A Hylomorphic Account of Personal Identity Thought Experiments

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Abstract

Hylomorphism offers a third way between animalist approaches to personal identity that maintain psychology is irrelevant to our persistence and neo-Lockean accounts that deny we are animals. A Thomistic-inspired account is provided that explains the intuitive responses to thought experiments involving brain transplants and the transformation of organic bodies into inorganic ones without having to follow the animalist in abandoning the claim that it is our identity that matters in survival nor countenance the puzzles of spatially coincident entities that plague the neo-Lockean. The key is to understand the human being as only contingently an animal. This approach to our animality is one that Catholics have additional reason to hold given certain views about Purgatory, our uniqueness as free and rational creatures, and our having once existed as zygotes.

I

Introduction. While the hylomorphic account of the person has been receiving increased attention in philosophical forums that previously ignored it, there is still a need for a sustained look at how the approach deals with the thought experiments that pervade the personal identity literature.[1] Much of the appeal of the neo-Lockean or psychological approaches to personal identity comes from thought experiments involving cerebrum transplants and inorganic part replacement. The apparent switching of bodies or the replacement of a living body with an inorganic one in a manner that leaves one's mental functions intact are often taken to reveal that we are not animals – or at least show that we don't consider ourselves to be such. However, not only does denying that we are living animals not sit well

[1] Eleonore Stump, "Non-Cartesian Substance Dualism and Materialism without Reductionism," *Faith and Philosophy* 12 (1995): 505-531; David Oderberg, "Hylemorphic Dualism," *Social Philosophy and Policy* 22 (2005):70-99; Lynne Rudder Baker "When Does a Person Begin?" *Social Philosophy and Policy*, 22 (2005): 25-48, at 40-43; Eric Olson, *What Are We*? (Oxford: Oxford University Press, 2007), 171-76. While hylomorphism is not the theory of personal identity that I personally favor, I think it is a promising and wrongfully neglected research project.

with the Catholic philosophical tradition, it runs into problems explaining what is the relationship between the human person and the human animal. A number of metaphysical difficulties arise if in the reader's chair there are two distinct entities, a human person and a human animal.

It will be argued that the proper Catholic construal of our animal nature is that we are contingently animals, i.e., we are living creatures but can still exist without being alive.[2] We are unlike all other animals in virtue of being made in God's image with certain mental capacities. This is often interpreted to mean that we, like God, are persons capable of free, rational and moral action. Such an account provides some reason to believe that our persistence conditions are unlike those of other animals and thus deserve a different treatment in the standard thought experiments. As free and rational creatures, we are to be found wherever our capacity for free and rational thought and action is found. So accepting, for the sake of argument, the standard description of the brain transplant thought experiment, we could be moved if our brain was, or at least the crucial parts of it were.[3] Moreover, we wouldn't exist as living animals after such parts were surgically removed and before the second operation completed

[2] My claim is, on the face of it, at odds with what Aquinas actually says that "animal is predicated essentially of human being and 'human' is not placed in the definition of animal but conversely." Summa Theologiae, 76.3 1 a. As will become evident below, I don't think Aquinas should have said this, given other claims that he makes. And modern Thomists shouldn't follow him on this matter.

[3] I am not committing myself here to the claim that one's mental properties are a result of just matter configured in the way one's brain is. The transplant is being described in a way that is compatible with a soul arising from the brain's activity as theorized by emergent dualists, being causally linked to the brain in the manner envisioned by Cartesians, or configuring the brain's matter in a manner acceptable to the advocate of hylomorphism. What is being assumed is only that thought, or its immediate physical effects, is occurring where the brain is. Thus when a brain has been removed from one skull but not transplanted into another, it will be supposed that a person could think at that time and will be related to that brain much as it was related to the body before the transplant.

the transplantation. This is to be contrasted with the transplant of a cerebrum of a lower animal lacking free will and rationality. Transplanting such a cerebrum would not move an animal from one body to another. Furthermore, if many of our animal organs were replaced with inorganic substitutes that would sustain our capacity for thought, we may still exist but without any longer being physiologically alive. Such positions can be defended without denying our animal nature as is done when it is posited that we persons are entities distinct from though intimately related to the human animal. In order to provide the intuitive response to the thought experiments we will understand "Human animal" not as a substance sortal but rather a phase sortal like "adolescent." In other words, since we are only contingently living animals, our persistence conditions are not determined by our life processes but by our capacities for a certain kind of mental life.

A benefit of this approach is that the advocate of hylomorphism doesn't have to explain away the popular thought experiments as animalists do. Animalists have typically responded in one of the following four ways when confronted by the intuitions that transplant scenarios elicit. They can admit an inability to incorporate the recalcitrant intuitions into their metaphysics but this is a philosophically unsatisfying position. They can deny the physical possibility of a brain transplant which seems akin to insisting in the 1940s that there will never be a kidney transplant. They can retort that they will only worry about incorporating such bizarre events into their metaphysics when they actually occur which renders them a sort of ontological ostrich. They can accept that such transplants could happen but insist that we wouldn't then "go" with our brain. This last move involves claiming that we are misled into thinking that we would be transplanted because of a mistaken belief that identity is what matters to us in our survival. This is the Parfit-inspired view most famously defended by Eric Olson.[4] Yet it is not easy to construe ourselves in the Parfit-Olson manner as uninterested in our personal survival and concerned only with our psychology continuing even if realized by someone else. Many of us do not find

[4] Eric Olson, *The Human Animal: Identity without Psychology*, (Oxford: Oxford University Press, 1997), 42-79.

persuasive the standard defense of this position that involves a hypothetical brain division and double transplant in which we fission out of existence but our psychology is retained by two resulting persons. This doesn't strike us as good as our own personal survival and thus fails to show that our being identical to a future person is not what matters to us. A hylomorphic approach to personal identity is appealing precisely because it allows us to consider ourselves animals while justifying our responding in the intuitive manner to the thought experiments and thus to hold onto the belief that it is our identity that matters in our survival.

The position that we are not essentially alive is actually supported by certain Catholic positions, though this implication is often not explicitly recognized. For example, if we are to be found in Purgatory after death and before resurrection, we won't be there as metabolizing, homeostasis-maintaining living bodies.[5] And Purgatory is rather metaphysically and morally problematic if it is

[5] It is not even clear that our post-Purgatory "glorified" resurrected bodies will be what contemporary biologists would describe as animal bodies. Aquinas writes: "Consequently those natural operations which are directed to cause or preserve the primary perfection of human nature will not be in the resurrection: such are the action of the animal life in man…and since to eat, drink, sleep, beget, pertain to the animal life, being directed to the primary perfection of nature, it follows that they will not be in the resurrection." *Summa Theologiae Supplement*, Q. 82 a. 4. See also Lynne Rudder Baker, "Persons and the Metaphysics of Resurrection," *Religious Studies* 43 (2007): 338-48. One might wonder how this claim about the glorified body coheres with Jesus' eating with his disciple after his resurrection, supposedly a model of our future resurrection. Aquinas may have to claim that Jesus needed to convince his disciples that he was real, flesh and blood, and not an apparition. Partaking in a meal would do that. Norms of courtesy, hospitality and solidarity, rather than physical need, may also prescribe sharing in a meal.

populated not by the deceased but only one of their parts, the soul.[6] The view that we are contingently organisms may even get support from claims that we each existed once as zygotes and then two-celled embryos. Standardly, when a one-celled organism divides, there is a death of the cell. If we were identical to the cell *and* essentially alive, then we should cease to exist when the cell's life ends. But if we are only contingently alive, then we could continue to exist as a two-celled entity after the division and death of the first cell. This view about our animality can be reinforced by claims that embryos from the two-celled stage up to gastrulation do not meet certain criteria for being living (multi-cellular) organisms. A living organism functions as a unit, maintaining homeostasis, metabolizing food, excreting waste, assimilating oxygen, maintaining its boundary etc. The particular cells (blastomeres) in the early embryo are doing all of this individually but not as a whole.

II

Two Thought Experiments. There is a time worn metaphysical tradition that claims it is possible for persons to switch bodies. Sometimes this involves the soul (usually construed in a Cartesian fashion) moving from one body to another body, on other occasions it involves a brain being reconfigured to subserve a different person's psychology, but in the most popular and "neurologically respectable" version, a brain is removed from the skull of one body and placed in the empty skull of another. Since some animalists believe that the human animal can be pared down to the size of the whole brain, the transplant thought experiment is sometimes carried out with just a person's cerebrum being transplanted.[7] This rules out the description of an animal moving from one place to another. The

[6] David Hershenov and Rose Koch-Hershenov, "Personal Identity and Purgatory," *Religious Studies*, 42 (2006): 439-51.

[7] Van Inwagen and Olson believe that the whole brain (and brainstem) transplant would be relocating a maimed but still living human animal. Peter van Inwagen, *Material Beings*, (Ithaca: Cornell University Press, 1990), 172-180 and Eric Olson, *The Human Animal: Identity without Psychology* (Oxford: Oxford University Press, 1997), 44-46. Alan Shewmon offers a neurologically informative account that

cerebrum is thought to be the physical realization for each person's unique psychology.[8] Most people respond that they would have switched bodies/animals when told that the parts of their brain responsible for embodying their psychology will be placed in a nearly identical animal body. So if people can leave behind their body or animal, then it appears that they are not identical to an animal for no one can leave himself behind.

The second thought experiment involves replacement of organic body parts.[9] If we are essentially living beings, then we couldn't exist if our body wasn't engaged in life processes such as metabolizing food, assimilating oxygen, maintaining homeostasis, excreting waste, etc. If enough organs are removed and replaced with inorganic substitutes, a point will come where there is no longer a living creature. Nonetheless, there still is the compelling intuition that we might survive such a change. We normally survive full (or nearly full) gradual, organic part replacement. The reason why many

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downplays the role of the brain and brainstem in the biological life of the human animal. Shewmon's account suggests that the whole brain transplant is not the moving of an animal that previously had a trunk and limbs. D. Alan Shewmon, "The Brain and Somatic Integration: Insights into the Standard Biological Rationale for Equating 'Brain Death' with Death," *Journal of Medicine and Philosophy* 26 (2001): 457-78.

[8] For a way to handle worries about the cerebrum needing the brainstem to function and the transplant being the moving of a maimed organism, see David B. Hershenov, "The Death of a Person," *Journal of Medicine and Philosophy* 31 (2006): 107-20. For a real life example of substituting for a brainstem see Shewmon's discussion of R. Hassler, a German neuroscientist, whose comatose patients that were aroused by electrical stimulation above their lesioned brainstem. D. Alan Shewmon. "Recovery From 'Brain Death': A Neurologist's Apologia'" *Linacre Quarterly* 64 (1997): 30-96, at 51.

[9] See Peter Unger, *Identity, Consciousness and Value,* (Oxford: Oxford University Press, 1991), 120-123; Lynne Rudder Baker, *Persons and Bodies: A Constitution View,* (Cambridge: Cambridge University Press, 2000), 106.

people believe they survive such extensive part replacement is that it leaves their psychological capacities and connections intact. So it may be that we could survive inorganic part replacement if our mental life is left intact. We don't even have to imagine our brain being replaced with an inorganic mentation-preserving duplicate. All that we have to envision is maintaining our natural organic cerebrum with whatever inorganic support system is needed. The cerebrum is not a small organism, so no organism would survive the material transformation that leaves only the cerebrum organic in composition.[10] And the cerebrum combined with the inorganic parts will not together compose an organism since such parts don't cooperate in a way characteristic of a living being. The robotic parts are not involved in the reciprocal dependence of vital organ systems, they don't grow or decay in unison with each other or the cerebrum, nor function as a unit in maintaining an organism/environment interface through which energy sources are acquired and waste products removed. The robotic parts are merely there to facilitate the cerebrum's cognitive functions. This scenario doesn't seem on the face of it to be metaphysically impossible and doesn't seem as mind boggling as replacing all of the brain's cells with silicon chips in a way that preserve's the person's cognitive capacities and identity. And since the Thomist is committed to the rational soul functioning in Purgatory without the sensitive and vegetative operations, the Catholic hylomorphic thinker can't argue that rational capacities could not exist without vegetative and nutritive ones.

Most people's initial intuition is that they survive the transplant and the organic part replacement scenarios. They identify with that being which continues to realize/instantiate or stand in some sort of ownership relationship to their beliefs, memories, desires, intentions etc. This shows that they don't believe themselves to be organisms. It is often taken to reveal that they aren't even

[10] See Eric Olson's discussion of the organ/organism distinction in his *The Human Animal: Identity without Psychology*,115.

contingently organisms since they have left an organism behind.[11] If the same organism exists both as a thinking creature before its cerebrum is removed and then after as a mindless creature, then it can't be maintained that people are contingently organisms in the way people are incontrovertibly contingently adolescents. People can cease to be an adolescent when they age but they can't be physically separated or exist independently of that adolescent as it has been conjectured is the case for the person and organism. In other words, you and the adolescent cannot go your separate ways because you are identical to the adolescent. Since you and the adolescent aren't distinct substances, neither could survive the destruction of the other. You can cease to instantiate the property of being an adolescent but nothing goes out of existence when it ceases to be an adolescent. The individual that is an adolescent just becomes a young adult. The term "adolescent" only serves to pick you out in virtue of properties that are not essential to you.

On the standard neo-Lockean or psychological approaches to personal identity, you would be spatially coincident with an organism prior to undergoing a cerebrum transplant or inorganic part replacement. The advocates of this approach claim that "person" is a substance sortal. That term picks you out in virtue of properties that are essential to you and as a result determines your persistence conditions. They usually maintain that "organism" is a distinct substance sortal. Human persons are not identical to human organisms but stand in some other intimate relation to each other.[12]

[11] The best known exception would be Baker's account of derivative properties. Her persons are contingently organisms since they borrow properties from the organism constituting them. *Persons and Bodies*, 46-58, 191-212. I will be arguing for a very different conception of ourselves as contingently animals later in this paper. My approach renders us identical to an animal while Baker's has us borrowing our animality from an animal that constitutes us but to which we are not identical.

[12] While the thought experiments may provide the most compelling reason to believe that we are essentially persons rather than essentially organisms, they aren't the only defenses on offer. There are also the various arguments of the dualists such as appealing to modal intuitions of disembodied

III

Neo-Lockean and Animalist Treatments of the Two Thought Experiments. Eric Olson and others have shown there are major metaphysical problems lurking behind the psychological approaches to personal identity that claim we are essentially thinking entities, not living ones. The puzzles of spatial coincidence involve explaining how two things, such as the organism and the person, could be physically indistinguishable and in the same relationship to the environment yet have different modal and psychological properties. It would seem that if the person can use his brain to think, the organism that possesses the exact same brain should also be capable of thought. And if both spatially coincident entities can think then there arises the "Problem of Too Many Minds." There would appear to be two minds and a pair of thoughts where we would prefer just one. Moreover, if each can not only think but is also alive, then why aren't they are both classified as organisms and persons? Olson calls this the

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existence. The strategy of some soul theorists is to defend their position by the default of their materialist rivals. They claim that the materialist cannot provide a plausible *unique* candidate for the subject of thought. This tact is taken by Dean Zimmerman "Materialist People," *The Oxford Handbook of Metaphysics*, ed. Dean Zimmerman and Michael Loux, (Oxford: Oxford University Press, 2003),491-526. Other immaterialists argue that the problem isn't so much finding the material thinker amongst apparently equally good candidates, but finding even one appropriate material candidate. Alvin Plantinga, "Against Materialism," *Faith and Philosophy* 23 (2006): 3-32. Grounds for positing that we are essentially persons rather than organisms that are only contingently thinking beings have even been put forth by materialists who stress the distinctiveness of our inward life or first-person perspective. Lynne Rudder Baker, "The Ontological Significance of Persons," *Philosophy and Phenomenological Research* 65 (2002): 370-88. Baker claims that these capacities separate us from the animal kingdom. She argues that classifying us as our animals will keep the animal kingdom from being unified for there will be a divide between organisms that have robust first-person perspectives and those that don't. *Persons and Bodies*, 12-20, 147-164.

"Duplication Problem."[13] Furthermore, there are puzzles in determining whether someone is the organism or the person since both share a brain and will think similar thoughts. If the person believes that he can be transplanted, so will the organism. Thus how can any one be sure that he is not the erroneous organism rather than the right thinking person? Olson labels this the "Epistemic Problem."

The opponents of animalism have made various moves in response. Sydney Shoemaker claims that the organism can't think because it doesn't have the right persistence conditions to possess mental properties. He insists that just as the aggregate of organic molecules composing you is too short-lived to have a thought given the scattering of millions of atoms with each breath, animals too have the wrong persistence conditions to be thinkers. Shoemaker imagines that the mental solving of a math problem may begin before the thinker's cerebrum is removed for transplantation, continue during the procedure, and end only after the cerebrum is placed in another skull in a second operation. Shoemaker contends that the math problem could not have been thought by an organism since it has the wrong persistence conditions, not continuing to exist wherever its cerebrum continues to function.[14] Another response is made by Baker who, unlike Shoemaker, allows that organisms can think. She claims that the organism thinks the numerically same thoughts as the person that it constitutes. There aren't two minds or two thoughts in the constitution scenario any more than there are two bruises when a person has a bruised elbow. There are instead two things in a unity relation each sharing the instantiation of the same properties: at any moment there is only one instantiation of a conscious thought, only one tokening of the property of personhood, and only one toeing of the property of animality. Just as an elbow and an arm instantiate the same bruise, the person and the organism instantiate the same thought. Another

[13] Eric Olson. "The Thinking Animal and the Reference of 'I,'" *Philosophical Topics* 30 (2002): 189-208.

[14] Sidney Shoemaker, "Self, Body and Coincidence," *Aristotelian Society Supplement* 73 (1999): 287-306, at 300-01. For a critique of Shoemaker's account: See Eric Olson, "What Does Functionalism tell us about Personal Identity?" *Nous* 36 (2002): 682-98.

option, championed by Harold Noonan, is to claim that the problems are mitigated by a form of linguistic revisionism.[15] Both the person and the organism refer to the person when they use the first-person pronoun "I." Since the organism is unable to directly refer to itself, it can't wonder which being it is and thus the epistemic puzzles don't arise. This essay is not the place for exploring these responses, my aim in providing the readers with a sampling of the peculiar nature of the proposed solutions is to simply wet their interest in an account where there is only one thinking entity in the reader's chair and it is not co-located with a dumb organism.[16]

While the neo-Lockeans certainly have their problems dealing with spatially coincident entities, the animalist's explanation of the standard response to the thought experiments is not intuitively appealing. Animalists usually claim that identity is not what matters to us in survival.[17] That is, they insist that we don't really care if we survive but only that something continues to realize our psychology. In the actual world, we and our psychology never go our separate ways. But in thought experiments it seems possible that this could happen. Olson, and Parfit before him, relies upon their own reactions to the case of cerebral hemispheric fission and transplantation. They state that we could survive if one of our cerebral hemispheres were destroyed. To undermine the transplant intuition, they

[15] Harold Noonan, "Animalism versus Lockeanism," *Philosophical Quarterly* 48 (1998): 302-318 and "Persons, Animals and Human Beings" in eds. J. Campbell and Michael O'Rourke *Time and Identity*, (Cambridge: MIT Press,) forthcoming.

[16] A thoughtful study of the cognitive capacities of Baker's organisms and the persons they constitute can be found in Dean Zimmerman, "The Constitution of Persons: A Critique of Lynne Rudder Baker's Theory of Material Constitution," *Philosophical Topics* 30 (2002): 295-338. For a critique of Noonan, see Olson "Thinking Animals: The Reference of 'I.'"

[17] Olson, *The Human Animal,*42-72; David B. Hershenov, "Countering the Appeal of the Psychological Approach to Personal Identity," *Philosophy* 79 (2004): 445-72. The source of this approach is Derek Parfit, *Reasons and Persons*, (Oxford: Oxford University Press, 1983): 246-280.

then ask readers to consider a case of cerebral fissioning and a double transplant. Both of our hemispheres are removed, and then each is transplanted into a different skull of a physical duplicate of us. There would be little reason to claim that we were one of the resulting persons rather than the other. The standard response is that we have fissioned out of existence. But Olson and Parfit point out that this hardly seems as bad as death. If we could survive with one hemisphere intact, where the other is destroyed by disease or injury, why should we be upset by both hemispheres surviving? The post-fission persons each possessing one of our cerebral hemispheres would manifest our personalities, pursue our hobbies, promote our political agendas and so forth. Parfit and Olson conclude that our continued persistence is not what really matters to us; rather it is only the continuation of our psychology, even if we are not subserving or realizing it. Olson then tries to explain away our intuitions that we would be moved if our undivided cerebrum was transplanted and that we could survive inorganic part replacement by insisting that what matters to us continues even if we don't go with our upper brain nor survive the dramatic change in our physical composition. Olson suggests that we are misled by the survival of our psychology into thinking that we switch bodies in the transplant scenario and survive in the case of the inorganic part replacement.

Unfortunately, it is not that easy to reconceptualize matters as the animalist suggest. Many of us imagine having less concern for the post-fissioned beings with our cerebral hemispheres than we would have had towards our own futures if we had survived. It is not that easy to imagine post-fission life as attractive. Which of them will carry out one's promises, reap the rewards or punishments of one's earlier actions, continue to live with one's spouse and children etc.? If one of the products of fission apologizes, is the other released from doing so? If a pre-fission person wants to be the first female president of the United States, would either person resulting from her fission be content with the other fulfilling the earlier person's intention? Baker goes so far as to maintain that "our practices of apologizing, promising and intending become inconsistent if we suppose that our interest in identity is

really an interest in only psychological continuity."[18] Thus it is not easy to give up the intuition that identity is what matters to us. We don't each want a psychological duplicate of us (or our loved ones) to survive into the future; we want ourselves (and those we care about) to continue to exist. It seems to do us little good that post-fission beings will think they are each identical to us and act like us.[19]

One might also question whether the initial Parfit thought experiment designed to show that identity doesn't matter may violate the only x and y rule.[20] Parfit's thought experiment involves imagining ourselves surviving if one cerebral hemisphere was destroyed by a stroke. If the remaining hemisphere was transplanted into a new body, we would have switched bodies. But if we imagine a different scenario where neither cerebral hemisphere is destroyed, but they are separated and each is placed in the skull of a different body, then it seems that you fission out of existence. Noonan's criticism is that whether you (x) survive as a post transplant person (y) should be determined solely by the intrinsic properties and relations between you and that future person. It shouldn't be affected by what happens elsewhere, whether there is another person (z) with one of your hemispheres. It can't be that in

[18] Baker. *Persons and Bodies: A Constitution View*,. 129. See also Unger's discussion of fission in his *Identity, Consciousness and Value*, 211-294.

[19] The intuition that identity matters in survival is so strong that Four-Dimensionalism even becomes more attractive than it would otherwise be too many of us. Four-Dimensionalism is the view that entities are extended in time, much as events are. In addition to spatial parts like your nose, you have temporal parts that are not present like the first half of your life. The Three-dimensionalist denies that we have temporal parts, instead arguing that we are "wholly present." Identity mattering can be preserved if there were two worms each sharing the pre-fission person's stages as temporal parts of their existence. Ted Sider, *Four Dimensionalism: An Ontology of Time and Persistence*, (Oxford, Oxford University Press, 2001), 152-161, 188-208.

[20] Harold Noonan argues that Parfit's claims do violate the *Only x and y rul*e. See his *Personal Identity*. (London: Routledge Press, 2003), 129-130, 163-177, 214-230.

one world you survive as y with one hemisphere, but in another possible world, where the same functioning single cerebral hemisphere exists in the same skull, you are not identical to the person possessing it because there is another intact hemisphere to be found somewhere else.

IV

The Hylomorphic Account of Thought Experiments. Hylomorphism offers a way to capture the belief that we are organisms and yet that we go with our transplanted brain and could survive inorganic part replacement. So it is an attractive third way between animalism and Neo-Lockeanism. The hylomorphic tradition does not understand the human being to be a composite of two substances: a body and soul. Nor does hylomorphism claim we human beings are identical to just an immaterial soul that is intimately related to a body that is not a part of us. Instead, the hylomorphic tradition construes a human being as a single substance, a thinking, living creature resulting from a soul configuring matter. The hylomorphic human being is a thinking person and a living animal body, not a part of the body, nor constituted by it. The body can't survive apart from a soul that configures it. So hylomorphism understands the human being, human body, human animal and human person in your chair to be one and the same individual. In addition, the soul of the human being is unlike the souls of the rest of the animal kingdom for it possesses capacities of rationality and freedom. According to Aquinas, the rational soul doesn't emerge from matter appropriately arranged, as do the sensitive and vegetative souls, but is a result of a divine creation.

The hylomorphic animal is a special kind of animal for it has a rational soul. On Aquinas's succession of souls version, this soul takes over the functions of the vegetative and then sensitive souls. On another, but less literal Thomistic version of hylomorphism, there is one soul throughout the entire pregnancy, its rational capacities latent.[21] What distinguishes the human soul from all others is not its

[21] Rose Koch-Hershenov, Jason Eberl, Patrick Lee and John Haldane all claim this biologically more realistic view is loyal to the spirit of Aquinas' hylomorphism. Jason Eberl "Aquinas' Account of Human Embryogenesis and Recent Interpretations," *Journal of Medicine and Philosophy* 30 (2005): 374-94;

capacity to govern life processes, but its freedom and rationality. This is why the human soul had to be imposed by God from the outside rather than emerges from appropriately configured matter as with the souls of nonhuman animals. Aquinas thought no material organ could give rise to or be responsible for such capacities.

Hylomorphism does not posit the spatial coincidence of a human person and human animal. There is only one animal-size creature in the reader's chair. So what happens with the cerebrum transplant? According to the animalist, an organ has been removed but you, the animal, stays behind with a partially empty skull in what amounts to being in a permanent vegetative state. Since the hylomorphic account on offer claims that the person is identical to the animal, the reader might think that no one was transplanted when the cerebrum was. If the person is the animal, then a transplant of a person would also be the moving of the animal. But the animalist states that no animal has moved in the transplant scenario. Olson stresses that you can't move an animal by moving its cerebrum any more than you can by transplanting one of its kidneys. Moreover, one can't make the case that the cerebrum in a transplant scenario is a maimed animal for it lacks the integrative functions characteristic of an animal.

To understand why the human animal on the hylomorphic construal behaves differently than does an organism - human or otherwise - on the animalist account, readers need to keep in mind the Thomistic claim that the human animal is a distinctive animal. Its soul has the capacities for rationality and free action unlike any other animal. If those capacities have gone with the cerebrum then there is reason to think that the person has moved.[22] What is left behind is a mindless animal that doesn't have

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Patrick Lee and John Haldane "Aquinas on Ensoulment, Abortion and the Value of Life," *Philosophy* 78 (2003): 255-278; Rose Koch-Hershenov "Twinning, Totipotency and Ensoulment at Fertilization," *Journal of Medicine and Philosophy* 31 (2006): 139-64. The authors of all three articles have all claimed that ensoulment at fertilization is compatible with Aquinas' metaphysics.

[22] Throughout this paper, references to an undetached "cerebrum" should really be interpreted as "matter arranged cerebrum-wise lest a puzzle of the spatial coincidence of the person and cerebrum and the

the capacity for thought and action. In fact, it doesn't even have the potential to acquire or manifest such capacities as the normal fetus does. There is no natural development of the cerebrumless animal that will give rise to thought in the way there is with the developing fetus. If the soul provides the capacity for rational thought, and the person will be found where their soul is, then one has some reason to claim that the soul and the person have moved when the cerebrum does.[23] The person's soul will configure less matter during the transplant procedure than it did before being the cerebrum was removed, and then will configure more and different matter after the cerebrum has been "replanted." In the interim period, the time which the cerebrum has been removed from one skull but not yet put in another, the person becomes physically very small, just cerebrum-size. One could say the person's arms, legs, trunk, lower brain, face, and skull have been amputated. Instead of configuring the body of an organism, the rational soul configures merely the matter of the cerebrum. This is assuming a Shoemaker-like story where thought is preserved during the transplant.[24] This is not to say that the person then thinks solely with a material organ, the cerebrum. The small person's thoughts about immaterial things like universals could still as Aquinas believed, a power bestowed by an immaterial soul rather than a material organ.

The animalist will protest that if human people are identical to human animals as the hylomorphic theorist admits, then they wouldn't move with the cerebrum if the same animal that once had a brain is still in the original operating room in a brainless state. Animalists insist that functioning cerebrums are not needed for an animal to persist. Human embryos existed early in their lives without

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problem of too many minds arise during the transplant. This also avoids a problem of an unwanted embedded thinker prior to the transplant. See Peter van Inwagen's treatment of a virtual brain in his *Material Beings*, (Ithaca: Cornell University Press, 1990), 173.

[23] We're assuming the typical description of the transplant where rational capacities are found where the cerebrum is located and in the middle of the transplant procedure there is a person able to think even though it is the size of its cerebrum.

[24] Sydney Shoemaker, "Self, Body and Coincidence," 300-01.

cerebrums and older humans in permanent vegetative states have non-functioning and liquefying cerebrums. So it might seem that no human animal has gone out of existence with the removal of its cerebrum in the thought experiment. Moreover, there is no denying that after the removal of the cerebrum for transplant there is a living cerebrumless animal in the operating room. It would seem that if the hylomorphist theorist claims that the post-transplant cerebrumless animal is not identical to the human being with a cerebrum that was brought into the operating room prior to the surgical procedure, then there has come into existence a new human animal, merely as a result of cerebrum removal! How, asks the amazed animalist, can the hylomorphic thinker accept that a new animal has popped into existence when there hasn't been any noticeable change in life processes during the operation? It certainly doesn't appear that an organism died on the operating table and a new animal took the place of the deceased. Furthermore, since the hylomorphic theorist maintains that the human being has moved with its cerebrum, placing that cerebrum into a mindless animal body will bring about the demise of the animal and its replacement by the human animal that the transplanted human being was identical to. The animalist protests that placing a cerebrum in a cerebrumless entity can no more bring about the replacement of one animal with another than can the transplant of a liver. Claims to the contrary are just bad biology.[25]

It is worth pointing out that animalists have their own version of thinking beings popping into existence (without having been born) and popping out of existence (without leaving any remains). These cases involve removing a functioning cerebrum from an animal. Even if thought could be sustained uninterrupted through the cerebrum transplant procedure, a new person would have popped into existence. This is because the organism that was thinking prior to the transplant procedure is left behind without a cerebrum in a mindless, permanent vegetative state. The person using the cerebrum to think after it has been removed from the organism is not identical to the person/organism that was earlier

[25] An illuminating discussion of the cerebrum transplant destroying the animal recipient can be found in Olson, *The Human Animal,* 114-19.

thinking with that cerebrum. And when a thinking cerebrum is placed in the skull of an animal, even if thought is uninterrupted, that cerebrum-realized person would go out of existence. The reason it goes out of existence is that an organism can't be destroyed and replaced by another organism due to the mere addition of a cerebrum and there cannot be spatially coincident organisms and persons on the animalist view.[26]

The hylomorphic tradition has the resources to take much of the sting off the animalist's charge that no animal would have replaced another when the former's cerebrum is removed and that no animal will go out of existence when the functioning cerebrum of another is placed in its skull. It is important for Christian readers to keep in mind their commitment to our being distinct in creation. We are told in *Genesis* that we are made in God's image. We are the only rational, self-conscious, free and morally responsible animals. Aquinas rejects the claim that "the image of God is also in the body, and not only in the mind" Instead, he claims "….man is the most perfectly like God according to that which he can best imitate God in his intellectual nature [27] These capacities distinguish us from all other living creatures. The Catechism of the Catholic Church perhaps captures all of this in its claim "Being in the image of God the human individual possesses the dignity of a person who is not just something, but someone. He is capable of self-knowledge, of self-possession and of freely giving himself and entering into communion with other persons."[28] If such capacities are granted to have ontological significance rather than just conceived as contingent features of us, then if the matter that composes something with such capacities later composes something without these capacities, none of us would be identical to the

[26] For an honest admission of this problem, see Eric Olson's *The Human Animal: Identity without Psychology*. 120-123.

[27] ST 1 Q 93 a. 4.

[28] *Catechism of the Catholic Church,* 2nd ed., (New York: Doubleday, 1995), 102.

resulting entity.[29] So it is not as bizarre for the Christian metaphysician to posit in the cerebrum transplant thought experiment that most of the matter that had composed us moments before our cerebrum's removal, afterwards ceases to do so since the soul that makes our unique mental capacities possible no longer configures that matter. The resulting body composed of the matter that used to be configured by our soul won't even have dormant or stymied mental capacities for they have gone with the transplanted cerebrum. A cerebrum transplant shouldn't be treated like someone undergoing a brain injury in which the soul is perhaps retained but can no longer "master all of its matter," thus leaving the individual's thought impaired or stopped. So while the animalist treats animals in permanent vegetative states as metaphysically no different from those in the thought experiments who have had a cerebrum removed, the Catholic hylomorphic thinker is not under a similar compulsion.

Let us first look more closely at how the traditional Thomistic succession of souls theory could deal with the transplant thought experiment. Aquinas believed that there is substantial change as a sensitive soul emerges and replaces the vegetative soul and then substantial change again occurs when the rational soul is implanted by God and it takes over the vegetative and sensitive functions. Rational ensoulment means that a new living entity has appeared on the scene but there isn't a noticeable change in life functions. It has been called "delayed hominization" and recently revived by Donceel.[30] So the traditional Thomistic theorist posits a new rational soul smoothly coming to configure matter that had been configured before by the sensitive soul. What occurs with the removal of the cerebrum in the transplant thought experiment is basically the reverse. We can call it "departed hominization." Whether this involves the reappearance of the same sensitive soul and organism that existed before the original rational soul had been implanted or the emergence of a new creature is not that important to our

[29] I am using "capacity" to cover first and second-order capacities. Fetuses have the second-order capacity (potential) to later manifest rational capacities.

[30] Joseph Donceel, "Immediate Hominization and Delayed Hominization," *Theological Studies* 31 (1970): 76-105.

purposes. What matters is that the advocate of Aquinas's metaphysics has to accept substantial change and the replacement of one organism by another where there appears to be no death and no corpse has appeared.[31] So claiming that substantial change has occurred upon the removal of the cerebrum doesn't involve any radical adjustment to the tenets of the traditional Thomistic hylomorphic theory in order to accommodate our intuitions that we have moved.

It is likewise for the recipient of the transplanted cerebrum. One mindless animal has been replaced by a distinct thinking animal with the acquisition of a single organ because there was a rational soul configuring that organ. The soul that configured the cerebrum during the transplant procedure comes to configure the entire organism that receives the transplant. Although it didn't look like the death of one organism and the replacement of it with another, this occurrence is in principle no different from what happens in the Thomistic succession of souls' story with the substantial change from a creature with a sensitive soul to one with a rational soul.

Matters are a little trickier with the non-succession of soul's version of hylomorphism. On this account, the rational soul was there from the organism's beginning, it just didn't manifest its rational capabilities as an embryo any more than it did its capacity for adolescence. But what is important is to stress that the rational soul has the capacities for thought. If these are no longer to be found where they were before, then there are grounds to believe that we are not dealing with the same organism. The sameness of soul is crucial for the identity across time of the hylomorphic human being. And there are two reasons for claiming that the animal prior to cerebrum removal is not the same ensouled animal as the cerebrumless one after the surgery. The first has been touched on before; there is not even the natural potential in it for thought as there is in the fetus and this points to the absence of a rational,

[31] Aquinas seems to defend departed hominization. He writes: "In the course of corruption, first the use of reason is lost, but living and breathing remain: then living and breathing go, but a being remains, since it is not corrupted into nothing…when human being is removed, *animal* is not removed as a consequence" *In Librum De Causis Expositio,* 20-21).

distinctly human soul. But one might say that is only true for the normal fetus. There are congenitally retarded fetuses or anencephalic fetuses that lack the natural potential to become thinkers. The religious hylomorphic theorist doesn't deny they are ensouled. Their opportunity for thought will come only with a miracle in the next life. But that admission doesn't really cause a stumbling block for the hylomorphic account championed here. There is an additional reason to believe that the original rational soul doesn't remain with its rationality blocked or dormant in the transplant thought experiment case. And that is because we would have evidence that the soul is configuring just the cerebrum during the transplant and then the entire body of the cerebrum recipient. According to the way such thought experiments are typically described, there is rational thought even in the interim period when the cerebrum is "between bodies," perhaps being maintained in that wondrous philosopher's vat. Given the appearance of the same cognitive capacities - abstract reasoning skills, as well as private biographical knowledge - there would be considerable reason to say the same person exists in the interim period, though presently in a maimed, much smaller form. So the continuation of what appears to be the same psychology and rational capabilities gives us reasons to say that the same soul that earlier configured an intact human animal is now configuring just the cerebrum. This distinguishes the post-cerebrum removal situation in the transplant thought experiment from the scenario of the "thwarted" soul of the extremely retarded or anencephalic child or patient in a permanent vegetative state.[32]

Similar lessons can be extended to the thought experiment of inorganic part replacement so dear to neo-Lockeans. Let's imagine that every organ but the person's cerebrum has been replaced by an inorganic counterpart. The capacity for thought has been retained. The person no longer participates in biological processes such as metabolism and homeostasis and thus has ceased to be alive but hasn't

[32] I actually believe the two cases should be treated the same on danger of violating the *Only x and y rule*. I think Shewmon makes this mistake when he claims that whether we could end up brainless depends upon whether our brain was removed or is destroyed in situ. Shewmon, "Recovery from Brain Death: A Neurologist's Apologia," 71.

gone out of existence. The soul has either come to configure just the remaining organic part of the brain or has actually come to configure the inorganic parts as well. What might make one say the latter is the case is if the person can control some of the inorganic parts. That is, the thoughts of the person cause the inorganic parts to move just as it did earlier with its arms and legs. But since the inorganic parts don't grow and decay, nor are reciprocally dependent upon each other as are the vital organ systems of an organism, readers might prefer the first interpretation of what is configured by the soul of the person. Either way, the person survives the loss of life functions. The person has ceased to be alive but hasn't ceased to exist. That means the person is not essentially alive. No animal that is essentially alive can survive without being alive. That follows from what we mean by "essentially." Thus although human persons are identical to human organisms, they are so in the same way that I am identical to a father, husband and professor. None of these terms pick me out in virtue of properties that are essential to me. Just as I am not essentially a teacher or parent or spouse, so I am not essentially an animal. I am not spatially coincident with such entities but identical to each of them.

If the devotees of hylomorphism accept the view that we are contingently animals, that is, organisms distinguished by our mental capacities, then they can have their metaphysical cake and eat it too. They can save the intuitive responses to the thought experiments that are the bread and butter of the psychological approaches to personal identity, but don't have to do engage in any dubious metaphysical acrobatics to avoid the problems of spatially coincident thinkers that plague such Neo-Lockean accounts.[33] Of course, this can be done only by accepting that we are merely contingently animals and

[33] Someone might claim that split brains and possibility of double transplant support the idea that there were two minds all along. Since most theorists individuate minds by causal connections/psychological unity, there is little reason to claim that there were two minds before the brain was split. But it might be thought that a problem arises when the brain's hemispheres are split and if this split was maintained so there was no communication between the hemispheres or learning what the other knows. But this isn't a problem for the hylomorphic account. The hylomorphic view doesn't identify the soul with the mind or

the acquisition of an organ, the cerebrum, can bring about the replacement of one animal by another. That may seem like bad biology to many theorists. But we have already seen that organisms coming into and going out of existence with the acquisition or loss of capacities for thought has a storied place in the Catholic tradition. And the claim that we are unique among living things also has a long Christian tradition. So we shouldn't be too surprised if our persistence conditions are different from other animals. Non-human animals don't go to Heaven or Hell. And we will see in moment that their not going to Purgatory may force upon Catholics the view that we human animals are only contingently living organisms.

V

Contingently Alive: Persisting Through Death, Division and Purgation. Resistance the idea that we are contingently organisms is a bit surprising coming from Catholics who believe they will be in Purgatory sometime between their death and resurrection. If they will someday be in Purgatory, it is hard to imagine that they will be there as living beings if they are utterly devoid of a material body. Aquinas, however, believed that we were each a composite of soul configured matter and that if only our

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the thinker. The theory is not committed to any psychological unity principle for individuating minds and the persons that posses them. And though the hylomorphic soul is simple, it configures a complex object that could be cut off from itself. In the above scenario, the same soul is configuring two parts of the brain, just as it configures other organs. While hylomorphism is committed to our having *rational* capacities, it is not committed to our thought being unified. It is the human being that is the thinking subject, not a soul whose contents must be fully accessible and unified. So split brains and mental states cut off from each other don't entail the impossibility of a split hylomorphic soul, and don't give the hylomorphic thinker any reason to abandon his soul theory. Only a double transplant would create new minds and persons. This is because there would be two living bodies and the hylomorphic soul configures only a single human body.

disembodied soul will be in Purgatory then we will not.[34] He declares "I am not my soul." That is why he admits that our prayers actually are heard not by St. Peter but just by his soul.[35] A question then arises about the fairness of Purgatory if the deceased are not there. Since Purgatory probably involves some discomfort, there arises the question of fairness to the soul who suffers for what the human being had done earlier.[36] The soul is not the responsible agent, the human being is.

More troubling is that if the disembodied soul can think in Purgatory, then it should be able to think prior to that posthumous disembodied state when it earlier configured matter. Given that Aquinas maintains that the person's abstract thoughts are the result of capacities it does not have in virtue of its physical organs, it is even more difficult to see why a soul could think disembodied but not when embodied. If the soul *and* the human being can both think, that would plague us with a hylomorphic version of the much discussed Problem of Too Many Minds. However, if the soul can't think on its own

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[34] Eleonore Stump disagrees with this reading of Aquinas and claims he held the position that the human being that had earlier been alive is in Purgatory but with a single part. She writes: "Similarly, it *is* true that on Aquinas's account a soul is not identical to a human being, but a human being can exist when he is composed of nothing more than one of his metaphysical constituents, namely his form or soul." *Aquinas,* (New York: Routledge, 2003), 53. Jason Eberl also has maintained this view that people will be in Purgatory with only a single proper part, their soul, but adds that they would still be an animal at that time. Eberl maintains that the person in Purgatory should be considered an organism because of the retention of the capacity to control life processes should that person's soul come to again configure the matter of a body. Where I differ from Eberl is that I don't believe the immaterial person in Purgatory should be construed as an organism.

[35] Aquinas, ST I q. 89 a.1 and a.8

[36] Details about the problems Purgatory poses for the view that we are essentially animals can be found in Koch-Hershenov and Hershenov, "Personal Identity and Purgatory," 439-57.

but only the human being thinks, though in virtue of the soul, this extra thinker can be avoided.[37] Aquinas believes that even intellectual thought involves phantasms, images left over from sensations, their production dependent upon material organs. He writes "Someone who wants to understand a human being has occur to him the imagination of a six foot tall human being; but the intellect understand the human being as a human being, not as having this quantity"[38] Pasnau explains:

> The point, then, is that the intellect turns towards phantasms as a way of grasping the universal natures of the particular thing depicted in the sensible image. Even once we have grasped the nature of lines and triangles, we still cannot help but think about these things in light of specific images. We literally cannot help it, because our intellects are too feeble to do anything else.[39]

The soul needs phantasms produced by organs, but the thinking is done by the human being that is composed of matter configured by a soul. If the soul were capable of thinking in the afterlife, a case could be made that it was also a subject of thought in our earthly life. But it must have a divine

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[37] For some doubts about this see the section on hylomorphism in Olson's forthcoming book *What Are We?* and his "A Compound of Two Substances," ed. Kevin Corcoran, *Soul, Body and Survival,* (Ithaca: Cornell University Press, 2001), 73-88. For a response to some of Olson's worries see Koch-Hershenov and Hershenov, "Personal Identity and Purgatory."

[38] He also writes "when someone wants to understand a line, there occurs to him the phantasm of a two foot line. But intellect understands it only with respect to the nature of quantity, not in respect of its being two feet long" *Sentencia libri De memoria et reminiscencia* 2.44-47.

[39] Robert Pasnau, *Thomas Aquinas on Human Nature,* (Cambridge: Cambridge University Press, 2002), 291.

substitute for phantasms for it to perform its function. So the soul is not capable of thought on its own, even when it is the human person's only part in the afterlife.[40]

If the soul contributes to thought but is incapable of being a subject of thought, then for thought to occur when someone's soul is in Purgatory would mean that the deceased person would have to be there. It follows that the human being is in Purgatory in a bodiless form. There would be an immaterial human being whose only proper part is an immaterial soul. Such a person would only be contingently an animal for it would not be involved in any life processes during Purgatory.

Evidence that we are only contingently organisms can also come from the other end of our existence. There is some biological basis for claiming that the early embryo taken as a whole is not alive in that the cells of the embryo don't cooperate for the benefit of the whole in the way that is typical of a multi-cell organism like the reader.[41] An organism functions as a unit, maintaining homeostasis, metabolizing food, excreting waste, assimilating oxygen, maintaining its boundary etc. The particular cells (blastomeres) in the early embryo are doing all of this individually but not as a whole. In the first week there is no growth as the cells rely upon the original resources of the mother's egg. The cells get smaller with each division. If one cell is sick or injured, the others don't come to its aid to fight disease or engage in repair etc. as do the parts of the reader's body. Nor are there organ systems in the embryo serving the entire entity as there are with the reader's respiratory, circulatory, nervous systems etc. But these absences are not reasons to deny that there is an object composed of a multitude of one-cell organisms any more than they would be to deny that my table, computer or a cheerleader pyramid are

[40] So the Thomist conception of the afterlife avoids the problem of too many thinkers that Olson has shown plagues the Cartesian compound dualist. Olson, "A Compound of Two Substances."

[41] Barry Smith and Berit Brogaard, "16 Days," *Journal of Medicine and Philosophy* 28 (2003): 45-78.

composite objects.[42] There is a unity and a telos in the early embryo that could be sufficient for being considered an object even if not sufficient for being alive.

The last reason why some Catholic readers might not want to insist on our being essentially organisms is that at the one-cell stage the only organism the human being could be is the zygote. But if the zygote is essentially an organism then it would seem to have the persistence conditions of a one-cell organism. And cells go out of existence when they divide as is widely agreed upon in the case of an amoeba. If we each were once identical to a zygote and essentially alive, then we should have gone out of existence when the life fissions out of it. As Olson writes:

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[42] I am suggesting that the contact, communication and cooperation of the smaller cells in the early embryo are insufficient to render the embryo a multi-cellular living organism just as they are insufficient for making the cheerleader pyramid a giant living organism. The cheerleaders in the pyramid are in contact, communicate and coordinate themselves without composing a giant living creature. (The cheerleaders could even come from a shared source if they were all identical siblings that emerged from the splitting of the same early embryo. Or the cells of the early embryo could come from distinct sources if they were a result of the fusion of two embryos but are physically just like the cells of an early embryo that came from a common zygote.) Likewise, for various kinds of the cells cultured in a lab. Skin cells and neurons can grow and connect up and form patches of skin and webs of neurons without those *unified* entities meeting the criterion for being organisms. That communication and coordination between cells isn't a sufficient condition for their composing a multi-cell organism is evident from considering the possibility that the sperm and egg were chemically signaling each other. There could conceivably even be a species where a particular egg is destined to be fertilized by a particular sperm, no other gamete could effectively take the place of either. They may be involved in a chemical "courting" long before they are in contact but we surely wouldn't say they were a single organism despite the telos.

> Profound changes take place within a cell when it divides. While the 'plans' (the chromosomes) are being copied, the flow of chemically coded instructions to the rest of the cell is interrupted and its enzyme systems must function without renewal. The nucleus splits in two, and the cell's organelles arrange themselves symmetrically around an internal axis; the biological event that we might call the cell's life loses its integrity and divides into two independent streams. It seems appropriate to call this event the birth of two new organisms and demise of the original cell.[43]

But if the zygote is only contingently alive, it could survive the loss of life and subsequently becomes a two-celled and then three-celled entity and so on. Human beings could be caught up in life processes at one time, but not at another. The unity and telos of the early embryo would be enough for us to claim that the entity that was the zygote survived.

VI

Conclusion. I have tried to argue that the hylomorphic theorist has the resources to provide a fairly interesting research program for personal identity that navigates a safe course between the Scylla of Animalism and the Charybdis of Neo-Lockeanism. The costs may appear to be an alteration of our notion of the modality in which we are alive. It may have first been thought that this involves altering too much of a Catholic web of belief. I have tried to argue that this is not the case. Since philosophical arguments for a particular position are often judged by how well they fit with our other convictions, if Catholics have to accept that we are contingently alive to sustain other positions that they want to hold, then it is easier to extend that position to the personal identity thought experiments. And given their belief that we are unique amongst living creatures, Catholics shouldn't be surprised if that means that we don't come into and go out of existence in the same manner as other living beings. [44]

[43] Eric Olson, *The Human Animal*, 114.

[44] I would like to than an anonymous reviewer for helpful comments.