Olson’s Account of Function and Substance Concepts

Introduction

Eric Olson claims that "person" is not a substance term like "organism" or "animal." In an early section entitled "Movers and Thinkers" of his book *The Human Animal: Identity without Psychology*, Olson puts forth an argument that "person" should be understood as a functional term like "locomotor."[1] The strategy Olson pursues there against those who would bestow substancehood on persons involves showing how counterintuitive it would be to hold such a position about locomotors. He then suggests that the same skepticism that readers harbor towards the substantial nature of locomotors should be extended to persons.

Olson begins by imagining a philosopher who is so impressed with the locomotive abilities of humans and other entities that she puts forth a criteria of locomotor identity. A locomotor persists if and only if its capacity for locomotion is preserved – if and only if there is "locomotive continuity." Our philosopher considers "locomotor" to be a substance term – i.e. it is the type of answer given to the question "What is it?"[2] Crabs, human animals, angels, cars, motorboats, and airplanes would all be essentially locomotors. A locomotor would come into existence whenever there arose something with the capacity to move itself and it would cease to exist whenever it lost that capacity. Olson insists that even if we were informed that something were a locomotor we would still be warranted in asking "But what kind of thing is a locomotor?" What is *it* that generates its own movement? Olson suggests the answer should be a crab or human animal or angel etc. If "locomotor" had been a substance term, then there would have been no need for the additional question.

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[1] Olson, Eric T. *The Human Animal: Identity without Psychology* (Oxford: Oxford University Press, 1997) pp. 31-37.

[2] Olson claims to be using "substance sortal" as David Wiggins does in his *Sameness and Substance.* (Cambridge University Press, 1980) pp. 23-27.

Since Olson expects readers to recoil from the idea that "locomotor" could be a substance sortal, he challenges them to explain how "person" differs. Olson argues that "person" is a functional kind like locomotor and thus it can't be the answer to the question "What kind of substance is it?" He insists that to say that something is a person tells us that it has the capacity or disposition to think in a certain way, but doesn't inform us what it is that thinks in such a way.

Olson rightly claims that if "person" is not a substance term then the Psychological Approach of personal identity cannot be true. The position of the Psychological Approach is that we are essentially thinking beings, not living beings. I will argue that the advocates of the Psychological Approach should not be worried by the lessons that Olson draws from his discussion of locomotors. Olson's arguments against interpreting "locomotor" and "person" as substance sortals beg a number of questions. One of the reasons locomotors appear so bizarre and nonsubstantial in Olson's presentation is that he assumes, without argument, that there are no spatially coincident objects in a constitution relationship. The locomotor could be constituted by a manmade object much as the statue is constituted by a lump of bronze. And if Olson at this point in his book given an argument against spatially coincident objects, then he wouldn't be able to reveal locomotors to be such poor candidates for substancehood by contrasting them with other artifacts for they are also involved in relations of spatial coincidence. Olson's strategy in this early section assumes that readers will believe certain artifacts have good standing as substances with certain commonsensical persistence conditions which would be threatened if they accepted that there were locomotive substances.[3] Leaving aside matters of spatial

[3] If Olson had argued against spatial coincidence and constitution, then there probably wouldn't be any existing artifacts that he could then appeal to undermine the claim that a locomotor, and by extension a person, are substances. This is because if there aren't constituting objects like lumps of bronze, long pieces of yarn, sections of cloth, and portions of leather, then there are unlikely to be any statues, sweaters, flags and shoes that they were held to respectively constitute. There isn't a good reason to eliminate the things on one of the lists rather than the other.

coincidence, Olson's criterion for substancehood entails that many artifacts that most readers would consider to be substances would not be. Furthermore, persons actually escape some of his arguments against locomotors. And those criticisms that persons can't avoid turn out to plague organisms as well. Moreover, the persistence conditions of organisms actually possess some function-dependent features that Olson finds quite suspect when they appear in locomotors. And most damming of all is that a case can be made that Olson's paradigmatic substance, the organism, is an example of a functional kind. My conclusion is that there is nothing wrong with certain instances of functional kinds being substances. So the refutation of the Psychological Approach to personal identity must be made in other ways.[4]

Constitution, Coincidence, and Substantial Change

Part of the reason that locomotors appear suspect is that Olson just assumes that there are no spatially coincidence objects. At this point in his book he has no right to presuppose this and thus cannot make a locomotor appear as unattractive a candidate for substancehood as he would like. The result of his unjustified assumption is that ordinary things like rowboats and ships come into existence and go out of existence in ways that are quite counterintuitive and which thus understandably render readers quite skeptical that locomotor could be a substantial kind. However, all Olson is entitled to claim in the passage quoted below is that a *locomotor* came into and went out existence. His claims there about rowboats and ships is unwarranted and he thus caricatures the position of the philosopher who believes "locomotor" is a substance term.

Trenton Merricks has a thorough discussion of this claim in his *Objects and Persons.* (Oxford: Oxford University Press, 2001) pp. 38-46.

[4] I actually believe Olson does successfully make such a case in later parts of his work *The Human Organism* and subsequent articles. But the subject of this paper are his inadequate arguments in the earlier section entitled "Movers and Thinkers." pp. 31-37.

> If a ship's engine is damaged beyond repair, she says, that ship ceases to exist, and the resulting crippled ship (if we can call a thing with no locomotive capacity a ship) is numerically different from the one that once sailed. If we attach a motor to something that was previously unable to move (a rowboat, for example), and give it (or rather its successor) locomotive powers, the original nonlocomotive object ceases to exist and is replaced by a locomotor numerically different from it - for the latter object would have a different criterion of identity from the former. And if a ship's engine is removed and installed in a new hull, the resulting ship is identical with the original ship, for it inherits the original ship's locomotive capacity.[5]

This account is not only unfair to the philosophical defender of locomotors but it isn't a problem for advocates of the Psychological Approach because they don't conceive of persons in an analogous manner. While Olson assumes that the emergence of a locomotor eliminates the rowboat, the defenders of the Psychological Approach wouldn't claim that the emergence of a person destroyed a preexisting body or organism. A more plausible explanation is that in such situations persons come to be spatially coincident with bodies or organisms.[6] If a cerebrum is placed in the empty skull of an otherwise intact body, the body doesn't cease to exist, only a person comes to be found where moments before there wasn't a person. The motor in Olson's story is not playing a role analogous to what the cerebrum does in the Psychological Approach. So advocates of the latter need not be bothered by the oddity of the locomotor story.[7]

It is intuitively more plausible to say about a cerebrum transplant that a body comes to constitute the transplanted person than the person replaces the body as the locomotor allegedly

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[5] *The Human Animal.* Op. cit. pp. 32-33.

[6] The usual description of an upper brain transplant is as follows: The person became very small when its cerebrum is removed from one body. Later when it is transplanted into another body it regains much of its original size, becoming spatially coincident with the body.

[7] Shoemaker points out that Olson's theory may have an implication that is as counterintuitive as the locomotor transplant described at the end of the above quote. Olson appeals to the absurdity of one boat being identical to another just because they share an engine that has been "transplanted." But given Olson's belief that a detached whole brain is a very small, maimed organism, and given the importance imputed to the brainstem for the organism's survival –if an organism is without a functioning brainstem for a split second it ceases to exist and is replaced by a new organism – the transplantation of just the brainstem may be the moving of an organism to another location. "Selves, Bodies and Coincidence." *Aristotelian Society Supplement.* (1999) p. 305.

replaces the rowboat. The body no more goes out of existence with the emergence of the person than does the manmade – and thus artifactual – piece of plastic that comes to constitute a toy doll. Since the piece of plastic is itself an artifact, readers shouldn't protest that the rowboat can't coincide with the locomotor on the grounds that one artifact can't constitute another.[8] Thus Olson can't undermine the claim that a locomotor or person is a substance by appealing to the queerness of a second object popping out of or into existence whenever a person or locomotor emerges or disappears.

I am not endorsing here that there is such a thing that is essentially a locomotor, merely suggesting that readers may be too hostile because of Olson's tendentious presentation. Consider the differences between locomotors and automobiles. Aren't automobiles substances? If any artifacts can be substances, then automobiles would seem to qualify. I don't know what would be a better answer to someone pointing at an automobile and asking the question "What is it?" than "It is an automobile." [9] And automobiles are self-moving entities which make them seem a lot like locomotors except for their being limited to propelling themselves across the land rather than through the sea and skies.

Imagine the following alternative history of the automobile. One hundred years ago people were sleeping in engineless cars. They didn't call them "cars" nor were they cars. They were domiciles shaped like the bodies of our present-day cars. Suppose some engineers started to add engines under the hood of these domiciles and used them to drive around rather than live in. Is it that odd to believe that they have created a new substance? So even if readers didn't like my earlier account of one artifact (a rowboat) coming to

[8] Judith Thomson denies that an artifact can constitute another in her "The Statue and the Clay." *Nous.* 32:2 (1998). pp. 149-173.

[9] Is "vehicle" a better answer than "automobile?" If it is, it would still be a functional kind because it is a device for transporting people or cargo.

constitute another (a locomotor), they are less likely to be upset by the prospect of substantial change in which the automobile is a new substance that *replaces* the older engineless domicile. Now what is the difference between this story of automobiles and the locomotors replacing the rowboat? Do readers have a strong intuition that we should speak of domiciles persisting and acquiring a new property rather than going through substantial change? If not, then perhaps they should adjust their stance towards the rowboat and the locomotor, one result being that the beliefs of the locomotor-fascinated philosopher that Olson imagines become less objectionable. And those readers who believe that automobiles and locomotors somehow differ in ontological category need to offer us an account of why the former is a substance and the other merely an instance of a functional kind. I am of the opinion that they cannot. I suspect that they accept automobiles but not locomotors as substances mostly because of the unfamiliarity of the latter.

In this section, I have offered two competing interpretations of locomotors that can't both be correct. However, if either one of them is right, then Olson's alternative account is erroneous. My first claim was that locomotors may not have been recognized for the substances that they are because Olson ignored the possibility of their standing in a constitution relation to the entities that preceded them. The second claim was that some artifacts could emerge through a substantial change that eradicates their predecessor. A consequence of this is that the story of the rowboat becoming the locomotor may not be as farfetched as readers have initially supposed.

The Structure of a Substance

Let's now evaluate Olson's own explanation of why readers intuitively recoil from the claim that locomotors are substances. He suggests that the problem with locomotors is in part due to the fact that they can be multiply realized. He writes:

> Why doesn't "it's a thing that can move" or "It's a locomotor" answer the question "What is it?" This is difficult matter, but I think part of the answer is that *locomotion is a dispositional or functional property that can be realized in a wide variety of intrinsic structures.* Different locomotors have very little in common besides the fact that they are locomotors – besides their ability to perform a certain kind of task. A crab and a model airplane have very little intrinsic similarity; *even the locomotive capabilities that they have in common are grounded in utterly different internal structures.*[10]

The very argument that Olson uses against locomotors would seem to be applicable to automobiles but they don't elicit the same ontological qualms. Automobiles come in all shapes and sizes and materials. As I noted earlier, it is hard to imagine a better answer than automobile to someone pointing at a car and asking the substantial question "What is it?" And since some automobiles have internal combustion engines and others electrical engines, it could be said of them that "even the locomotive capabilities that they have in common are grounded in utterly different internal structures." However this doesn't diminish their claims to substancehood as Olson believes to be the case with locomotors. So the problem with functional kinds can't be their multiple realization. If Olson believes no artifact can be a substance then he needs to tell us this and justify it. He can't just contrast intuitively nonsubstance artifacts like locomotors with artifacts such as automobiles that appear to be unproblematic substances.

Olson's argument seems to be trading on some crude reductionist and anti-functionalist intuitions readers might have. But even organisms, which he takes to be the paradigmatic substance, can conceivably be made of very different materials. My skin and the tree's bark are

[10] *The Human Animal*. Op. cit. pp 34-35. I have added the parentheses.

quite different in composition. Furthermore, organisms in their own lives undergo massive changes in the physical parts that compose them. Perhaps the commonalities of organic material render the multiple realization of organisms less troubling than that of locomotors which includes things as different as boats and crabs. However, Peter van Inwagen, Olson's teacher and the philosopher whose metaphysics of identity appears closer to his than anyone else's, conjectures that there could be an artifact without any cells or other organic parts that functions like an organism and thus might have to be considered an organism. He writes:

> Perhaps a machine that could maintain itself would be an organism. (Perhaps our club of automata is an example of such a machine. I see no reason to think that an organism, as a matter of conceptual necessity, must be a spatially connected object.) When people talk about the possibility of scientist's "creating life," they are normally thinking of the possibility of creating living things whose largest nonliving virtual parts are large organic molecules: things that have the kind of life we and dogs and amoebas have. But perhaps there can be living things that have springs and diodes or assemblies of these as their largest nonliving virtual parts." [11]

It turns out that it is not *just* the multiple realization of different powers of movement that keeps Olson from considering locomotive properties to be essential properties of a substance. It is also that the locomotive capacities are realized in only a small fraction of the total physical structure of the alleged locomotor substances. This makes the locomotive capacity of things seem to be an insignificant property of them and thus not the type of feature that can be the essence of a substance and determine its persistence conditions. Olson writes:

> *Moreover, it is a (locomotive) capacity that is not closely connected with a thing's internal, structural, or intrinsic features.* "Locomotor," like "carburetor" or "heat sink" is a functional kind. Anything can be a locomotor or carburetor or heat sink as long as it can somehow move under its own power, or mix fuel and air in a certain proportion, or absorb heat. This is at least part of the reason why

[11] Van Inwagen, Peter. *Material Beings*. (Ithaca: Cornell University Press, 1990) p. 137.

> locomotor is not a substance concept, and why it could not determine the persistence conditions for all and only locomotors.[12]

One thing that is startling about this last passage is that Olson mentions carburetors right after protesting that the structure of locomotors is largely irrelevant to their locomoting. While it may be problematic that locomotors (allegedly) come into existence by the addition of motors to objects whose shapes, intrinsic features and internal structures are tangential to or not very conducive to locomotion, this certainly isn't the case for a carburetor.[13] Virtually every macro part and feature of the carburetor is designed to contribute to the function of mixing fuel and air etc. So while Olson is no doubt right about the physical realization of the locomotive capacity of some locomotors being irrelevant to much of their physical structure, his point can't be generalized to carburetors. And why aren't carburetors substances? I can't envision what could possibly be a better answer to someone pointing at a carburetor and asking "What is that?" than "It is a carburetor."

Perhaps it will be maintained that a carburetor is not a substance because it is a part of a substance. If the status of being an embedded object renders carburetors nonsubstances, then what about computers? They are not parts of any larger entity yet they seem to be the functional entity par excellence – i.e., a computer is a thing that computes. They vary greatly in structure, or it is at least very plausible to maintain that they could do so. What substance term would be a better answer than "computer?" Certainly it is less informative to say that a computer is a silicon and metal machine. But that is exactly what Olson writes when he is envisioning certain

[12] *The Human Animal*. Op.cit. pp. 34-35. I have added the italics.

[13] Perhaps Olson's point is that anything that would do what the standard carburetor does would be a carburetor. So if there was a God under the hood mixing the gas and air then it would be a carburetor. One response to this would be to distinguish between things that are essentially carburetors and those that are contingently carburetors just as something that was essentially a chair would be distinguished from a chair that was being used as a footstool and thus contingently a footstool. This is not always easy to do but it would be a problem of any artifact that is a substance qua that kind of artifact.

nonhuman thinking beings of the future.[14] Such inorganic thinking beings would not be essentially persons or computers in Olson's substance ontology. But "a machine made of silicon and metal" sounds more like an answer about the entity's *constitution* than its identity. It would be an answer to the question "What is it made of?" - on a par with someone pointing at a statue and saying "it is a lump of bronze." I find "person" or "computer" or at least a hybrid of "mechanical thinker – i.e. android," much more informative and a better answer to the question of "What is it?" than "A machine made of metal and silicon."

Olson might still try to make his case against "person" being a substance sortal even after conceding that computers, automobiles and perhaps carburetors avoid the problems of locomotors. Their structure is well designed for what we take to be their essential function while some things that are alleged to be essentially locomotors may be so merely because a motor was added to any of a variety of objects, many of whose structures may not be designed for or conducive to locomotion. Likewise, a person may come into existence when just an organism's cerebrum undergoes a small change and 99% of the rest of the individual remains unchanged.[15] Thus Olson might then insist that persons are more like locomotors and thus should remain off the list of substances.

However, there are philosophers like Ingmar Persson and Jeff McMahan who maintain that the person is just a proper part of the organism.[16] Motivated mainly by a desire to avoid person/organism spatial coincidence and the problems that entails, they identify the person with the "minimally sufficient subject of thought." They offer two alternative accounts of this. The

[14] Olson writes on p. 32 of *The Human Animal*: "We might still ask, is the thing that can think a biological organism? A Cartesian ego or Leibnizian monad? An Angel? *A machine made of metal and silicon?*" The italics in the quote are my addition.
[15] Barry Smith and Berit Brogaard make this claim about why the onset of personhood in the fetus or infant doesn't bring a new substance into being. See their "16 Days." *Journal of Medicine and Philosophy*. 28, 2003.
[16] McMahan, Jeff. *The Ethics of Killing*. (Oxford: Oxford University Press, 2001) pp. 90-95. Persson, Ingmar. "Our Identity and the Separability of Persons and Organisms." *Dialogue* 38. (1999) pp. 519-533.

first is to claim that the person just is the cerebrum when it is functioning a certain way. The second construes the person not as identical to the cerebrum but as that which possesses the cerebrum but has no other proper parts. So if Persson and McMahan are correct, then the person's thinking capacities would be reflected in its entire structure rather than just a small and insignificant part. People would then have the good standing of automobiles, computers and perhaps carburetors, in that virtually their entire structure reflects their proper function.

And if a person is identified with a soul or ego or immaterial thinking being, pace Locke, then the substantial and functional kind seems to be the same. Even if the soul were a simple, it would be trivially true that it wouldn't possess any structure unrelated to function – which was Olson's complaint about locomotors. So the historically most popular accounts of persons avoid Olson's complaint about carburetors.

However, most of this journal's readers will not find cerebrum-size persons or immaterial persons attractive views. But there are two other considerations that may leave them rather unaffected by the fact that only a small part of the physical structure of a person is involved in its essential cognitive capabilities - as contrasted with the vast amount of physical structure involved in the organism's life processes. Even though personhood arises because of additions to just one organ (the brain) of the developing animal, this change is quite different from the small part of the boat that composes the motor. The capacity of thought gives the person the ability to think about and become involved in any other part of itself. So while the acquired thought is realized in only a small part of the entity, it is special in that it can ponder and interact with the rest of its parts and structures.

The second reason why it might be a mistake to extend to persons doubts that functional kinds can be substances is that the emergence of a thinking being where before

there had been a mindless one seems just to be such an important change. So significant is this that it would be a mistake to construe it only as the modification of an existing object rather than the introduction of a new object. This intuition may in the end be overridden, but nothing Olson says in or before his early "Movers and Thinkers" section gives the reader a reason for doubting that it is the property of personhood that bestows substantial status on an entity. We are not talking about different kinds of *artifacts* as in the rowboat and locomotor case. Changing the way that something can move pales in significance to something giving rise to thought. The latter event seems more likely to be the introduction of a new substance because the divide crossed in creating a thinker seems to be so significant. The emergence of a person means that there has come into existence a being that knows that it exists and cares about its survival as a thinker. While it is unlikely that it imagines itself surviving without thought, it can distinguish itself from its body and is able to conceive of itself with a different body.[17] Since nothing comparable occurs with the addition of locomotive capacity it just may be that the capacity of a thinker is a sui generis functional ability that makes it a promising candidate for substancehood while a number of other instances of functional kinds are not. Perhaps no more can be said in favor of the substantantial nature of persons than just to note the great significance of thought.

[17] Attesting to the importance of thought are the intuitions of Peter Unger and Lynn Rudder Baker that people could survive complete bionic part replacement if this left their psychological capacities unchanged. They take this possibility of becoming inorganic as evidence that we persons are not essentially organisms. See Baker's *Persons and Bodies: A Constitution Approach:* (Cambridge: Cambridge University Press, 2000) pp. 56, 106, 109, 113. Unger's remarks are in his *Consciousness, Identity and Value.* (Oxford: Oxford University Press, 1990) p. 123.

Wide Extension and Uninformative Sortals

Olson points out that there is no a priori reason why there shouldn't be Gods or futuristic computers or other beings that think but lack brains like ours. The possibility of such diverse thinking creatures leads him to observe how uninformative "person" is as an answer to the substance sortal question "What is it?" He adds "that if anything, human beings, Gods and computers have less in common than locomotors such as crabs and battleships."[18] That may be so, but how much more informative is saying the substance sortal that applies to the reader as well as an oyster, or a fungus, is "animal?" Olson writes that "What we most fundamentally are is not a person but Homo sapien or animal or living organism."[19] Well which is it? The different disjuncts have different extensions. Are we essentially living organisms rather than Homo sapiens or animal? Let's start with the first kind. What is an organism? Olson writes that he is using "organism" to cover "fungi, bacteria, plants and animals."[20] This means our essence is the same as the other beings on the list. Many readers may find it hard to believe that we are really the same substantial *kind* of thing as fungi and plants, differing only in numerous *contingent* properties like intelligence and size. Anyway, readers can see that the creatures Olson believes are the same kind of substance as themselves vary almost as much as those that are considered locomotors (crabs and battleships) or persons (Gods and futuristic computers). Recall the van Inwagen position that there could organisms made not of cells but springs and diodes. So it is not fair of Olson to use the diverse physical structures of persons to refute their claim to be substances in virtue of their cognitive capacity.

[18] *The Human Animal*. Op. cit. p. 35.
[19] *The Human Animal*. Op. cit. p. 30.
[20] *The Human Animal*. Op. cit p 6.

Olson can't avoid the strange implications just surveyed by insisting that the substance sortal pertaining to us is the species term "human organism" or "Homo sapiens." Modern conceptions of species make such membership inessential to us. If we assume along with most contemporary evolutionary biologists that a species is a historical individual and not a morphological kind, then what species we belong to depends upon our reproductive community. But what reproductive community we belong to, if any, can change. For example, everyone in the reader's part of the state could undergo a mutation in their reproductive systems that makes it impossible for them to produce fertile offspring with any Homo sapien located outside of their region though they could earlier have produced fertile offspring with them. With the passage of time and breeding within this reproductively isolated community in the reader's state, a new species would emerge. But the reader surely didn't go out of existence. My fictional story is compatible with David Hull's claim in the following passage that an organism can acquire a species membership which it earlier lacked without ceasing to exist. Hull, whose expertise is the philosophy of biology, writes:

> But in the typical case to be a horse one must be *born* of a horse. Obviously, whether one is a gradualist or saltationist, there must have been instances in which non-horses (or borderline horses) gave rise to horses. The operative term is still "give rise to." But what of the science fiction examples so beloved of philosophers? What if a scientist made a creature from scratch identical in every respect to a human being including consciousness, emotionality, a feeling of personhood, etc. Wouldn't it be included in Homo sapiens? It all depends. If all the scientist did was to make such a creature and destroy it, it was never part of our species. However, if it proceeded to mate with human beings born in the usual way and to produce offspring, introducing its genes into the human gene pool, then it would become part of our species. The criterion is precisely the same one used in cases of introgression. In the evolutionary world view, unlike the Aristotelian world view, an organism can change its species while remaining numerically the same individual.[21]

[21] Hull, David. "A Matter of Individuality." *Philosophy of Science.* September 1978. pp. 349-350.

So “Homo sapien” can’t be a term that designates what is essential about an organism or living animal.[22] Since our species membership is not essential to us it cannot determine our persistence conditions. Therefore what determines the extension of our substance is either the property of being an organism or an animal. And creatures categorized as organisms and animals are nearly as strangely diverse as those considered locomotors and persons. Yet it was the extreme diversity of the latter two categories which Olson hopes will lead readers to dismiss locomotors and persons as substances.

Olson’s claim that we are each essentially an organism or animal may have implications about what changes we can undergo that are as counterintuitive as those resulting from the claim that persons and locomotors are substances. Olson sought to ridicule the idea of a person’s cerebrum transplant being identity-preserving by comparing it to moving a locomotor in an (allegedly) identity-preserving way by merely “transplanting” its engine. He wrote “And if a ship’s engine is removed and installed in a new hull, the resulting ship is identical with the original ship, for it inherits the original ship’s locomotive capacity.”[23] But Olson claims “that in fact, it seems likely that our persistence conditions are those of aardvarks and oysters and other animals.”[24] Does that mean we could survive change from one type of animal into another? It would seem so as long as the life processes that constitute our shared persistence conditions didn’t cease. If another animal can grow horns, feathers, whiskers, and tails without going out of existence, so we should be able to. Let’s not forget the embryological similarity of many

[22] On some historical accounts, whether one is a member of a particular species would be determined by what happens after one’s death to a certain population. Obviously, species membership could not be an essential property of an organism if it is a relation to be determined after the individual ceased to exist.
[23] *The Human Animal*. Op. cit. p. 32-33.
[24] *The Human Animal*. Op. cit. p. 30.

different animals at some point of their development and that many of one's genes can change during one's life do to mutation. No doubt readers will wonder whether we really could become aardvarks - or at least aardvark-like if species membership is a historical property – as long as there's no interruption in life processes such as metabolism and homeostasis occur. Yet I don't think Olson can rule that out anymore than someone else can deny that there could be an immaterial or mechanical persons. And we saw above that Olson can't avoid such changes by appealing to our species membership as essential to us and determining our persistence conditions.

"Organism" is a Functional Term

Most damning of all is that Olson presents some arguments which undermine his very claim that organisms are substances. Although Olson puts forth organisms as the exemplary substance, he makes a number of comments that suggest that organism is a functional kind. Notice in the quote below that he claims that we have the persistence conditions we do because we are an animal or *living* organism.

> Animal (or "organism" or "human animal") is a paradigm case of a substance concept, and so is an ideal candidate for determining a thing's persistence conditions. We should expect an animal to have its persistence conditions by virtue of its being an animal (or a *living* organism, or an animal of a particular species), for "an animal," unlike "a locomotor" or "a thinker" is an excellent answer to the question of what something is – what it is that can move or think."[25]

Olson writes of us having the persistence conditions of a *living* organism. To live is to function in a certain biological manner. Thus describing something as a *living* being is as much a functional description as it to describe a person as a *thinking* being. So if person is a functional kind and that entails it can't be a substantial kind, then the same is true for organism. It is just a quirk of the language that animals are not given names that advertise their function as do those of

[25] *The Human Animal*. Op. cit. p. 36. Italics are my addition.

obvious functional kinds such as gliders, seats, and computers. Animals could have been named "metabolizers" or "entropy resisters" because that is what they do. A person is a thinking being and an animal is a metabolizing being. Since both persons and organisms would appear to be functional kinds, one shouldn't be any more metaphysically suspect than the other.

Recall Olson's early claim that the philosopher fascinated by locomotion is committed to an ontology in which rowboats go out of existence when locomotive capacities emerge due to the addition of a motor. (Ignore my earlier challenge premised on the constitution relation.) And if a ship's engine is damaged beyond repair, that ship ceases to exist and the resulting crippled thing is numerically different from the one that once sailed. Olson is appealing here to our intuition that there is not anything that is essentially a locomotor because ships and other artifacts are generally not held to go out of existence when they lose their functional capacities. Ships don't cease to exist when their engines break down. So locomotors are suspect, and likewise, so are persons who cease to exist when the capacity for thought is lost. Advocates of the Psychological Approach maintain that there are no persons in permanent vegetative states because they have lost their capacity for thought. Olson would prefer us to maintain that the boat with the useless engine just loses a property, and the same for the individual that forever loses its cognitive capacities to disease or injury. The entities don't cease to exist, rather, they persist without the respective capacity to move or think.

The problem for Olson is that he has no right to draw upon these intuitions against locomotors and then extend them to persons because he also maintains that organisms cease to exist when the brainstem stops performing its function of controlling vital life processes. He writes:

> Imagine that surgeons destroy your brainstem and immediately replace it with a perfect duplicate...the same Lockean life seems to continue without interruption... Isn't it evident that your brainstem is not essential to you? Despite appearances, it does not seem to be the case that your biological life continues without interruption when your brainstem is destroyed and replaced. As soon as your brainstem is destroyed, you lose the capacity to direct your vital functions. Your individual cells and organs can no longer work together as a unit in the manner characteristic of a living organism. What we have is a corpse that merely appears to be alive because it is so freshly dead, and not a living animal. This period of "metabolic anarchy" might seem insignificant because it is so brief.[26]

So there are no organisms with nonfunctioning brainstems. Olson claims that there are no such things as dead organisms. Organisms don't persist through living and dead phases. Olson maintains that dead organisms are no more organisms than dry lakes are lakes or counterfeit money is money or toy soldiers are soldiers. He adds that "the mere fact that your corpse is spatially-temporally continuous with you does not show that it existed (as a living body) before you perished…."[27] That makes organisms, Olson's paradigmatic substance, just like his alleged non-substance locomotors and persons. They all cease to exist when they are unable to function – in the case of the organism it is the brainstem's capacity to control its vital functions, in the case of the locomotor it is the ability to move about, and in the case of the person it is the power to think. This account of an organism existing only when life functions are operative strikes me as a description of a functional kind. So insomuch as Olson can play off our intuition that a motor boat and battleship aren't locomotor substances because they don't go out of existence when they lose their locomotive capacity, he has provided a similar argument against considering organisms to be substances.

[26] *The Human Animal*. Op. cit. p 140.
[27] *The Human Animal*. Op. cit. pp. 151-152.

Conclusion

It is a mistake to put too much ontological stock in the function-substance kind distinction. In some cases, knowing what something does entails knowing what it is. A person is a being possessing the capacity of thought. The answer to the next question "What is it that thinks?" *may* just be "a person" or "a thinker."[28] Likewise, knowing what an organism does, it metabolizes, is knowing what it is - a metabolizer. One shouldn't be misled by the fact that organisms or animals lack a general name whose function unpacks analytically like "glider" or "computer" or "carburetor." As I noted earlier, organisms could have been named "metabolizers or "entropy resisters" and they would have no less qualified for substantial status.

Substance answers are actually quite uninformative if not followed by an account of causal powers, dispositions, capacities and the like.[29] As Shoemaker and others have argued, properties are to be identified and individuated by their causal powers.[30] And there is no reason to deny that an organism has the property of being an organism.[31] If someone doesn't know what an organism does, how it operates or functions, in other words, what causal powers it has, then he doesn't really know what an organism is. It is no help to just say "It is an organism" when asked of something "What is it?" The next question will be something like "What is an organism?" or "What does an organism do?" or "What makes something essentially an

[28] I write "*may* be a person" because I believe that there are other reasons for denying that persons are substances qua persons.
[29] Or having them implicitly as mass or matter resist motion etc.
[30] Shoemaker, Sydney. "Causality and Properties." Reprinted in his *Identity, Cause and Mind: Philosophical Essays*. (Cambridge: Cambridge University Press, 1984). See pp. 214-215 for an illuminating discussion of how bizarre it would be if the relation between properties and causal powers were just contingent.
[31] Kind properties like organism can be distinguished from properties like redness and hardness. As E.J. Lowe has argued, the property of being a certain kind is a universal and the individual substance is the very instantiation of that universal. See his *The Possibility of Metaphysics: Substance, Identity and Change*. (Oxford: Oxford University Press, 1998) .

organism?" and the answer will involve a functional account of life processes essential to it. So the distinction between substance and function terms is, on occasion, a bit artificial.[32] [33]

[32] I wrote above "on occasion" because not all function terms will designate substances qua substances, i.e., in virtue of their essential properties. So there is a need for an explanation to distinguish "cook" from functional terms that are good candidates for revealing the essential properties of a substance such as "person" or "organism." But Olson's account of locomotors, persons and organisms doesn't meet this need.

[33] I would like to thank Randall Dipert for a helpful conversation and comments on this paper.