing different things, and they are compatible because one being could have both a biological body and a psychological presence, and thus the two things co-exist in one being (though they could be separated). A mental life and psychological continuity is what is essential to a person and a biologically functioning body is what is essential to a human animal, and both combined is what makes our kind of individual.

Here are some problems with that view (I call it the joint view), though, and why the discussion is generally divided into one or the other, rather than both. A classic problem for this view is the issue of communication between the two parts. If the individual is truly that – an individual – then how can it be that there are two separate things that work together as one? Do the two parts communicate with each other, and how is this facilitated? By a third facilitating part? This is problematic because it requires a larger ontology to explain an issue, which ultimately creates more problems than it solves. Another problem is the “Too Many Thinkers Problem.” If we all agree that brains think (and that brains are part of our bodies), a problem develops wherein the body’s thinking appears to be occurrent with the psychology’s thinking. I am not particularly swayed by this problem, but it does often make an appearance, and is also hard to explain away. The problem is a dilemma: Either the body does not think (which means that the brain is not part of the body, or the brain does not think), or the psychology is redundant. The joint view also does not answer the question of what we are, essentially. If both are equally necessary to being things like us, but they can (and do) often come apart, then which one is us, if they do? It is primarily this reason that most philosophers choose one or the other, rather than both.

Another assumption that Olson makes for BA, and one I cannot accept, is that individual body parts (including parts of the brain and nervous system) can be isolated and continue to

function in the same way. Olson's assertion may seem obvious. Hearts and other organs can be transplanted with little problem, so it looks as though those can function in isolation, at least to some extent. Although brain transplants are not yet physically possible, Olson thinks that they are metaphysically possible, based on the success of things like heart and liver transplants. Importantly, Olson cites the cerebrum as the center of psychology, and the brain stem, or lower brain, as the center for coordinating bodily functions.<sup>16,17</sup> Olson's talk about "cerebrum transplants," and "head transplants," and even "arm transplants" throughout his work make it clear that he thinks this is a possibility, albeit one that we have not yet scientifically achieved. In tandem with this assumption is the assumption that cerebrums, and cerebrums only, are the center and only organism that controls an individual's psychology, and "non-physical"<sup>18</sup> individuation (things such as thoughts, memories, and so on). My reason for disagreement with this idea not that organs can *never* survive outside their systems, but that they cannot on their own, and that to make them do so would be unnatural and complicated. A heart from one person can be transferred to another, and operate (that's the point!), so at least in some sense, I cannot deny that organs cannot be isolated. But, the heart is not operating *alone*. Again, that is the point – it is operating within a system to fulfill a particular function of that system. The receiver of the new heart will also have to take medication to make the heart function within that system (at least initially). The rest of the body sees the heart as an invader, and tries to attack it. These are some of the reasons I do not accept that organs can be isolated and continue to function in the same way. Although these assumptions are both widely accepted views, I argue against them in Part III.

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<sup>16</sup> Olson (1997) 114 - 118: discussing cerebrum transplants

<sup>17</sup> Olson (1997) 140: discussing brainstem replacements

<sup>18</sup> I say non-physical loosely here. It will become more clear later on that I believe these attributes, strictly speaking, are also physical.

With these assumptions in mind, I move on to Olson's argument. Olson asserts that what we are, essentially, are human animals. Olson explains: "[O]nce it is conceded that we are material beings of some sort, it seems quite obvious what sort of material being we are: we are living animals."<sup>19</sup> For a human animal to persist, it needs a certain set of vital functions, which provide it with biological life. Olson is happy to defer to scientists about what it is to be a living organism, and what Olson (along with the scientists) says is important to be a living organism is "...it's capacity to direct those vital functions that keep it biologically alive..."<sup>20</sup> Those vital functions include things such as metabolizing, exchanging oxygen and carbon dioxide, digesting, maintaining an appropriate body temperature and blood pressure, and healing wounds. In order to encompass the variety of vital functions that exist, Olson clarifies:

"By 'life-sustaining' functions I mean those that sustain life in the biological sense: they are those functions that keep an organism alive in the sense in which not only human beings, but also cockroaches and cabbages, are alive. There are certain features that distinguish biological organisms from non-living things."<sup>21</sup>

Of course, there are other functions as well, and clearly, it is not the case that an organism must have all of these functions in order to properly be called a living animal. These vital functions just happen to be markers of what it is to be a living organism.

An interesting point that Olson makes about these vital functions is that they should primarily occur organically. By "organically," Olson refers to something that is involved (strictly speaking) in the metabolic process. As such, things like dialysis machines, hip replacements or pacemakers are non-organic.<sup>22</sup> I find this an interesting position, and one that I am liable to disagree with; although dialysis machines are external to bodies, surely they are part of the

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<sup>19</sup> Olson (1997) 95

<sup>20</sup> *ibid* 135

<sup>21</sup> *ibid* 112

<sup>22</sup> *ibid* 135

metabolic process. For someone with kidney failure, his dialysis machine is necessary for his continued metabolism. This view of Olson's is important to his argument, which is the reason I mention it now.

So it seems that the vital functions, in all their various forms, are the thing that points at identity, and persistence. This is the part of the argument where Olson and I most dramatically part ways. Olson asserts that since these vital functions are what are important, and the brainstem controls of these vital functions, that makes it the lone necessitator of both identity and persistence. The brainstem is what controls these functions, and if it were to be removed, or stopped, for even a very brief time, the animal would be deprived of its ability to function, and would therefore cease to persist (even in the case that other organs continue to function). Olson explains, "As soon as your brainstem is destroyed, you lose the capacity to direct your vital functions...you cannot survive brainstem replacement for the same reason you cannot survive annihilation and replacement by a perfect duplicate."<sup>23</sup> A new human animal could perhaps come into existence, but it would not be the same human animal as the one prior.

Olson's main points are basically as follows: biological life itself is what is important to persistence and identity, and this is because we are human animals. Animals are distinguished by living in a particular sort of way. Science determines what constitutes life, and what appears to constitute life is a particular set of functions that all living bodies perform, but that no inanimate bodies do. This set includes functions such as metabolizing, digestion, wound healing, regulating body temperature and the exchange of carbon dioxide and oxygen. In human animals (at least), these vital functions are primarily controlled and monitored by the brainstem. Regarding the relationship of the brainstem to a human animal, Olson asserts that, "...it perished when its

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<sup>23</sup> Olson 140 - 141

original brainstem is destroyed (which may be a gradual process), for that destroys its ability to coordinate its life-sustaining functions.”<sup>24</sup> Thus, the brainstem is the most important physical aspect to identity and persistence. In fact, without the brainstem, no human animal would continue to live or persist. Any loss (yes, any! even brief) of brainstem, or brainstem functioning, stops a human animal from persisting, and thus ends its identity as a human animal.<sup>25</sup>

Olson sets up his argument in favor of the BA as a response to the Psychological Approach (hereafter PA). The advantages of the BA over the PA are too many to list here, but importantly, Olson thinks that BA is preferable because PA and the Lockean view of personhood are incompatible, but that the Lockean view of personhood is compatible with BA. According to Olson, the Lockean view of personhood is, “The idea that personhood is a complex psychological property: the difference between a person and a non-person is a difference in psychological capacities.”<sup>26</sup> This may sound an odd thing for Olson to use in an argument, because he defends a view that does not focus on psychological continuity or other psychological properties. Olson can (and does) agree with the holders of the psychological view on what the definition of a person is. He just does not think that the definition of personhood that they both agree on is actually compatible with the psychological view. Recall, however, that Olson thinks that his view is consistent with property dualism. Although he argues that it is not the psychological matters that are essential to persistence and identity, he recognizes (along with Derek Parfit) that these sorts of things do matter to us, at least for some social or pragmatic reasons.

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<sup>24</sup> Olson (1997) 142

<sup>25</sup> Olson (1997) appeals to this several times, most notably p 141

<sup>26</sup> *ibid* 105

Olson asserts that accepting the Lockean view of personhood means that, "...nothing could fail to be a person just because of its modal or dispositional properties."<sup>27</sup> In other words, persons are necessarily persons, and could not have failed to be. This assertion sets up a dilemma, which separates the Lockean approach from the PA: "...either the Psychological approach would not be true of all people (in which case it would be false), or the being in question would not be a person (in which case the Lockean Account would be false)."<sup>28</sup> The first horn of the dilemma emphasizes that there are, or could be, persons<sup>29</sup> who do not have the persistence requirements that the psychological approach uses. For instance, perhaps there is a being that has a gappy psychology. It is usually rational and self-aware and has all of the other mental phenomena that we associate with persons, but it occasionally undergoes an amnesiac fugue state. When it awakes from these states, it has a different psychology every time. Olson's point is that this being appears to be a person, but it does not have psychological continuity in the way that the psychological view requires. The second horn emphasizes that if such beings did exist, then they would not be persons, which is contrary to the Lockean view.

Of course, a defender of the PA may counter that they do not intend to defend the Lockean approach, and when they talk about psychological continuity, they mean something different. This seems like a stretch, however. Most who will defend the PA do so *because* they also want to defend the Lockean approach, which is that people are determined by their psychological properties, such as being rational, self-conscious, et cetera. Olson argues against the PA because he thinks that it is inconsistent with the Lockean approach, which is a popular and widely accepted view of personhood. He believes that it is consistent to hold the Lockean

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<sup>27</sup> *ibid*

<sup>28</sup> *ibid*

<sup>29</sup> In the previous passage, Olson means "persons" as I have defined it. He is just not as careful about separating the terms "persons" and "people" as I am, which he explains on page 6 (1997).

approach *only if* the psychological properties of a person are not also the essential properties. This appears to be the reason he defends the BA, and allows it to be consistent with property dualism.

He also contrasts BA with what he calls the Bodily Criterion (hereafter BC). The BC is different from the BA in an important way. According to Olson, the BC is the view that, “If  $x$  is a person at time  $t$  and  $y$  exists at  $t^*$ ,  $x = y$  if and only if the thing that is  $x$ ’s body at  $t$  is  $y$ ’s body at  $t^*$ .”<sup>30</sup> This is distinct from the BA because the BC identifies a person with his or her physical body, and nothing else. The BC requires us to define what a body is, and stick to that as far as persistence and identity are concerned. This is problematic, because bodies are very difficult to define. To make the problem clearer, remember the Ship of Theseus: every so often, a part is replaced until after a long while, none of the ship is physically the same. Apply the same concept to a human: If a human was born seventy years ago, she has undergone countless physical changes in the last seventy years. Whether or not the exact data is true, popular science posits that a human body sheds all its cells and regenerates them approximately every seven years. If this is the case, then the seventy-year-old woman has had no less than ten bodies throughout “her” lifetime. I say “her” lifetime, because if the BC is correct, and we are identical with our bodies, and this woman has had several different enumerations of bodies, then it is difficult (perhaps impossible) to argue that she is the same person that was born so long ago. This is distinctly a problem for BC and not BA because BC is concerned primarily with the actual physical parts, whereas BA is concerned with functioning. It is one of our vital functions to grow and replace cells, so it is expected, even required by BA that human bodies undergo this sort of

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<sup>30</sup> Olson (1997) 142

change. If BC were construed to include vital functioning, then it would not be a problem for BC either. I am just trying to emphasize the most basic type of BC, for the purposes of comparison.

Olson gets around this body problem with his Biological Approach. Although he thinks that we are human animals, who necessarily have, and are defined by our bodies, the BA allows natural processes, such as the regeneration and replacement of dead cells, to occur. By identifying the processes themselves (as centered in the brainstem), the BA allows bodies to change, and undergo normal bodily functions that the BC does not, at least *prima facie*. The point is that the BC centers on only the physical manifestations of bodies, whereas the BA also accounts for natural bodily functioning, which goes above and beyond the pure physical matter of bodies. It is just that the BC emphasizes purely the physical bodies alone, without describing how they can persist through change. The BA has an advantage, because it emphasizes processes (and the capacity of the brainstem to affect those processes) in the body, which naturally entails changes that bodies undergo, while still persisting.

To clarify and make overt the situation that Olson (and I am) is in, here is a rough hierarchy of the views I have discussed in this chapter. The Bodily Criterion is the main alternative to the psychological approach, because it claims that what is essential to beings like us is our bodies, rather than our psychologies. The most simplistic BC (which Olson argues against) gives human animals the same persistence conditions as artifacts. As long as the same physical material is in the same place, the same entity exists. Olson argues against this view, in favor of animalism. Animalism is a version of the BC because it maintains that bodies are what are essential to beings like us, but it adds an additional requirement that we have animal bodies. Olson takes this notion even further, arguing that not only are we animal bodies, but that these

animal bodies function in a particular way (the BA), and that this particular way is organized by the brainstem.

### 3: Objections and Further Considerations

Now that it is more clear what Olson's position is, and why that is his position, I want to move on to objections against his view, and further considerations that are not taken into account. First, I give the objections and the expected replies, and then I add some more considerations. I argue that the responses to the objections to Olson's view are unsatisfactory, and will use this dissatisfaction in Part III to encourage readers to accept my view over Olson's. The same is true for the considerations; these are concerns that I think Olson does not (or cannot) adequately address with his thesis, but which I hope to address with mine.

The first objection I consider concerns the role of the brainstem in Olson's theory.<sup>31</sup> It seems clear that the physical brainstem itself is not the important part of Olson's theory,<sup>32</sup> but rather the function that the brainstem performs. Of course, Olson is also committed to the position that no non-organic part can be a part of a human animal's body. This brings up a slew of questions regarding what is important to Olson, especially as to what can be changed, and what the role of the brainstem is, precisely. To put this iteration of the objection more precisely, if what is important to Olson is the vital functioning of the body (because this is what constitutes life), then how is it the brainstem alone the necessary constituent of persistence and identity? Surely in order to fulfill vital functions, other parts (lungs, heart, stomach) are necessary. How is it possible for the vital function of respiration to occur without lungs, or at least lung-like

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<sup>31</sup> Thanks to Ben Rohrs for his help in developing this objection, along with a few related ones.

<sup>32</sup> Here are some reasons to think that Olson agrees with this statement: an isolated brainstem lying on a table is not a human animal. Once a human animal has died, that animal ceases to persist, but still contains a physical brainstem.

organs? It would appear that other bodily parts are as necessary to vital functioning and living as the brainstem is, even if it is the brainstem that sends the signals, or has the capacity to organize vital functions.

I suspect that Olson has several responses to this critique. In the first place, he argues that, while other parts can be removed or replaced without ending the persistence of a particular human animal, and are with some regularity, brainstems cannot be removed or replaced. Unlike hearts or kidneys, “As soon as your brainstem is destroyed, you lose the capacity to direct your vital functions...suppose Descartes’ evil genius annihilates you and replaces you with a perfect duplicate a thousandth of a second later...what happens during that thousandth of a second is enough to bring your existence to an end.”<sup>33</sup> But this is not the only response. Consider some alternatives: as long as the brainstem functions, the vital functions that create life can still occur. Even if your kidney is removed, your brainstem may still send out signals that would make the kidney function, if it were there. Furthermore, even if the kidneys are no longer functioning, the brainstem still sends out signals to the rest of the body to ensure that the other vital functions still occur.<sup>34, 35</sup>

This trifecta of responses is not satisfactory to me. The first response is glib, appealing to whole body functioning when the objection concerned only the brainstem. If the body could continue to function without the brainstem intact (as it can, and I show in Part III), and vital functioning is what gives us persistence, then why does it matter if the brainstem is there or not? To the second response, I reply that it does not appear as though the vital function that the kidneys are in charge of continues even when the brainstem sends signals (if indeed it does), and

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<sup>33</sup> Olson (1997) 140 - 141

<sup>34</sup> This is an important empirical question, for which I unfortunately do not have data. Certainly, if it is the case, it is a response that Olson would give.

<sup>35</sup> Thank you to David Boonin for this response.

without that vital function, the animal will cease to function, regardless of how many signals the brainstem sends. And to the third response, my reply is that, since the failing of the kidneys sends the rest of the body into failure as well, it does not appear to matter how the brainstem functions – the rest of the animal will cease to function so as to continue life.

A related concern of mine focuses on transplants. Suppose you are undergoing kidney failure, so your doctor removes your kidney, puts you on dialysis, and goes about finding a healthy kidney to replace your damaged one. Olson is committed to the idea that the dialysis machine is not part of you, because no part of you can be inorganic. Olson does not think that the dialysis machine is part of you because it is not “caught up” in your biological functioning. This seems blatantly false to me, but I will allow Olson this distinction anyway. Perhaps the doctor discovers that your identical twin sister is an appropriate person to donate a kidney. Live transplants from relatives are most likely to succeed, and often have the added benefit of matching some or part of DNA, which makes the organ less likely to be rejected. Living organs often start functioning immediately as well.<sup>36</sup> It seems at least plausible that Olson would accept that although you lost your original kidney, the new kidney is now part of the human animal that is you, since it functions due to its communication with your brainstem. But if the situation is different, it might be the case that you end up with a brainstem communicating with a kidney-like organ, which is not technically part of you. Perhaps instead of a living kidney from a close relative, you receive a kidney from a stranger who has died in a car accident. Does this kidney still become yours? Or perhaps scientists have learned to grow kidneys in the lab, but they must make use of some plastics or other “non-organic” materials in order to make the kidney function correctly. Finally, even if you do get a human animal internally grown kidney, most organ

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<sup>36</sup> National Kidney Foundation:  
[http://www.kidney.org/news/newsroom/fs\\_new/Q&Alivingdon.cfm](http://www.kidney.org/news/newsroom/fs_new/Q&Alivingdon.cfm)

donation recipients must be on medications to keep their bodies from rejecting the organ. This is suspect for two reasons: first, the brainstem may communicate with the kidney somehow, but non-organic medications must be used to allow this communication to occur. Second, even if the brainstem for some reason can communicate or control the new kidney, the rest of the body may still reject the kidney. The second reason is problematic for Olson's view because although the brainstem may still have the capacity to direct the functioning of the new kidney, the rest of the body is acting in such a way to keep the vital functioning from happening. The obvious choice to me in this situation is to give up isolated brainstem functioning as the persistence condition for the human animal. I propose instead going with body-system functioning, or what I call integrative unities. This is a version of the thesis I will defend in Part III.

#### 4: Conclusions for Part II

In this part, I have examined the argument of one of my primary interlocutors, Eric Olson. Although he handily defeats arguments for the Psychological Approach, his alternative argument for the Biological Approach has some objections that concern me. Olson's first assumption is that once we accept that humans are material beings, it is immediately clear that we are essentially human animals. And animals, he thinks, are essentially living beings. To live, or be a living being, is something that is determined by scientists, but it appears that scientists can agree that a certain set of vital functions indicate life. These vital functions are functions such as metabolizing, respiring, circulating blood, digesting food, and other such things that most bodies do on a regular basis. The brainstem appears to be the lone necessitator of these vital functions, in that it has the capacity to control them. For these reasons, Olson argues, if the

brainstem stops working or is destroyed, its associated animal (human or otherwise) ceases to exist.

I also examined some objections and considerations for Olson's Biological Approach. Some of these are more problematic than others. But the biggest issue I see (and one that I think my proposal can account for) is the tension that Olson has between the physical brainstem and the brainstem functioning. I address some of these issues more in depth in the next section.

Another thing I want to attend to briefly is whether or not Olson is addressing the same question I am, or, if like Parfit, his concern lies elsewhere. As I discussed in Part I, Parfit's primary concern is what matters. The conclusion that Parfit draws is that what matters is psychological continuity, because this is what guarantees certain mental faculties stay intact, and mental faculties are a primary way we have of identifying each other. Olson obviously dismisses psychological continuity and mental faculties as something that is essential to beings like us. He does this in favor of biological life, and life's contributing vital functions. But what question is Olson answering, and what relation does it have to the question I am asking? Remember that my concerns lie in what causes human persons to persist, and what a human person is. Olson is more concerned with what a human animal is, and what a human animal's persistence conditions are. He thinks (as I do) that human animals and human persons are different entities, which do not always overlap each other, but often do. Both of us argue for the position that some human animals are also human persons. We also both agree that something could be a person without being a human animal, and that something could be a human animal without being a person. Finally, we both agree that what is important to persistence has something to do with bodily functioning, and the physical body. Olson's view is consistent with Parfit's, because he thinks that it is possible that a human animal could have psychological continuity, and that

psychological continuity could matter to that human animal. In the end, however, Olson's views differ from mine in the way that we think that human animals persist, and how human animals are related to human persons. These issues will be more fleshed out and obvious in the following section.

### **Part 3: Integrative Unity View**

#### 1: Introduction

In the first part of this paper, I gave an exegesis of the most common view of personal identity (the psychological view), as well as arguments against it. In the second part, I continued with an exegesis of the view of Eric Olson, who is the primary interlocutor for my view. In this part, I give positive arguments for my own view. Like Olson, I think that life is dependent on a variety of vital functions. Like Olson, I think that the Lockean view of persons is correct. And, like Olson, I think that vital functions are imperative to identity across time. I defer to his arguments for these claims. Unlike Olson, however, I do not think that the brainstem is the lone necessitator of these vital functions. Furthermore, I think that there is one effect of vital functioning that Olson has overlooked – consciousness. These two areas in which I differ from Olson inform my thesis: human persons are<sup>37</sup> human animals that persist through systematic functioning of the human animal.

As I discussed in Part II, Olson's Biological Approach (BA) seems correct in that it addresses life as the primary facilitator of persistence for biological creatures, and it also seems correct in pointing to vital functions (according to biologists) as the aspect that makes life occur. Olson takes these propositions and concludes that since the brainstem is the central feature of

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<sup>37</sup> In the strong sense of *is*: identical

human animals that controls vital functions, then too is the brainstem the central feature of persistent identity amongst human animals. It is at this point that I no longer agree with Olson. As discussed previously, I believe that there are too many problems and inconsistencies with isolating the brainstem alone. In order to keep the attractive parts of the theory, while leaving the accumulating brainstem problems behind, I propose instead a systemic, or integrative unities, approach. One benefit of this approach over Olson's (and others) is that it provides not only the persistence conditions for a human animal, but also for a human person, which it does by incorporating the human animal function of consciousness.

Before I elucidate my view, I want to return to the questions I posed back in Part I and confirm that they are still relevant, and that I am consistent in answering them. The questions I promised to answer were the "What am I" question, and the "What does it take for me to persist" question. The way that Olson answers the "What am I" question is to posit that, essentially, what I (and others like me) am is a living human animal. The answer to the persistence question for Olson is that human animals persist so long as they have life and vital functions, which are a process controlled by the individual's brainstem. I, too, answer the "What I am" question with the response that I (and others like me) am essentially a functioning human animal, and I answer the persisting question by asserting that human animals persist so long as they are (undergoing) a certain set of systematic functions. The reasons I answer the way I do will become more clear in the following section.

There is a further question here as well, one to which both Olson and I have an answer. The question is whether or not we address *personal* identity, which is the identity of a particular *person*, or if what we are arguing for is the persistence of a different type of identity, such as organismic or bodily. Olson is only arguing for *organismic* identity, and setting the personhood

of the individual organism aside. Olson thinks that multiple views of personhood are compatible with the brainstemmed Biological Approach. Human animals are essentially human animals, and not essentially persons; an individual human animal could become a different person through means of an upper brain transplant (for example). I am also arguing for *organismic* identity, because I agree with Olson's arguments that we are essentially human animals. Olson and I diverge, however, because I think that the systemic view provides a means to identify personhood with organismhood. So, beyond *organismic* identity, I believe that my version also provides an account of *personal* identity.

## 2: The Biological Approach, Systemically

As I argued in Part II, there are several problems with Olson's approach, most of which stem from his isolation of the brainstem as the lone necessitator for maintaining identity. Recall the dilemma that is a result of Olson's view: either the physical brainstem itself is what is important to identity (which means that corpses, early fetuses, a lone (even functioning!) brainstem on a table, are all human animals) or the functions that the brainstem officiates over are what is important to identity (which means that the brainstem alone is not the important part). My alternative is to say that it is the vital functions that provide human animals with our identities and persistence conditions, but that instead of focusing those vital functions on a single organ (or rather, part of a single organ), to take a systemic approach to them. For instance, instead of isolating the function of respiration to the brainstem (as Olson does, by asserting that, since the brainstem sends the signals to the lungs that make it respire<sup>38</sup>), the whole brain, as well as the lungs and even the heart are intimately involved in making this vital function occur.

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<sup>38</sup> Olson (1997) 134

## 2.1: Integrative Unity and the Systemic Approach

The systemic approach to the BA emphasizes bodily systems as that which provides vital functions to an organism. In turn, this provides life to individuals. D. Alan Shewmon is talking about what I call a systemic approach when he gives a criterion for what he calls “integrative unity”. Shewmon’s definition of integrative unity (and my working definition of systems) is as follows:

“Integrative unity” is possessed by a putative organism (i.e., it really is an organism) if the latter possesses at least one emergent, holistic-level property. A property of a composite is defined as “emergent” if it derives from the mutual interaction of the parts, and as “holistic” if it is not predicable of any part or subset of parts but only of the entire composite.”<sup>39</sup>

Applying this definition to what I would like to call the systemic approach, Shewmon points out that anything in a system (or with integrative unity) has two necessary components. First, it has “at least one emergent, holistic-level property.” An emergent property is one that comes from the interactions of parts to create a whole. A common example of an emergent property is the taste of salt; salt tastes salty not because either chlorine or sodium tastes salty, but because their combination does. This is a weak form of supervenience, in that the parts together create something more than the parts individually, but changing the parts also changes the way the whole works together. Shewmon also indicates that the property is holistic. Shewmon’s definition is a working definition for systems as well. I agree with him that a system (or integrative unity) has at least these components. For example: Shewmon thinks that an isolated, but conscious whole brain has integrative unity, and is therefore a putative organism. This brain organism would be very weak and not apt to survive alone for very long, but it does have at least

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<sup>39</sup> Shewmon, 4

one emergent, holistic-level property.<sup>40</sup> The one lone emergent, holistic property is the consciousness property.<sup>41</sup> As soon as this is gone, the brain fails to be anything other than just a mass of cells, precisely because it has lost the emergent, holistic property that made it an integrated unity.<sup>42</sup>

Note, however, that there is a difference between an isolated brain that has consciousness and a whole body, or even bodily system. Perhaps the lone, isolated brain with consciousness may suffice as an organism, in that it has an integrated unity. But it is not a whole organism, because it cannot self-sustain; it does not by itself have life. An entire body, however, which has various systems, is self-sustaining – it does have life. It can make use of its various systems and survive independently of any other being. The whole organism has vital functions that the isolated but conscious brain does not, which give the whole organism life in a way that the brain cannot have. The isolated brain does not have life and it cannot survive alone. This is contra Olson in that for an organism to persist, it must have life. The isolated brain exists in some sort of in-between stage.

The integrative unity, or systematic approach, focuses on the whole organism instead of individual parts. This allows us to avoid the brainstem dilemma that Olson pits himself against by identifying a single organ (or, part of an organ) as the center for organismic persistence. But why think that the systematic view of the entire organism is a good way to go? If the whole brain

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<sup>40</sup> Shewmon, 5

<sup>41</sup> I do not think that it is possible to have this sort of situation, and this is due to my view on what constitutes consciousness. But for the sake of exegesis on Shewmon's view, I explore it here. It will become more obvious later on why I do not think that individual brains can have this sort of emergent, holistic property.

<sup>42</sup> I will leave it to the scientists to say what underlying physical process would have to change in order for the brain to lose consciousness. Perhaps some specific group of cells, or some certain number of cells would have to die. As I mentioned in footnote 5, I am skeptical that an individual brain could have consciousness, for reasons I discuss later.

could have integrative unity, then why not posit just the whole brain, rather than the whole organism?

There are several reasons to posit the whole body rather than simply the brain as the thing that causes persistence for an individual. As I have discussed above, although the whole brain may have a weak sort of integrative unity, it does not have the sort of systemic wholeness that the entire body does. The body is a robust system of integrated unities; it undergoes more changes and has more vital functions than the brain alone can. If we consider the body itself as a system of integrated unities (or an integrated unity of systems), the result is that we get a very robust, flexible entity from which to draw identity. The same is not the case for brain-only (or brainstem only) approaches. The whole body approach allows systems to rely upon each other to preserve identity in the case that one or more systems fail, either permanently or temporarily.

For demonstration of this assertion, consider the following case: Dolores is in a terrible car accident, but because of the way the accident happened, her body (other than her brain) is largely still healthy. Her whole brain, however, is failing, and will soon stop working altogether. Fortunately, there is a doctor (Dr. Hfuhruhurr) on call who has developed a new process of replacing brains (including brainstems) such that when Dolores awakes, she will be just as she was prior to the accident (with the exception of the new brain).<sup>43</sup> What makes Dolores the same person after the accident, even with her new brain? Since the rest of her body continues function as an integrative unity throughout the process, her identity is preserved. This is not the case for Olson, or for most who hold a physical version of the psychological view. It is not the case for Olson because Dolores' brainstem has been replaced. It is not the case for those who hold the psychological view because Dolores' upper brain, where her psychology is housed, has been

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<sup>43</sup> Thanks, Steve Martin: [The Man with Two Brains](#)

replaced, and even more so, it was not her psychological continuity that maintained her identity for her during the brain replacement.<sup>44</sup> But it seems natural to think that Dolores is qualitatively the same pre and post accident (with the exception of the brain) that she is the same person. If Dolores were to have a heart replacement or a liver replacement, and was qualitatively the same pre and post those operations as well (with the exception of her new organ), we would have good reason to think that she was numerically the same person as well. Why should it make a difference that it is her brain, rather than one of these other essential organs?

One (popular) reason the brain might have special status over the other organs is that it seems like the brain has special powers. These supposed special powers include consciousness or psychological powers and vital function organization. In this way, both some psychological theorists and many animalism theorists (including Olson) give special status to the brain. But here are some relatively mundane reasons to think that the brain does not deserve so much special status:<sup>45</sup>

- I have a gym locker. If you asked me what the combination to my lock was, I would not be able to tell you unless I (a) move my fingers in a particular way, as if undoing the lock and/or (b) close my eyes and imagine seeing the lock turn. This indicates that I need either my fingers or my vision, or both, in order to correctly remember the lock combination.
- As a child, Ian played piano frequently, and quite well. He played many pieces over and over again. Now, he has not read sheet music in years, to the point that if he were told to play a familiar piece off of the sheet music, his playing would be hesitant and he would make many mistakes. However, if his eyes were covered, and he were told which familiar piece to play, he could still play it seamlessly, even though he has not played it in years.

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<sup>44</sup> This view might be compatible with some sorts of the psychological view, depending on what the brain process occurs. But it need not be compatible.

<sup>45</sup> I am not committed (at least at this point) to saying that the brain deserves *no* special status. Just that it does not deserve *lone* or *primary* status. It seems to be in charge of directing thoughts, just as the heart seems to be in charge of pumping blood.

What these examples are meant to show is that the brain alone is not responsible for memory formation, and perhaps other facets of the sorts of things generally attributed to the brain. Clearly other body parts are important in performing these actions; furthermore, it appears (at least in example 2) that these alternate methods can override signals from the brain. Unfortunately, they do not do much to demonstrate that the brain (and especially the brainstem) is not required for certain vital functions. For that, I have some more exciting examples.

Significant evidence has been gathered over the past several years that indicates that the brainstem is not, in fact, the sole organizer and controller of vital functions. Furthermore, no part of the brain is. In fact, many of these vital functions seem to stem from the primary organ of the vital function, and it also appears that these organs communicate and also can control some aspects of brain functioning. Here are some of these more exciting examples:

- “Clinicians have observed that patients who satisfy the tests for brain death have shown a significant increase in both heart rate and blood pressure when the transplant team makes an incision into their body. This would seem to indicate the systematic, integrated functioning characteristic of a living organism.”<sup>46</sup>
- Individuals experiencing whole brain death (including the brainstem) have been observed spontaneously undergoing: “Homeostasis...through functions especially of liver, kidneys, cardiovascular and endocrine systems...maintenance of body temperature...wound healing...successful gestation of a fetus...”<sup>47</sup>
- There has been research into the so-called second brains that are the heart and the lower digestive system. These two systems both have highly complex neural systems that are unique to the heart and lower digestive system, but that appear to not only communicate with the brain (and other body parts), but also to control it. The heart also appears to have several of its own, unique, hormones that help it not only to regulate itself, but also to communicate and help regulate other integrated systems.<sup>48</sup>

I find these examples pretty compelling reasons to think that both:

(a) the brain (and brainstem) are not the center of vital functioning

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<sup>46</sup> Hershenov 508

<sup>47</sup> Shewmon 467-468

<sup>48</sup> Salem 2-3 and Hadhazy

(b) that the body is far more integrated and systemic than it is often credited

These examples exhibit (a) because in all of them, either the brain is absent, or it plays second fiddle (at least in some way) to another organ. The amazing thing about the first two examples is that the kinds of vital functions that are imperative to life (which Olson says are controlled by the brainstem) are performed without the any of brain, including the brainstem. According to Olson, these individuals would be corpses! The vital functions of respiration, circulation, digestion/metabolism, wound healing and even gestation (perhaps not a vital function itself, but it must seamlessly incorporate several vital functions in order to occur) keep happening, and sometimes for a long while, *without the brainstem's functioning*. If Olson wants to still subscribe to the brainstem as the part that gives an individual persistence across time, then he must give up the thesis that it is vital functions that matter to persisting.

As to (b), the above examples demonstrate this by showing that many of the body's systems work together to preserve each other. Instead of being isolated systems, they communicate and interact and provide feedback to each other in order to run smoothly. The heart does not only pump blood; it also secretes hormones and sends neural messages to the brain (and likely, the lungs) to make sure that the process of circulation (far more than just blood pumping) is occurring to the degree it must to fulfill needs for the body. When an incision is made in a brain dead body, blood pressure increases, indicating that even though it is (initially) the skin that was cut, the information has been relayed to the heart somehow, without help from the brain. I am so inclined to think that (b) is the case that I want to make it the cornerstone of personhood, by introducing a new emergent, holistic property, one which I (with others) call embodied consciousness. I discuss what embodied consciousness is, and how it relates to my thesis in the next section.

## 2.2: Embodied Consciousness

It seems to me that (b) indicates the possible presence of an emergent, holistic property, which is distributed throughout the entire body. I think a good candidate for this property is that of embodied consciousness. I also think that embodied consciousness is likely what makes people (human animals) persons. This is an accidental property though, since it is obvious that there are some cases of human animals that are not also human persons, if person is defined the way that Olson (who is working from Locke) defines person. Many of the cases I indicated above, of the brain dead human animals, are human animals, but not human persons in the way that Locke and Olson mean.<sup>49</sup> We are a specific way that (possibly and often) gives rise to embodied consciousness, which is one of the emergent, holistic properties that bodies like ours have. Specifically, this is the property that makes some people persons. Consciousness, however, is neither a necessary or sufficient condition for the kind of thing that we are; it is just an accidental property of what we essentially are. Consciousness is a necessary and sufficient property personhood (as defined by Locke), and something that we, as essentially human animals, have accidentally as a result of the way we (bodies) are.

At this point, it should be clear that we are bodies, and it should also be clear that most of us also have consciousness, as a result of being bodies. And, it should perhaps also be clear that embodied consciousness is one of the emergent, holistic properties we should expect to arise from the integrative unity or systematic approach. But it may not be entirely clear what embodied consciousness is, and what role it plays in personal or organismic identity. Robert Hanna, who has done much work in this area, asserts that:

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<sup>49</sup> This is not a paper on ethics, so I will not say much to the ethical effect, but I also suspect that we have different obligations to human animals that are not persons than we do to persons.

“necessarily, human consciousness has a full-scale neurobiological incarnation of all its states in all the conscious human animal’s vital systems and vital organs—including the higher brain, brain stem, limbic system, nervous system, endocrine system, immune system, and cardiovascular system, right out to the skin, but no further than that.”<sup>50</sup>

What Hanna appears to be asserting by this is that consciousness, at least the sort that we essentially bodied creatures have, is spread throughout our bodies, and is not located simply in the brain. This fits nicely with the data I have shown about integrative unities and systems of the bodies, but why think that just because our bodies are integrated systems that our consciousness is too? Could there be a way that our consciousnesses could come apart from our bodies?

The answer should be an obvious no. If we are essentially bodies, then how could something non-bodied suffice for “us”? It cannot, and furthermore, since we are essentially bodies, we cannot even imagine what it would be like to exist without being a body. For instance, picture yourself in a so-called out-of-body experience. Do you still see things? Do you still hear things? Most people who report having out-of-body experiences report seeing and hearing things, such as seeing the doctor make an incision in their body below, and hearing the nurses talking to each other. Here is what Hanna has to say about that sort of situation:

“...the conscious experience of floating high in the sky above one’s own body, looking down at it, is not a conscious experience of *disembodiment*... on the contrary, an “out-of-body” conscious experience is simply the non-veridical illusory conscious experience of having a strange new birdlike, airy body that floats in the air above one’s old non-birdlike, heavy earthbound body.”<sup>51</sup>

This seems immediately correct to me. When someone reports having an out-of-body experience, they still generally report experiencing the sort of things that require the existence of a body.

Seeing and hearing cannot be done by non-bodied things, because seeing and hearing are

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<sup>50</sup> Hanna, 29-30

<sup>51</sup> *ibid*

physical experiences that happen to physical beings. Consider further what it would really be like to *not have a body*. Perhaps your imagination is better than mine, but try as I might, I simply cannot.

As I mentioned above, embodied consciousness is one of the emergent, holistic properties of our integrative unity, or bodily system. This is an accidental property of things like us, but it is at least plausible that it is what gives us our personhood (at least, those human animals among us that are also persons). As Shewmon notes, however, integrative unities need at least one of these special traits, and although embodied consciousness is important in that it gives some of us personhood, it is not the only one. Furthermore, it is the less important one, since we have it accidentally. It works out well for many of our intuitions that personhood is an accidental property of being a human animal. Since it is accidental, it can come into existence at some point, dependent on how the integrative unity is functioning, and also go out of existence, without us losing our persistence conditions. Sure, once that property ceases to exist, human animals cease to exist at persons, but this does not ultimately affect their identity. This flexibility allows human animals to remain themselves regardless of bouts of serious amnesia, Alzheimer's disease, maturation from childhood to adulthood, or even long-lasting vegetative states. Since it is the body that we are essentially, and persons accidentally, as long as enough of the body and its vital functions remain, so too does the same individual. Personhood can be thought of as a special stage in life, much like the terrible twos, or being an angsty teenager. It is something that most human animals develop into, and that some human animals develop out of.

This distinction is the case for any sort of body that could have an associated mind. For instance, a bunny might be conscious.<sup>52</sup> This bunny remains the same bunny from the time it develops into a bunny in Mama Bunny's womb until the bunny body decays. But it could also have bunny personhood, as a result of its bunny body. The bunny person would be a different type of person than a human person is, as a result of the differences between human and bunny bodies. But the bunny could develop its bunny personhood at some point in its bunny childhood, as a result of its integrative unity, and then lose its bunny personhood when it gets old and has Bunnyheimer's Disease. It would remain the same bunny though, as long as its same body was performing (at least one of) the same vital functions.

Here is one interesting entailment of the embodied consciousness/integrative unity theses: Body swaps (a la *Freaky Friday*) are not possible. The reason why should be obvious, but just in case, allow me to explain. Since consciousness is essentially embodied, changing the body will change the consciousness. The original one will cease to exist, and a new one will come into existence. But overriding this first reason is the fact that consciousness simply is not separate from the body. Consciousness *is* the body, and so the question of whether or not body swaps can happen does not even make sense. Asking if we can swap bodies is akin to asking if Van Gogh's *Sunflowers* could swap pictures with Van Gogh's *Irises*. The question is just nonsense.

Another interesting entailment of the embodied consciousness/integrative unity theses is that we are not distinguished or identified by our accidental property of consciousness, but rather by being bodies. This might sound odd to someone who thinks that we human animals are distinct from other animals because many of us have consciousness. But given the embodied consciousness and integrative unity theses, it should be clear why this is not the case, and what

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<sup>52</sup> It could be the case that bunny bodies are not the type of body that develops the emergent, holistic property of consciousness. But if they are, then this is how it would work.

makes us distinct from other animals and organisms. This view also fits with many intuitions that other types of animals (perhaps cetaceans, or apes) can also be persons who have a similar personhood to us, but without being human animals. Furthermore, it helps us make sense of how some human animals are not also human persons.<sup>53</sup> The reason that these intuitions are explained is because of our likenesses. For instance, I am both a human animal, and a human person, and this paper is intended for those like me. So, you and I have relatively similar bodies, and probably relatively similar consciousnesses as a result of our similar bodies. Both of us have relatively similar bodies to apes, which may also be persons. We probably have pretty similar consciousnesses to the apes that have personhood, as a result of our similar bodies, but our consciousnesses are likely more similar to each other's than they are to the apes', because our bodies are more similar. It gets a little trickier with some other animals – cetaceans for instance. Our bodies do not look as similar to whales and dolphins as they do to chimpanzees, and we live in very different environments.<sup>54</sup> But, we are all mammals, and proportionally speaking, our bodies are still pretty similar. Certainly our bodies are more like apes and cetaceans than they are like crabs or komodo dragons, and we generally think that we have more in common with apes and cetaceans than we do crabs or komodo dragons. We probably also think that we have more consciousness in common with crabs and komodo dragons than we do with trees or amoebas (if indeed trees or amoebas could be said to have consciousness of any kind). I also want to emphasize that when I say consciousness, I mean consciousness like ours – there might be

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<sup>53</sup> Again, not an ethics paper, so I do not intend to say much about this. But my thesis might explain how we have more obligations to non-person human animals than to non-human persons. Maybe.

<sup>54</sup> Environments are important, because bodies generally evolve to work best in a particular environment. You and I and chimpanzees are primarily land-dwelling creatures and our bodies have evolved to accommodate this (or perhaps, vice versa). Whales and dolphins are primarily ocean-dwelling animals, and so their bodies have evolved to thrive in that environment.

alternative consciousnesses out there, but they might not be recognized as such. I also note that this explanation alone does not explain why we appear to share a more similar type of consciousness with apes and cetaceans than we do other mammals, but I suspect that it has to do with the internal proportions to our bodies – particularly the size of our brains in proportion to the rest of our bodies.<sup>55</sup>

In this section, I have argued that our bodies' vital functions are controlled not only by the brainstem, but also the rest of our bodies' various systems and integrative unities.<sup>56</sup> An integrative unity is one that has at least one emergent, holistic property. Consciousness is one of the emergent, holistic properties of bodies like us, and because of the integrated unity of our bodies,<sup>57</sup> our consciousness is intimately tied (that is, identical to) our bodies' functioning, which makes it embodied. There are, of course, objections to this view, most of which will be addressed in Part IV. Part IV will consider objections that all Biological Approaches (specifically mine and Olson's) have to answer, such as the Corpse and Fetus problems. I will also answer a few objections that apply specifically to my view over Olson's.

Before I move on to Part IV, I want to address the questions I discussed in Part I, to make sure that it is clear what my answers are to them. I also want to clearly state what the necessary and sufficient conditions are for (a) a human animal to persist across time and (b) a human

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<sup>55</sup> This does not contradict my claim that consciousness is spread throughout the body. Just as the heart has a special function in pumping blood, the brain appears to have a special function in organizing our consciousness, mental states and language.

<sup>56</sup> I have been using these terms pretty interchangeably, and that is because I think that they get at the same thing. The reason I use both, instead of just one, is because I find "system" a more natural way to cash out integrative unities, but I like that integrative unities emphasizes the unity of the system. Body systems, such as the digestive system may not always be integrative unities (although probably the digestive system is), but I think that integrative unities are always systemic.

<sup>57</sup> Strictly speaking, I mean "us" here, but I want to emphasize bodies as us, and it is difficult to talk about our bodies as us, for various reasons. It is merely a redundant colloquialism for us to say, "my body" or "my consciousness" or "my body's consciousness."

person. As I mentioned at the beginning of this part, the answer to the question, “What am I?” on my view is the same as it is for Olson: I am (along with others like me) a human animal. The other question, the one of persistence, we answer differently. Although we both agree that vital functions and life are what gives us persistence conditions across time, Olson says that it is the brainstem that is ultimately in charge of these vital functions, as well as life, and so as long as the brainstem persists, so too does the animal that has it. I disagree, and have argued at length against Olson’s position. Instead, I emphasize the entire body as the propagator and cause of vital functions. So long as the body continues to have these bodily functions, it retains its identity.

As for the necessary and sufficient conditions of human animalness and human personhood, they are as follows. It is both necessary and sufficient to be a human animal to be an organism belonging to the genus and species *Homo sapiens*. There are probably some in-between cases (being the evolutionary “missing link,” for instance) but I will allow scientists to determine those cases. To persist as a human animal, it is necessary that the organism undergo vital functions, which give it life. Life is one of the emergent, holistic properties that occur as a result of an integrative unity. It is sufficient if at least one of these vital functions is occurring. To be a human person, it is necessary that the individual meet the criteria for being a human animal. It is sufficient to be a human person if the human animal has another emergent, holistic property that is an affect of its integrative unity – that of embodied consciousness.

#### **Part IV: Objections to the Biological Approaches**

Here I discuss the major objections to Biological Approaches, which includes both my view and Olson’s view. I do this to highlight the differences between my view and Olson, and to

hopefully leave the impression that my version of the Biological Approach is more satisfactory than Olson's. I also address a few specific objections to my view. There is a different section for each objection. Each section includes an enumeration of the problem at hand, and then an explanation as to how Olson answers the problem, and how I answer the problem. I finish each section by attempting to show why my result is more satisfactory than Olson's.

### 1: The Corpse Problem

The Corpse Problem is a problem for Biological Approaches, because it is concerned with what happens to the body that was previously a human animal, and is no longer, because it has stopped performing any vital functions. Since the BA identifies vital functions with the persistence of identity, once the vital functions are gone, it appears as though that identity is gone too. It is as if the body that previously housed the vital functions has suddenly disappeared and been instantaneously replaced with something else, which is not identical to, but bears a strong resemblance to, the body that just died.

Olson's response to this question is to posit that there is, strictly speaking, no such thing as a dead animal. In fact,

“We may call something lying by the side of the road a dead animal, but strictly speaking what is lying there are only the lifeless remains of an animal that no longer exists. That a dead animal should not be an animal may sound absurd. But then a ghost town is not a town, a dry lake is not a lake, a tin soldier is not a soldier, and a dead person is not a person.”<sup>58</sup>

An animal, according to Olson, is something that is living. As soon as it has stopped living, then it is no longer an animal. Another way to explain this is to say that Olson is only talking about living things, and how it is that they persist. He is not interested in the persistence of non-living things. This is why he rejects the Bodily Criterion in favor of the Biological

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<sup>58</sup> Olson (1997), 136

Approach. What Olson has actually done is to restrict the domain of animals to only the living animals.

My response to the Corpse Problem is two-fold. I could accept Olson's view, because it is true that what makes an animal persist for us is its vital functions, and once those stop, it is at least plausible that the animal no longer persists. But, since we have different views of what makes the vital functions themselves persist (for Olson, the brainstem, for me, the integrative unities), I can answer differently than Olson, and in a way that I think is more satisfactory. First, since I have an integrative unity view, rather than a brainstem view, death comes later (with the complete breakdown of the various integrative unities)<sup>59</sup>, and so in many ways, it makes more sense to say that what used to be a human animal is now a corpse. Another way I can answer the problem is to say that death is one of the vital functions<sup>60</sup> of a human body; rather than death ending a life, it is simply the last function a particular body performs as an integrative unity. When the body starts to erode and break down, which happens only after all integrative unities (but not necessarily after brainstem death) occur, it makes more sense to indicate that the body has become something different – or at least is in the process of becoming something different.

Olson's view is compelling in some ways, but it seems at least odd for us to agree that as soon as the brainstem stops working that one entity is no longer, and another one (which shares exactly all of the same properties as the one that just left, except for one) has come into being. If your grandmother is on her deathbed, and then dies, it seems natural to say, "Grandma has died. Her body is on the bed." To Olson, though, this is problematic for two reasons. First, Grandma

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<sup>59</sup> Shewmon and DeGrazia, writing about the same issue, suggest that death occurs when both circulation and respiration cease (Shewmon 1997, DeGrazia 115- 158)

<sup>60</sup> I realize that it is odd in some ways to refer to death (or, lack of vitality) as a vital function. But it is a function of ending vitality that all animals undergo at some point, so in many ways it seems natural to refer to it as a vital function. Granted, I have a somewhat unorthodox view of death, but here is not the place to discuss it.

has not just died – she has *gone out of existence*, even if her heart is still beating.<sup>61</sup> Death is a sort of nonsense word to Olson. In his words, “...bringing an animal’s life-sustaining functions to an end and producing a lifeless corpse – what the vulgar call ‘death’...”<sup>62</sup> Secondly problematic to Olson about your statement over Grandma’s death is that “Her body is on the bed,” is also nonsense. Strictly speaking, what you should say is, “The lifeless corpse that closely resembles Grandma is on the bed.” My response does not have the same problems as Olson’s; since death is something that occurs later, and is a vital function the former animal is not replaced by another entity until it starts decaying (which could, perhaps, be another vital function), which is a more natural time to think that the animal no longer exists as such.

## 2: The Fetus Problem

There are two versions of the Fetus Problem: one that Olson uses to argue against the psychological view, and another that is more directly against Olson’s view. The Fetus Problem I am interested in here is obviously the second, which is similar to the Corpse Problem, except that it starts at the other end of life. The problem involves when an animal becomes an animal, rather than when it stops being one. At some point in its prenatal development, an embryo goes from being a bunch of conglomerated cells with no real specialized organization into an entity that organizes its own vital functions (with perhaps the help of its external organ, the placenta).

David Hershenov points out that Olson too, must answer to a version of the Fetus Problem:

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<sup>61</sup> Recall that (1) Olson thinks that since the brainstem is the center of identity, then if it stops functioning, the animal ceases to persist and also (2) some animals’ hearts can continue to beat after whole brain death

<sup>62</sup> Olson (1997) 118

“The problem for Olson is that he insists that we cease to exist when our brainstem fails. But he gives an account of our origins that have us existing prior to the development of a functioning brainstem...we are compelled to ask, ‘Why is it that we could exist as a brainless foetus dependent upon our mother’s body but couldn’t survive in a brain-dead state dependent upon a hospital respirator?’”<sup>63</sup>

Hershenov’s query applies to both myself and Olson, as well as other defenders of the biological view. The problem here is again, if vital functions are what is important, how do we connect an individual that does not currently have its own vital functions with the thing it will (or was) become that does have vital functions. Specifically, the question here is for Olson: if it is the brainstem that is important, then what is the relationship between the thing that does not currently have a brainstem, and cannot perform its own vital functions, and the thing that (perhaps in a few weeks) will have a brainstem and can perform its own vital functions. Is there a time where, the brainstem starts functioning and there is a shift of identity from a mere bundle of cells into a human animal?

Olson himself does not respond to this version of the Fetus Problem, but Hershenov tries to on his behalf, and in a way that I agree is consistent with Olson’s other stated theories:

“[Olson] could of course, rescind his claims about the origins of human beings, and instead insist that we each come into existence later in a pregnancy when a brainstem has developed. And Olson could just deny that there was an organism or any other kind of entity before that time, thus avoiding the abrupt ending of one entity and its replacement with another or having to accept the existence of spatially coincident entities.”<sup>64</sup>

Again, these are some interesting options for Olson, and I do not think that they are completely wrong. But, since I have an integrated unity approach, instead of a brainstem approach, once again, I can offer a more intuitive answer. Fetuses become people once they develop at least one of the important properties sufficient for the human animal’s integrative

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<sup>63</sup> Hershenov 504

<sup>64</sup> Hershenov 507

unity – life. Once the fetus has developed enough of an integrative unity to survive without the womb, it becomes a human animal. This point comes rather late in pregnancies, but it seems a natural point at which to start to distinguish the fetus from its mother. Prior to this point, distinguishing the fetus from its carrier is difficult because of its complete dependence on it; the fetus alone does not have life. This is different from a late-in-life patient's dependence on machinery to keep it alive, because, as I have indicated earlier, pregnancy (though not itself a vital function) creates a new integrative unity in the mother, through expanding and creating new vital functions. Once the fetus has its own integrative unity, however, it is no longer so dependent on the mother to provide them, as it could survive on its own, without her assistance.

The hypothetical Olson answer, however, because it (again) requires that he either choose between the brainstem itself (which does not develop until several weeks into the pregnancy) or the vital functions (some of which, like circulation, start within the first 20 days of pregnancy). If he chooses the brainstem horn of the dilemma, it is problematic for him because lots of things that do not have vital functions still have physical brainstems (corpses, for instance). If he chooses the other horn of the dilemma, it is problematic for his view because there are things that have at least some vital functions, but which do not have a brainstem (fetuses, for example).

### 3: Problems specific to Integrative Unity/Systemic View

I have tried to point out that the main problem with Olson's view is that it creates a dilemma between the brainstem itself and vital functions. Olson draws on the brainstem itself because he thinks that it is the controller of the vital functions, which are important to life. This creates problems, though, because there has been much medical research that shows that some vital functions, indeed many of them, can be done after the brainstem has stopped functioning. In

order to bypass the dilemma that Olson has gotten caught on, I emphasize the vital functions over the brainstem. I think that vital functions are spread throughout the body, and this allows me to answer many of the objections towards Olson in a more satisfactory way. There are, however, some objections that are more specific to my view, which Olson does not have to answer. I attempt to suss these out and respond to them here.

One possible question might be: how much of the body is required? The answer to this is seemingly easy... enough so that the body has an integrative unity and the effects (especially life) thereof. Quadriplegics can still have integrative unities, although they are missing much of the physical part of their bodies.

Another version of this question might be, what if a scientist were to slowly replace a human animal body with a non-organic substance (such as plastic or metal) such that, none of the vital functions were ever disturbed. After the replacement, everything still appears to run on its own, and the resulting individual appears to have both life and also even consciousness. Then would the resulting entity be a human animal? It seems pretty clear to me that the answer to that question is no, but it does poke at an important problem. Olson could answer simply that since the brainstem has been replaced, that the organism no longer exists and has been replaced by a clever sort of replica. But I may be in deeper trouble here, if only because we could imagine that the new individual could still appear to have all of the important vital functions. It could still appear to respire, or even asphyxiate under the same sort of conditions that regular human animals do. It could still have a pumping heart that delivers blood-like stuff and exchanges oxygen and carbon dioxide. If the scientist could create something so similar to a human animal out of non-human animal type materials, and slowly, using a real human animal as the starting place, then what makes this new creature a human animal, or not?

This is a difficult objection to answer, but I do have a few responses. One potential response is that, since the scientist is subjecting the animal to undergo this change, anything that occurs as a result of this change does not count as vital functioning. This is a promising response, and perhaps even the right one. The objection could be strengthened though, and instead of a scientist actively changing out particles of the human animal's body, perhaps what happens is that something changes in the environment such that the same effect occurs, only without an active agent causing it. If this this scenario occurs, then what?

It seems unlikely that this situation could happen such that (a) really, none of the integrative unities of the original human animal are disrupted. Since it appears to metaphysically possible, though, I accept that it could be the case. But, it is important that *all* of the vital functions occur, and in the same way that they would in the case of a human animal. It must be able to be wounded, and to heal those wounds. It must really undergo digestion and respiration, at the molecular level. And importantly, it must undergo death, since this too, is a vital function of a human animal. Also important to this case is that the new being starts out as a human animal, so that it has the proper origins.<sup>65</sup> Under these exact conditions, the resulting non-organic being would still be the same human animal as the one that started out. This may seem like a non-ideal situation, and perhaps it is. But given the features I have outlined in the rest of the paper, and the exact conditions I have laid out for this being to continue as the same animal.

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<sup>65</sup> I realize I have not said much about this topic, at least overtly. But part of being in the species *Homo sapiens* is having biological origin in that species. If the new being I am picturing were to reproduce with another of its kind, I think that that would be a new, related species, one which has the same persistence conditions as other animals.

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