

A HYLOMORPHIC ACCOUNT
OF PERSONAL IDENTITY

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By

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ABSTRACT

The current state of the personal ontology debate can be summarized as a disagreement between two roughly distinct camps. First, there are those philosophers who argue that personal identity consists of psychological continuity. According to the psychological continuity theorist, one's identity over time is traced by following a series of memories, beliefs, desires, or intentions. Opposed to psychological continuity theories are those who argue that personal identity consists of biological continuity. So-called "animalists" suggest that our identity corresponds to that of a human organism, a member of the species *Homo Sapiens*. As long as the event of the organism's life continues, there too do we persist, according to the animalist. It is my contention that both views suffer difficulties found when exploring their metaphysical commitments and responses to certain widely-discussed thought experiments. In this thesis, I aim to resurrect the ancient view of hylomorphism, by which I mean the view espoused by Aristotle and adapted by St. Thomas Aquinas that posits matter and form as the basic constituents of every material object. As a theory of personal ontology, I argue that hylomorphism has the resources to provide a formidable challenge to the two main views. I will offer hylomorphic responses to general problems faced by accounts of personal identity such as intransitivity, circularity, fission, and composition, and show how its answers are an improvement over those given by psychological continuity theory and animalism.

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INTRODUCTION

The “problem of personal identity” refers ambiguously to at least two very different questions. Historically, arguments have attempted to deal with the *issue of personhood*: what is a “person” and what are the conditions one must satisfy in order to achieve that status? Discussions have often been limited to identifying certain psychological features that are essential to a person’s persistence over time. Answers to this question frequently rely on an intuitive relevance of the concept of a person in framing ethical and political theories. But there is also a more fundamental question for the problem of personal identity. Following a distinction made by Judith Jarvis Thomson, Eric Olson has recently resurrected the problem of *personal ontology*.¹ Olson suggests that the ontological question of personal identity is the question of our “most basic metaphysical nature.”² In other words, what are our metaphysical constituents? And of the properties that we have, which are essential and which are accidental? Another way of posing the question is to ask what we refer to when we use the personal pronoun ‘I’. Assuming that there is an answer to this question, it will help us determine the category of the thing that we are.

The question of personal ontology is importantly different from the issue of personhood. Most notably, defining personhood does not necessarily entail that we or anything else fulfills that definition, whereas personal ontology starts by asking what *we* essentially are. As Olson points out, the issue of personhood dogmatically excludes the possibility that in investigating our own metaphysical nature we may find that we are not essentially persons.³ In that regard, the ‘personal’ of personal ontology refers to the reflexive nature of the question, rather than an emphasis on the ontology of “persons” in an achieved sense.

¹ Eric Olson, *What are We?* (New York: Oxford University Press, 2007) with reference to Judith Thomson, “People and Their Bodies,” in Jonathan Dancy, *Reading Parfit* (Oxford: Blackwell): 202-230.

² *Ibid.*, 3.

³ Olson’s own biological approach, for example, denies that we are essentially persons. This of course depends on one’s definition of a person. There is an implicit debate between those who advocate a Boethian definition of persons as “individual substance[s] of a rational nature” (Boethius, *Theological Tractates*, translated by H.F. Stewart, E.K. Rand and S.J. Tester (Cambridge, MA: Harvard University Press, 1973): 85) and Lockeans who define a person as “a thinking intelligent being, that has reason and reflection, and can consider itself as itself” (John Locke, “An Essay Concerning Human Understanding,” in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 39), but this is not a debate I will be entering into here.

A related issue involves establishing the necessary and sufficient conditions of our persistence over time. There is a long-standing tradition in discussions concerning personal identity of using thought experiments to determine these conditions. While these may go some way towards answering metaphysical questions of our fundamental nature (and the technique is one that I will use throughout my own thesis), it falls short of ending all debates. We could agree on established persistence conditions while still disagreeing on an ontological account. As Olson states, “[t]o say what our identity through time consists in is only to begin to say what sort of thing we are, just as describing a country’s coastline only begins to tell us about its geography.”⁴ The greater question, then, for the problem of personal identity is the question of metaphysical categorization for that which we most fundamentally are. Presenting an account that appropriately responds to this need is the focus of my thesis.

From the outset, it might be suggested by detractors that personal ontology is an empty or misguided approach. The issue of personhood, it may be argued, is more worthwhile due to its obvious relevance for ethics and politics. Personal ontology may satisfy a metaphysical curiosity, but it does not seem to accurately trace our concerns. On the contrary, I would like to argue, initially, that while there is an element of speculative curiosity in the motivations for providing ontological accounts, the identification and diachronic mapping of one’s identity over time can be framed in such a way as to lay the foundations for ethical and political theories. Therefore, before I offer an account of personal ontology, it may help to address the importance of the project. In the following section I will offer a defence of the importance of identity for our philosophical concerns.

I.1 Defending Identity

Derek Parfit has famously argued that identity is not what matters to us.⁵ To understand the basic motivation for his position it will be necessary to introduce certain thought experiments, to which I will add further analysis in later chapters. Imagine that at this moment, in your office, room, etc., where there once was a single bearer of your psychology (you), there are now two or more replacements, each one psychologically

⁴ Olson, *What Are We?*, 18.

⁵ Derek Parfit, “Personal Identity,” *The Philosophical Review*, Vol. 80, No. 1 (January, 1971): 12; *Reasons and Persons* (Oxford: Oxford University Press, 1984): 255.

identical to you in your previous state. These duplicates would share all of your beliefs, desires, memories, and intentions. Because it would be absurd to identify yourself as both separately existing individuals,⁶ and neither would be entitled to sole possession of your identity,⁷ the thought experiment seems to result in your ceasing to exist. But if, as Parfit argues, a single continuation of one's psychology would be sufficient for one's continued existence, "[h]ow could a double success be a failure?"⁸ The point that Parfit makes in including this example is that while you logically cannot continue to exist as identical to either of your duplicates, their ability to take on and complete your projects and aspirations allows for all that you care about to survive. If what matters to us can continue without our being identical to any future recipients of our psychology, Parfit concludes, identity cannot concern us as much as we may think.

Parfit's remarks have stirred a lengthy and complex debate among philosophers working in personal identity, and while a full treatment of the discussion is beyond the scope of this thesis, there are some notable replies worth including for the sake of defending the relevance of personal ontology. The most controversial aspect of Parfit's thesis is his suggestion that the relation one would have to one's psychological duplicates includes *all* of the "vital element[s] that [are] contained in ordinary survival."⁹ In arguing against Parfit, Lynn Rudder Baker states that if psychological continuity were all that we cared about, "our ordinary practices of agency and morality would be incoherent":

Suppose that A [pre-fission or pre-duplication individual] was a politician who vowed to become the first woman Democratic presidential candidate. B and C [psychological duplicates or offshoots of A], each of whom reports remembering A's vow, are both infuriated by the expected (and unfair?) competition. Suppose that B becomes the first woman Democratic presidential candidate. B says, elatedly, 'Since I am the first woman Democratic presidential candidate, I've totally fulfilled the intention that I remember before the operation.' A says dejectedly, 'Since I am not the first woman Democratic presidential candidate, the intention that I remember before the operation is totally unfulfillable.' How can a single intention both be totally fulfilled and totally unfulfillable? Our practices of

⁶ See section 1.2.1 below.

⁷ In other words, there is no "closest-continuer." See sections 1.2.1-1.2.3 below for further discussion of fission and closest continuer theories.

⁸ Parfit, *Reasons and Persons*, 256.

⁹ *Ibid.*, 261.

apologizing, promise keeping, and intending become incoherent if we suppose that our interest in identity really is interest only in psychological continuity.¹⁰

Making a similar point, Patrick Lee and Robert George argue that psychological duplication without identity would fail to preserve our sense of autonomy:

If B learns that the memories he has are actually results of transfer or transplant from A's brain and actual life, he will rightly feel that his autonomy has been violated. The plans and commitments he thought were his, that is, of his own making, he discovers are actually the product of someone else's (A's) choices. They would no more be his plans and commitments than if he had been induced to have them through hypnosis.¹¹

The main problem with Parfit's suggestion that identity does not matter to us is, I think, his neglect of what Peter Unger calls our "singular goods."¹² According to Unger, there are certain things one treasures that are singular in nature and cannot be done for the same benefit by someone else. Most of these singular goods are one's relationships with other people. It is of crucial importance to me, says Unger, that I continue to enjoy the particular company of my wife that results from our unique relationship, and not that certain psychological duplicates enjoy that company. The relationship is special in virtue of the fact that she (my wife) has it with no other man. A "double success" involving two duplicates of myself would likely result in the failure of our marriage due to my wife's struggles to carry on that relationship with two men simultaneously. Even if one were to solely consider the benefits of duplication for the duplicates, only one of my offshoots could have that unique relationship to my wife and the others would find themselves frustrated and forlorn. On average, the lives of the duplicates would be much less preferable than my own survival.

David Hershenov has also expanded the singular goods intuition to a consideration of one's children:

when contemplating one's young son or daughter splitting... concern for the well being of offspring is more clearly dependent upon their identity being preserved than their psychology continuing. We don't come to love

¹⁰ Lynn Rudder Baker, *Persons and Bodies* (Cambridge, UK: Cambridge University Press, 2000): 129.

¹¹ Patrick Lee and Robert P. George, *Body-Self Dualism in Contemporary Ethics and Politics* (New York: Cambridge University Press, 2008): 37

¹² Peter Unger, *Identity, Consciousness and Value* (New York: Oxford University Press, 1990): 275-276.

our children in virtue of their psychology and we would continue to show that same great concern if they underwent radical psychological discontinuity. But if they cease to exist via fission, our concern won't transfer undiminished to their successors.¹³

Consequently, it seems that any relation we may have to future individuals or any relation future individuals may have to us that is less than full numerical identity will be lacking in some significant sense. It is a matter of personal concern to us whether or not we, ourselves, persist through time and for that reason it is worth considering what our identity consists in, or to echo Olson, what we are.

Admittedly, the arguments above rely largely on the reader's response to the thought experiments and basic ideas of prudential concern. I leave the possibility of defending Parfit's thesis open to debate, but my suggestion is that we may have reason to consider personal ontology as more than a practice of speculative metaphysics for at least the reasons outlined above. The actual ethical, political, or religious implications for my own position in the personal ontology debate are not explored in this thesis. I ask the reader to keep in mind, however, that the importance of identity can only be denied by forsaking these seemingly entrenched intuitions.

With that said, there are other motivations than prudential concern for pursuing an account of personal ontology, some of which will be analyzed in more detail in later sections. Olson, for example, has resurrected the issue in order to solve metaphysical and epistemological conundrums related to his "thinking animal problem."¹⁴ Peter van Inwagen is interested in personal ontology as part of a greater discussion of problems of composition.¹⁵ And the works of some personal identity theorists, such as Hud Hudson and David Lewis, set out to explain a universal metaphysics of temporal parts.¹⁶ There

¹³ David Hershenov, "Soulless Organisms? Hylomorphism vs. Animalism," *American Catholic Philosophical Quarterly* (Forthcoming); Hershenov makes similar remarks in "Identity Matters," in Neil A. Manson and Robert Barnard, *The Continuum Companion to Metaphysics*, (Forthcoming).

¹⁴ Eric Olson, *The Human Animal: Personal Identity Without Psychology* (New York: Oxford University Press, 1997); *What are We?* (New York: Oxford University Press, 2007), "An Argument for Animalism," in Raymond Martin and John Barresi, eds., *Personal Identity* (Malden, MA: Blackwell Publishing, 2003): 318-334. The problem will be discussed in detail in Chapter 2.

¹⁵ Peter van Inwagen, *Material Beings* (Ithaca, NY: Cornell University Press, 1990).

¹⁶ Hud Hudson, *A Material Metaphysic of Human Persons* (Ithaca, NY: Cornell University Press, 2001); David Lewis, "Survival and Identity," in Raymond Martin and John Barresi, *Personal Identity* (Malden, MA: Blackwell Publishing, 2003): 144-167.

are also recent discussions outlining religious conceptions of survival after death using positions found in the personal ontology literature.¹⁷ Once again, my focus is not to outline a particular motivation for answering the question of personal ontology, but rather to indicate (contra Parfit) that any view concerning identity of one's self over time can have meaningful and wide-reaching repercussions. It is with that in mind that I begin a presentation of my own strategy.

I.2 Hylomorphism and What it Can Provide

The current state of the personal ontology debate can be summarized as a disagreement between two roughly distinct camps.¹⁸ First, there are those philosophers who argue that personal identity consists of psychological continuity. Diachronically, according to the psychological continuity theorist, one's identity over time is traced by following a series of memories, beliefs, desires, or intentions. Synchronically, in answering the question of what we most fundamentally are, the psychological continuity theorist is a little less clear. It could be that one is a functional state of a certain kind,¹⁹ or a bundle of memories, beliefs or desires,²⁰ or, simply put, a person, understood as "a materially coincidental entity with certain unique persistence conditions."²¹ Opposed to psychological continuity theories are those who argue that personal identity consists of

¹⁷ See, for example, Peter van Inwagen, "The Possibility of Resurrection," *International Journal of Philosophy of Religion*, Vol. IX, No. 2 (1978): 114-121; Dean Zimmerman, "The Compatibility of Materialism and Survival: 'The Falling Elevator' Model," *Faith and Philosophy*, Vol. 16, No. 2 (April 1999): 194-212; Eleonore Stump, "Resurrection, Reassembly, and Reconstitution: Aquinas on the Soul," in Bruno Niederberger and Edmund Runggaldier, *Die menschliche Seele: Brauchen wir den Dualismus? The Human Soul: Do We Need Dualism?* (Frankfurt: Ontos Verlag, 2006): 151-172; Trenton Merricks, "How to Live Forever without Saving Your Soul," in Kevin Corcoran, *Soul, Body, and Survival* (New York: Cornell University Press, 2001): 183-200; David Hershenov, "Van Inwagen, Zimmerman and the Materialist Conception of Resurrection," *Religious Studies: An International Journal for the Philosophy of Religion*, 38, (December 2002): 451-469.

¹⁸ As will become clear by the end of my investigation, these two categories are sometimes only approximate. There are views that borrow from both camps, and some that borrow from neither.

¹⁹ This could in turn mean that we are certain three-dimensional, functioning parts of an organism, or we are a series of temporal parts of an organism including only those moments of functionality. The hypothesis that we are proper parts of organisms will be addressed in section 2.2.2. I will not, however, be discussing in detail any four-dimensionalist theories of personal identity. I leave that analysis for another work.

²⁰ This was Hume's view. See David Hume, "Of Personal Identity," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 162.

²¹ This definition most directly corresponds to Lynn Rudder Baker's constitutionalism (see *Persons and Bodies*). I will not be explicitly discussing Baker's view here, though many of my objections to psychological continuity in general should apply to her position, as will Olson's thinking animal problem.

biological continuity. So-called “animalists” suggest that our identity corresponds to that of a human organism, a member of the species *Homo Sapiens*. As long as the event of the organism’s life continues, so too do we persist, according to the animalist.

These two positions, psychological continuity theory (PCT) and animalism are at odds with one another, disagreeing both on synchronic and diachronic responses to questions of personal ontology, their seeming irreconcilability due to differences in their respective metaphysical backgrounds and stances concerning certain thought experiments. It is my contention that both views suffer difficulties found when exploring these factors. In Chapter 1, I will present PCT in various forms while demonstrating flaws and inconsistencies in each formulation of the account. In Chapter 2, the main arguments for and against animalism will be considered. Though animalism will be shown to fare better than its PCT rivals, it must abandon some of our important intuitions in order to do so. In my third chapter I will attempt to resurrect the ancient view of hylomorphism as a theory of personal ontology and argue that it has the resources to provide a formidable challenge to the two main views. I will offer hylomorphic responses to general problems faced by accounts of personal identity such as intransitivity, circularity, fission, and composition, and show how its answers are an improvement over those given by PCT and animalism.

Though hylomorphism has recently received increased attention in the analytic literature, it has mostly been as a theory in the philosophy of mind.²² Here some have borrowed from arguments found in the work of Saint Thomas Aquinas which attempt to demonstrate the immateriality of the intellect. There is a fair number of philosophers currently working in the philosophy of mind who argue for some aspect of non-reductionism or non-physicalism, and Thomists aware of the current debates are beginning to insert arguments from Aquinas accordingly. My own approach is decidedly different. Instead of explicitly focusing on the immateriality of the intellect, I will

²² For example, see David Oderberg, “Concepts, Dualism, and the Human Intellect,” in Alessandro Antonietti, Antonella Corradini, and E. Jonathan Lowe, *Psycho-Physical Dualism Today: An Interdisciplinary Approach* (Lanham, MD: Lexington Books/Rowman and Littlefield, 2008): 211-33; David Oderberg, “Hylemorphic Dualism,” in Ellen Frankel Paul, Fred D. Miller, and Jeffrey Paul, *Personal Identity* (Cambridge: Cambridge University Press, 2005): 70-99; John Haldane, “A Return to Form in the Philosophy of Mind,” *Ratio*, Vol. 11 (December, 1998): 253-277 ; John Haldane, “The Metaphysics of Intellect(ion),” in Michael Baur, *Intelligence and Philosophy of Mind*, ACPA Proceedings, Vol. 80 (2007): 39-55.

interpret hylomorphism as a theory of personal ontology which posits as our most fundamental constituents *matter* and *form*.

Though hylomorphism is a sort of dualism, as will be explored later on, it is substantially different than typical formulations of Cartesian dualism, and thus avoids its most obvious pitfalls. This will become apparent in my defence of hylomorphism as a brand of animalism in section 3.2. In sections 3.3 – 3.3.2 I will explore an alternative interpretation of hylomorphism, suggested most notably by David Hershenov, that argues that we are *contingently* animals.²³ The way in which this should be understood will be analyzed, as well as the repercussions it may have for thought experiments present in the literature. The goal of my thesis is to demonstrate that a hylomorphic account should be granted serious consideration in the personal ontology debate due to its ability to respond (successfully, I believe) to the problems faced by other views. Whether the reader finds one interpretation of hylomorphism or the other more plausible is not as crucial to my argument as the disjunctive supposition that either one could be considered an engaged participant in discussions of personal identity. By its end, I hope to have accented and responded to Hershenov's remark that Hylomorphism "is a promising and wrongfully neglected research project."²⁴

²³ David Hershenov, "A Hylomorphic Account of Thought Experiments Concerning Personal Identity," *American Catholic Philosophical Quarterly*, Vol 82, No. 3 (2008): 481-502; "Soulless Organisms? Hylomorphism vs. Animalism," *American Catholic Philosophical Quarterly* (Forthcoming).

²⁴ Hershenov, "A Hylomorphic Account of Thought Experiments," 481.

CHAPTER ONE:
PSYCHOLOGICAL CONTINUITY THEORY

1.1 “Un- Locke-ing” the Memory Criterion

John Locke is frequently considered to be the progenitor of psychological continuity theory, and his discussion of personal identity in *An Essay Concerning Human Understanding* has historically been seen as the starting point for the debate in modern philosophy. Accordingly, my own discussion of PCT will begin with his conception. Locke’s position is that a person persists as long as his or her consciousness does: “in this alone consists personal identity, i.e., the sameness of a rational being: and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person.”²⁵ Many have taken Locke to mean that as long as certain *memories* persist, so does that person. Thomas Reid famously supposed that “[i]t is impossible to understand the meaning of this, unless by consciousness be meant memory, the only faculty by which we have an immediate knowledge of our past actions.”²⁶ This interpretation follows from Locke’s own insistence that one cannot be the same individual responsible for an action one does not remember committing.²⁷

Locke’s motivation for giving necessary and sufficient conditions of personal identity is to establish an account of moral and legal accountability, both in terms of human law and divine law at the Resurrection. As a result, his definition more accurately applies to the *issue of personhood* described above. But later philosophers seem to take Locke’s ideas as closer to an answer to the question of personal ontology. Anthony Quinton, while distancing himself from Lockean ideas of spiritual substance, incorporates an ‘empirical’ definition of the soul as “a series of mental states connected by continuity of character and memory,” the soul being “what a person fundamentally is.”²⁸ Though Quinton uses the ‘person’ terminology, determining our most basic metaphysical nature seems to be the goal of subsequent memory theorists, and it is as a theory of our own

²⁵ John Locke, “An Essay Concerning Human Understanding,” in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 39.

²⁶ Thomas Reid, “Of Mr. Locke’s Account of Our Personal Identity,” in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 115

²⁷ Locke, “An Essay Concerning Human Understanding,” 48.

²⁸ Anthony Quinton, “The Soul,” in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 65

fundamental nature that I will approach Locke's position and other formulations of the memory criterion.

Prior, then, to introducing what I see as the main problem for PCT in general, I will present three historical objections to memory theory as such: intransitivity, circularity and backwards causation. The importance of these objections, as well as those covered in section 1.2.1, is due to the fact that, properly explicated, they are potential problems for any account of personal identity and they will help to elicit the general requirements to be met in order to stage a sound defence of my own favoured position later on.²⁹

1.1.1 Transitivity and Constancy

The first historical problem for memory accounts of personal identity is the problem of intransitivity. Transitivity is the logical requirement that if two things are identical to a third thing, then each must be identical to the other. In other words, if A is identical to B and C is identical to B, then C must be identical to A. Thomas Reid famously accused Locke's memorative account of violating the transitivity of identity. His example of intransitive memory connections involves a story of a brave officer who has lost certain memories of himself as a boy:

Suppose a brave officer to have been flogged when a boy at school for robbing an orchard, to have taken a standard from the enemy in his first campaign, and to have been made a general in advanced life; suppose, also, which must be admitted to be possible, that when he took the standard, he was conscious of his having been flogged at school, and that, when made a general, he was conscious of his taking the standard, but had absolutely lost the consciousness of his flogging.

These things being supposed, it follows, from Mr. Locke's doctrine, that he who was flogged at school is the same person who took the standard, and that he who took the standard is the same person who was made a general. Whence it follows, if there be any truth in logic, that the general is the same person with him who was flogged at school. But the general's consciousness does not reach so far back as his flogging; therefore, according to Mr. Locke's doctrine, he is not the person who was flogged. Therefore the general is, and at the same time is not, the same person with him who was flogged at school.³⁰

²⁹ In later chapters, I will explicitly focus only on the problems of intransitivity and circularity, though it should be understood that a prohibition against backwards causation remains in the background.

³⁰ Reid, "Of Mr. Locke's Account," 114-115.

There are two key points to notice in Reid's thought experiment. The first is that the memories considered important for determining identity are those of *experiencing* certain events. This much is present in Locke's own formulation of his account when he emphasizes conscious reflection of "*our* past actions."³¹ Memories of specific non-personal facts such as mathematical truths or the dates of historical events, or memories of how to perform a certain task or skill are not included in a formulation of personal identity over time, as they do not pick out the particularity of one's own consciousness. The second and most apparent point of Reid's example is the violation of transitivity which Locke's formulation seems to commit. The problem is that the direct memory connections had between the officer as a boy and the officer as a young man do not hold between the officer as a boy and the officer as an older general. This illustrates the common fact that we do indeed lose certain memories over time. I cannot now remember everything that I did on this date last year, but we would not wish to say that I am ontologically distinct from the individual who did those things (though I may not be morally responsible for those actions). The requirement that continuity of personal identity uphold this strong connection must therefore be abandoned.

In order to preserve the transitive relation of identity in a memorative account, therefore, a weaker stipulation must be introduced. Derek Parfit's formulation of PCT does this by differentiating between *psychological connectedness* and *psychological continuity*.³² *Psychological connectedness*, according to Parfit, "is the holding of particular direct psychological connections," e.g., explicitly remembering a certain action that one performed yesterday.³³ *Psychological continuity*, on the other hand, "is the holding of *overlapping chains* of *strong* connectedness."³⁴ Instead of requiring that one be capable of explicitly remembering at the present moment all of those actions one has performed or otherwise experienced in the past, for psychological continuity one need only be a member of a chain of remembering stages in an individual's career such that each stage is connected to that immediately prior to him or her through direct

³¹ Locke, "An Essay Concerning Human Understanding," 40.

³² Parfit, *Reasons and Persons*, 206. Anthony Quinton makes a similar differentiation between direct and indirect psychological continuity in "The Soul," page 59.

³³ Parfit, *Reasons and Persons*, 206.

³⁴ *Ibid.*, emphasis added to 'overlapping chains'.

psychological connections. Parfit further stipulates that the direct psychological connections between each link must involve a transfer of at least half of the memories contained in that immediately prior in order to qualify as “*strong* connectedness.”³⁵

Parfit suggests that his solution thereby avoids Reid’s objection to the memory criterion. The officer as a general, though not sharing direct connectedness with the officer as a boy, can be considered identical to him because they are members of a chain of direct psychological connectedness (presumably of the strong variety) that runs from the officer as a general, through the officer as a young man, and to the officer as a boy, as well as through any and all intermediary links necessary for the transfer of strong connectedness. Consequently, if what we mean by identical is psychologically continuous, then the officer as a general is identical to the officer as a young man, the officer as a young man is identical to the officer as a boy, *and* the officer as a general is identical (psychologically continuous) to the officer as a boy. In other words, A (general) = B (young man), C (boy) = B (young man), and C (boy) = A (general). The law of transitivity of identity is thus seemingly preserved by updating Locke’s memory account so as to include Parfit’s suggestions.

It is often assumed that this strategy has successfully solved the intransitivity problem.³⁶ My own position, however, is that Parfit’s modifications have not eliminated it completely. The notion of psychological continuity may superficially achieve a transitive relation, and it may allow one to respond to Reid’s thought experiment, but I would argue that it does so at the expense of abandoning claims of *numerical identity*. As an example, consider the relation *taller than*. We can construct a transitive formulation of taller than by positing it as a relation between three individuals: B is taller than A, C is taller than B, and consequently, C is taller than A. Let us further suppose that B is taller than A by two inches and C is taller than B by four inches. On the face of it, we have transitivity of a property (taller than). But upon investigation of the details of each relation (two inches between B and A, four inches between C and B), the relations had between the three individuals are not exactly similar. It would not follow from the transitivity of the taller than relation that C is either two inches or four inches taller than

³⁵ *Ibid.*

³⁶ For example, Harold Noonan, *Personal Identity* (London: Routledge, 1989): 12.

A. We want to admit, without question, that C is taller than A. This much we learn from the transitive relation. But also within the relation we find that C is more-taller-than B than B is taller than A. The relations between these three individuals are similar but they are not identical.

Translating this example to a case of supposed personal identity, we find that we are faced with a problem. Consider an individual P at a certain time T, an individual Q at $T+2$ hours, and an individual R at $T+2$ years. Let us assume that, by Parfit's standards, P is psychologically continuous with Q, Q is psychologically continuous with R, and R is psychologically continuous with P. In saying that P is psychologically continuous with Q what we mean to say is that there is a chain of direct connectedness between them. Their being psychologically continuous is thus constituted by and dependent on the direct connectedness upheld by their intermediaries. As Parfit admits, direct connectedness admits of degrees.³⁷ We can imagine a case in which throughout a particular day I was considerably drowsy and oblivious to my surroundings. On the following day, my direct memories of the day before may still be at least half of those I had on that day (thus qualifying as *strong* connectedness), but it would be a weaker direct connection than if I had been fully awake and aware of what I was doing at the time. Let us suppose that the direct connectedness between P and Q is very strong due to their minimal separation in time.³⁸ It may also be plausible to assume that Q and R, while sufficiently strong in their connectedness to qualify as psychologically continuous, share a weaker relation, due to their separation in time, than the relation had by P and Q. As both relations achieve psychological continuity, they each do so to different *degrees*. It might be said that P is *more* psychologically continuous with Q than Q is psychologically continuous with R. If for memory theorists, and PCT advocates in general, psychological continuity just *is* an identity relation, then we would have to say that P is more identical to Q than Q is identical to R. But if anything is a strict dichotomy, identity is. Either a certain thing is identical to another thing or it is not. And it seems that our concerns for personal identity rely on that very fact.

³⁷ Parfit, *Reasons and Persons*, 206.

³⁸ This is of course assuming there are no amnesia-inducing accidents, or "brain zaps."

Bernard Williams emphasizes this point by considering cases in which you are imprisoned and forced to undergo sessions of excruciating physical pain.³⁹ At certain points in these sessions, you are also forced to undergo psychological manipulations, such that each successive manipulation leaves you with a considerable loss of memories. Williams argues throughout his formulations of the thought experiment that it is always a valid question to ask whether or not one will actually persist through each ordeal. Responding in a way that makes one's identity a matter of degree is no consolation for the imprisoned individual. She wants to know at each moment whether or not the next session of torture will be something that *she herself* will have to endure. If her identity is only partially preserved will the sessions of torture hurt less? I think questions like these illustrate the absurdity of admitting degrees of identity into one's account. In the words of Thomas Reid, "The identity of a person is a perfect identity: wherever it is real, it admits of no degrees...For this cause, I have first considered personal identity, as that which is perfect in its kind, and the natural measure of that which is imperfect."⁴⁰

Parfit's account is at least consistent in this regard. He correctly concludes that his notion of identity as psychological continuity admits of degrees, and he emphasizes such facts in his famous "Spectrum" cases.⁴¹ David Lewis likewise concedes, "Identity certainly cannot be a matter of degree. But... personal identity may be a matter of degree because personhood is a matter of degree, even though identity is not."⁴² Parfit and Lewis are right to abandon numerical identity in preserving psychological continuity, because as the above argument shows it cannot be upheld as such. But if the arguments defending identity have any weight, then Parfit's solution will fail to be a solution at all. Though the PCT advocate can avoid Reid's intransitivity objection, it can only do so by clinging to a

³⁹ Bernard Williams, "The Self and the Future," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 179-198.

⁴⁰ Reid, "Of Mr. Locke's Account," 111.

⁴¹ Parfit, *Reasons and Persons*, 231-243.

⁴² Lewis, "Survival and Identity," in Raymond Martin and John Barresi, *Personal Identity* (Malden, MA: Blackwell, 2003): 157. Lewis is able to admit this freely because he is working under four-dimensionalist assumptions. Strictly speaking, for the temporal parts theorist no two person-stages can be identical. The best one can hope for in such an account is a sufficiently strong similarity between temporal parts to be able to consider them stages of the same individual. These assumptions cannot be so easily translated to a three-dimensionalist PCT account, and PCT theorists may have reason to follow Lewis in accepting his larger metaphysical commitments. Even so, his account abandons numerical identity and the objection still stands.

relation that is less than numerical identity, which seems a high price to pay for a memory account.

Before moving on, it may help to address the claim that the transitive numerical identity relation that I am demanding is too strict and that it will defeat any account of personal identity. While I do see it as a problem to be faced by all views, and one which I will use to approach the alternatives explicated below, I will argue here that there is room for fruitful debate within the restriction. The reason Parfit's formulation of PCT fails is due to the fact that each stage of an individual's career in the schema has a different relationship with another considered stage. In order to preserve transitive numerical identity, each member of an individual's chain of existence must be related in an identical way to the other members. Three possibilities come to mind. First, one could espouse a memory theory in which all instances of an individual over time share a single identical memory. The relation *has this memory as a member* could perhaps be strictly identical between stages at different times. A second approach could be a physical criterion such that each instance of an individual has as a member a certain identical physical constituent.

If neither of these can be defended, one might be justified in forgoing Parfit's reductionist requirement. One may posit (as many anti-reductionists have⁴³) a continuing immaterial part as the explanation of an individual's persistence over time, to which an individual may also be identical. The stipulation that a continuing part to which instances of an individual share an identical relation be itself identical over time would, at the risk of eliciting an infinite regress, have to be a simple, brute and unanalyzable fact. One could then borrow from the anti-criterialist literature to flesh out the position.⁴⁴ Admittedly, the transitive numerical identity requirement limits the options one can choose from in the personal identity debate, but, if anything, this is a virtue of the objection.

⁴³ Roderick Chisholm seems to do so for similar reasons. See his *Persons and Objects* (London: George Allen & Unwin Ltd., 1976), chapter three. Other arguments for metaphysical simples as they relate to personal ontology are considered in my Chapter Two below.

⁴⁴ See for example David Oderberg, *The Metaphysics of Identity Over Time* (New York: St. Martin's Press, 1993); Trenton Merricks, "There are No Criteria of Identity Over Time," *Noûs*, Vol. 32, No. 1 (March, 1998):106-124.

1.1.2 Circularity and Quasi-Memory

The second historical objection to Locke's memory account of personal identity is that it contains, in its definition, terms which already assume the persistence of a single entity. If the goal of a criterion of personal identity is to establish the existence of a continuing subject, it cannot frame that definition around an idea of a person already in place. If it does so it commits an act of circularity. The inspiration for this objection and its application to PCT comes from Joseph Butler when he says that "consciousness of personal identity presupposes, and therefore cannot constitute, personal identity, any more than knowledge, in any other case, can constitute truth, which it presupposes."⁴⁵ As Butler's remarks indicate, circularity seems to be a particularly potent problem for attempts to define personal identity in terms of memory. I will attempt to provide an analysis of why this may be so, and to defend the objection against more recent replies by Sydney Shoemaker. Shoemaker's own concept of "quasi-memories" will be shown to be just as circular as Locke's original account.

To understand why Locke's formulation of the memory theory is circular, consider his supposition that "as far as any intelligent being can repeat the idea of any past action with the same consciousness it had of it at first, and with the same consciousness it has of any present action; so far it is the same personal self."⁴⁶ Here Locke suggests that if someone can remember doing certain things, then it was he himself who did them. But as Bernard Williams points out, this simple formulation of memory theory is tautologous.⁴⁷ Properly elaborated, it means that if an individual can remember that he himself did something, then it was he himself who did it. Or, if A remembers A doing S, then A is identical to A. In order to avoid the tautology and offer any kind of informative criteria, it must not be said that A remembers A doing S. There must be some lesser requirement that does not assume that A has done the prior action in a statement of the definition of A. If, as Shoemaker argues, it is a logical truth that *actually remembering* a certain thing being done by me guarantees that it was me who did that

⁴⁵ Joseph Butler, "Of Personal Identity," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 100

⁴⁶ Locke, "An Essay Concerning Human Understanding," 40.

⁴⁷ Bernard Williams, "Personal Identity and Individuation" in *Problems of the Self* (Cambridge: Cambridge University Press, 1973): 233.

thing, then we must not include a reference to actually remembering in our definition of personal identity.⁴⁸

Once we abandon the actually remembering component, the circularity of the memory account comes into play. Our reformulated memory criterion would have to say that if A *seems to remember* doing S (that is, it appears to A herself that she remembers doing S), then A is the same individual who did S. But this immediately raises the question. How can we be sure that it actually was A that performed the action that A remembers being done? As we have stated, we cannot attach A to the action within the definition itself without it being trivially tautologous, and as a result, it seems we must look elsewhere in order to determine the validity of the memory. The most obvious way of doing so would be to appeal to some criterion other than PCT, such as bodily continuity. For example, if a young woman were to claim in a court of law that she remembered being beaten by her father on a certain night, the first step towards validating her claim would be to establish that she actually was physically present in the specified location at the specified time. We would thus already have a working conception of the girl's persistence over time in validating her memory claims. If determining whether a seeming memory is an actual memory requires a prior understanding of personal identity, then we have come full circle. Personal identity would be explained in terms of memory, and validating the operative term 'remembers' would include invoking notions of personal identity. If false memories are a distinct possibility, and the validity of experience-memories cannot be determined "from the inside," or making reference only to psychological terms, then this may undermine the appeal to memory in establishing personal identity over time.

In response to this objection, Sydney Shoemaker has argued that a memorative account of personal identity can be constructed which both avoids tautology and provides a method of validation without requiring reference to bodily continuity. It can do so by employing what he calls "quasi-memory".⁴⁹ Shoemaker defines quasi-memory as

⁴⁸ Sydney Shoemaker, "Personal Identity and Memory," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 125.

⁴⁹ Sydney Shoemaker, "Persons and Their Pasts," *American Philosophical Quarterly*, Vol. 7, No. 4 (October, 1970): 269-285.

a kind of knowledge of past events such that someone's having this sort of knowledge of an event does involve there being a correspondence between his present cognitive state and a past cognitive and sensory state that was of the event, but such that this correspondence, although otherwise just like that which exists in memory, does not necessarily involve that past state's having been a state of the very same person who subsequently has the knowledge.⁵⁰

This definition corresponds to the aforementioned formulation, A seems to remember (someone) doing S. Shoemaker would translate 'seems to remember' as 'quasi-remembers'. Importantly, quasi-remembering includes actual remembering as a special case, in which the individual I quasi-remember doing S was actually me. But if quasi-memory includes both veridical and non-veridical cases of apparent remembering, the notion has not gotten us any closer to a criterion of identity. Shoemaker's next step, then, is to supplement his quasi-memory account so as to include only those memories which are valid (or nearly so), and he must do this without explicitly invoking a tautology.

Shoemaker offers three initial requirements that must be met for an apparent memory to be an actual memory.⁵¹ The first is that I must now be in a state of seemingly remembering a certain experience, which can perhaps be understood as a dispositional state. The second is that what I seem to remember happening did at least happen to someone. In order for there to be an experience of witnessing something "from the inside" there must have been someone by whom the event was experienced.⁵²

Shoemaker's quasi-memory meets both of these requirements. The third requirement is the one on which we intuitively want to insist in order to complete the formula. This is the stipulation that the individual who originally experienced the event that I remember experiencing was in fact me. But as we have seen already, this last requirement is not one that Shoemaker can resort to without falling back into circularity. Instead of saying that my quasi-memory of an experience logically connects me to the original experience, Shoemaker suggests that we should say that my quasi-memory is *causally* connected to

⁵⁰ *Ibid.*, 271

⁵¹ Sydney Shoemaker, "A Materialist's Account," in Sydney Shoemaker and Richard Swinburne, *Personal Identity* (Oxford: Blackwell, 1984): 81-82

⁵² Shoemaker, "Persons and Their Pasts," 273.

the original experience.⁵³ In other words, the original experience of a certain event must be the cause of my remembered experience of that same event.

The need for a properly causal relationship between the original experience and my memory of it becomes apparent when we consider some examples of non-actual memories. Imagine that a certain experience that you have had has become forgotten.⁵⁴ All attempts at reviving the memory have failed. You approach a hypnotist who claims he can implant memories, perhaps as a last resort. But this particularly devious hypnotist cares nothing about the type of memory you have requested, and he completely disregards your written instructions. He does not even know what type of memory you wanted. Amazingly, this devious hypnotist, who implants random memories in his unsuspecting victims, manages to implant a memory that is exactly similar to the one you have forgotten. Intrinsically, there would be no way to tell the difference between the original and this newly implanted replacement. The apparent memory meets the three original requirements for veridicality. You are in a state of at least seemingly remembering, the original experience did happen to someone, and the individual who originally experienced the event was in fact you. But we would not wish to include this example in the category of actual memories. And the reason for this, Shoemaker argues, is because the original experience is not the cause of the present memory, not even indirectly.

But we can redesign the thought experiment so as to include the causal element while still producing a possibly non-actual memory. Imagine in this case that the hypnotist is a little less devious. Years prior to hiring the hypnotist, you explain to him a certain experience that you have had in vivid detail (perhaps he is also your psychiatrist or a friend of the family). Since that meeting, you have irretrievably forgotten the event that you had experienced. But the hypnotist knows all about this memory that you had of the event because you told him all of the precise details. With this information he is able to skillfully implant a memory that is exactly similar to the original. Let us say that they are, once again, intrinsically indistinguishable. This memory, too, meets the first three requirements for veridicality. It also meets the initial formulation of the causal

⁵³ Shoemaker, "A Materialist's Account," 83.

⁵⁴ *Ibid.*, 82-83.

requirement. Your original experience is the cause of your memory of it, albeit indirectly through a causal chain in the hypnotist. But it seems not to be a case of actual remembering.⁵⁵

Or for greater plausibility, consider a less fanciful case. In a recent study by psychologists E.F. Loftus and J.E. Pickrell, participants were led into believing that they had experienced an event in their childhood which they had not actually experienced.⁵⁶ Loftus and Pickrell obtained information about three events that the participants had actually experienced. They also added a fourth event which was based on no such truthfulness. With the help of family members, some participants (about 25%) were convinced that all four events had happened to them. In interviews, these participants confessed details about the fourth event as if it were an actual memory. Assuming that the participants did not actually experience the fourth event, this case seems like a real example of memory implantation. We can slightly adjust the example to fit the hypnotist framework by suggesting that the family members knew that the participants had actually experienced the fourth events, but that they had also completely forgotten about them. It would then be the case that the content of the memory was veridical but the causal chain seems too convoluted to be considered an actual memory held by the participants. What these examples illustrate is that the causal requirement needs to be supplemented to properly capture only those quasi-memories that are actually cases of remembering.

Shoemaker admits that between the original experience and the memory of the event there must be a causal connection “of the appropriate sort.”⁵⁷ He offers an elaboration by introducing his notions of “M-type causal chain[s]” and “M-connectedness.”⁵⁸ M-connectedness is Shoemaker’s specified causal requirement that is employed in order to avoid the troubling cases outlined above. He argues that

[t]wo mental states, existing at different times, are directly M-connected if the later of them contains a quasi_c-memory [a causally related memory] which is linked by an M-type causal chain to a corresponding cognitive

⁵⁵ *Ibid.*, 83-84.

⁵⁶ Elizabeth Loftus and J.E. Pickrell, “The Formation of False Memories,” *Psychiatric Annals* Vol. 25 (2005): 720-725., discussed in Gregory Robinson-Riegler, and Bridget Robinson-Riegler, *Cognitive Psychology: Applying the Science of the Mind*, Second Edition (Allyn & Bacon, 2007): 269-270.

⁵⁷ Shoemaker, “A Materialist’s Account,” 84.

⁵⁸ Shoemaker, “Persons and Their Pasts,” 278.

and sensory state contained in the earlier. And...two total mental states are M-connected if either (1) they are directly M-connected, or (2) there is some third total mental state to which each of them is M-connected.⁵⁹

Shoemaker's reply to problem cases relies on his definition of M-type causal chains. Unfortunately, he fails to precisely define what the relations between members in an M-type causal chain would be. Shoemaker supposes that the most plausible solution is found in a functionalist theory of mind in which a memory "is a 'functional state', i.e., a state which is definable in terms of its relations (primarily its causal relations) to sensory inputs, behavioural outputs, and (especially) other functional states."⁶⁰ But this just restates the problem. Even as a functional state, your memory of an experience in the second formulation of the hypnotist example *is* causally related to later functional states of yourself, albeit through intermediary functional states in the hypnotist.

Shoemaker also hints at a requirement of spatio-temporal continuity,⁶¹ and this seems to be his underlying assumption, but if he truly wants this to be his requirement, then it seems he has returned to a circular definition of personal identity, only a more complex one. Admittedly, the reason the cases above are troubling is due to a seeming violation of spatio-temporal continuity. The causal chain between the original experience and the memory of that experience "jumps" through other people, namely the hypnotist in the first example, and family members in the second. But if a "no jumping" clause must include a reference to other people through which the causal chain cannot jump, then Shoemaker's criterion presupposes some conception of personal identity. We understand what "jumping" means by assuming a bodily distinction between two individuals. Perhaps there is some way that spatio-temporal continuity can be explained in non-bodily terms, and a functionalist theory of mind may even be a method of doing so, but in his defence of the memory criterion Shoemaker offers no such account. As a result, Butler's objection that veridical memory presupposes personal identity, and thus cannot be used as a criterion, remains unscathed.⁶²

⁵⁹ *Ibid.*

⁶⁰ Shoemaker, "A Materialist's Account," 92.

⁶¹ Shoemaker, "Persons and Their Pasts," 277.

⁶² It is worth noting that Shoemaker himself admits the unavoidability of circularity in his approach: "On the view I would urge, the notion of personal identity and the notions of particular mental states are internally related, but neither can be said to be conceptually prior to the other. If we want philosophical

Though solely considered as an objection to PCT in this section, as will be explained below, circularity is a problem that must be resolved in one way or another by each of the three main accounts considered in this thesis. But before moving on to alternative views, there is one more historical objection against memory accounts in particular that may help to more resolutely demonstrate their difficulties.

1.1.3 Backward Causation

The last historical objection to memory accounts that I will briefly consider here is the objection most recently made explicit by David Hershenov. Hershenov argues that any psychological continuity theory that relies on notions of memory to explain identity or continuity over time necessarily commits itself to backward causation. The ubiquitous phenomenon of losing memories will, for the memory theorist, alter the origins of what we essentially are. If actions that we perform or memories that we lose now can change the moment at which we began to exist (assuming we are persons), then an element of the past has been altered by an element of the present, which if not completely absurd, is an unwelcome consequence. I include this argument in the historical objections portion because, though the problem has only recently been formulated, I believe there are hints of the objection in the words of Joseph Butler when he says that facts concerning the history of an individual's identity are "prior to all consideration of its remembering or forgetting; since remembering or forgetting can make no alteration in the truth of past matter of fact."⁶³

Recall that for Locke, in order for an individual to be identical to the person who performed a certain prior action she must be able to "repeat the idea of [the] past action with the same consciousness it had of it at first." In other words, one must have an experience-memory of the event. If one no longer has that same experience-memory, then one is no longer identical to the individual who performed it. But if I lose a memory now, does this change who in the past I am identical to? Hershenov's backward causation objection elicits the inherent absurdity in this premise. For

illumination here, we have no choice but to move in a circle. In elucidating particular mental concepts, we shall have to help ourselves to the notion of personal identity, while in elucidating the concept of personal identity, we shall have to help ourselves to various mental concepts" (Shoemaker, "Identity, Properties and Causality" in *Identity, Cause and Mind* (Oxford: Oxford University Press, 2003): 260.)

⁶³ Butler, "Of Personal Identity," 104.

[a]ssume you have memories extending back to your early childhood. Then through either a natural process of forgetting (or a minor stroke or blow to your head), you lose your earliest memory of something that happened to you. Let's say that this memory was of an experience of an event T_1 (1937). Your earliest memory is now of a later time T_2 (1938). That means you are not identical to a being that existed in 1937- at least according to the unreconstructed Lockean memory criterion...If the earliest experience you can recall is *now* 1938, and you are not identical to any person that existed earlier, then that actually means you have changed your origins! You have come into existence at a later time than was true before. Thus an event in the present, a memory loss, *causes* your first moment of existing in the past to change.⁶⁴

Nor, as Hershenov explains, does adapting the memory criterion so as to require only overlapping chains of psychological continuity avoid the problem. As mentioned above, for Parfit the continuity of a proper psychological chain requires a transfer of at least half of the memories from one link to the next. So if I were to receive a head injury such that less than half of my memories remained, I have changed my past origin from years ago to much more recently.⁶⁵

Beyond Hershenov's specific points, I believe there is also another problem in admitting a backward alteration in one's origin. If one wants to say, as Locke does,⁶⁶ that one thing cannot have two beginnings of existence, then changing my origins brings into existence a whole new entity. There exists a chain of psychological connections that begins in 1937 and ends with my head injury (of the first variety). Let us refer to the individual constituted by this chain as A. Because I continue to exist, and I am still psychologically continuous with an individual beginning to exist in 1938, I am a distinct individual. Let us refer to myself constituted by this chain as individual B. Based on this information, we can gather that there is a long series of memories (from 1938 onward) that is shared by both A and B. It would seem to follow that an experienced event in 1938 was actually experienced by two people simultaneously. If A witnessed a murder in 1938, then B did as well. There would in fact be two witnesses to the crime when the law court documents only claim one person was present. Even if it were not true that two people

⁶⁴ David Hershenov, "The Memory Criterion and the Problem of Backward Causation," *International Philosophical Quarterly*, Vol. 47. No. 2 (June 2007): 182.

⁶⁵ *Ibid.*, 5

⁶⁶ Locke, "An Essay concerning Human Understanding," 33.

simultaneously experienced the event from the 1938 perspective, at the moment I lose my memory of 1937, and thus become a different individual than A, it is retroactively admitted that there were two persons present. Working from a temporal parts background, David Lewis welcomes such consequences,⁶⁷ but I think few would be willing to follow him in accepting the obviously counter-intuitive consequences of a multiple occupancy view.⁶⁸ In conclusion, if a PCT account which relies on a memory criterion must resort to backward causation and multiple occupancy, it might be a wiser solution to abandon that criterion altogether.

Thus far, in the first half of this chapter, I have considered three main historical objections to a memory criterion of personal identity: intransitivity, circularity, and backward causation. I have shown that even reformulations of PCT accounts that utilize some aspect of the memory criterion must admit unwelcome consequences for their views such as the abandonment of numerical identity, a denial of the possibility of false experience-memories, or multiple-occupancy. Due to these concerns, it may seem a more plausible solution to reject the memory criterion and look for an account of personal identity elsewhere. But before exploring other non-PCT views, in the following section I will attempt to give the justifications for a wider PCT account their due, and then offer possible objections to psychological continuity in general.

1.2 Body-Switching and Fissioning out of Existence

Due perhaps to literary encouragement from imaginary science-fiction scenarios, there has been a continuing interest throughout the history of the personal identity debate in so-called cases of “body-switching.” This usually involves an initial experience of existing in or through a particular human body (one’s normal first-person perspective), followed by a transportation or transplantation of some crucial aspect of one’s identity such that at the end of the procedure one seems to experience the world from the point of view of an entirely different body. Or from a third-person perspective, the procedure ends with the particular personality of an individual seemingly being instantiated in an entirely different body than before. John Locke may be the first to seriously suppose such a case when he says,

⁶⁷ Lewis, “Survival and Identity,” 151.

⁶⁸ I will have slightly more to say about the multiple occupancy view in sections 1.2.2 and 2.1.2 below.

should the soul of a prince, carrying with it the consciousness of the prince's past life, enter and inform the body of a cobbler, as soon as deserted by his own soul, every one sees he would be the same person with the prince, accountable only for the prince's actions.⁶⁹

A more modern formulation is provided by Sydney Shoemaker in his *Self-Knowledge and Self-Identity*, which he calls "the change-of-body argument".⁷⁰ In his example, we are to imagine that the brain of a certain human being (call him "Mr. Brown"), which we assume can be safely extracted from its original cranium intact, is accidentally placed in the recently brainless cranium of another human organism ("Mr. Robinson"). If the brain transplant "takes" then we would have the resulting combination of Mr. Brown's brain and Mr. Robinson's body. Let us follow Shoemaker's suggestion and call the functioning combination "Mr. Brownson".⁷¹ Given that the transplant is successful, we can imagine Brownson awakening from the surgery only to be shocked at seeing what he claims is his own body on the opposite operating table. Furthermore, Shoemaker supposes that Brownson would respond to the name 'Brown', recognize members of Brown's family without Robinson ever having met them, reveal certain facts about Brown that only Brown himself would know, and over time demonstrate the particular personality traits formerly exhibited by Brown. Following Locke, Shoemaker argues that "[t]here is little question that many of us would be inclined, and rather strongly inclined, to say that while Brownson has Robinson's body he is actually Brown."⁷² But if this is the case, then bodily continuity cannot be the criterion of personal identity over time, since Brown's identity has continued beyond that of his body.

Shoemaker argues that the temptation to stress the continuity of the brain is also misleading.⁷³ For even if Robinson had kept his own brain, if he had somehow awoken with all of the characteristics, memories, beliefs and desires of Brown, then we would be just as likely to consider that that person was in fact Brown rather than Robinson. Therefore it is the continuation of Brown's psychology that matters, not any specific

⁶⁹ Locke, "An Essay Concerning Human Understanding," 44.

⁷⁰ Sydney Shoemaker, *Self-Knowledge and Self-Identity* (Ithaca, NY: Cornell University Press, 1963): 22.

⁷¹ *Ibid.*

⁷² *Ibid.*, 24.

⁷³ *Ibid.*

physical continuity. In a later work, Shoemaker takes this intuition even further, considering the possibility of a “brain-state transfer”:

Imagine a society living in an environment in which an increase in some sort of radiation has made it impossible for a human body to remain healthy for more than a few years. Being highly advanced technologically, the society has developed the following procedure for dealing with this. For each person there is a stock of duplicate bodies, cloned from cells taken from that person and grown by an accelerated process in a radiation-proof vault, where they are then stored. Periodically a person goes into the hospital for a ‘body-change’. This consists in his total brain-state being transferred to the brain of one of his duplicate bodies. At the end of the procedure the original body is incinerated. We are to imagine that in this society going in for a body-change is as routine an occurrence as going to have one’s teeth cleaned is in ours. It is taken for granted by everyone that the procedure is person-preserving.⁷⁴

Derek Parfit likewise considers such events “person-preserving.” Similar to Shoemaker’s brain-state transfer, Parfit makes use of a science-fiction staple, the “Teletransporter,” to demonstrate that our intuitions point us away from a bodily account of personal identity over time.⁷⁵ In his imaginary case, at the press of a button, atoms on Mars can be rearranged so as to precisely “transport” one’s exact functional state, while concurrently disintegrating one’s body on earth. One’s relocated psychology can then continue to consist of the same beliefs, intentions, and desires as it would have otherwise.

If the above thought experiments do elicit the appropriate responses, then it seems a strong case can be made for some sort of psychological criterion of personal identity. Even if brain-state transfers or Teletransportation are hard to fathom, there is the seemingly plausible case of the brain transplant, which bodily and animalist accounts of personal identity must confront. As will be investigated in more detail in Chapter Two, even Eric Olson admits that there is a “transplant intuition”.⁷⁶ Accordingly, philosophers opposed to PCT have offered replies to these types of thought experiments. In the following sections I will introduce an historical objection to the PCT advocate’s transfer arguments, consider some counter-replies from PCT theorists, and ultimately end with

⁷⁴ Shoemaker, “A Materialist’s Account,” 108.

⁷⁵ Parfit, *Reasons and Persons*, 199.

⁷⁶ Olson, *The Human Animal*, 43.

what I shall argue are crushing reformulations of the original objection that can only be avoided by abandoning the Parfitian/Shoemakerian thesis.

1.2.1 Reduplication and Double-Transplants

As I see it, the greatest difficulty for PCT advocates who argue for their view based on our intuitions in the “body-switching” examples above is the problem of fission, or reduplication. Historically, Bernard Williams is credited with first posing the reduplication objection against a memory-based PCT account.⁷⁷ Recall that according to Shoemaker, even without a brain transplant, if Robinson were to somehow awaken with all of Brown’s memories, beliefs, desires and intentions, then we would be tempted to say that Robinson just *is* Brown in this case. To follow Williams’ formulation, let us refer to Robinson as Charles and Brown as an historical figure, Guy Fawkes.⁷⁸ So in this account, Charles awakens with the memories, beliefs and intentions of Guy Fawkes, and we are tempted to view him just as Guy Fawkes himself. But as Williams points out, it is also logically possible for Charles’ brother Robert to awaken at the same time with the exact same set of memories, beliefs and desires formerly held by Guy Fawkes. What should we say in this situation? If they equally share the psychology of Guy Fawkes we do not seem to have a principled reason for saying that either man is Guy Fawkes to the exclusion of the other. But we also cannot say that they are both identical to Guy Fawkes without violating the transitivity of identity. For if each man was identical to Guy Fawkes, then they would have to be identical to each other, which is clearly not the case. Even considering solely psychological features, very soon after the “transfer” each man would contribute separate experiences and memories to that psychology which would be particular to each man himself.

Though Williams’ example is explicitly aimed at Lockean- type memory accounts, it can easily be adapted as an objection to Shoemaker’s thesis and justifications for PCT in general.⁷⁹ Imagine that in Shoemaker’s brain-state transfer society, an

⁷⁷ See his “Personal Identity and Individuation,” 8-10.

⁷⁸ I am told that Guy Fawkes is a rather well-known figure in British history, having been involved in a plot to blow up parliament, but any historical figure with very particular memories will work for this thought experiment.

⁷⁹ As Williams himself suggests in his “Are Persons Bodies?,” in *Problems of the Self* (Cambridge: Cambridge University Press, 1973): 80.

individual, call him Daniel, arrives for his scheduled body-change. A body clone is prepared, and an extra is put on stand-by in case something goes wrong. When initiating the procedure, the operator accidentally presses the transfer button twice and both body doubles are infused with Daniel's brain-state simultaneously. Though Daniel's original body is destroyed as planned, two of his duplicate bodies awaken with the exact memories, beliefs and desires that Daniel had before the procedure. But what has happened to Daniel? Once again it seems that neither duplicate can lay exclusive claim to Daniel's psychology. Nor can they both be Daniel because as soon as they exit the hospital in opposite directions, they are no longer identical with each other. It seems that Daniel has ceased to exist, even though his psychology has survived. What we learn from the reduplication objection, then, is that psychological continuity is not sufficient for the continuation of personal identity, and this may cause us to critically question our intuitions in the original brain-state transfer case.

One may suppose at this point that the reduplication objection might only be a problem for Shoemaker's later formulation of brain-state transfers. But there is reason to believe that a related objection can be made against PCT advocates who argue from Shoemaker's original Brown/Brownson scenario. We begin such an objection by returning to an emphasis of the locus of one's psychology, the brain, for in the original Brown/Brownson case it was the whole brain that was transplanted. Studies have shown that the two cerebral hemispheres of a normal human brain can be separated by severing the band of nerves called the corpus callosum.⁸⁰ As Thomas Nagel notes, this type of procedure was in fact used at one time in order to limit or cease the violent episodes of epileptics.⁸¹ Furthermore, some individuals, patients who suffer severe strokes for example, can survive the loss of functionality in one of the hemispheres.⁸² It is widely held that each cerebral hemisphere engages in separate activities and houses distinct

⁸⁰ See, for example, studies cited in David Wiggins, *Identity and Spatio-Temporal Continuity* (Oxford: Blackwell, 1967): 52.

⁸¹ Thomas Nagel, "Brain Bisection and the Unity of Consciousness," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 399; later sections of this article outline the disunitive repercussions of the condition for a human being's consciousness and behaviour.

⁸² Parfit, *Reasons and Persons*, 254.

psychological functions, but, following Derek Parfit,⁸³ let us suppose that one could be left sufficiently intact for psychological continuity if either hemisphere is retained.

Based on these facts, David Wiggins has famously devised a fission-type counter-argument to Shoemaker's Brown/Brownson example.⁸⁴ Imagine that, before transplant, Brown's brain is split along its corpus callosum and the two hemispheres are removed separately. The right hemisphere is then placed in Robinson's body. This transplant is successful, and though his psychology is notably reduced, there are over time enough of Brown's characteristics shining through Robinson's body for us to refer to Brownson as Brown himself. But let us also consider the possibility that the left hemisphere of Brown's original brain is placed in a third body, call him Smith, and this transplant too is successful. We may as well call this combination Brownsmith. If over roughly the same amount of time, Brownsmith and Brownson both begin to instantiate a recognizable portion of Brown's memories, beliefs and desires, we may be tempted to say that Brown's double transplant is what Parfit refers to as "a double success".⁸⁵

But once again considering the requirement that identity be a transitive relation, this cannot be the case. If Brownsmith is identical to Brown, and Brownson is also identical to Brown, then it would have to follow that Brownsmith is identical to Brownson. But for the reasons given above (namely that immediately upon transplantation, memories particular to each man's situation will contribute to Brown's psychology) they cannot be identical to each other. What the case of fission illustrates is that either psychological continuity must abandon the transitive relation (and therefore abandon numerical identity altogether) or to preserve that notion, PCT must be abandoned itself.

The problem of reduplication and the related problem of fission have been well-documented in the personal identity literature.⁸⁶ Though it is an enduring difficulty that I believe must necessarily be addressed by the PCT theorist, the purpose of its inclusion in

⁸³ *Ibid.*

⁸⁴ David Wiggins, *Identity and Spatio-Temporal Continuity*, 52-56.

⁸⁵ Parfit, *Reasons and Persons*, 256.

⁸⁶ See sources cited above, especially Chapter 12 of *Reasons and Persons*. Harold Noonan also dedicates a chapter to the reduplication objection in his *Personal Identity* and Patrick Lee and Robert George see it as the main problem for psychological continuity views (*Body-Self Dualism*, 26)

this section is not simply to rehash an old problem, but to use its formulations heuristically so as to gather relevant insights from the replies it has elicited. Accordingly, in the following sections I will first investigate possible responses to the fission objection, and secondly, I will demonstrate the inadequacy of these responses. Ultimately, it will be argued that the reduplication/fission objection stands unanswered in its final formulations, thus providing a compelling reason to abandon PCT.

1.2.2 Replies, Responses, and Further Stipulations

Though he is himself a PCT theorist, the most detailed and insightful formulations of the reduplication and fission objections can be found in the work of Derek Parfit. Almost immediately in his discussion of personal identity in *Reasons and Persons*, Parfit introduces a reduplication version of his Teletransporter thought experiment:

Several years pass, during which I am often Teletransported. I am now back in the cubicle, ready for another trip to Mars. But this time, when I press the green button, I do not lose consciousness. There is a whirring sound, then silence. I leave the cubicle, and say to the attendant: ‘It’s not working. What did I do wrong?’

‘It’s working’, he replies, handing me a printed card. This reads: ‘The New Scanner records your blueprint without destroying your brain and body. We hope that you will welcome the opportunities which this technical advance offers.’

The attendant tells me that I am one of the first people to use the New Scanner. He adds that, if I stay an hour, I can use the Intercom to see and talk to myself on Mars.

‘Wait a minute’, I reply, ‘If I’m here I can’t *also* be on Mars’.⁸⁷

Parfit adds a further twist to the story by stipulating that the new procedure leaves his original self with a heart ailment which will lead to his death in a few short days. Because of the overlapping existence of Parfit and his duplicate, it cannot be the case that they are identical. Even though after his impending death there will be a psychologically continuous replacement, Parfit’s numerical identity will not be preserved. Parfit calls this “The Branch-Line Case”.⁸⁸

As mentioned earlier, Parfit uses such thought experiments to argue that numerical identity is not what matters to us. In his branch-line case, when faced with an

⁸⁷ Parfit, *Reasons and Persons*, 199.

⁸⁸ *Ibid.*, 200.

impending heart attack, Parfit argues that one should not view such an event as badly as death. There will be a psychological continuer to complete one's projects, desires and intentions, and *that* is all that matters. Likewise with the double-transplant, one should view the prospect of double-transplantation not as fissioning out of existence, but rather as surviving in a less than numerical sense. In my introduction, I included objections to Parfit's thesis which demonstrated the counter-intuitive consequences of emphasizing only qualitative identity. There is also the further objection by Shoemaker which stresses an individual's concern for the continuance of pleasure and cessation of pain.⁸⁹ If, as should be assumed, it is in an individual's nature to desire pleasure, then it is also of its nature to wish that that pleasure continue. But what is desired is not the continuance of pleasure *simpliciter*, but rather the continuance of pleasure experienced by that same individual. This, Shoemaker argues, just follows from our understanding of human mental states such as pain and pleasure.⁹⁰ For these reasons, abandoning numerical identity does not seem to be a viable reply to the reduplication/fission objection.

One may also respond to the fission objection by appealing to a multiple occupancy view. According to the multiple occupancy thesis, prior to the double transplant, there are actually two persons in Brown's place. Both of the resulting persons Brownsmith and Brownson were already present in the place of Brown and thus no entity was actually split. Brownsmith and Brownson are not required to be identical to each other because there was never a single individual with which they both shared their identity. Harold Noonan suggests that any statements describing Brown, as well as any 'I' statements used by Brown himself, may actually refer ambiguously to either or both of the pre-fission entities.⁹¹ In advancing such a view, both Lewis and Noonan make use of the four-dimensionalist language of "person-stages" rather than enduring persons as such,⁹² but this locutionary exercise fails to avoid the difficulties for the view. As mentioned above, the main problem with the multiple occupancy thesis is that it seems to commit to backward causation. The number of pre-fission individuals coincident with

⁸⁹Shoemaker includes a suggestion of this argument in "A Materialist's Account," page 121, though it seems his actual position with regards to fission cases is closer to Parfit's.

⁹⁰ *Ibid.*

⁹¹ Harold Noonan, *Personal Identity*, 253.

⁹² *Ibid.*; Lewis, "Survival and Identity".

Brown depends on the future event of fission and the determinate number of offshoots such a procedure creates. Additionally, there is the glaring epistemological difficulty of not being in a present position able to determine how many persons are now present in one's physical location. My inability to determine whether or not my usage of the pronoun 'I' refers ambiguously to two individuals seems an unwelcome consequence for holding to PCT. As a result, multiple occupancy too fails as a response to the reduplication/fission objection.

A third reply is to argue for psychological continuity with a "no-branching clause". This strategy, most notably defended by Sydney Shoemaker,⁹³ says that one is justified in considering one's numerical identity preserved by a psychological criterion *as long as one has verified that no fissioning or reduplication has occurred*. An act of identification for this view, then, is based on inductive reasoning. In considering a memory criterion, Shoemaker argues that, "if a person quasi_c-remembers an action from the inside then, *in the absence of evidence to the contrary*, he is entitled to regard it as more likely that the action was done by him than that it was done by any other person."⁹⁴ Basing the identification of one's self over time on extrinsic empirical information has difficulties that will be explored in the next section, but at this point let us at least say that it is an odd consequence of the view that whether or not I persist depends on something other than just the relations I have to an individual in the past.

A related strategy for dealing with the double transplant and reduplication cases is the "closest-continuer view," most ably defended by Robert Nozick.⁹⁵ According to Nozick, "[t]he closest continuer view holds that y at t₂ is the same person as x at t₁ only if, first, y's properties at t₂ stem from, grow out of, are causally dependent on x's properties at t₁ and, second there is no other z at t₂ that stands in a closer (or as close) relationship to x at t₁ than y at t₂ does."⁹⁶ In other words, what allows one to assert that an individual has persisted through a certain transplant case is the evidentially-based conclusion that there is a candidate for being that same person that more closely approximates the original

⁹³ Shoemaker, "Persons and Their Pasts," 279.; "A Materialist's Account," 115.

⁹⁴ Shoemaker, "Persons and Their Pasts," 280, emphasis added.

⁹⁵ Robert Nozick, *Philosophical Explanations* (Cambridge, MA: Harvard University Press, 1981).

⁹⁶ *Ibid.*, 37.

person than any other candidate. This close approximation could mean psychological continuity, but it could also mean bodily continuity or some mixed account. For example, the original Brown/Brownson scenario is a case in which Brown survives and is transplanted because there are no better or other equally good candidates for being the same Brown. But if the original Brown were to have only one hemisphere removed, while the other remained in tact and functioning within Brown's body, and bodily continuity had any weight whatsoever, the transplanted half functioning in Robinson's body could not be the original Brown because the best candidate still exists as Brown's original functioning body.

Still, the potency of the fission objection is that such procedures could produce two equal candidates for being the original person. It is a function of the closest continuer view that any cases of actually existing equal candidates eliminates both from candidacy,⁹⁷ but Nozick leaves room for its application to certain overlapping scenarios. For example, consider a case of double transplant in which Brown, on the verge of death, retains his left cerebral hemisphere, but allows his right cerebral hemisphere to be transplanted to the younger, healthier Robinson body. Even though the hemisphere in Robinson's body will be sure to greatly outlive its counterpart, it appears that we have a case in which Brown's identity dies with his body. The only thing keeping Robinson from being Brown, let us say, is the three hours in which the left hemisphere was retained in Brown's body.

Nozick suggests that it would be "unfair for a person to be doomed by an echo of his former self," and he seems to want to leave room for a closest continuer account based on the post-transplant duration of competing candidates.⁹⁸ Those candidates that only exist for a short amount of time would not be considered equal to those whose duration appears more certain. A closest continuer view might then argue that Brown's identity "jumps" to the hemisphere in the younger Robinson body once the dying Brown succumbs to his illness, or that the promise of the right hemisphere's survival beyond the death of the left hemisphere allows us to say that Brown's identity is transferred to Robinson's body at the very moment of the double transplant. While he does not

⁹⁷ *Ibid.*, 62

⁹⁸ *Ibid.*, 43.

explicitly advocate this duration-criterion himself, Nozick argues that equal candidates are possible, and in that event he turns to the Parfitian thesis in which a double transplant should not be viewed as harshly as death.

Disregarding his Parfitian retreat, Nozick's closest-continuer account is similar to Shoemaker's no-branching clause in that an assertion of identity over time depends necessarily on facts external to the candidate's relation to the original person. In Shoemaker's case, one must simply provide evidence that there are no other candidates, and for Nozick's account, one must first determine the degree of similarity between other candidates and the original person before one can determine one's own eligibility. This extrinsic facts stipulation as a reply to the fission and reduplication objections will be considered largely as one thesis in the following section and the absurdity of its entailments will be demonstrated.

1.2.3 Identity and Extrinsic Facts

As a restriction not only for personal identity, but identity in general, David Wiggins insists that the conditions of an entity's persistence over time are such that the fact of persistence must rely solely on the relation between a later instance of that entity (b) and its past self (a). Relations that other objects (c, etc) may have to a past stage of that entity are irrelevant. Wiggins calls this "the *only a and b* condition".⁹⁹ The motivation for such a rule becomes clear when we consider a famous philosophical problem, "The Ship of Theseus".¹⁰⁰ In this thought experiment, we are to imagine that Theseus' weathered ship is worn and needs repairs. Over a period of a year, each of the weathered planks of the ship are gradually removed and replaced by newer, stronger pieces, which in turn are arranged in the exact same configuration as the pieces they have replaced. Following Hobbes' formulation,¹⁰¹ let us also assume that the old weathered pieces of the ship are gathered together by some collector and he arranges those pieces in the exact same configuration they were in before.

⁹⁹ David Wiggins, *Sameness and Substance* (Cambridge, MA: Harvard University Press, 1980): 96; also, more recently, *Sameness and Substance Renewed* (Cambridge, UK: Cambridge University Press, 2001): 96.

¹⁰⁰ See *Ibid.*, 92, for Wiggins' relevant usage of the puzzle, as well as his tracing of it through Hobbes and Plato.

¹⁰¹ Thomas Hobbes, "Of Identity and Difference," in Thomas Hobbes, Richard S. Peters (ed.), *Body, Man, and Citizen* (New York: Collier Books, 1962): 128.

Based on these facts, we can examine three possible scenarios. In the first scenario the original ship has its parts gradually replaced and the old parts are discarded. In the second, the removed parts are re-configured into a qualitatively identical ship and we thus have two candidates for the ship of Theseus. In the third scenario, the parts of the old ship are removed and reconstructed into an exactly similar ship, but the old ship never replaces these parts and ceases to exist with its deconstruction. The reconstructed ship would be the only remaining candidate.

In order to formulate Wiggins' objection, it is not necessary to decide on the difficult question of which ship is the ship of Theseus in the second scenario, but let us for the sake of argument say that the old ship which has undergone gradual part replacement is the best candidate for the original ship.¹⁰² A closest-continuer theory applied to the ship of Theseus would say that in the first scenario a lack of competition makes the ship with gradual part replacement identical to the ship prior to that shuffling of parts. Likewise, in the second scenario, assuming that it is still the best candidate, the ship with gradual replacement is identical to the old ship. In the third scenario, however, the ship with gradual replacement does not exist, so the best candidate for the old ship is the reconstructed ship with old parts. As a result, in the third scenario the reconstructed ship is a good enough candidate to hold the identity of the original ship.

In the second scenario the reconstructed ship *would* be a good enough candidate if it were not for the existence of the ship with gradual part replacement. We thus have an example in which the relation between a later entity and its past self is thwarted by the relation that another entity has to that same past self. As Wiggins states, based on what we know about the third scenario, in scenario two

we could walk up to the antiquarian's relic [the reconstructed ship], seen as a candidate to be Theseus' ship, and say that, but for the existence of its rival, i.e. the distinct coincidence-candidate that is the constantly maintained working ship plying once yearly to Delos [the ship with gradual part replacement], it would have veritably coincided as a ship with Theseus' original ship.¹⁰³

¹⁰² As will become evident, the objection still works if we say that the reconstructed ship is identical to the original.

¹⁰³ Wiggins, *Sameness and Substance*, 95.

“But,” Wiggins continues, “the idea that in *that* case it would have been Theseus’ very ship seems to be absurd.”¹⁰⁴

Harold Noonan remarks that Wiggin’s objection is not quite accurate, but that it can be adapted slightly to maintain its force.¹⁰⁵ It is not the case that were it not for the ship with gradual part replacement, then the reconstructed ship would have been the ship of Theseus. Rather, the reconstructed ship qua lesser candidate *would not have existed at all*, and in its place would be the original ship qua reconstructed ship. And the fact that one thing can owe its very existence to the existence of a competitor is surely absurd, especially without any kind of a spatially-based causal interaction between the two. As Katherine Hawley puts it, closest-continuer views must necessarily admit to “*noncausal counterfactual correlations between distinct individuals.*”¹⁰⁶ The existence of a rival ship can change the very identity of the ship next to it without it exerting any kind of causal influence. Additionally, Noonan indicates, the closest-continuer theory would have to say that two exactly similar processes can manufacture two different things. In scenarios two and three, the project of reconstructing the ship can be done using the exact same materials, the exact same workers, in the exact same location and the exact same time, and they would still manufacture different ships in the two cases.

Applying Wiggins’, Noonan’s, and Hawley’s observations to an explicit case of personal identity, recall the above case in which Brown’s left hemisphere is left intact while the right hemisphere is placed in Robinson’s body. Were it not for Brown’s retention of the left hemisphere, the right hemisphere functioning in Robinson’s body would appear to be Brown. But for the closest-continuer view, in this case it cannot be Brown, so it must still be Robinson or perhaps a third person, Rogers. According to Noonan’s formulation of the objection, if it were not for the functional left cerebral hemisphere, then Rogers would not even exist. In his place would just be Brown. Rogers could be said then to owe Brown a gracious thank you for retaining that other

¹⁰⁴ *Ibid.*

¹⁰⁵ Harold Noonan, *Personal Identity*, 159

¹⁰⁶ Katherine Hawley, “Fission, Fusion, and Intrinsic Facts,” *Philosophy and Phenomenological Research*, Vol. 71, No. 3 (2005): 22, emphasis added.

hemisphere, even for a few weeks. For if Brown's left hemisphere would have failed during the operation, then Rogers would never have come into existence.

In addition to its seeming metaphysical counter-intuitiveness, there are further epistemic problems in advocating a closest-continuer view or a no-branching clause. Both Nozick and Shoemaker stipulate that psychological continuity must include a causal requirement.¹⁰⁷ For Nozick specifically, this means that psychological duplicates created through independent, random processes do not count as genuine candidates.¹⁰⁸ Despite this requirement, there are plausible scenarios involving unorthodox, but causal, relations nonetheless, in which it would be next to impossible to determine one's eligibility or even if a branching has occurred.

If we grant that psychological continuity is preserved through brain-state transfers, and it is allowed that the data transfer be mediated by computers, we can imagine a modern case in which the data was made available to millions of such machines through internet communication. If millions of instantiation-capable computers received my "psychological data" mid-transfer, in order to confirm a no-branching clause I would have to verify, post-transfer, that none of the computers had successfully transferred my psychology to another body other than my own successful local trial. If even one was successful, I would not be identical to the person whose memories, beliefs, desires and intentions I instantiate. Likewise, for the closest continuer view, I would have to investigate every offshoot (if there were any) to determine the degree of closeness it has to the original "me". If we do not accept Nozick's suggestion that longevity be included in the criteria for candidacy, it is assuredly plausible that during one's search for other successful transfers, all of the transfer recipients besides myself may have already perished. In this case I would have to determine whether these duplicates were ever during their existence psychologically equal to me. This information may quite possibly be irretrievable. Notably, epistemic problems arise for Nozick even if he accepts the longevity requirement. For if two psychologically equivalent candidates exist presently, but unbeknownst to either, one will die before the other, no one would presently be in the

¹⁰⁷ Nozick, *Philosophical Explanations*, 37; See Shoemaker citations above.

¹⁰⁸ Nozick, *Philosophical Explanations*, 41.

position to determine which candidate is at this moment identical to the pre-fission or pre-reduplication individual.

Admittedly, cerebrum transplants are less epistemically problematic than brain-state transfers, but similar cases are possible. Imagine that during a double transplant one of your cerebral hemispheres is carefully snatched by a thief and preserved in a way that makes the organ viable for at least a few hours. Let us also say that this thief carrying your left hemisphere absconds to a faraway country and his intentions are unknown. The person who awakens with the right hemisphere will think he is identical to the pre-fission individual, but he would not be justified in that claim until the thief is hunted down and the fate (even the past fate, as it might have been initially successful but failed shortly thereafter) of the missing hemisphere is determined. Based on the above cases, it is apparent that stipulating a no-branching or closest-continuer clause would so complicate the process of determining identity that even everyday identifications would seem plausibly open to false ascription. This is due to their reliance on extrinsic facts for identification, and if such cases appear at all absurd (which it seems they do), we may have good reason to follow Wiggins' intrinsic identity requirement.

1.2.4 Burying PCT with the Hope of Resurrection

Psychological Continuity Theory (PCT) is perhaps the most popular account of personal identity, and in response to its objections, it has spawned numerous variations. In this chapter I have included what I consider to be the main historical formulations of PCT in order to argue for its general implausibility as a whole. I admit that the objections featured above more ably debunk some formulations than others. For example, the entire first half of this chapter was dedicated to three specific objections to the most common psychological criterion, memory. I have shown that intransitivity, circularity and backward causation are grave difficulties for memory theorists, and that they can only be avoided by espousing some counter-intuitive, non-identity preserving relation or surrendering to a more physically-based account. How other theories of personal identity fare against some of these problems will be investigated in later chapters.

In the second half of my first chapter I introduced possible arguments in support of some form of PCT, which may be used even if appeals to memory as the sole criterion fail. In challenging the PCT theorist's intuitions I included the well-known problems of

fission and reduplication, which, it should be noted, must necessarily be addressed by any account of personal identity, though it is a particularly strong objection to PCT. It seems that the only possible way to save psychological continuity in light of the problem of fission is to advocate some form of a no-branching or closest-continuer clause. But if that response requires an appeal to extrinsic facts for identification, then there are a whole host of difficulties and absurdities that follow. In that regard I hope to have critically challenged the appeal to brain-state transfers as a plausible case of personal identity over time.

I have, however, featured physical brain transplant thought experiments for a more positive reason. As will be seen in Chapter two, some animalists are willing to argue that a *whole* brain transplant, including brain stem, would be the transplantation of the individual. A distinction must then be made between cerebrum and whole brain transplants. In sections **3.3 - 3.3.2** I will further investigate the possibility of personal survival across cerebrum transplants. Based on the criticisms outlined in this chapter, such a view would have to maintain a notion of the intrinsicness of identity (or at least be able to avoid the problems of extrinsic identity), and the theory of hylomorphism may have the resources to do so. In concluding this chapter, then, I hope to have elucidated the many issues that a PCT advocate must face in order to be consistent, which should be enough to encourage the reader to look elsewhere for the possibility of more capable alternatives.

CHAPTER TWO:
BIOLOGICAL CONTINUITY THEORY
2.1 Animals, Bodies and Too Many Thinkers

The biological account of personal identity, or animalism, makes two important claims.¹⁰⁹ The first is that we, you and I, are most fundamentally biological organisms, members of the species *Homo Sapiens*. This is not to say that we are constituted by animals, uniquely related to animals, or that biological continuity only traces some form of Parfitian concern. Instead, we are *numerically identical* to a human organism such that at any time the organism persists, that is where we are to be found. The second animalist claim is that “psychological continuity is neither necessary nor sufficient for a human animal to persist through time.”¹¹⁰ As Eric Olson explains, psychological continuity is not necessary because an animal can survive in a persistent vegetative state even though the capacity for psychological features has been irretrievably lost.¹¹¹ As long as the organism maintains homeostasis and continues its metabolic activities, psychology is irrelevant.

The insufficiency of the psychological criterion for biological persistence can be demonstrated by considering the cerebrum transplant cases mentioned above.¹¹² Recall that if my cerebrum, which houses my higher mental functions, is removed from my cranium and placed in the cranium of another human animal, the displacement of my psychology seems to suggest that I have been moved during the procedure. But let us also assume that my brain stem, which coordinates the more basic biological activities, is not transported but left functioning in my body. My cerebrumless body would still, without interruption, continue its life processes. According to the animalist, because no organism has been moved during the procedure in the cerebrum transplant thought experiment, my identity is preserved in the cerebrumless animal rather than the relocated cerebrum. The transplant intuition is therefore false and misleading.¹¹³

¹⁰⁹ Eric Olson, *The Human Animal*, 17; Paul Snowden, “Personal Identity and Brain Transplants,” in David Cockburn, *Human Beings* (Cambridge: Cambridge University Press, 1991): 111.

¹¹⁰ Olson, *The Human Animal*, 17.

¹¹¹ *Ibid.*

¹¹² See Sections 1.2 – 1.2.3 above.

¹¹³ Animalists are split over whether or not a *complete* brain transplant would change the result of the thought experiment. Olson (*The Human Animal*, 45) and van Inwagen (*Material Beings*, 172-181) argue that during a whole brain transplant the organism is pared down to just the functioning brain and thus

Crucial to the animalist position is an account of biological continuity, and the traditional feature utilized by animalists is the notion of an organism's "life." Interestingly, John Locke himself has one of the best historical analyses of the persistence of organisms. He says in considering how an oak tree differs from inanimate objects that "the one is only the cohesion of particles of matter any how united, the other such a disposition of them as constitutes the parts of an oak; and such an organization of those parts as is fit to receive and distribute nourishment."¹¹⁴ And furthermore the oak

continues to be the same plant as long as it partakes of the same life, though that life be communicated to new particles of matter vitally united to the living plant, in a like continued organization conformable to that sort of plants.¹¹⁵

More recently, Peter van Inwagen bases the continuity of an organism on a continuing homeodynamic event such that

If the activity of the *xs* [constituent particles] at t_1 constitutes or results from a life, and the activity of the *ys* [other candidates for constituency] at t_2 constitutes or results from a life, then the organism the *xs* compose at t_1 is the organism the *ys* compose at t_2 if and only if the life that the activity of the *xs* at t_1 constitutes or results from is the life that the activity of the *ys* at t_2 constitutes or results from.¹¹⁶

Underlying van Inwagen's formula is a requirement of spatio-temporal continuity, but importantly this requirement is not always sufficient for a continued life. To see why, in the next section I will offer an analysis of the important distinctions between the more historically defended bodily criterion and the more recently popular biological approach. Upon establishing a firmer understanding of the account, section 2.1.2 will be dedicated to Eric Olson's famous argument for animalism. Throughout section 2.2 I will consider problems for the biological approach which will ultimately lead into my own positive account in chapter three.

moved with its transplant. Hershenov, on the other hand, points to the work of neuroscientist Dr. Alan Shewmon to suggest that the animal may not need the brain for biological integrity, and thus the whole brain transplant should be treated just as the cerebrum transplant (Hershenov, "A Hylomorphic Account of Thought Experiments Concerning Personal Identity," 484-485; Alan Shewmon, "The Brain and Somatic Integration: Insights into the Standard Biological Rationale for Equating 'Brain Death' with Death," *Journal of Medicine and Philosophy*, Vol. 26 (2001): 457-78.)

¹¹⁴ Locke, "An Essay Concerning Human Understanding," in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 35-36.

¹¹⁵ *Ibid.*, 36.

¹¹⁶ Van Inwagen, *Material Beings*, 149.

2.1.1 Bodily Continuity and the Biological Account of Personal Identity

Traditionally, the main competitor to the psychological continuity view of personal identity has been the bodily account or the bodily criterion. Bodily criterialists, few though they are¹¹⁷, often insist that psychological continuity is not sufficient for the preservation of one's identity over time, and argue thenceforth that there need be a spatio-temporal requirement.¹¹⁸ In making such a suggestion, it is assumed that there exists some material entity, some hunk of matter to which we may be identical. Advocates of a bodily criterion, such as Bernard Williams, devote most of their work to demonstrating the inadequacy of other views, and as a result, the problem of precisely defining their own account remains largely untouched. Bodily continuity theorists seem to rely on a presumed common-sense understanding of the term 'human body'. In this section I will attempt (much as Olson has¹¹⁹) to outline possible formulations of a bodily criterion, and argue that in four important ways the biological or animalist account is distinct from (and in many ways an improvement upon) the more traditional bodily criterion.

It is a widely accepted biological fact that organisms regularly shuffle their parts through normal metabolic processes.¹²⁰ An animal (or plant, insect, etc.) takes in nutrients from the outside, retains certain particles such that some of them become a part of the organism itself, and expels unused or formerly used particles which it no longer needs. It is in fact necessary for an organism to do this in order to survive. It is also quite possible, based on a consistent metabolic shuffling, for an organism to have none of the same microscopic parts at two times in its history.¹²¹ Some ontological accounts of material objects might argue that no material thing can survive the complete replacement of all its

¹¹⁷ Relevant discussions can be found in the work of Bernard Williams (see his *Problems of the Self*) and Judith Jarvis Thomson ("People and Their Bodies," in Jonathan Dancy, *Reading Parfit* (Oxford:Blackwell, 1997): 202-229).

¹¹⁸ My discussion of the circularity problem for memory accounts above is one such example of drawing out the need for a spatio-temporal or continuous physical realization requirement. Bernard Williams' reduplication objection (also mentioned above) is another.

¹¹⁹ Eric Olson, "Is There a Bodily Account of Personal Identity Over Time?" in Fraser MacBride, *Identity and Modality* (Oxford: Oxford University Press, 2006): 242-259.

¹²⁰ Eric Olson lists metabolism as the first requirement of biological continuity in his *The Human Animal*, 127.

¹²¹ David Oderberg has suggested that, as a matter of fact, this may not be the case for human beings ("Hylemorphic Dualism," 80), but he certainly does not mean to suggest that it would be impossible.

parts. For if the two stages of an entity share absolutely no parts, in what sense are they the same physical object? Mereological essentialists will take this suggestion a step further and argue that no material thing can survive the loss or exchange of *any* of its parts.¹²² The departure of one single particle would introduce a new and numerically distinct object. The first point of differentiation, then, between biological and strict bodily accounts could result from a bodily criterialist espousing either mereological essentialism or the thesis that a physical object cannot survive complete part replacement. If one's notion of bodily continuity requires either of these restrictions then it is incompatible with animalism.

In contrast to the ultra-conservativism of mereological essentialism, a bodily criterialist may favor a more liberal understanding of the phrase 'human body'. Let us assume that a body can survive complete part replacement as long as it is gradual. Using the term 'body' in the loose sense, it may also be possible to consider an inorganic human figure a body. From these two premises, some bodily continuity theorists may conclude that a body made up of organic constituents (one's current body) could be numerically identical to a completely inorganic version of that body at a later time, as long as the organic parts were replaced gradually and there is consistent spatio-temporal continuity.¹²³ After all, the bodies of some real individuals seem to include things such as pacemakers and artificial limbs. The inorganic part replacement thought experiment just asks us to consider an expansion of this real occurrence so as to include human bodies entirely made up of artificial parts. Contrary to this formulation of the bodily criterion, the animalist is committed to the idea that each part of an organism must be caught up in the event of its biological life. An inorganic part such as an artificial limb is not subsumed by the organism's life processes due most evidently to its lack of participation in metabolic activities. As Olson states, "[i]f you cut off an animal's limb and replace it with an inorganic prosthesis, the animal just gets smaller and has something inorganic

¹²² For discussions of mereological essentialism see Roderick Chisholm, "Parts as Essential to their Wholes," *The Review of Metaphysics*, Vol. 26, No. 4 (June, 1973): 581-603; Alvin Plantinga, "On Mereological Essentialism," *The Review of Metaphysics*, Vol. 28, No. 3 (March, 1975): 468-476. For the theory's relevance for personal ontology and animalism see Peter van Inwagen, *Material Beings*, 6, 54; Eric Olson, *What are We?*, 30.

¹²³ Though not bodily continuity theorists, the "bionic" part replacement thought experiment is considered by Peter Unger in his *Identity, Consciousness and Value*, 122 and Lynn Rudder Baker in her *Persons and Bodies*, 106.

attached to it.”¹²⁴ Complete inorganic part replacement would therefore destroy the animal, and thus end one’s existence. Olson admits that it might be possible to replace microscopic pieces of a human animal with inorganic parts and have them still be part of the animal, but each replacement would have to be small enough to be caught up in the larger organism’s life processes.¹²⁵ Insofar as a bodily account allows for large scale inorganic part replacement, that much is it opposed to a biological account.

A third distinction between a bodily account and animalism is the difference in categorization of the hunk of matter which is left after an animal’s life processes cease. When the event of an organism’s life ceases, in all but the most violent deaths, there is a material entity that seems to persist – the body. Where once there was the body of a living being, this apparently same body is now dead. If there is such an entity (some material body) that persists through the cessation of the animal’s biological activities,¹²⁶ then according to the animalist account of personal identity, I cannot be identical to that thing, for I am essentially an organism, which is defined as an entity preserved by the continuation of its life. If the event of the life ceases to exist, then so do I. Some who argue for a bodily account of identity suppose that a human being can survive its own death as a corpse.¹²⁷ This may be due to its physical continuity with our living body. But as Olson points out (following Wiggins), spatio-temporal continuity is only relevant for identity when considered under a substance sortal.¹²⁸ There has to be a sense in which two spatio-temporally connected things are of the same kind. For animalists there is no substance sortal term shared by the animal and the corpse. They are of radically different kinds. I will discuss in more detail the animalist account of the dead body and the possibility of a “corpse problem” below, but for the moment it is enough to emphasize

¹²⁴ Eric Olson, “An Argument for Animalism,” in Raymond Martin and John Barresi, *Personal Identity* (Malde, MA: Blackwell, 2003): 320.

¹²⁵ Olson, *The Human Animal*, 135.

¹²⁶ A claim that Olson and van Inwagen deny. See the section on the corpse problem below (2.2.1).

¹²⁷ Michael Ayers appears to make this claim when he says, “the living thing can straightforwardly outlast its life.” (Michael Ayers, *Locke: The Arguments of the Philosophers* (London: Routledge, 1990): 224.) Bernard Williams makes a similar claim on page 74 of his “Are Persons Bodies?” in *Problems of the Self*.

¹²⁸ Olson, *The Human Animal*, 27-28. I will have more to say on the sortal terminology in section 3.3 below.

that if a bodily account says that the body persists through death, then this is another important difference between the two accounts.

The fourth difference between bodily and biological accounts is the bodily account's reliance on a principle of identity for masses and hunks of matter. Say, for example, that your arm becomes completely detached from the rest of you. Has the same body persisted through the excision? If not, then we have an immediate distinction between the two accounts, this one similar to that mentioned in the first. If the body does survive, we might extend the example to include a loss of both arms and both legs, and then proceed to ask the same question. Inevitably the inquiry arises, at what point does subtracting parts no longer result in the same body? Is it after half of the parts are removed? The arbitrariness of any supposed solution to this problem becomes most clear in considering Derek Parfit's famous physical spectrum example.¹²⁹ Imagine that gradually over time each of your parts are replaced by new ones.¹³⁰ When only one percent of your parts are replaced, it seems obvious to say that it is still the same body. On the other end of the spectrum, it may seem just as obvious that a complete replacement of one hundred percent of your parts results in a completely different body. Parfit's question, like ours, is: at what point in the spectrum did a numerically distinct body come to be? If at fifty-one percent exchange there is a new body in place, then it would follow that from fifty to fifty-one percent, the exchange of one single particle is responsible for the onset of an entirely different material object, though nothing else may appear to change. And if the bodily continuity theorist holds that we are numerically identical to our bodies, then one single particle has ended our existence and caused another human being to be.

The animalist of course has a response to this problem. He need not rely on stipulating a certain amount of physical continuity. The questions the animalist would ask are: Is the human being still alive? Is it still the same life? If the answer to both of these questions is 'yes,' then the animalist has his response to Parfit's physical spectrum. There may be a certain precise point in which taking a single particle destroys the animal, but this would have to result in the cessation of its biological life, an event perhaps

¹²⁹ Derek Parfit, *Reasons and Persons*, 234-236.

¹³⁰ For this example we can stipulate that the parts are organic.

significant enough to warrant the suggestion of substantial change. The portrayal of this thought experiment as a problem for the bodily continuity theorist not faced by the animalist demonstrates the final important distinction between the two views. By considering these four issues, I have given animalism a fuller exposition so as to avoid initial concerns and confusions. It is with this greater understanding of the view that I now turn to arguments which aim to indicate its superiority over its psychological rivals.

2.1.2 The Thinking Animal Argument

Eric Olson's case for animalism depends almost exclusively on what he has called "The Thinking-Animal Argument." His defense of the argument and the discussion it has elicited have substantially changed the personal identity debate, and while it is not essential for the animalist position,¹³¹ it may very well be the best argument against alternative accounts. I include it here as an additional objection to psychological continuity, one that points explicitly to a biological conclusion.

The premises for the argument (as taken from Olson's "An Argument for Animalism") are as follows:

- (1) There is a human animal sitting in your chair.
- (2) The human animal sitting in your chair is thinking.
- (3) You are the thinking being sitting in your chair. The one and only thinking being sitting in your chair is none other than you.¹³²

The conclusion that Olson reaches from these premises, and that which follows logically, is that you are that same animal. His argument is "deceptively simple",¹³³ and taken at face value there does not seem to be much to it. But the real strength of Olson's account is his elaboration and defense of each of the premises. In investigating his argument, then, I will explore how one could deny each of the premises and consider Olson's replies.

The first premise could be rejected by denying that animals exist at all. For if we are willing to grant that such things as animals do exist, then it would seem to be apparent that the breathing, perspiring, metabolizing thing in your chair is an animal. If one were an idealist, in that one believed that no material things at all existed, then premise one

¹³¹ Van Inwagen's account, for instance, does not rely on it.

¹³² Eric Olson, "An Argument for Animalism," 325.

¹³³ *Ibid.*, 326.

would be false. But Olson is unwilling to grant plausibility to this suggestion and I will follow him in that regard.¹³⁴ Perhaps more convincingly one could hold a mereological essentialist stance, and based on the metabolic shuffling discussed above, this would make impossible the continuation of any single biological entity. But importantly, a mereological essentialist would also have to deny that we could be anything like what the psychological continuity theorist wants to suggest we are.¹³⁵ For many PCT advocates would argue that we are bundles of psychological features, such as memories, beliefs or intentions, but none would (I assume) suggest that we are a stagnant bundle which never changes any of its parts. Therefore, the first premise seems to survive scrutiny.

The second premise could be rejected by denying that, even though animals exist, and the material thing presently in your chair is an animal, it is not thinking because animals do not or cannot think. Olson's reply to this objection is to push the intuition into the implicit dualism which motivates it. Consider the fact that the normal human animal has an elaborate functioning brain which it uses for the storage and computation of information. If any organism could be capable of thought, a human being would seem to be the best candidate. Inasmuch as human beings are the best-equipped (among animals, and perhaps even among all material objects), denying the capacity for thought to human animals seems to prohibit any organism from having that capacity. Furthermore, if no organism can think, it seems difficult to suppose that any material thing at all could think. The only place left for thought in one's ontology would be in an immaterial subject. In pushing this line, Olson seems to follow Daniel Dennett's suggestion that "dualism is not a serious view to contend with, but rather a cliff over which to push one's opponents."¹³⁶ And while this is not a very sound assumption,¹³⁷ most psychological continuity theorists seem to want to avoid dualism if at all possible.¹³⁸

¹³⁴ Olson, *What Are We?*, 30

¹³⁵ *Ibid.*, 31

¹³⁶ Daniel Dennett, *Brainstorms: Philosophical Essays on Mind and Psychology* (Cambridge: MIT Press, 1978): 252.

¹³⁷ As will become clear in section 2.2.2.2 below and later in chapter three, dualism (or at least some types of dualism) are more defensible than philosophers such as Dennett are willing to admit. Notably, Olson himself considers Zimmerman's arguments for dualism a formidable challenge to his animalism (*What Are We?*, 153-157)

¹³⁸ It is worth noting that Sydney Shoemaker's contribution to his and Richard Swinburne's *Personal Identity* is entitled "A Materialist's Account".

Shoemaker's response to the second premise is to say that animals do not think because, based on a functionalist theory of mind, they have the wrong persistence conditions.¹³⁹ According to Shoemaker's formulation of functionalism, "it is of the essence of a mental state to be caused in certain ways, and to produce in conjunction with other mental states, certain effects (behaviour or other mental states)."¹⁴⁰ In other words, a thought that it will rain is defined by its tendency to bring about either further thoughts (such as regret at the inevitable cancellation of an outdoor event) or actions (such as grabbing an umbrella). Shoemaker continues:

But of course, it is in conjunction with other mental states *of the same person* that a mental state produces the effect it does; and its immediate effects, those the having of which is definitive of its being the mental state it is, will be states (or behaviour) on the part of the *very same person* who had the mental state in question.¹⁴¹

Shoemaker's suggestion is that a mental state had by an individual can only produce the appropriate effects (by which it is defined) in that very same individual. So if the thought that it will rain produces the effect that I pick up an umbrella, then it is the same individual who had the thought and performed the action. Recalling Shoemaker's famous brain-state transfer thought experiment,¹⁴² the fact that my informed body duplicate's actions are caused by my previous mental states leads to the conclusion that he and I are the same individual. But between us there is no biological continuity. (It is not necessary that there be any physical continuity at all). Because I am a person rather than an animal, because I am the thinker of my thoughts, and because the only bearer of a mental state can be that same individual who experiences its effects, an animal, according to Shoemaker, is not a proper bearer of mental states. Therefore, he concludes, the animal cannot think.

The weakness in Shoemaker's response is, I think, in the claim that mental states can only have causal relevance to the same individual who instantiates them. The case of

¹³⁹ As discussed in Olson, *What Are We?*, 32-35. Shoemaker's account can be found in his "A Materialist's Approach" and "Self, Body, and Coincidence," *Proceedings of the Aristotelian Society*, Vol. 73 (1999): 287-306.

¹⁴⁰ Shoemaker, "A Materialist's Approach," 93.

¹⁴¹ *Ibid.*

¹⁴² Section 1.2 above.

fission certainly undermines this claim, and that is precisely why Shoemaker resorts to his ad hoc no-branching clause. We also considered a counterexample to his claim when discussing a patient's memory of an event being causally relevant to a hypnotist's actions.¹⁴³ As was demonstrated, the only way to respond to that objection was to talk in a circle. Perhaps Olson puts the problem best when he asks:

Why must the characteristic causes and effects of a thing's mental states always be states of that thing and no other? Why should anyone who isn't already a psychological-continuity theorist accept that? For someone to be hungry is at least in part for him to be in a state typically caused by someone's having low blood sugar, and apt to combine with someone's belief that there is food before him to cause someone to eat. Why must it be the same being all four times? Why couldn't my being hungry cause someone else to eat in the way that it ordinarily causes me to?¹⁴⁴

Shoemaker just assumes this premise, offering no real support that does not also require a general defense of PCT. Similar to the conclusion reached by the circularity objection, we find here that Shoemaker's notion of a causal requirement leaves his account lacking. And as a result, the only way to really deny premise two of the thinking-animal argument is to embrace substance dualism, which may or may not be a view worth taking seriously.

The third premise of Olson's Thinking-Animal argument can be challenged by granting that there are actually two things thinking all of your thoughts. As mentioned above, both Lewis and Noonan take this route.¹⁴⁵ In responding to their positions, Olson lists three main problems associated with "cohabitation" or "multiple-occupancy" views.¹⁴⁶ The first is the overcrowding problem. This means that the cohabitation view must admit that in the place of every human being, where we normally think there is only one individual, there are actually two entities thinking each thought (usually a person or psychological continuer and an animal). Anticipating a cohabitation reply long before Olson's formulation of the argument, Chisholm describes the problem: "Isn't this multiplying thinkers beyond necessity? If I want my dinner, does it follow that two of us want my dinner? Or does the thinking substance want its dinner and not mine?"¹⁴⁷

¹⁴³ See my section on the circularity objection above (1.1.2).

¹⁴⁴ Eric Olson, "What does Functionalism Tell Us about Personal Identity?" *Nous*, Vol. 36 (2002): 682-698.

¹⁴⁵ See sections 1.2.2 and 2.1.2 above.

¹⁴⁶ Olson, *What Are We?*, 35-37.

¹⁴⁷ Roderick Chisholm, *Person and Object*, 108.

The second problem for the cohabitation view is epistemic. If there are in fact two thinkers in your chair you ought to wonder which one of them you are. It may seem obvious that you are the person and not the animal. But if each thought that you might have is equally shared by the other thinker, then any reason you would have for believing that you are the person is also had by the animal. One of the co-located thinkers is incorrect in believing that he or she is the person, and it seems you can never know for sure that it is not you. The third problem Olson calls the problem of dual personhood. Defining the term ‘person’ is, as described above, outside of the scope of the personal ontology debate, but if we very tentatively consider a person anything that can think about itself as itself (roughly, Locke’s definition) then the problem becomes clear enough. The psychological continuer in your chair certainly does this and that is why it is often referred to as the person. But the animal has all of the same thoughts that the person does according to the cohabitation view. It seems to reflect on its actions just as the person might. So why is it not too a person? If the animal is a person, then the PCT theorist would have to admit that some persons have biological persistence conditions, and this allowance would seem to undermine the whole project.¹⁴⁸

Additionally, David Hershenov points to a fourth problem for the collocationist, which he calls the “false self-ascription problem.”¹⁴⁹ If you, qua person, believe that you will be moved with your transplanted cerebrum then your belief will be true. And in so believing this statement the animal in your chair believes it as well. But this belief is clearly false for the animal. Similar to the epistemic problem, if there is at least one thinker in your chair who believes falsely that he or she will be transported in a cerebrum transplant scenario, and both of you have the exact same thoughts, the veridicality of the transplant intuition is in serious doubt.

To soften the apparent counterintuitiveness of multiple occupancy and to solve the difficulties above, Lewis and Noonan have offered linguistic solutions to the too many

¹⁴⁸ Olson, *What Are We?*, 30.

¹⁴⁹ David Hershenov, “APA Panel Talk on Organisms, Persons, and Bioethics,” *APA Newsletter on Philosophy and Medicine*, Vol. 9, No. 1 (Fall 2008): 8-11. Hershenov credits the fourth problem to Olson, but I think his description is much more explicit.

thinkers problem.¹⁵⁰ Lewis suggests that though there are two entities in your chair when counting by strict numerical identity, identity is not the only way of counting.¹⁵¹ Working within a temporal stage theory of personal identity, he argues that we need not count by perduring continuers or whole temporally extended series. We can instead count by temporal stages themselves, wherein each thought is counted only as one. This, Lewis remarks, will correspond to the results of our counting in everyday speech, and the underlying multiple occupancy is no cause for concern as long as we stick to counting more practically when it matters.¹⁵² Although Lewis seems to make room for our everyday assertions about the number of thinkers in your chair, he has not really solved the problem. Saying that we *can* talk about there being only one thinker hardly makes the fact that there really are two (or more) any easier to accept. Also, as Olson points out, this linguistic hypothesis fails to reply to the epistemic problem. Even if we can talk about there being only one thinker, the fact that there really are two makes an issue out of which one holds our identity.

From the false self-ascription and epistemic problems we gather that if at some time both the animal and the person in my chair think the thought, “I am a psychological continuer,” then one of them has uttered a falsehood and I have no way of determining which one of them I am. Harold Noonan suggests that the possibility of false self-ascription can be eliminated if we abandon the assumption that all ‘I’ statements are reflexive in the way we normally take them to be.¹⁵³ If we accept that the utterer and referent of ‘I’ statements need not be the same entity, then the thinking-animal problem can be mitigated. The animal who thinks, “I am a psychological continuer” does not speak falsely because the referent of ‘I’ in his statement is not himself qua animal but the person whose thoughts he shares.¹⁵⁴ Essentially his thought just means, “The person whose thoughts I share is a psychological continuer.” The person qua person who thinks

¹⁵⁰ Eric Olson, *What Are We?*, 35-36, 37-39; “Thinking Animals and the Reference of ‘I’,” *Philosophical Topics*, Vol. 30 (2002): 189-208.

¹⁵¹ David Lewis, “Survival and Identity,” 152-155.

¹⁵² *Ibid.*, 152.

¹⁵³ Harold Noonan, “Animalism versus Lockeanism: A Current Controversy,” *The Philosophical Quarterly*, Vol. 48, No. 192 (July 1998): 302-318.

¹⁵⁴ *Ibid.*, 316.

this same thought can refer to herself using ‘I’ and thus her statement is true as well, only non-derivatively. Noonan also hopes to avoid the epistemic problem with this linguistic exercise. He argues that I can know that I am the person and not the animal because by definition the person is the only entity that can refer to itself using ‘I’ statements.¹⁵⁵ With the further premise that *I* am the non-derivative thinker of my thoughts, it follows necessarily that I am the person. So even with the acceptance of two thinkers for every thought, if Noonan’s “personal-pronoun revisionism”¹⁵⁶ is successful then all other relevant problems are solved.

Though Noonan’s account is consistent, it appears to compile counterintuitive consequences. He admits that he has not rejected the overcrowding problem and as a result there remain two thinkers in your chair. It also requires us to accept that some entities (human animals) not only fail to refer to themselves when they use personal pronouns, but they fail *necessarily*. It is impossible for them to do otherwise. When giving a reason for why animals cannot refer to themselves Noonan seems to suggest that it is because they are not persons, and only persons can refer to themselves with personal pronouns.¹⁵⁷ But here Noonan has argued in a circle, and Olson catches him in the act. Noonan vacuously asserts that the animal cannot refer to itself because it is not a person and it is not a person because it cannot refer to itself. Olson remarks that “[w]e might as well say that there is no reason why animals aren’t people. But then there is no reason to suppose that the animal associated with you refers to you rather than to itself when it says ‘I’.”¹⁵⁸ Even if Noonan can offer an informative account of persons that does not include animals,¹⁵⁹ Olson argues that it would have to concede that a rational animal with all of the same thoughts as a person could still fail to be a person herself.¹⁶⁰ And as a necessary consequence of Noonan’s position it seems only to add to the running list of disconcerting elements.

¹⁵⁵ *Ibid.*

¹⁵⁶ Eric Olson, *What Are We?*, 38.

¹⁵⁷ Harold Noonan, “Animalism versus Lockeanism,” 316.

¹⁵⁸ Eric Olson, “Thinking Animals and the Reference of ‘I’,” 197.

¹⁵⁹ Eric Olson himself admits that a deeper definition is implicit in Noonan’s work.

¹⁶⁰ *Ibid.*, 200-201.

In the above, by including many of the replies and responses drawn from Eric Olson's original argument, in addition to a presentation of the argument itself, I have attempted to demonstrate the strength and cogency of his position. I see it as a formidable challenge to alternatives, and even as I proceed to defend a non-animalist account of personal identity in chapter three, I do so with the understanding that it must be reconciled with Olson's argument. But before moving on to that stage I will include in the second half of this chapter some popular problems for the biological account of personal identity which may point the reader towards the alternatives I will later explore.

2.2 Problems for a Biological Account

My first task in arousing concerns for the animalist is to briefly consider how the position fares with regard to some of the problems posed for the PCT theorist. I will begin with the intransitivity objection. Recall that for Parfit's and Lewis's accounts the transitivity of numerical identity was violated by granting varying degrees of connectedness between stages of an individual's career. Any psychological account based on the continuity of memories will fail because there is no single aspect that persists over time, be it a continuing relation or a distinct simple entity.

A biological account seems to provide such a persisting aspect in the form of an organism's life. As mentioned above, Locke insists that an oak tree "continues to be the same plant as long as it partakes of *the same life*, though that life be communicated to new particles of matter vitally united to the living plant".¹⁶¹ Van Inwagen likewise considers an organism to persist as long as its parts continue to engage in the homeodynamic event of its life. But inevitably the question arises, what is a life? Is it simply a relation had between the parts of an organism? If it is just a relation between spatial parts, then in order to preserve the transitivity of identity *over time* each stage in an organism's career must be related to those temporally contiguous to it by the same relation. This much is present in Locke's and van Inwagen's definitions. But what must also be the case is that the life-relation cannot admit of degrees, or else it is susceptible to the same numerical intransitivity objection that befell PCT.

¹⁶¹ Locke, "An Essay Concerning Human Understanding," 35-36, emphasis added

In other words, the animalist must argue that the life of an organism at a certain time is just as much its life as at any other time of its career.¹⁶² Even in the midst of disease and dying the life-relation itself cannot be said to “wane.” There may be fewer particles engaged in the event of an organism’s life between stages of its career but the relation itself cannot weaken. For if the life-relation just *is* an identity relation then two stages of an organism’s career having between themselves a greater continuity of life than that between two other stages would lead to the undesirable result that the first two stages are more identical to one another than the two other stages of the same organism. This would violate the transitivity of identity. In order to avoid “degrees of identity” it seems to me that the animalist would have to argue that the life-relation has no parts or components. If certain components of the life-relation are lacking between two stages of an organism’s career then the animalist would be stuck with a non-equivalent relation over time and a return to intransitivity. More needs to be said by animalists concerning the simplicity of the life-relation, but my initial intuition is that they may be able to accept my suggestion without damaging the account. If nothing else, it seems the animalist has more options in avoiding the objection than the PCT theorist.

The notion of an organism’s life leads to the second objection I will consider in this section, circularity. Earlier I accused Shoemaker of arguing in a circle when he attempted to include an informative causal requirement for psychological continuity. In order to state that a memory was caused in the appropriate way, it seemed necessary for him to make reference to some sort of physical continuity, which if spelled out, reveals a reliance on a criterion of personal identity already in place. The biological account, if it is to be an improvement upon PCT must respond to its own challenge of circularity.

The intuitive concept of an organism’s life allows the animalist to explain the general conditions which must be met for an individual to persist over time. But there is the deeper question of what distinguishes one life from another. Diachronically what may distinguish lives (and consequently, the organisms themselves) is some sort of temporal discontinuity. It may be impossible for a life to stop and then start again while continuing

¹⁶² I am not suggesting here that the animalist make any kind of moral claim regarding the value of lives. As the following sentences should indicate, I mean only to insist on ontological consistency.

to be the same life.¹⁶³ Synchronically there is the tendency to distinguish lives based on spatial discontiguity. While spatial contiguity may be a necessary criterion for the singularity of a life, it does not appear to be sufficient. One need only consider the example of an intestinal parasite, which though seemingly within the spatial boundaries of the organism actually participates in its own distinct life. Van Inwagen also points out the inadequacy of spatial contiguity or “contact” by indicating that a handshake in no way joins two human organisms into a single life despite their apparent connectedness.¹⁶⁴ How then can the animalist differentiate lives?

Eric Olson recognizes that without a proper answer to this question, the biological account risks falling into circularity. He says,

[I]s there any way to find out whether some animal’s life is your life without first knowing whether that animal is you? If not, the current proposal would be no better than this one: a person x picked out at one time and something y picked out at another time are identical just in case x and y are legally entitled to bear the same passport. While this may be true, it doesn’t tell us anything about how to individuate people, because any evidence for the claim that x and y are entitled to carry the same passport would have to involve the claim that x is y.¹⁶⁵

In practice it seems that we tend to delineate lives based on the distinct organisms whose lives we are considering. But of course this would require a prior understanding of how one organism is distinguished from the next, which is precisely the point being discussed. Though Olson is aware of the problem, he fails to give any informative criteria for individuation, relying instead on the intuitive practicality of the process.¹⁶⁶ Van Inwagen more or less passes the problem on by stating that “it is the business of biology to answer this question.”¹⁶⁷ He gives few if any of his own suggestions. But if Jack Wilson, another biological criterialist, is right in saying that “the biological literature on individuality

¹⁶³ Animalists seem to be divided on this issue. Van Inwagen makes the important distinction between “disrupted” lives and “suspended” lives and argues that a life can persist through suspension but not disruption. See his *Material Beings*, 145-149. Hershenov, on the other hand, believes that lives can have intermittent existence as long as the exact same parts are configured in the exact same order when the life is reinstituted as when it was paused (David Hershenov, “The Metaphysical Problem of Intermittent Existence and the Possibility of Resurrection” *Faith and Philosophy*, Vol. 20, No. 1 (Jan., 2003): 24-36.)

¹⁶⁴ Van Inwagen, *Material Beings*, 35.

¹⁶⁵ Olson, *The Human Animal*, 139.

¹⁶⁶ *Ibid*, 140.

¹⁶⁷ Van Inwagen, *Material Beings*, 84.

could itself use some philosophical tidying up”¹⁶⁸ then there appears to be a rather large lacuna in the biological account. Hence, the challenge of circularity for animalism is not that the account is explicitly circular, but that it could very well fall into circularity if the individuation issue is not solved more resolutely. In that regard the animalist is already doing better than the PCT theorist, but I hope to have demonstrated that she may still have some cause for concern.

2.2.1 The Death of an Animal and “The Corpse Problem”

In arguing for his position, Eric Olson presents another challenge for PCT accounts, similar to his thinking-animal quadrilemma, which he calls “The Fetus Problem”.¹⁶⁹ According to most (if not all) PCT accounts, certain psychological features are essential to an individual’s identity over time. I exist, *and can only exist*, when those features (or perhaps the capacities to demonstrate those features) are present. But consider the fact that the normal human fetus, or for that matter the normal human infant, fails to meet these psychological requirements. Does it follow that I was never a fetus or even an infant? Olson continues:

[S]uppose I came into being six or seven months after I was conceived, when the normal course of fetal development produced the first mental capacities worthy of the name – or a year or more after my birth, when the normal course of infantile development produced those mental capacities that distinguish people from non-people, such as rationality and self consciousness. Suppose that the fetus my mother bore during that time (and perhaps the infant my mother nursed) is numerically different from me. What became of the infant?¹⁷⁰

As Olson explains, the PCT theorist has only two options: either the fetus continues its existence as an entity coinciding with the person or it ceases to exist altogether.¹⁷¹ The former option would of course lead to the problems of cohabitation outlined above. The latter would entail that the fetus, a biological entity, ceases to exist at

¹⁶⁸ Jack Wilson, *Biological Individuality* (Cambridge: Cambridge University Press, 1999): 4. Wilson’s book, which offers an interesting attempt to solve this problem, can only do so with the use of a pluralist framework of biological individuation. In other words there is no *single* answer to the individuation question, which, I think, should worry any animalist working within a realist metaphysic.

¹⁶⁹ Eric Olson, *The Human Animal*, 73-89; “Was I Ever a Fetus?” *Philosophy and Phenomenological Research*, Vol. 57 (1997): 95-110.

¹⁷⁰ Olson, *The Human Animal*, 79.

¹⁷¹ *Ibid.*

the onset of psychological features. But why, asks Olson, “should a fetus perish simply because in the course of carrying out the program encoded in its genes, it (or rather its successor) came to be able to think? ... That something should perish by virtue of *gaining* that ability is absurd.”¹⁷² Olson’s conclusion is that each of us is numerically identical to a biological entity which started out as a fetus (or perhaps earlier) and grew into an adult.

Using insights gained from the fetus problem, W. R. Carter, who agrees with the conclusion above, has claimed that the form of the argument actually undermines Olson’s expression of the biological account by introducing what he calls the “the dead person problem”¹⁷³ (or for stylistic reasons what I shall henceforth refer to as the “corpse problem”). To understand the issue, recall that the persistence condition of an organism is said to be the continuation of its life. When the life processes of an organism dissipate, the organism itself ceases to exist. Olson says, “Roughly an organism dies when its life-sustaining functions cease and cannot be restarted, or when its capacity to regulate those functions is destroyed.”¹⁷⁴ Peter van Inwagen and Jack Wilson give similar definitions.¹⁷⁵ The puzzle that Carter presents to animalists who espouse the “termination thesis” is approximately the following¹⁷⁶: if I have ceased to exist at the moment of death, what shall we say about the dead body which I have left behind? How was this body situated before I died? Did the same body, the same hunk of matter, exist throughout my career and survive my death? There seems to be, in all but the most violent deaths, some *thing* that persists, some *body* that once held my life and is now buried in the ground. If our intuitions are correct here, and there is a persisting body that survives my death, it follows from the termination thesis that it is numerically distinct from what I am. This is due to

¹⁷² *Ibid.*

¹⁷³ W. R. Carter, “Will I Be a Dead Person?” *Philosophy and Phenomenological Research*, Vol. 59, No. 1 (Mar. 1999): 167-171.

¹⁷⁴ Olson, *The Human Animal*, 119.

¹⁷⁵ Van Inwagen, *Material Beings*, 148-149; Jack Wilson, *Biological Individuality*, 89-99. This “Termination Thesis” is not to be confused with the claim that when an individual dies, he or she ceases to exist as a person or as a living thing. Rather, the termination thesis, as held by Olson, van Inwagen and others, says that when an individual dies, he or she ceases to exist *simpliciter*. There is no thing that the individual is identical to after death. See Fred Feldman, “The Termination Thesis,” *Midwest Studies in Philosophy*, Vol. 24 (2000): 98-115 for a relevant discussion of this point.

¹⁷⁶ W. R. Carter, “Will I Be a Dead Person?”

the fact that the body can (seemingly) survive death, even when I, qua organism, have ceased to exist, and no single thing can have two sets of persistence conditions.

Carter then proposes a dilemma strikingly similar to that used in Olson's fetus argument: either the body existed throughout the organism's career as a spatially coinciding entity or at the cessation of life processes a dead body "popped" into existence. If we grant that the body has as one of its proper parts a human brain, then the first option would seem to leave the animalist with too many thinkers. Sydney Shoemaker uses the corpse argument to show that the animalist is no better off than the PCT theorist when considering the puzzles of coinciding entities.¹⁷⁷ If it were necessary for the animalist to accept option one this would undermine the strength of Olson's thinking animal problem, and if the PCT theorist has any additional arguments in support of her own position, the animalist may find himself in a rather grave situation.

Carter, arguing from the other side of the debate, insists that option two is just as troublesome.¹⁷⁸ If we were to film the death of a dying patient in a hospital, there would be a distinct point (according to the termination thesis) in which we could view the animal going out of existence. If we were to view the film in reverse it would likewise follow that we could watch the dead body (or the corpse) cease to exist. Carter continues:

In this (extraordinary) context we might ask: what becomes of Flan [the dead body]? Suppose that our BV [Biological View] theorist replies that Flan 'perishes' when life emerges (on the backtracking film we are viewing). Isn't this as implausible as supposing that (the fetus) Flem perishes when thought emerges?¹⁷⁹

Carter thus criticizes the biological view for having the same sort of unexplained disappearances as PCT accounts. His solution is to deny the termination thesis and argue that we just are those persisting bodies all along. The corpse problem, then, as a difficulty posed for the biological account of personal identity from both sides of the debate is a seemingly formidable foe which the animalist must grapple with if he is to be successful.

Fortunately, there are replies to be made on behalf of the biological view. In order to solve the corpse problem the animalist must deny that there is in fact any one thing that

¹⁷⁷ Sydney Shoemaker, "Eric Olson: The Human Animal" *Nous*, Vol. 33, No. 3 (1999): 499.

¹⁷⁸ W. R. Carter, "Will I Be a Dead Person?" 168-169.

¹⁷⁹ *Ibid.*, 168.

persists through the death of the organism. One line of reply is to argue that there is never any corpse to account for. After biological death there may be smaller particles arranged “corporeally”, or to follow van Inwagen’s suggested paraphrase, there may be particles arranged “body-wise”, but these particles are never such that they compose any larger object such as a corpse or a dead body. This “corpse eliminativism”¹⁸⁰, most famously defended by Peter van Inwagen and Trenton Merricks¹⁸¹, avoids the question of what to say about the dead body by denying that there even is such a thing to be answered for. Van Inwagen’s espousal of “corpse eliminativism” stems from his preoccupation with what he calls “the Special Composition Question”:

Suppose one had certain (nonoverlapping) objects, the xs, at one’s disposal; what would one have to do- what could one do- to get the xs to compose something? For example: Suppose that one has a lot of wooden blocks that one may do with as one wills; what must one do to get the blocks to add up to something?¹⁸²

In searching for an answer to this question, van Inwagen considers and rejects such principles as “contact,” “fastening,” “cohesion,” and “fusion.”¹⁸³ The only reply that he feels is at all adequate is the formulation of the “life principle” mentioned above.¹⁸⁴ Because smaller particles (in van Inwagen’s case they would have to be philosophical atoms or simples) cannot compose a larger object unless they are caught up in the homeodynamic event of a life, it follows that there are no material objects other than organisms and philosophical atoms. So van Inwagen concludes, in response to the corpse problem, that when the organism’s life processes cease, the organism itself goes out of existence, and due to the lack of any other feasible principle of composition, its former parts henceforth fail to compose any object at all. The appeal of this solution to Carter’s (and Shoemaker’s) challenge is that without a corpse, the corpse problem cannot even get off (or out from under!) the ground.

¹⁸⁰ I borrow this term from Eric Olson, “Animalism and the Corpse Problem,” *Australasian Journal of Philosophy*, Vol. 82. (2004): 265-274.

¹⁸¹ Peter van Inwagen, *Material Beings*; Trenton Merricks, *Objects and Persons*, Oxford: Oxford University Press, 2001.

¹⁸² Van Inwagen, *Material Beings*, 31.

¹⁸³ *Ibid.*, 33-37, 56-60.

¹⁸⁴ *Ibid.*, 149.

Presumably, few animalists are willing to completely discharge all inanimate objects from their respective ontologies. If “corpse eliminativism” were the only response to the dead body problem then Carter and others could underline the counterintuitive nature of animalism’s only reply, probably with some success. Olson and Hershenov recognize this worry and have offered some non-eliminativist strategies to mitigate the concern.¹⁸⁵ Consider the fact that the persistence condition of an organism is the continuation of its life processes. Through one of these processes, metabolic shuffling, an organism can in principle survive complete part replacement as long as the transaction is gradual, something that perhaps no other type of object can survive. The life, then, that holds the animal together and preserves its identity, is something particular to organisms. Corpses, on the other hand, if we are willing to grant that such things exist, do not share this compositional feature. Depending on the rules of one’s ontology, it is uncertain whether an inanimate object such as a corpse can survive complete part replacement. In fact, the underlying problem according to Olson and Hershenov is that it is unclear what precisely it would take to preserve or destroy the numerical identity of a corpse.¹⁸⁶ For instance, does the corpse cease to exist when more than half of its parts are replaced or destroyed? Or is it something to do with functional integrity?¹⁸⁷ Whatever the persistence conditions of a corpse turn out to be, without the compositional feature of a life to work with, they are bound to be radically different than those determining the boundaries of an organism.¹⁸⁸ Given that no entity can have two sets of radically different persistence conditions, the above should be enough to demonstrate that the organism and the corpse are not identical. They are not even of the same kind.

So does the corpse, then, “pop” into existence when the organism’s life fades? By denying the identification of the corpse and organism, in order for Olson and Hershenov

¹⁸⁵ Eric Olson, “Animalism and the Corpse Problem”; David Hershenov, “Do Dead Bodies Pose a Problem for Biological Approaches to Personal Identity?” *Mind*, Vol. 114, No. 453 (Jan., 2005): 31-59.

¹⁸⁶ Olson, “Animalism and the Corpse Problem,” 271; Hershenov, “Do Dead Bodies Pose a Problem for Biological Approaches to Personal Identity?” 45-46. This issue also becomes clear by analyzing the various differences between bodily and biological accounts of personal identity. See my section 2.1.1 above.

¹⁸⁷ David Mackie suggests this kind of approach in his “Personal Identity and Dead People,” *Philosophical Studies*, Vol. 95, No. 3 (1999): 219-242. See Olson, “Animalism and the Corpse Problem” and Hershenov, “Do Dead Bodies Pose a Problem” for replies.

¹⁸⁸ Olson, “Animalism and the Corpse Problem,” 270.

to avoid the problem of coincidental entities, they will have to grant that at death a substantial change occurs in which one object ceases to exist and a new one emerges. Shoemaker, Carter and others have found this suggestion absurd.¹⁸⁹ In response, Olson states that

The changes that go on in an animal when it dies are really quite dramatic. All of that frenetic, highly organized, and extremely complex biochemical activity that was going on throughout the organism comes to a rather sudden end, and the chemical machinery begins immediately to decay. If it looks like there isn't that much difference between a living animal and a fresh corpse, that is because the most striking changes take place at the microscopic level and below.¹⁹⁰

In this case, it is argued, appearances are deceiving. Despite the apparent persistence of a single material body through death, an investigation of the real underlying occurrences reveals a unique and radical transformation.

As I will argue in Chapter Three, while Olson and Hershenov are approaching a successful response to the corpse problem, the animalist's provisional notion of "substantial change" can be supplemented and more ably defended if it takes on the resources of a hylomorphic account. It can do so as well without resorting to any sort of corpse eliminativism. In concluding this section I will therefore suggest that the challenge of dead bodies has not defeated the biological criterion; it has only demanded further clarification of the view.

2.2.2 The Challenge from Proper Parts

One of the key premises of Eric Olson's argument for animalism is that I am the thing that thinks my thoughts. Additionally, I am the thinker "in the strictest possible sense,"¹⁹¹ meaning I am not just related (even necessarily) to the object that thinks my thoughts, but rather, if there is anything that literally thinks my thoughts, it is I. This insight is one Olson borrows from the line of Cartesian thought which passes through the work of Roderick Chisholm. Chisholm says

There is no reason whatever for supposing that *I* hope for rain only in virtue of the fact that some *other* thing hopes for rain – some stand-in that,

¹⁸⁹ Shoemaker, "Eric Olson: The Human Animal," 499; Carter, "Will I Be a Dead Person," 168; Lynn Rudder Baker, *Persons and Bodies*, 207-208.

¹⁹⁰ Olson, *The Human Animal*, 151-152.

¹⁹¹ Olson, *What Are We?*, 79.

strictly and philosophically, is not identical with me but happens to be doing duty for me at this particular moment... If there are thus two things that now hope for rain, the one doing it on its own and the other such that its hoping is done for it by the thing that now happens to constitute it, then I am the former thing and not the latter thing.¹⁹²

Assuming that I am, strictly speaking, *the* thinker of my thoughts, Olson asks, what entity in the world corresponds to that category? His argument for the biological account is based on the intuitive reply that certainly the animal in my chair is thinking my thoughts. To attribute my thoughts to anything else would be to introduce an over-populated ontology and the myriad problems of cohabitation. In the absence of any better candidate, therefore, I, the thinker of my thoughts, am an animal.

In response to this formulation of Olson's argument, both Ingmar Persson and Jeff McMahan have independently rejected the claim that the animal strictly thinks one's thoughts.¹⁹³ Consider the fact (gathered from an even basic understanding of human biology) that the brain is the material locus of one's psychology. Without a functioning brain, the organism could not be said to be capable of thought. Furthermore, Persson points out, the brain seems "minimally sufficient" for the realization of relevant psychological features.¹⁹⁴ As the seeming plausibility of cerebrum transplants demonstrates, the persistence of the entire organism may not be necessary for the continuation of one's thoughts.¹⁹⁵ Persson suggests, based on these facts, that a better candidate for the thinker of my thoughts would be my brain, a proper part of my brain, or certain proper parts of my brain inasmuch as they are functional.¹⁹⁶ McMahan likewise identifies the person with "regions of the brain in certain functional states".¹⁹⁷

Even though they hold that the brain is the thinker of one's thoughts in the strictest sense, McMahan and Persson do not deny that the animal is an appropriate candidate. Both agree that there are two things that can be said to think, the animal and

¹⁹² Chisholm, *Person and Object*, 104. Also quoted in Olson, *What Are We?*, 80.

¹⁹³ Ingmar Persson, "Our Identity and Separability of Persons and Organisms," *Dialogue*, Vol. 38 (1999): 521-533.; Jeff McMahan, *The Ethics of Killing: Problems at the Margins of Life* (Oxford: Oxford University Press, 2002): 88-94.

¹⁹⁴ Persson, "Our Identity," 522.

¹⁹⁵ See my section 1.2 above.

¹⁹⁶ Persson, "Our Identity," 522.

¹⁹⁷ McMahan, *The Ethics of Killing*, 92.

the proper part most relevant for psychology. But they also suggest that the well-known problems of collocation can be avoided by stipulating that the animal only thinks derivatively in virtue of having a part (the brain) which thinks non-derivatively.¹⁹⁸ McMahan's illustration of the derivative/non-derivative relation is an example of a car with a noisy horn. It is true that both the car and the horn are noisy, but there are not two noises whenever we think we hear just one. Rather, the car is derivatively noisy in virtue of having a noisy horn.¹⁹⁹ McMahan and Persson contend that if we formulate the relationship between the organism and its psychologically relevant proper part using the innocuous derivative/non-derivative distinction, then Olson's too many thinkers argument loses its force.²⁰⁰ And if the strictest thinker of my thoughts turns out to be something smaller than the whole organism, then, contrary to the biological account of personal identity, I am not identical to any animal.

The challenge from proper parts presents two slightly different problems for animalism. The first is what Olson refers to as "The Thinking-Brain Problem."²⁰¹ If the brain thinks our thoughts, and it seems like the best candidate for strictly thinking them, why are we not identical to our brains? This problem is explicitly gathered from the remarks of Persson and McMahan above. The second problem, implicit in the challenge above (and made explicit by Zimmerman and Olson below), is the more general problem of rival candidates. The suggestion here is that *any* candidate for the thinker of your thoughts that is not the animal seems to bring in too many thinkers. In addressing these challenges below, I will present both actual and possible responses on behalf of the animalist. This will ultimately lead to my summary evaluation of the biological approach at the conclusion of the chapter.

2.2.2.1 Thinking brains

David Hershenov replies to the proper parts solution to the problem of too many thinkers advocated by McMahan and Persson by stating that it "amounts to just moving

¹⁹⁸ Persson, "Our Identity," 521-523 ; McMahan, *The Ethics of Killing*, 92.

¹⁹⁹ McMahan, *The Ethics of Killing*, 92-93. Persson also uses an example of a ball which is said to touch another ball by having only a small surface do the touching ("Our Identity," 523).

²⁰⁰ *Ibid.*; Persson, "Our Identity," 524.

²⁰¹ Olson, *What Are We?*, 78.

around the metaphysical bulge in the carpet.”²⁰² By this he means that they have not eliminated all of the rival candidates and still face the standard problems of cohabitation. Hershenov’s challenge arises due to the ambiguity of the proper parts account. Am I a “functional brain” or am I a brain *simpliciter*? If I am simply my physical brain, then I could survive a complete loss of functionality resulting from the biological death of the organism or otherwise. This seems like an undesired conclusion. As Olson points out, it would mean that the brain of Albert Einstein sealed in a jar after his organism’s death and stored in a lab would *literally be* Einstein himself.²⁰³ Perhaps as a result of such considerations, McMahan stipulates that you and I are only identical to functioning and psychologically relevant proper parts of our brains.²⁰⁴ Persson also denies that one can persist through a cessation of relevant cognitive processes.²⁰⁵ But by admitting that we are not strictly identical to physical brains, Persson and McMahan have, unbeknownst to them, reintroduced the problem of too many thinkers.²⁰⁶

The functional brain, that which we are identical to according to the revised proper parts account, ceases to exist at biological death (or perhaps earlier). The physical brain (or at least certain parts of the brain), on the other hand, can presumably survive biological death. This difference in persistence conditions leads to the conclusion that they are numerically distinct entities. And if prior to biological death the physical brain (or at least one relevant part of the brain) is situated in the same place as the functional brain, we have a return to cognitive co-location.²⁰⁷

²⁰² David Hershenov, “Persons as Proper Parts of Organisms,” *Theoria*, Vol. 71, No. 1 (March, 2005): 33.

²⁰³ Olson, *What Are We?*, 85.

²⁰⁴ See citation above.

²⁰⁵ Persson, “Our Identity,” 522.

²⁰⁶ Hershenov, “Persons as Proper Parts,” 33.

²⁰⁷ By now the reader should recognize this dilemma as similar to that presented to the animalist in the corpse problem discussed above. My suggestion for the animalist was to pursue the notion of a substantial change during the death of the organism. Can the proper parts theorist similarly avoid the problem by claiming that the brain *simpliciter* doesn’t come into existence until after the departure of its functional complement? It seems that the proper parts theorist could make this move, but consider the following remarks: “Brain parts can persist in a state of brain death, when the processes sustaining thought and experience can no longer occur. But, as we have seen, the persons we are on personalism do not survive this state” (Persson, “Our Identity,” 522); “When an organism dies, the physical object that remains does not seem to be a new creation; it seems to have been there all along” (McMahan, *The Ethics of Killing*, 30). Persson and McMahan appear to, as a matter of fact, reject my suggestion, and as a result, their views remain susceptible to a corpse-like problem for proper parts.

Hershenov argues that the derivative/non-derivative distinction used by McMahan and Persson to alleviate their admittance of too many thinkers, while appropriate in many circumstances, is still susceptible to the false ascription problem.²⁰⁸ Consider the thought, ‘I am essentially a person’.²⁰⁹ A person is indeed essentially a person according to the McMahan-Persson view, but an organism can survive the loss of personhood. So if both the organism and the person think ‘I am a person’ concurrently, the person’s statement is true while the same thought considered by the organism is false. The falsity of the organism’s thought indicates that it refers to itself when it considers the essentiality of its personhood. And if the person does the same (which it must if its statement is true), then the content of the thought allegedly shared by both thinkers is nonequivalent. What Hershenov demonstrates is that in this case there would have to be two distinct thoughts, due to their distinct referents, rather than one thought understood derivatively.

In addition to hinting at a too many thinkers problem for McMahan and Persson similar to that argued for by Hershenov,²¹⁰ Eric Olson also expresses his own particular concerns for a proper parts account. The appeal of the brain criterion is that it seems to present a strong (perhaps the strongest) candidate for the strictest thinker of one’s thoughts. The underlying assumption is that I must be identical to that thing and *only* that thing that *directly* thinks my thoughts. Olson calls this stance “thinking-subject minimalism.”²¹¹ But what parts, asks Olson, are directly involved in my thoughts? The *entire* brain is certainly not *directly* involved in thought. Blood vessels and the contained blood cells are within the spatial confines of the brain, but they serve only to regulate the higher functions, rather than participating themselves.²¹² I must then be identical to some smaller part or parts of my brain. But even nerve cells have components geared towards the circulation and maintenance of the cell rather than cognition.²¹³ It would follow that I am only a set of certain coordinating parts of certain nerve cells directly relevant for the introduction of psychological features. But how does one draw the line between parts of

²⁰⁸ Hershenov, “Persons as Proper Parts,” 37.

²⁰⁹ *Ibid.*

²¹⁰ Olson, *What Are We?*, 87.

²¹¹ *Ibid.*, 88.

²¹² *Ibid.*, 91.

²¹³ *Ibid.*

the nerve cell that are directly involved in thought and those that are only indirectly involved? Olson contends that any answer to this question is bound to be arbitrary and unprincipled.²¹⁴ Using thinking-subject minimalism to determine our boundaries leads to the conclusion that we have no idea how big we are or which parts we have.²¹⁵ “The organism,” however, “has a nonarbitrary boundary, and it would appear to be the largest thing whose behavior we can explain in terms of its thinking.”²¹⁶ Olson concludes, then, that the animal is a more principled candidate for my thought.

Olson’s larger concern about proper parts theory is that it puts us too far away from the world. Even if we could determine the boundaries of the entity directly involved in thinking, consider the repercussions of *only* being that subject of thought. Any parts of my brain not directly involved in my thinking are not a part of me. The parts not directly responsible for philosophical reflection, but are more directly responsible for sight (call the set of these parts the “vision module”²¹⁷) or those more directly responsible for hearing (call this set the “hearing module”) cannot be properly said to be parts of me. When the vision module sees and the hearing module hears, I do neither of these things. I may be intimately related to those modules such that I may receive the content of my reflection from their collected data, but I would always be one additional step removed from the external world. As Olson points out, following Chisholm,²¹⁸ the proper parts theorist’s denial of the fact that any one thing can perceive and reflect on that same perception makes even the most basic kind of self-knowledge impossible.²¹⁹

²¹⁴ Olson uses the example of a knife factory to demonstrate the difficulty in requiring a notion of direct involvement. He asks, “[w]hich workers are *directly* involved in making knives, and which only indirectly?” “Some deliver the steel; others beat it with hammers, sharpen the blades, stoke the fires, repair the tools, sweep the floors, run the canteen, keep the accounts, and so on... There may be some sense in the idea that those who actually work the steel are *more* directly involved in the making of knives than those who sweep the floors. But is there really an absolute distinction- even an imprecise one- between those who are directly involved in making knives and those who are only indirectly involved?” (*What Are We?*, 92.)

²¹⁵ *Ibid.*, 93.

²¹⁶ *Ibid.*

²¹⁷ *Ibid.*, 95.

²¹⁸ Roderick Chisholm, *The First Person* (Brighton: Harvester, 1981): 87-88.

²¹⁹ Olson, *What Are We?*, 96. Patrick Lee and Robert George make the similar claim that the actions of an organism (dog, man, etc) are incomprehensible unless it is understood that it is the same entity which perceives, understands and acts (Lee and George, *Body-Self Dualism*, 15-16.)

As I argued in Chapter 1, in addition to the worries expressed by Hershenov and Olson, a brain criterion also faces the problem of duplication. Recall that one of the driving justifications of PCT accounts is the possibility that I could be relocated with my transplanted cerebrum.²²⁰ Proper parts theorists such as McMahan and Persson, to maintain consistency, can and should consider the physical relocation of one's psychology person-preserving. Furthermore, if, as Olson's analysis indicates, I must be identical to a part much smaller than my entire brain, it is not necessary to transplant the entire cerebrum. The psychologically relevant parts of a single hemisphere may be sufficient. But by severing the corpus callosum and performing a double transplant of psychologically relevant proper parts of my brain, my identity can be fissioned out of existence, even if each procedure is meticulously executed in a fashion qualitatively identical to that used in a single hemisphere transplant. The proper parts theorist could reply that there may be only one psychologically relevant part of the brain per human organism, and it cannot be severed without destroying it. But if the studies featured in the personal identity literature are deemed reliable,²²¹ this seems not to be the case. It is likely true that either hemisphere is sufficient for the maintenance of psychological features. Duplication, then, is a recurring problem for the proper parts view.

Both Olson and Hershenov have ably demonstrated the difficulties in precisely formulating a proper parts account. Their responses to the McMahan-Persson theory of personal identity are sufficient to signal its inadequacy. But even if we are forced to abandon the principle of thinking-subject minimalism, there are general concerns that Olson and Hershenov have not appropriately addressed. Dismissing a specific formulation of the proper parts account does little to answer the issue of rival candidates. It seems like a legitimate question to ask why my head cannot think or why my body is not the thinker of my thoughts or if there are appropriate candidates for thought such as the upper half of my body or the left hemisphere of my brain, why I am not one of those things. It is this general problem of rival candidates to which I will now turn.

²²⁰ See section 1.2 above. Importantly, I also mentioned that in this chapter I will refer to the procedure as a transplantation of *cerebrums* due to the fact that some animalists hold that a whole brain transplant would transport the pared-down animal.

²²¹ See, for example, Thomas Nagel, "Brain Bisection and the Unity of Consciousness."

2.2.2.2 Rival candidates and the state of animalism

In considering Olson's argument for animalism, Dean Zimmerman observes that in premise two, which states that "the human animal sitting in your chair is thinking," the term 'human animal' can be replaced by just about any other candidate for thought and be used as an argument for identifying ourselves with that thing.²²² For example, we could just as easily make a similar argument for our being identical to a 'Mere Body,' a 'Psychological Person,' or a 'Mere Hunk of Matter.'²²³ Acknowledging the problem, Olson adds 'my head' and 'my brain' to the list of potential candidates.²²⁴ But if (almost) any number of terms can be substituted for 'human animal,' why give animals the preferential treatment? Or as Zimmerman puts it, "What sort of support can one adduce for this premise? Why do I think there is an animal here? Or, better, why does Olson think this, with respect to himself, when he is alone in a room?"²²⁵

Olson admits that, in response to the problem of rival candidates, there are only three ways to defend premise two.²²⁶ First, the animalist could present an argument for why smaller parts or rival candidates cannot think in the strictest sense, or at least why the animal is the best candidate for that position. An example of this strategy is his dismissal of proper parts accounts as arbitrary or unprincipled. Second, one could offer an epistemic solution. Granting that proper parts or rival candidates are just as valid an option for the thinker of one's thoughts as animals, it might still be possible to know that I am in fact the animal rather than any of those other things. Third, the biological account of personal identity can be defended by denying that any such rivals exist. There just are not any other candidates.

Olson is not entirely pleased with any of these options,²²⁷ but the one he finds most promising is the third. Borrowing from van Inwagen's work on the special

²²² Dean Zimmerman, "Problems for Animalism," *Abstracta*, Special Issue I (2008): 23-31.

²²³ *Ibid.*,

²²⁴ Eric Olson, "Replies," *Abstracta*, Special Issue I (2008): 38.

²²⁵ Zimmerman, "Problems for Animalism," 28.

²²⁶ Olson, "Replies," 39.

²²⁷ *Ibid.* Immediately after laying out his options he admits that "the rival-candidates problem worries me a lot more than the usual, familiar objections to my view: the objection that it has implausible consequences about what happens to us in brain transplants or robotic replacements, for instance, or that it implies that we are only temporarily and contingently people" (Olson, "Replies," 39.)

composition question,²²⁸ Olson argues that the only feasible principle of composition for material objects is the principle of an organism's life. We saw earlier that this stance can be used as a solution to the corpse problem by denying the very existence of those things.²²⁹ Here Olson extends the project so as to exclude from his ontology any candidates not individuated and identified over time by a life. Therefore, there are no "mere bodies," "psychological persons" or "mere hunks of matter." This may sound plausible enough. But what the "sparse ontologist" must also deny is that we have any of the parts we normally think we do, like heads, hands, or hearts.²³⁰ If animalists are willing to take their ontological solutions to the problem of personal identity this far, then they will have their responses to challengers, but if the sparse ontology is the *only* way to defend the biological account against its rivals, it is bound to be an unattractive position. Of course, as Olson replies, "*any* sensible account of what we are faces its own version of the rival-candidates problem."²³¹ He continues,

I don't have a good solution... Zimmerman is right to say that I am inclined to solve it by denying the existence of the rivals. I'd like to say that there is no hunk of matter standing here, and no being with psychological persistence conditions, and –this is the bit I like least of all – no head. There is only animal, and a lot of particles. I am inclined to accept a sparse ontology of material objects. Why? Well, because the alternatives look even worse. This is not a nice thing to have to say, but I can't see any good way of avoiding it. If you don't like it, tell me how *you* would solve the rival-candidates problem.²³²

In response to Olson's challenge, my chapter three will be dedicated to presenting a hylomorphic account of personal identity, which, when accompanied by the larger metaphysical system of Aristotle and Thomas Aquinas, does have its own solutions to the most common problems for animalism. It also will not require an ontology as sparse as

²²⁸ Van Inwagen, *Material Beings*. See also citations above.

²²⁹ See section 2.2.1 above.

²³⁰ Olson, "Replies," 40-41; Eric Olson, "Why I have No Hands," *Theoria*, Vol. 61 (1995): 182-197; Peter van Inwagen, "The Doctrine of Arbitrary Undetached Parts," *Pacific Philosophical Quarterly*, Vol. 62 (1981): 123-137.

²³¹ Olson, "Replies," 39. Interestingly, Zimmerman sees the inevitable problem of rival-candidates as a fundamental argument for his substance dualism. See his "Material People," in Michael Loux and Dean Zimmerman, *The Oxford Handbook of Metaphysics* (Oxford: Oxford University Press, 2003): 491-526 for more on this.

²³² Olson, "Replies," 40.

the one offered by Olson and van Inwagen. In this regard, it will be demonstrated how a hylomorphic animalism can capture the metaphysical consistency of the biological account without its pitfalls. In the second half of chapter three, I will offer a defense of a recent alternative interpretation of hylomorphism which gives considerable weight to both the thinking animal argument of the biological account and the cerebrum transplant literature considered by PCT. I will conclude with a summary analysis and evaluation of the three main views considered in this thesis and offer arguments as to why I think hylomorphism is the most successful.

CHAPTER THREE: HYLOMORPHISM

3.1 A General Account

Similar to the way in which psychological continuity theory develops from a general conception of persons, and animalism relies on an implicit understanding of the persistence conditions of biological organisms, a hylomorphic account of personal identity is a specific application of a more far-reaching ontological framework. Hylomorphism in general is the view that every material object is composed of two distinct metaphysical parts²³³: matter and form.^{234,235} Inasmuch as we too are material objects, hylomorphism as a theory of personal ontology entails that every human individual has these two components: each one of us is a composite of matter and a certain type of form, the form being that which is primarily explanatory of our persistence over time.

In this third and final chapter, I will present a case for a hylomorphic account of personal identity by demonstrating how it can respond to problems faced by the two main views featured in the previous chapters. I will also consider two recent formulations of hylomorphism, that, though incompatible with one another, offer intriguing, if not compelling, suggestions for where in the contemporary debate a hylomorphic view should fall. But before assessing hylomorphism as a theory of personal identity in particular, I will first attempt to construct the account from its foundation.

3.1.1 The Metaphysics of Hylomorphism

In order to make sense of a hylomorphic view of personal identity it is first necessary to become acquainted with the relevant terminology and metaphysical commitments of a general hylomorphic ontology. To what do the terms ‘matter’ and

²³³ As opposed to ‘integral’ parts. See Eleonore Stump, *Aquinas* (New York: Routledge, 2003): 209-210; Christopher Brown, *Aquinas and the Ship of Theseus* (London: Continuum, 2005):53.

²³⁴ The term ‘hylomorphism’ comes from the original Greek words ‘hylē’ (matter) and ‘morphē’ (form). As a result, some hylomorphists refer to the view as ‘hylemorphism’ (David Oderberg and Patrick Toner for instance), but I will continue to use the spelling I used in my introduction and any reference to ‘hylemorphism’ should be understood as indicating the same view.

²³⁵ Although he himself never uses the term ‘hylomorphism’, this two-part ontology of material objects was first developed by Aristotle (see, for example, Aristotle, *Metaphysics*, Book VII, Chapters 10-11, translated by Terence Irwin and Gail Fine, in *Aristotle: Selections* (Indianapolis: Hackett, 1995). The two Greek terms mentioned in the previous footnote are present throughout his works.

‘form’ refer? And what can they tell us about *our* persistence conditions? In this section I will offer a brief survey of these issues. Here, as throughout this chapter, my most frequent resources are the works of Saint Thomas Aquinas and Thomistic philosophers in the analytic tradition, though when appropriate I will make note of the relevant passages in the Aristotelian corpus that Thomism inherits.²³⁶

One of the signature marks of the Aristotelian-Thomist ontology is the particular account of matter that it espouses. In contrast to a view such as atomism, which posits as the most fundamental aspects of the physical world actually-existent, self-contained, indivisible particles or atoms,²³⁷ hylomorphism suggests that matter in its most basic sense does not contain any actuality at all.²³⁸ This is to say that matter by itself lacks all qualities, with the important exception that it can be *made into* something that has qualities. So-called “prime matter” is in this regard nothing but a substratum of pure potentiality from which the objects in the universe are fashioned.²³⁹ An illustrative example of the difference between an atomistic view of matter and hylomorphism is a pile of bricks and a hunk of clay.²⁴⁰ Though both can be used to make just about anything, the individual bricks are already actual entities on their own prior to any construction, whereas the hunk of clay is relatively unactualized prior to its being moulded. A hunk of clay is not a perfect example of prime matter, due to the fact that it

²³⁶ While philosophers in the Franciscan tradition such as Saint Bonaventure and John Duns Scotus could likewise be considered hylomorphists for relying on a form/matter distinction, the position I will develop here is closer to the Thomistic reading. This will become most evident when considering the “unicity” of substantial form (a doctrine rejected by both Bonaventure and Duns Scotus) below. For a relevant discussion of these points see Frederick Copleston, *A History of Philosophy, Vol. 2: Medieval Philosophy from Augustine to Duns Scotus* (New York: Doubleday, 1962): 274, 375, 515.

²³⁷ See Sylvia Berryman, “Ancient Atomism,” *The Stanford Encyclopedia of Philosophy* (Fall 2008 Edition), edited by Edward N. Zalta, <<http://plato.stanford.edu/archives/fall2008/entries/atomism-ancient/>>.

²³⁸ “But it [prime matter] can never exist in itself, because on account of its very concept it does not have any form, whence it does not have actual existence (since something can have actual existence only through its form), but it exists only potentially” (Saint Thomas Aquinas, *De Principiis Naturae* (hereafter referred to as *DPN*), Chapter Two, translated by Gyula Klima, in Gyula Klima, et al., *Medieval Philosophy: Essential Readings with Commentary* (Malden, MA: Wiley-Blackwell, 2007).

²³⁹ “...that matter which is thought of without any kind of form or privation as subject to all forms and privations is called *prime matter*, because there is no other matter before it. And this is also called *hyle*” (*Ibid.*)

²⁴⁰ Aquinas actually uses a hunk of bronze as his example (*Ibid.*, Ch. 1), but I think clay more ably illustrates the plasticity required for the example to work.

has actual properties such as color and some sort of shape, but when contrasted with the set of individual bricks, it brings us closer to an idea of unactualized potentiality.

The degree to which ahylomorphist must take seriously the *reality* of a substratum of pure potentiality is a matter of some debate,²⁴¹ but it is at least necessary to posit its existence *conceptually* in order for hylomorphism to get started. So in considering material objects, and in particular, human beings within the hylomorphic framework, it is important to keep in mind that the matter in the matter/form composite refers to a notion of unactualized potentiality, or prime matter.

When conceived of as nothing but passive potentiality, it is immediately apparent that matter is not alone sufficient for the construction of even everyday objects; given that material objects are indeed actual there must be something that actualizes them. A form, then, is the actualizing principle of every material object that draws from prime matter its inherent potencies in order to, with matter, compose the object itself.²⁴² This definition, of course, requires some fleshing out. The term ‘principle’ in scholastic jargon is rather ambiguous. Aquinas at one point suggests that “the terms ‘principle’ and ‘cause’ can be used interchangeably”²⁴³ and that “generally speaking everything from which some change begins can be called a principle”.²⁴⁴ At other times I think what Aquinas means

²⁴¹ Robert Pasnau, for example, believes the hylomorphist can do without it (Robert Pasnau, *Thomas Aquinas on Human Nature* (New York: Cambridge University Press, 2002): 40-44, 131-140) and Aquinas himself says “in itself it can never exist, since, as in its concept it does not have any form, it does not have actual existence – for something can have actual existence only by its form-, but it is only potentially. So nothing in actual existence can be called prime matter” (*DPN*, Ch. 2). John Haldane, on the other hand, points out that its existence is required in order to explain substantial change (John Haldane, “A Thomist Metaphysics,” in Richard M. Gale, *The Blackwell Guide to Metaphysics* (Oxford: Blackwell, 2002): 95-96) as does David Oderberg (David Oderberg, *Real Essentialism* (New York: Routledge, 2007): 71-76; see also section 3.2.2 below). This seems loyal to Aquinas’ own remarks at the beginning of *DPN*. Interestingly, Haldane suggests that we may be able to understand prime matter as space-time itself, and Oderberg entertains the idea that it may be identified with the concept of energy in modern physics (see citations above). I make note of these discussions not to emphasize one view over the other, but rather, to respond to an inclination the reader may have to immediately relegate the concept of prime matter to what Oderberg refers to as “spooky metaphysics” (*Real Essentialism*, 72).

²⁴² Compare Bernard Wuellner’s definition of substantial form as the “intrinsic incomplete constituent principle in a substance which actualizes the potencies of matter and together with the matter composes a definite material substance or natural body” (Bernard Wuellner, *Dictionary of Scholastic Philosophy* (Milwaukee: Bruce Publishing Company, 1956): 48, featured in David Oderberg, *Real Essentialism*, 65).

²⁴³ Aquinas, *DPN*, Ch. 3.

²⁴⁴ “For every cause can be called a principle and every principle can be called a cause, though the concept of cause seems to add something to that of principle in its ordinary sense, for whatever is first can be called a principle, whether there results some existence from it or not. For example, a craftsman can be called the principle of a knife, as from his work there results the being of the knife. But when something turns from

by principle is anything through which or with which a certain potency is able to be realized, most noticeably when he says that the eye is a principle of vision.²⁴⁵ Basically, then, a principle is the cause of any actuality. But importantly, this need not commit the hylomorphist to any kind of temporal succession of matter, form and then their composite. As Oderberg explains, matter is “*constitutively* prior and logically prior,” but there is no relevant sense in which the material component of an individual exists *before* it is informed.²⁴⁶

Additionally, there are two senses of potency that require actualization, which in turn correspond to the two types of forms in the hylomorphic ontology. Prime matter can be said to be in potentiality inasmuch as it can be made into a certain *sort* or *kind* of object. The form that is principally responsible for making prime matter into an actual substantial object is called an object’s *substantial form*. That same object can also be said to be in potentiality inasmuch as it can gain or lose certain properties or modifications. Any form that actualizes certain properties or accidents is called an *accidental form*. The example used by Aquinas to illustrate these points is a man who is made a human being (the kind of thing he is) by his substantial form and is made white (a non-essential property of the man) by an accidental form.²⁴⁷ When hylomorphism states that every material object, and specifically for the purposes of this thesis, a human individual, is composed of form and matter, the relevant form being considered here is the entity’s substantial form - that which makes it what it is.

This puts us in a better position to begin to understand what the hylomorphic account of material objects entails. Every material object is composed of both a selection of passively potential prime matter and an actualizing substantial form which makes it the

black to white, we can say that blackness is the principle of this change – and generally speaking everything from which some change begins can be called a principle – still, from this blackness there did not result the being of whiteness. But only that is called a cause from which there follows the being of the posterior thing; so we say that a cause is from the being of which there results the being of something else” (*Ibid.*).

²⁴⁵ Saint Thomas Aquinas, *Summa Theologica* (hereafter referred to as *ST*), part 1, question 75, article 1, corpus, translated by Fathers of the English Dominican Province (New York, NY: Benziger Bros, 1948).

²⁴⁶ Oderberg, *Real Essentialism*, 63. Larger substances can of course be made from smaller already actualized components, but according to Aquinas the latter are subsumed by the substantiality of the former. Therefore, properly speaking, the material complement of any substantial form is prime matter. See section 3.2.2 below for more on this.

²⁴⁷ Aquinas, *DPN*, Ch. 1.

kind of thing it is. This, however, is only one step towards outlining a hylomorphic account of personal ontology. Notably, not all substantial forms are created equal, and as human beings we have a very particular type. In what follows I will attempt to elaborate on this notion so as to draw from the discussion the features of our substantial form that will become important for determining our own persistence conditions later on.

Thus far we have defined a substantial form as that which realizes or actualizes matter so as to make the thing in question the type of thing it is. But what does this “actualizer”²⁴⁸ really refer to? The answer to this question depends, I propose, on the object we are considering. That is why the basic definition of form is so vague. It is an attempt to capture in a single category a multitude of referents. With that said, however, there are certain characterizations of substantial form in the literature that will prove informative. In the case of non-human material objects, for example, Eleonore Stump argues that we should understand substantial form as “the *configurational state* of a material object that makes the object a member of the kind of species to which it belongs and gives it the causal powers characteristic of things of that kind.”²⁴⁹ This definition provides us with a helpful illustration of the complementary nature of form and matter. The form of a material object is not identical to the matter itself but to *the way the matter is arranged*. This idea seems to be what Aquinas is getting at when he says that the substantial form of a human being “is not a body, but the act of a body; thus heat, which is the principle of calefaction, is not a body, but an act of a body.”²⁵⁰ While the substantial form of a human being is importantly different from other material forms (as will be further explained below), and it is clear that he is speaking analogously, the example of heat nevertheless neatly corresponds to Stump’s notion of a “configurational state”. Heat is not something identified by pointing to a certain selection of matter but by making note of the behaviour or organizational functionality of the object’s material constituents.

²⁴⁸ I borrow this term from Robert Pasnau and Christopher Shields, *The Philosophy of Aquinas* (Boulder, CO: Westview Press, 2003): 26.

²⁴⁹ Stump, *Aquinas*, 197, emphasis added.

²⁵⁰ Aquinas, *ST*, I, q.75, a.1, corp.

It is tempting to infer from the above that a material object's form corresponds simply to its shape. While this is not entirely inaccurate,²⁵¹ the case of living things demonstrates the inadequacy of such a simplification. As Stump notes (speaking for Aquinas), a form denotes a dynamic consistency rather than a static one.²⁵² For example, an oak tree begins its existence as a small sapling with a few branches, and after many years of change and growth, the same oak takes on a radically different shape. Furthermore, as Pasnau and Shields indicate, a statue of a human being is not itself a human being, despite being shaped like one.²⁵³ Sameness of shape, then, is neither necessary nor sufficient for the identification of a living material object.²⁵⁴ What is necessary and sufficient for the continuity of material objects, and most evidently living material objects, is the sameness of *functional* configuration, meaning the object continues to be arranged in such a way as to have the capacity to exhibit the types of functions naturally attributed to its kind.²⁵⁵ This sense of functional configuration is, as I see it, the proper definition of substantial form as it is constitutive of non-human material objects.

Aquinas, following Aristotle, holds that living things require a distinct type of form in order to actualize the functions that make them alive. A living thing grows and decays, takes in nutrients and expels waste, reproduces, and displays both directionality and limitation “from within.”²⁵⁶ In the Aristotelian-Thomist tradition, this “first principle

²⁵¹ To borrow an example from Edward Feser, a rubber ball's form or functional arrangement seems to be nothing more than the round shape it has (Edward Feser, *Aquinas: A Beginner's Guide* (Oxford: Oneworld Publications, 2009): 13).

²⁵² Stump, *Aquinas*, 194.

²⁵³ Pasnau and Shields, *The Philosophy of Aquinas*, 25.

²⁵⁴ It may also be possible for an inanimate object to change its shape while still remaining the same object (See for example, Brown, *Aquinas and the Ship of Theseus*, 102), but I do not think this is a view ahylomorphist has to be committed to, nor is it crucial for developing a theory of personal ontology.

²⁵⁵ Interestingly, Locke seems to capture this idea as well when he talks about an oak's having “an organization of those parts as is fit to receive and distribute nourishment” (Locke, “An Essay Concerning Human Understanding,” 35-36. See also section 2.1 above.

²⁵⁶ Aristotle makes note of “self-nourishment, growth, and decay” in *De Anima*, Book II, Chap. 1, translated by Hugh Lawson-Tancred (London: Penguin, 1986). Pasnau and Shields point out that living things not only grow outward with regularity but also have self-imposed limits to that growth (*The Philosophy of Aquinas*, 160). Compare also to the analysis given by Eric Olson in *The Human Animal*, 126-131.

of life of those things which live” is called the soul.²⁵⁷ All living things, then, have as their substantial form a particular, individuated²⁵⁸ soul. But there are also varieties of souls, differentiated by their characteristic functions. An oak tree, for example, has only basic capacities such as nutrition and reproduction and thus it is informed by a *nutritive soul*. A non-human animal such as a dog or a cat has the capacity for nutrition and reproduction, but it also has the capacity for sensation. All of these are incorporated into its *sensitive soul*. Lastly, a human being has the capacity to engage in (among other things) nutrition, sensation and cognition. Our own substantial form is therefore an *intellective* or *rational* soul.²⁵⁹

Though they are placed in the same category as the souls of human beings, the substantial forms of plants and animals are still “material forms,” meaning they are dependent upon their material instantiation for their continued existence.²⁶⁰ As Stump notes, “a plant has a soul in virtue of the fact that it has a configuration of matter which allows for nutrition, growth, reproduction, and other sorts of activities common to living things...[but] even a material form that is a soul goes out of existence when the material composite it configures goes out of existence.”²⁶¹ Human beings, on the other hand, have the distinctive capacities for cognition and self-reflection. According to Aquinas, the process of cognition or intellection is an immaterial act (“an operation *per se* apart from the body”),²⁶² and because “only that which subsists can have an operation *per se*...[w]e

²⁵⁷ Aquinas, *ST*, I, q.75, a.1, corp. Compare to Aristotle’s definition of the soul as “the *first* actuality of a natural body which potentially has life” (*De Anima*, II, 1). It is worth pointing out that the English word ‘soul’ corresponds in this context to the Latin word ‘anima’, which is where we get our terms ‘animate’ and ‘inanimate’. As opposed to the modern connotation, soul here just means that which makes something living rather than non-living.

²⁵⁸ The way in which the substantial form is individuated will be explored in section 3.2.1 below.

²⁵⁹ See, among other places, Aquinas, *ST*, I, q.76, a.3, corp.

²⁶⁰ Stump, *Aquinas*, 201.

²⁶¹ *Ibid.*, with reference to Aquinas, *ST*, I, q.75, a.3, corp.

²⁶² Aquinas, *ST*, q.75, a.2, corp. I will have to gloss over this point for the time being. A thorough hylomorphic account of personal ontology does require an underlying defense of the immateriality of the intellect, but these issues in the philosophy of mind are beyond the scope of this paper. For relevant discussions of Aquinas’ arguments see David Oderberg, “Concepts, Dualism, and the Human Intellect”; John Haldane, “The Metaphysics of Intellect(ion)” (cited above); James Ross, “Immaterial Aspects of Thought,” *The Journal of Philosophy*, Vol. 89, No. 3 (Mar. 1992): 136-150. The focus of this chapter is not to justify Aquinas’ account by validating the premises, but rather to demonstrate its resourcefulness once the premises are accepted.

must conclude, therefore, that the human soul, which is called the intellect or the mind, is something incorporeal and subsistent.”²⁶³

Being immaterial, the substantial form of a human individual is unlike the substantial forms of both inanimate objects and non-human organisms in that *it is not itself a configurational state*. The rational soul, however, remains principally responsible for the actuality, specificity, and unity of the human body, and as such, Aquinas maintains, it can properly be called a substantial form.²⁶⁴ Following Stump, we can say that the rational soul of a human being is not a configurational state, but a “configured configurer,” something seemingly able to exist on its own, while at the same time serving as a principle of organization for a selection of unactualized prime matter.²⁶⁵

Explaining that the substantial form of a human being is a “configured configurer,” however, tells us little about what it actually is. We can gather from the above that it must be an immaterial *something*, but it does not seem like we can say much more than that. Aquinas appears to recognize the problem in stating, “though it [the rational soul] has the existence in itself which belongs to a ‘particular thing’ [*Hoc aliquid*], it is not a complete nature by itself; it is rather a *part* of a specific nature.”²⁶⁶ “Hence,” he concludes, “it is not in all respects a ‘particular thing.’”²⁶⁷ He later goes on to say that the rational soul can be considered a particular thing *in some respect* due to its ability to subsist,²⁶⁸ but he does not offer much more clarification than that.

The issue of precisely categorizing the rational soul may be a stumbling block for a robust hylomorphic account,²⁶⁹ but importantly there are certain things that *can* be said

²⁶³ Aquinas, *ST*, I, q.75, a.2, corp.

²⁶⁴ Aquinas, *ST*, I, q.76, a.1, corp.

²⁶⁵ Stump, *Aquinas*, 200.

²⁶⁶ Saint Thomas Aquinas, *Commentary on De Anima*, Lecture 1, Paragraph 215, translated by Thomas S. Hibbs, in *Thomas Aquinas on Human Nature* (Indianapolis: Hackett, 1999).

²⁶⁷ *Ibid.*

²⁶⁸ Aquinas, *ST*, I, q.75, a.2, corp.

²⁶⁹ This is not to say that there are not interesting replies to this problem. Patrick Toner and Gordon Barnes have independently argued that the rational soul is an “incomplete substance” (Patrick Toner, “Personhood and Death in St. Thomas Aquinas,” *History of Philosophy Quarterly*, Vol. 26, No. 2 (2009); Gordon P. Barnes, “The Paradoxes of Hylomorphism,” *The Review of Metaphysics*, Vol. 56, No. 3 (Mar., 2003): 508). Brian Leftow also offers a Platonic reading of Aquinas in which the rational soul is a “particularized universal” in his “Souls Dipped in Dust,” in Kevin Corcoran, *Soul, Body and Survival: Essays on the Metaphysics of Human Persons* (New York: Cornell University Press, 2001): 120-138. Perhaps the

about a human being's substantial form that will facilitate its appropriation into an account of personal ontology. For instance, a rational soul, while serving as a substantial form, can be said to have a spatial location²⁷⁰ and a determination in time.²⁷¹ Stump emphasizes this fact in saying that "while the body is alive and the soul configures it, the soul is located where the body is."²⁷² Stump also notes that the rational soul is simple "in the sense that it is not the sort of thing that has a certain quantity."²⁷³ For the purposes of our investigation, then, let us say that the rational soul is an immaterial something, which nevertheless has the qualities of spatial location, temporal determination and simplicity, and it serves as the actualizing and organizing principle of a selection of passively potential prime matter in order to compose, with its material complement, a single individual human being. Thus, we can, with greater clarification, return to the assertion above that each of us is numerically identical to a composite of matter and form.

With this determination in mind, the rest of chapter three will be dedicated to my own assessment of hylomorphism as an account of personal ontology. I will first compare hylomorphism to substance dualism, suggesting that, while it is a form of dualism, the Thomistic position can avoid most of the latter view's pitfalls when understood correctly. Next, I will introduce an animalist interpretation of hylomorphism and show how the larger hylomorphic ontology can provide the resources needed to respond to problems for a biological account. In sections 3.3 – 3.3.2 I will investigate a recent alternative interpretation of hylomorphism that claims that we are only contingently animals.

problem here is as innocuous as asking what an electron *actually* is. To answer this question one would probably list the qualities that electrons have or certain effects that they have on other things. It is essentially this sort of response that I provide in the sentences that follow.

²⁷⁰ "Since, however, the soul has not quantitative totality, neither essentially, nor accidentally, as we have seen; it is enough to say that the whole soul is *in* each part of the body, by totality of perfection and of essence" (Aquinas, *ST*, I, q.76, a.8, corp., emphasis added)

²⁷¹ Both Eleonore Stump (*Aquinas*, 173) and Jason Eberl ("Aquinas on the Nature of Human Beings," *The Review of Metaphysics*, Vol. 58 (Dec. 2004): 343) suggest that a rational soul cannot pre-exist its material complement, though it may continue to exist when that complement loses its functional configuration. See also Kevin White, "Aquinas on the Immediacy of the Union of Soul and Body," in Paul Lockey, *Studies in Thomistic Theology* (Houston: Center for Thomistic Studies, 1995): 209-280.

²⁷² Stump, *Aquinas*, 202.

²⁷³ *Ibid.*, 201. This seems to follow from Aquinas' assertion that the soul is "wholly present" in each of a human being's parts (*ST*, I, q.76, a.8, corp.). There is not more of the soul in the heart or in the brain, though there may be certain powers that are manifested in those places rather than in others. See also Stump, *Aquinas*, 200-201. I will say more about this notion of simplicity in section 3.2.1 below.

3.1.2 Hylomorphism versus Substance Dualism

Substance dualism in the Cartesian tradition is based on two key claims. The first is that the body and the mind (or body and soul) are distinct substances in their own right and can independently engage in activities natural to their kind. Descartes argues that “we clearly perceive the mind, that is, a thinking substance, apart from the body, that is, an extended substance.”²⁷⁴ And furthermore, he says

[t]he inference to be drawn from these results [the results of his meditations] is that all the things that we clearly and distinctly conceive of as different substances (*as we do in the case of mind and body*) are in fact substances which are really distinct from the other.²⁷⁵

The second claim made by Descartes is that, as an answer to the question of personal ontology, he (and presumably each one of us) is identical to a mind or soul, otherwise known as a thinking substance:

I saw...that from the mere fact of doubting the truth of other things, it followed quite evidently and certainly that I existed...From this I knew I was a substance whose whole essence or nature is solely to think, and which does not require any place, or depend on any material thing, in order to exist. Accordingly this ‘I’ – that is, the soul by which I am what I am – is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist.²⁷⁶

Although Aquinas holds that the rational soul is something subsistent,²⁷⁷ and that it can exist on its own after the corruption of the body,²⁷⁸ he would nevertheless disagree with Descartes on the two points above. In response to the suggestion that we are, strictly speaking, only souls, Aquinas insists, on the contrary, that “a human being is a third thing composed from two components, body and soul, both differing from the whole (for a human being is neither soul nor body).”²⁷⁹ And in an oft-quoted passage from one of his

²⁷⁴ René Descartes, “Objections and Replies,” translated by John Cottingham, Robert Stoothoff and Dugald Murdoch, in *Descartes: Selected Philosophical Writings* (Cambridge: Cambridge University Press, 1988): 158.

²⁷⁵ Descartes, *Meditations on First Philosophy*, translated by Cottingham et al, in *Descartes*, 73-74, emphasis added.

²⁷⁶ Descartes, *Discourse on the Method*, translated by Cottingham, et al., in *Descartes*, 36.

²⁷⁷ Aquinas, *ST*, I, q.75, a.2, corp.

²⁷⁸ Aquinas, *ST*, I, q.75, a.6, corp.

²⁷⁹ Saint Thomas Aquinas, *De Ente et Essentia* (hereafter referred to as *DEE*), Ch. 2, translated by Timothy McDermott, in *Thomas Aquinas: Selected Philosophical Writings* (Oxford: Oxford University Press, 1993).

biblical commentaries, he states quite simply, “My soul is not me.”²⁸⁰ Aquinas was aware of views that identified a human individual with only his or her own soul,²⁸¹ and he vehemently rejects them. He argues that sensation is an act properly attributable to that which we are. But “whatever performs the operations proper to a thing,” Aquinas asserts,

is that thing; wherefore that which performs the operations of a man is man. But it has been shown above (A. 3)²⁸² that sensation is not the operation of the soul only. Since, then, sensation is an operation of man, but not proper to him, it is clear that man is not a soul only, but something composed of soul and body.²⁸³

So sensation, according to Aquinas, is a bodily act as well as a psychical one. In order for my senses to be properly attributable to me, I cannot be the soul alone, but rather, I must be the man, that is, the body/soul composite.²⁸⁴

In response to the suggestion that the body and the mind (or body and soul) are distinct, independently acting substances, Aquinas insists, on the contrary, that “body and soul are *not* two actually existing substances; rather, the two of them together constitute one actually existing substance.”²⁸⁵ As indicated above, according to a Thomistic hylomorphic account, the body (or selection of prime matter) is not actually anything until it is organized by a substantial form, and thus it cannot be considered a substance in its own right. The soul too cannot be considered a substance because by itself it does not

Aquinas’s use of the term ‘body’ here as opposed to ‘prime matter’ is a bit curious. It may be, as Stump suggests (*Aquinas*, 203), simply an issue of translation. Gyula Klima, on the other hand, takes it to be much more complicated than that. See his “Man=Body+Soul: Aquinas’ Arithmetic of Human Nature,” in Brian Davies, *Thomas Aquinas: Contemporary Philosophical Perspectives* (Oxford: Oxford University Press, 2002): 257-274. I think for our purposes we can understand any reference to ‘body’ as meaning ‘a selection of prime matter’.

²⁸⁰ Saint Thomas Aquinas, *Commentary on St. Paul’s First Letter to the Corinthians*, 15: 17-19, translated by Timothy McDermott, in *Thomas Aquinas: Selected Philosophical Writings* (Oxford: Oxford University Press, 1993): “But soul is not the whole human being, only part of one: my soul is not me. So that even if soul achieves well-being in another life, that doesn’t mean I do or any other human being does.”

²⁸¹ He attributes a view of this sort to Plato: “Plato claimed that a human being is not a composite of soul and body but that a human being is the soul itself using a body, just as Peter is not a composite of a human being and clothes, but rather a human being using clothes” (Saint Thomas Aquinas, *Summa Contra Gentiles* (Hereafter *SCG*), Book Two, Chapter 57, translated by James F. Anderson, in *Summa Contra Gentiles: Book Two: Creation* (Notre Dame, IN: University of Notre Dame Press, 1992).

²⁸² Aquinas, *ST*, I, q.75, a.3, corp.

²⁸³ Aquinas, *ST*, I, q.75, a.4, corp.

²⁸⁴ For recent defences of this argument see Patrick Toner, “An Old Argument Against Co-location,” *Metaphysica*, Vol. 8, No. 1 (2007): 45-51 and Lee and George, *Body-Self Dualism*, 4-16.

²⁸⁵ Aquinas, *SCG*, II, 69, emphasis added.

have “the complete nature of its species.”²⁸⁶ I will have more to say concerning Aquinas’ account of substance in section 3.2.2 below, but it should be clear from these remarks that hylomorphism rejects not only the second claim of substance dualism, but the first as well.²⁸⁷

In denying the two main tenets of the Cartesian sort, hylomorphic dualism (if it can be called that) appears at once to be a strikingly different variety, and as such, it avoids many of the problems associated with the substance dualist position.²⁸⁸ First, by attributing sensation to the human individual herself, hylomorphism is not susceptible to the same epistemological difficulties faced by early modern philosophers (or, for that matter, brain identity theorists²⁸⁹). Instead of detaching the person from the natural world and attempting to bridge that gap with intermediaries, hylomorphism places us among the objects of our everyday experience and allows us to be directly aware of the things that we perceive.²⁹⁰ Secondly, and perhaps most importantly, hylomorphism has a much more feasible solution to the mind-body interaction problem. If, as the first tenet of substance dualism suggests, the body and the soul are two distinct, independently functioning substances in their own right, the question inevitably arises as to how these things of such

²⁸⁶ Aquinas, *ST*, I, q.75, a.4, reply obj. 2.

²⁸⁷ At times it seems that Descartes himself does not even fully accept the second tenet of substance dualism. Later in the *Meditations* he refers to his “whole self” as “a combination of body and mind” (Descartes, *Meditations*, 117). In this regard, his own view may be closer to “compound dualism,” a view according to which each human individual is identical to a pairing of two distinct substances: body and soul (For more on compound dualism and problems for the view see Eric Olson, “A Compound of Two Substances,” in Kevin Corcoran, *Soul, Body and Survival: Essays on the Metaphysics of Human Persons* (New York: Cornell University Press, 2001): 73-88). Some philosophers mistakenly take Aquinas to espouse such a view (See for example, Richard Swinburne, “The Dualist Theory,” in Sydney Shoemaker and Richard Swinburne, *Personal Identity* (Oxford: Basil Blackwell, 1984): 32 and Peter van Inwagen, “A Materialist Ontology of the Human Person,” in Peter van Inwagen and Dean Zimmerman, *Persons: Human and Divine* (New York: Oxford University Press, 2007): 204-206), but importantly, Aquinas rejects *both* of the substance dualist’s main claims and he thus should not be misinterpreted as being compatible with either “pure dualism” or compound dualism.

²⁸⁸ Some of the ideas briefly explored here are explicated in greater detail in articles on this topic in the literature. See, for example, Eleonore Stump, “Non-Cartesian Substance Dualism and Materialism without Reductionism,” *Faith and Philosophy*, Vol. 12, No. 4 (1995): 505-531; Jason Eberl, “Varieties of Dualism: Swinburne and Aquinas,” *International Philosophical Quarterly*, Vol. 50, No. 1 (2010): 39-56.

²⁸⁹ See section 2.2.2.1 above.

²⁹⁰ For an account of Thomistic epistemology as direct realism see John Haldane, “Mind-World Identity Theory and the Anti-Realist Challenge” in John Haldane and Crispin Wright, *Reality, Representation and Projection* (Oxford: Oxford University Press, 1993): 15-38. For a more representationalist reading, see Claude Panaccio, “Aquinas on Intellectual Representation,” in Dominik Perler, *Ancient and Medieval Theories of Intentionality* (Leiden: Brill, 2001): 185-202.

radically distinct natures can interact. Even if such an account could be provided, there is still the question as to why my soul interacts with *only* my body and not others.²⁹¹

Aquinas was well aware of this difficulty and he argues that it is not a problem for his hylomorphism:

There has been much uncertainty about the way the soul and body are conjoined. Some had supposed a sort of medium connecting the two together by a sort of bond. But the difficulty can be set aside now that it has been shown that the soul is the *form* of the body. As he [Aristotle] says, there is no more reason to ask whether soul and body together make one thing than to ask the same about wax and the impression sealed on it.²⁹²

The first thing to notice about St. Thomas's reply is that it almost presciently anticipates Descartes' suggestion that the soul is joined to the body by a "sort of bond," that is, the pineal gland – Descartes' "medium" of choice.²⁹³ The second thing to notice is that Aquinas quite clearly thinks such strategies are unnecessary. If the soul is properly understood as the *substantial form* of the body, then its relation to its material counterpart is no more mysterious than a seal pressed in wax. Now, of course, this can only be understood analogously, due to the fact mentioned above that the rational soul is more than just the configurational state of a selection of matter, but *as actualizing principle* the soul is nevertheless an obvious and necessary component of the human being. There cannot even *be* a human body without the formal influence of the rational soul. Its causal efficacy is not, however, to be understood as denoting an exertion of force between two substances. Rather, the soul is causally relevant for our consideration of the body in roughly the same way that the shape of a knife causes it to cut. The strength of hylomorphic dualism, then, is that it does not make a special case for human beings in needing a complementary part. The concept of a rational soul is just an extension of the form/matter duality present throughout the natural world.

Hylomorphism as a theory of personal ontology admittedly contains some dualistic elements. Each of us has a soul that is purportedly immaterial and subsistent.

²⁹¹ This is the so-called "Pairing Problem" in Jaegwon Kim, "Lonely Souls: Causality and Substance Dualism," in Kevin Corcoran, *Soul, Body and Survival: Essays on the Metaphysics of Human Persons* (New York: Cornell University Press, 2001): 30-43.

²⁹² Aquinas, *Commentary on De Anima*, Lecture 1, Paragraph 234.

²⁹³ Descartes, *The Passions of the Soul*, translated by Cottingham et al., in *Descartes*, 233-238.

But what I hope to have demonstrated in this section is that this need not commit us to any form of Cartesian dualism. Crucially,hylomorphism does not identify the individual with her soul, but instead offers a more holistic approach in which each person is a composite of body and soul; ultimately, hylomorphism coincides with the view that you and I are living, breathing, human beings. Following this suggestion, in the next section I will emphasize and elaborate on hylomorphism’s affinities with animalism.

3.2 Hylomorphic Animalism

Thomistic hylomorphism works its way into animalism by arguing that we must belong to the category of things that have the natural capacity for both sensation and cognition. According to a hylomorphic account of personal ontology, we are animals in the Aristotelian sense in virtue of having the first capacity²⁹⁴ and, more specifically, we are *rational* animals in virtue of the second. Aquinas himself confirms this point in stipulating that “‘*animal*’ is predicated of man *essentially* and not accidentally.”²⁹⁵ Hylomorphism, then, can be considered a kind of animalism (as even Olson himself is apt to admit²⁹⁶), and recent advocates of the position have emphasized its proximity to the contemporary biological views espoused by Olson, van Inwagen and others. In this section I will explore the similarities and differences between these two brands of animalism and ultimately conclude that hylomorphic animalism captures most, if not all, of the important insights of its modern equivalent.

First, both hylomorphic animalism (hereafter referred to as HA) and Olsonian animalism (OA) recognize the infeasibility of basing an account of diachronic identity on any specific selection of material parts. As was demonstrated in section 2.1.1 above, one of greatest virtues of a biological account is that it recognizes and utilizes the biological fact of metabolic shuffling to its advantage. The gradual but inevitable part replacement of organisms through consumption and expulsion can be seen as a grave concern for a strict bodily account, but OA incorporates this dynamism into its formulation and argues

²⁹⁴ “For indeed of those things that without moving or changing place yet have perception, we say not just that they are alive but that they are animals” (Aristotle, *De Anima*, Book Two, Ch. 2).

²⁹⁵ Aquinas, *ST*, I, q.76, a.3., corp., emphasis added.

²⁹⁶ Olson, *What Are We?*, 172. In “An Argument for Animalism,” Olson lists Aristotle and his followers (Aquinas?) as perhaps the only “major figure[s] in the history of Western philosophy who thought that we are animals” (318).

that the greater unity of the organism in spite of the radical change of its parts points to a single unifying event - its life.

HA likewise rejects a static view of material objects and *a fortiori* of organisms. Though he was obviously unaware of what modern biology tells us about metabolic shuffling, Aquinas anticipates such findings and builds his account around them. He uses as a helpful illustration the example of a fire:

[W]hen a certain matter is directly transformed into fire, then fire is said to be generated anew: but when matter is transformed into a fire already existing, then fire is said to be fed. Wherefore if the entire matter together loses the form of fire, and another matter transformed into fire, there will be another distinct fire. But if, while one piece of wood is burning, other wood is laid on, and so on until the first piece is entirely consumed, the same identical fire will remain all the time: because that which is added passes into what pre-existed. *It is the same with living bodies, in which by means of nourishment that is renewed which was consumed by natural heat.*²⁹⁷

As this passage clearly shows, matter in the form/matter composite of hylomorphism does not entail a static selection of material constituents. It is true that I must be made of *some* matter but I need not consist of *this very* matter that now serves to identify me.²⁹⁸ Instead, what signifies my identity over time is the continuity of functional organization such that whatever parts I have continue to be arranged in an order suitable for the manifestation of my essential capacities. While the rational soul of a human being cannot be reduced to the set of life processes that ensure this stability,²⁹⁹ the continuity of my life is perhaps the best evidence that my identity persists.

As a second point of agreement, some advocates of HA have taken Aquinas' assertion that we are essentially animals to mean precisely what OA claims - that psychological continuity (at least *overt* psychological continuity) is neither necessary nor sufficient for the continuation of one's identity over time. For if it is true that we are numerically identical to animals of a certain type, then we should have the persistence conditions of animals, namely those of the biological sort.³⁰⁰ But what about the

²⁹⁷ Aquinas, *ST*, I, q.119, a.1, reply obj. 5.

²⁹⁸ I explore this issue in more detail in section 3.2.1 below.

²⁹⁹ Stump, *Aquinas*, 162.

³⁰⁰ Lee and George, *Body-Self Dualism*, 38.

seemingly plausible intuition that I will be transported with my functioning cerebrum in the case of its transplant? Patrick Toner argues that a disembodied cerebrum is not the kind of thing that can be said to be capable of sensation, and therefore, even under the Aristotelian definition of animality it would not qualify as an animal.³⁰¹ Inasmuch as I am essentially an animal, the removed cerebrum cannot be me. I cannot accompany it through transplantation. But if the cerebrumless animal remains and continues to exhibit its biological functions then it *can* be said to be the kind of thing capable of sensation, even if the removal of its cerebrum severely limits its ability to do so. It is, therefore, more plausible according to HA to conclude that in the case of a cerebrum transplant I would still be identical to the living, breathing human organism rather than the removed cerebrum. Lee and George argue that even if the other organism that received my cerebrum began to instantiate all or most of my memories, beliefs, desires and intentions we should understand these psychological features as being *qualitatively similar* to my own but nevertheless *numerically* distinct.³⁰²

Furthermore, Lee and George seem to subscribe to the view espoused by Olson and van Inwagen according to which the brain stem is the important indicator of biological continuity.³⁰³ This will have important repercussions for distinguishing conjoined twins, establishing a whole-brain criterion for the death of the organism, and presumably for deciding on the possibility of whole-brain transplants.³⁰⁴ Lee and George's position seems in this regard consonant with other biological accounts. Though not all advocates of HA are willing to stress the brain stem itself as a principle of

³⁰¹ Patrick Toner, "Hylemorphic Animalism," *Philosophical Studies* (Forthcoming). Elsewhere, Toner tentatively proposes that we understand the detached cerebrum as taking on the form of "*cerebrum*" during transplant and if the procedure is successful it should be understood as being subsumed by the rational soul of the recipient organism (Patrick Toner, "On Hylemorphism and Personal Identity," *European Journal of Philosophy* (Forthcoming)).

³⁰² Lee and George, *Body-Self Dualism*, 26.

³⁰³ *Ibid.*, 46. See footnote 113 above.

³⁰⁴ Lee and George discuss conjoined twins in *Ibid.*, 44-49 and the whole-brain criterion for establishing the death of organisms in *Ibid.*, 63-69. Though they do not explicitly address the issue of a whole-brain transplant, Patrick Lee and Germain Grisez come close to saying as much in "Total Brain Death: A Reply to Alan Shewmon," *Bioethics* (Forthcoming).

persistence,³⁰⁵ in general HA seems to agree with OA against PCT theorists on the issues related to cerebrum transplantation.

Another area of overlap between the two brands of animalism is that HA is compatible with Olson's thinking animal argument.³⁰⁶ As Hershenov puts it, "Since hylomorphism does not posit the spatial coincidence of a human person and a human animal, but identifies the thinking person with the living animal, there is no problem of too many thinkers."³⁰⁷ Olson, however, raises the objection that hylomorphism inherits its own version of too many thinkers by including as a necessary component of every human individual a particular rational soul.³⁰⁸ The problem emerges due to Thomistic hylomorphism's insistence that the disembodied soul can by itself think and reflect on its previous embodiment after its departure from the body.³⁰⁹ Olson asks,

[I]f your soul can think when it is disembodied, why can it not think when it is embodied? If it does think when it is embodied, yet it isn't you, then you are not the being that now thinks your thoughts, but are merely something that has that thinker as a part. Thomists would then face the same thinking-soul problem as compound dualists face.³¹⁰

Toner's response to this problem is to say that the soul will have a radically different mode of existence when disembodied, and any ability it may have then is not necessarily present during its embodiment.³¹¹ I think this is precisely what the HA theorist will have to say if he or she wishes to grant that the disembodied soul thinks, and as a response, it is not obviously ad hoc. Importantly, what the hylomorphic animalist must maintain is that *while embodied* the soul is not the thinker of one's thoughts.

As Toner asserts, there is ample evidence in the Thomistic literature that this is what Aquinas himself believed. For Aquinas says, "we may therefore say that the soul understands, as the eye sees; but it is more correct to say that man understands through

³⁰⁵ Patrick Toner, for instance, is less convinced that a whole-brain transplant would preserve the identity of an animal in the Aristotelian sense (Toner, "Hylomorphic Animalism").

³⁰⁶ *Ibid.*

³⁰⁷ David Hershenov, "Soulless Organisms? Hylomorphism vs. Animalism," (Forthcoming).

³⁰⁸ Olson, *What Are We?*, 175-176.

³⁰⁹ Aquinas, *ST*, I, q.89, a.1, corp.

³¹⁰ Olson, *What Are We?*, 175-176.

³¹¹ Toner, "Hylomorphic Animalism." Toner cites, in defense of this claim, Aquinas' remarks concerning the disembodied soul's mode of existence in *ST*, I, q.89, a.1.

the soul.”³¹² What Aquinas seems to be getting at here is the way in which some of our parts are used for certain activities without the parts themselves being the subject of the act. For instance, I can shoot a basketball with my hands but we would not attribute the act of shooting a basketball solely to my hands. Rather, the action is something that requires the coordination of many of my parts and its complete explanation will necessarily include reference to me as the larger organism. Therefore, the thinking animal problem is not violated by positing a rational soul as a complement to the material nature of a human being. Rather, the assertion that activities such as thought must be attributable to the human organism in its entirety (by virtue of specific powers) is yet one more way in which HA and OA agree.

By including a comparative analysis of HA’s and OA’s treatment of metabolic shuffling, cerebrum transplantation and the thinking animal argument, I hope to have demonstrated the significant affinity between the two views. In the following sections I will argue further that hylomorphic animalism not only captures the insights of the animalist position, but it also has the resources to properly respond to its challenges.

3.2.1 Persistence and Individuation

The problem of intransitivity is an issue that confronts all accounts of personal identity. In Chapter 1 I argued that it is, *pace* Parfit and Lewis, a serious objection to any view that relies on the continuity of memories.³¹³ This was due to the fact that psychological continuity must necessarily introduce *degrees* of identity and this very admittance will undermine any attempt by the PCT theorist to construct an account of *numerical* identity over time. In Chapter 2, I argued that biological accounts of personal identity offer an interesting reply to this objection.³¹⁴ Animalists posit as the principle of persistence the continuity of the event of an organism’s life. I suggested that as long as the animalist insists on the numerical identity of an organism’s life at any stage of its career it can avoid intransitivity. But in order to do so, he or she must provide an account of the simplicity of the life relation. In other words, there cannot be more or less of the relation between the stages of an organism’s career as it persists through time.

³¹² Aquinas, *ST*, I, q.75, a.2, reply obj. 2.

³¹³ Section 1.1.1 above.

³¹⁴ Section 2.2 above.

The requirement that every human individual must have a simple, numerically persistent component lends itself most readily to an account of personal identity that includes a notion of the immaterial. It may very well be that Thomas Reid himself was aiming for this kind of conclusion when he first introduced the problem. Roderick Chisholm, who himself was following Joseph Butler, uses a similar argument to point to the fact that we must be *identical* to a simple immaterial part in order to preserve our “strict and philosophical” identity over time.³¹⁵ Where hylomorphism differs from Chisholm’s view and other substance dualisms is in its assertion that we are not *identical* to a simple immaterial being, but rather, each of us has a simple immaterial *part* – namely a rational soul as our substantial form. As I outlined in section 3.1.2 above, the rejection of substance dualism’s main claims allows hylomorphism to avoid its most obvious difficulties. In doing so it does not, however, abandon its solution to the problem of intransitivity. As Stump argues, the rational soul of a human being is quantifiably simple and at no time of its career will an individual be “less-ensouled” than at other times.³¹⁶ As a result, by positing the existence of substantial forms, hylomorphism can provide a sound preservation of the transitivity of numerical identity. Therefore, in response to the perennial issue of intransitivity, I submit that hylomorphism is the most qualified position to handle the objection.

The substantial form of a human being is its primary principle of persistence, but importantly, it cannot be its principle of individuation. The main reason for this is that a form is something universal. It serves to delineate types or kinds of things but it cannot distinguish individuals under the same category, for the form will be the one thing that every member shares.³¹⁷ The principle of individuation must then be the material component of the form/matter duality. But, as Oderberg notes, prime matter is not itself quantified until it is actualized by a substantial form, and as a result, it is not a legitimate

³¹⁵ Roderick Chisholm, “On the Simplicity of the Soul,” *Philosophical Perspectives*, Vol. 5, Philosophy of Religion (1991): 161-181.

³¹⁶ p. 102 above.

³¹⁷ David Oderberg, “Hylomorphism and Individuation,” in John Haldane, *Mind, Metaphysics, and Value in the Thomistic and Analytic Traditions* (Notre Dame, Indiana: University of Notre Dame Press, 2002): 128; Brown, *Aquinas and the Ship of Theseus*, 125.

candidate either.³¹⁸ Accordingly, Aquinas states that “what makes things individual is not material as such but *demarcated material*, by which I mean material thought as underlying certain defined dimensions.”³¹⁹ But as the fire analogy indicates, Aquinas does not mean by this that the principle of individuation is a selection of matter with static dimensions. Substances, and more specifically, human beings, change their material parts over time, grow in size and shape, and extend in duration. As Oderberg and others have noted, the principle of individuation must then be “demarcated matter” (or as it is often translated, “designated matter”) understood as having “*indeterminate* quantity,” where quantity simply means the degree to which it is extended in three dimensions.³²⁰ In other words, it is not possible to individuate human beings over a certain duration based on a particular height or weight they have at any single moment. Though it is necessary that at each moment they do have determinate dimensions, most substances will not have those same determinate dimensions throughout their career.³²¹ The range of possible dimensions for any given material object is dictated by its substantial form. Oderberg suggests that living things especially can only exhibit their characteristic features under certain ranges of dimensionality.³²²

The first relevant insight to gather from this analysis is the importance of the material component of a human being (understood dynamically) in tracing its individuation across time. While it is true that the sameness of substantial form allows us to re-identify a human being based on the continuation of its functional organization, the material component tells us that the object we are considering is not only of the same category, but that it is also numerically identical to the object whose previous stages we are comparing. The numerical identity of a substantial form, then, is *traced* by observing the spatio-temporal continuity of its material complement. As Haldane puts it, “Metaphysically speaking, what matters is material continuity, inasmuch as this is a

³¹⁸ *Ibid.*, 126.

³¹⁹ Aquinas, *DEE*, Ch. 2, emphasis added.

³²⁰ Oderberg, “Hylomorphism and Individuation,” 130-133; Eberl, “Aquinas on the Nature of Human Beings,” 350.

³²¹ Eberl, “Aquinas on the Nature of Human Beings,” 350.

³²² Oderberg, “Hylomorphism and Individuation,” 135. Perhaps one way to understand this is Pasnau and Shield’s notion of an organism’s self-limited growth (p. 99 above).

necessary complement to the preservation of one and the same individualized substantial form.”³²³ This is where at least some of the motivation for interpretinghylomorphism as animalism comes from. A human individual is unique with regard to non-human material objects in virtue of having a rational soul as its substantial form, but what makes it unique among other human beings is at least its distinct position in time and space.³²⁴ Even when in later sections of this thesis we approach an interpretation of hylomorphism that abandons the essentially-animalist stipulation, this spatio-temporal requirement will be a crucial element in its formulation.

The second topic of discussion that emerges from the issue of individuation, and the reason I include it in this section, is that, based on what has been said, hylomorphism risks falling into circularity. As has been argued, designated matter individuates substantial forms. What allows us to identify a substantial form as *this* substantial form is its location in time and space. But when observing a selection of smaller material entities, what we use to differentiate those candidates that are parts of a larger substance from those that lie outside of its boundaries are the qualities of the form itself and whether or not the smaller objects are caught up in its corresponding activities. It would seem, then, that the determination of matter requires a notion of form, but also, that form requires matter to be determined. If this is not a case of arguing in a circle it certainly comes close.

It may help to compare the present concern with the circularity problems faced by other accounts. Earlier I argued that formulations of PCT that are reliant on the experience-memories of individuals require the very concept of human individuation they are attempting to establish in order to validate the memories themselves.³²⁵ Animalism also faces the tough question of how to synchronically individuate lives without resorting to descriptions of the larger organisms.³²⁶ Similarly, hylomorphism faces the following problem: if a substantial form is the primary principle of persistence for a material object, what explains *its* persistence? What makes a substantial form exactly the same throughout the object’s career? I have argued in this section that material continuity is

³²³ John Haldane, “A Thomist Metaphysics,” 97.

³²⁴ There are of course other ways to differentiate individual human beings based on the accidental features they may have.

³²⁵ Section 1.1.2 above.

³²⁶ Section 2.2 above.

indicative of substantial identification. But if the persistence of a substantial form is *constituted* by the relations of its material counterparts, then the account is circular, and hylomorphism would appear to be no better off than its rivals.

The solution to this problem is one I briefly suggested back in the first chapter.³²⁷ Though the persistence of material objects, and specifically human beings, is constituted chiefly by the continuity of a substantial form, the persistence of the substantial form itself must be a brute and unanalyzable fact.³²⁸ This does not, however, mean that there is nothing to be said about its persistence. For one, it is still true that a substantial form is individuated by designated matter. At the very first moment of its existence, a substantial form actualizes a selection of matter that has determinate dimensions in space and time. This allows Aquinas to say, “its [the rational soul’s] individuality doesn’t have to perish when the body is taken away, because the existence it has in its own right – an existence individuated by it being made the form of this body – from then on always stays individuated.”³²⁹ So in an important sense, designated matter is still the principle of individuation for substantial forms.

Moreover, spatio-temporal continuity remains an important tool for the re-identification of substantial forms over time. In the case of living things, for instance, we can follow the instantiations of certain characteristic functions as they are individuated by an organism’s dimensionality. When I claim that the dog sitting at the edge of my bed is identical to the dog that did the same yesterday, what makes this claim true is the fact that the dog has the same, numerically identical substantial form. But my own assertion of this fact is the result of a certain procedure. First, I can determine that this object in front of me is suitably arranged so as to exhibit the characteristic functions of a typical dog. This tells me that I am dealing with the same type of object. Secondly, I can, at least in principle, offer a detailed map of the spatio-temporal continuity between the dog that sat at the edge of my bed yesterday and the one that does so today, such that at each stage along the way it continues to have a configurational state appropriate for its kind. The *fact* that the dog of today has the same substantial form and is thus numerically identical

³²⁷ p. 20 above.

³²⁸ Oderberg, *Real Essentialism*, 117-120.

³²⁹ Aquinas, *DEE*, Ch. 5.

to the dog of yesterday is a simple and unanalyzable truth, but spatio-temporal continuity is *evidentially important* for my own establishment of this claim. As Oderberg states, “We refer to evidence, and evidence is all we have to go on. Even the much-vaunted phenomenon of spatio-temporal continuity only gives us evidence rather than an analysis.”³³⁰

Oderberg’s suggestion, then, is that hylomorphism can avoid the problems of circularity by emphasizing the brute fact of persistence. Although the evidence for establishing the persistence of a substantial form requires reference to the relations of its material counterparts, the persistence itself is not constituted by those relations, and thus there is no circularity in its analysis. It might be argued that brute identity is a solution that even a non-hylomorphic animalist could accept just as well. While I am willing to admit that this is a possibility,³³¹ I would also argue that by positing the existence of a simple, immaterial part for each human individual, hylomorphic animalism is the most natural proponent of such a position.

3.2.2 Substances, Rival Candidates, and Dead Bodies

Another important facet of Thomistic hylomorphism, and for our present purposes, HA, is Aquinas’ so-called “unicity doctrine.”³³² According to this doctrine, every material substance has only one substantial form. In the case of human beings, for instance, there is not a separate substantial form that first actualizes the body, another that actualizes the body as a living thing and a third that actualizes the living body’s rationality. Instead, there is one single substantial form that actualizes all of a human being’s functions and every one of its parts. This is a human being’s rational soul. As St. Thomas puts it, “We must not think, therefore, of the soul and body as though the body had its own form making it a body, to which a soul is super-added, making it a living body; but rather that the body gets its being and its life from the soul.”³³³ And elsewhere he says,

³³⁰ Oderberg, *Real Essentialism*, 118.

³³¹ See, for example, Trenton Merricks, “There are No Criteria of Identity Over Time,” *Nous*, Vol. 32 (1998): 106-124.

³³² Brown, *Aquinas and the Ship of Theseus*, 84-87; Oderberg, “Hylemorphic Dualism,” 81-85

³³³ Aquinas, *Commentary on De Anima*, Lecture 1, 225.

we must conclude, that there is no other substantial form in man besides the intellectual soul; and that the soul, as it virtually contains the sensitive and nutritive souls, so does it contain virtually all inferior forms, and itself alone does whatever the imperfect forms do in other things.³³⁴

Aquinas has two main reasons for espousing such a view,³³⁵ and I include them here not as a rigorous defence of his position, but as a means of further clarification. The first motivation for his position follows directly from his conception of prime matter. Recall that for Aquinas the material foundation of the natural world is completely unactualized. A substantial form is that which actualizes and organizes the purely potential prime matter into a certain type of thing. The result of this combination is a substance of a specific sort. Once matter is arranged into a substance, the only kind of form that can be added to it is an accidental form. This is due to the fact that a material substance receives its very being from a substantial form. Once it has being it does not require any further substantiation. It can take on other forms certainly, but it can only receive from them modifications or accidents of the being that it already has.³³⁶

Aquinas' second argument for the unicity of substantial forms is based on the apparent unity of the human individual. For Aquinas, there must be some explanation, some unifying principle for the coordination of the parts and functions of an organism. If an animal did not have a single substantial form, then, metaphysically speaking, it could not be considered a single entity in any robust sense:

an animal would not be absolutely one, in which there were several souls. For nothing is absolutely one except by one form, by which a thing has existence; because a thing has from the same source both existence and unity; and therefore things which are denominated by various forms are not absolutely one.³³⁷

But, Aquinas insists, a human being *is* absolutely one thing, and therefore each of us has only one substantial form.

³³⁴ Aquinas, *ST*, I, q. 76, a. 4, corp.

³³⁵ Brown, *Aquinas and the Ship of Theseus*, 85-87.

³³⁶ "The accidental form presupposes an already existing subject; but the substantial form presupposes only potentiality to existence, i.e. bare matter. That is why there cannot be more than one substantial form in any one thing; the first makes the thing an actual being; and if others are added, they confer only accidental modifications, since they presuppose the subject already in act of being" (Aquinas, *Commentary on De Anima*, Lecture 1, 224).

³³⁷ Aquinas, *ST*, I, q. 76, a. 3, corp.

Aquinas' unicity doctrine has wide-reaching consequences for his greater hylomorphic ontology, and importantly, it also shapes his conception of human beings. Patrick Toner has recently argued that the entailments of the unicity doctrine can be used to solve many of the puzzles faced by proponents of a biological account of personal identity.³³⁸ In the following, I will attempt to outline and elaborate on his proposed solutions, utilizing relevant passages from the Thomistic literature when appropriate.

To begin with, let us start with the conclusion gathered from the above: a human being has as its formal component a single substantial form that actualizes all of its functions and every one of its parts. As a second premise, let us consider the fact that any substance gets its substantiality, indeed, its very being, from a substantial form. Based on these premises, we can conclude that, because it has within its composition only one substantial form, a human being has no other substances as proper parts.³³⁹ With that said, there is a right way and a wrong way to interpret this. The wrong way would be to conclude that each one of us is an immaterial soul or a philosophical atom with no parts whatsoever. The right way is to concede to the seemingly obvious fact that we do have parts, but insist that none of our parts are substances in themselves.³⁴⁰

But if our parts are not substances, what are they? Toner argues that many of the parts we do have are "mere spatial parts." They can be "geometrically defined" and "picked out functionally on the basis of what the properties associated with those areas do."³⁴¹ In other words, my left hand is the left-most area of my body with which I am able to grasp and pull various things. For this reason, Brown also refers to them as "functional parts."³⁴² It is clear why something such as my hand cannot be a substance in itself. If disconnected from the larger organism, a hand can no longer engage in its

³³⁸ Toner, "Hylemorphic Animalism."

³³⁹ Toner defends this position in much greater detail than I will here. See his "Emergent Substance," *Philosophical Studies*, Vol. 141 (2008): and also his "On Substance," *American Catholic Philosophical Quarterly* (Forthcoming). This argument also appears in Brown, *Aquinas and the Ship of Theseus*, 83-84.

³⁴⁰ Toner, "Hylemorphic Animalism."

³⁴¹ *Ibid.*

³⁴² Brown, *Aquinas and the Ship of Theseus*, 92.

characteristic functions of grasping or pulling. And without its capacity for those functions, a hand loses its categorical status – it is no longer the same thing.³⁴³

Additionally, a human being also has “elemental parts.”³⁴⁴ These are parts that could otherwise be substances in themselves, but, when contained within an organism, are subsumed by the activities of the larger substance. For instance, a carbon atom is an elemental substance when detached from any larger entity, but when it becomes a part of an organism it undergoes a substantial change such that there is no longer anything configured by its carbon form.³⁴⁵ Instead, the substantial form of the organism reconfigures the prime matter of the former carbon atom so as to utilize its potentialities for its own good. As Haldane puts it,

in hylomorphic terms there is in such a case only one actual substantial form, though there may be several virtual ones corresponding to lower level unifications. Activities which in lower-level systems would be attributable to the presence of different kinds of structuring principles are taken under the governance of the higher form.³⁴⁶

The powers or properties of the former carbon atom can, however, continue to be localized in the organism. The continuation of their “qualitative features” is the reason why Toner insists that these types of parts do in fact exist. He states that, although they cannot be considered substances in their own right, they are still “nominally present.”³⁴⁷ But, “the important question,” Toner continues, “is not whether the spatial parts bear a resemblance to the substances that existed prior to composition: they usually will. The

³⁴³ Toner, “On Substance.” Toner argues that for spatial parts, “having the property of being a part is essential to the thing that has that property.” Once it ceases to be a part of the organism, a hand is no longer a hand. This assertion comes right out of Aristotle (see, for example, Aristotle, *Metaphysics*, Book VII, Chapter 10, translated by Terence Irwin and Gail Fine, in *Aristotle: Selections* (Indianapolis: Hackett, 1995). It will become important later on when we approach a hylomorphic solution to the corpse problem below.

³⁴⁴ Brown, *Aquinas and the Ship of Theseus*, 94-98.

³⁴⁵ Toner, “Emergent Substance,” 287-288.

³⁴⁶ Haldane, “A Return to Form,” 275.

³⁴⁷ Toner, “Emergent Substance,” 288. Compare the analysis above to the following remarks from Aquinas himself: “The characteristic quality of the compound retains something of the qualities of its elements. But the qualitative property of an element is not its substance, though it is active with the substance’s power; The substances of the elements then are present in the compound, but virtually – through their powers – not actually” (Saint Thomas Aquinas, *De Mixtione Elementorum*, translated by Timothy McDermott, in *Thomas Aquinas: Selected Philosophical Writings* (Oxford: Oxford University Press, 1993).

important question, rather, is what *owns* the properties.”³⁴⁸ Toner’s assertion is that every property or causal power exhibited by a spatial or elemental part must be attributed to the substance itself.³⁴⁹

With these details having been laid out, we are now in a position to formulate a hylomorphic response to one of the biggest problems for animalism. As I noted in section 2.1.2 above, OA relies heavily on the thinking animal argument: if I am the thinker of my thoughts, and the animal in my chair thinks my thoughts, then to avoid too many thinkers, I must be the animal in my chair. But Zimmerman asks, why suppose that the animal is the *only* candidate for the thinker of my thoughts? One could easily replace ‘the animal’ in the argument with things such as ‘my head,’ ‘my brain,’ ‘a mere hunk of matter,’ or ‘my body’ and use it as an argument for being one of those things. This is the so-called “Problem of Rival Candidates.” Olson’s less than enthusiastic response to this objection is to deny that any of the supposed replacements exist. But as he himself notes, it is not a response that he likes to have to give.

Toner’s reply is that, based on our analysis of substance above, an advocate of HA can properly respond to the rival candidates objection without having to adopt the sparse ontology. His argument can be summarized as follows:

1. A human being is a substance.
2. A substance has no other substances as parts.
3. I am a substance.
4. Therefore, I cannot be a part of a human being.³⁵⁰

As we did with Olson’s original argument, let us briefly examine Toner’s premises. The first premise may appear contentious due to the fact that we have not yet precisely determined what a substance is or what things qualify as substances.

Unfortunately, I do not have room here to give a full analysis of Toner’s account of

³⁴⁸ Toner, “Emergent Substance,” 288.

³⁴⁹ *Ibid.* Notably, Aquinas also seems to hold this position: “to operate *per se* belongs to what exists *per se*. But for a thing to exist *per se*, it suffices sometimes that it be not inherent, as an accident or a material form; even though it be a part of something. Nevertheless, that is rightly said to subsist *per se*, which is neither inherent in the above sense, nor part of anything else. In this sense, the eye or the hand cannot be said to subsist *per se*; nor can it for that reason be said to operate *per se*. Hence the operation of the parts is through each part attributed to the whole” (ST, I, q. 75, a. 2, reply obj. 2.).

³⁵⁰ Toner, “Hylomorphic Animalism.”

substance,³⁵¹ but perhaps it is sufficient enough to note that, historically, human beings have been seen as the quintessential member of the substance category; even the sparse ontologies of Olson, van Inwagen, and Hoffman and Rosenkrantz admit that organisms are substances.³⁵² The second premise has been the topic of discussion for this section, and it is the main contribution of HA. The third premise, as I will admit, may be the most difficult to defend in front of a larger philosophical audience.³⁵³ I think some PCT theorists are quite willing to argue that we are not substances of any sort.³⁵⁴ But according to the hylomorphic framework, a substance is, in its most basic sense, an entity to which accidents or properties can be attributed.³⁵⁵ If, as seems to be the case, I am some thing to which properties are attributable rather than being any property itself, then it follows quite naturally that I am a substance of some sort. Moreover, as a suggestion for animalists, the third premise would seem to hold considerable weight. Van Inwagen states quite frankly, “I myself believe that we are material substances,”³⁵⁶ and one of Olson’s subsidiary arguments against PCT is claiming that unlike ‘animal,’ the term ‘person’ is not a substance concept.³⁵⁷

As I mentioned earlier,³⁵⁸ HA also preserves the thinking element of Olson’s original argument for animalism. For we can understand thinking as either a power of some entity or an attributable property along the lines of: ‘is currently thinking.’ But if Toner is right in suggesting that only substances can have powers or properties attributed to them, then any thinking seemingly done by a part of an organism is actually the

³⁵¹ See his “On Substance,” (Forthcoming). For a similar Thomistic account, see Brown, *Aquinas and the Ship of Theseus*, 55-56.

³⁵² Olson, *The Human Animal*, 4-5; van Inwagen, *Material Beings*, 100, 158, 207; Joshua Hoffman and Gary Rosenkrantz, *Substance: Its Nature and Existence* (New York: Routledge, 1997): ix.

³⁵³ Toner’s defense of this premise stems from his definition of substance. But again, I do not have room to go into that here.

³⁵⁴ H.P. Grice, for instance, believes we are “Logical Constructions” (H.P. Grice, “Personal Identity,” in John Perry, *Personal Identity* (Berkeley: University of California Press, 1975): 73-98).

³⁵⁵ Here we can look to Aristotle: “primary substances are subjects for all other things, and all other things are predicated of them or in them” (Aristotle, *Categories*, Chapter 5, translated by Terence Irwin and Gail Fine, in *Aristotle: Selections* (Indianapolis: Hackett, 1995).

³⁵⁶ Van Inwagen, “A Materialist Ontology of the Human Person,” 206.

³⁵⁷ Olson, *The Human Animal*, 27-37.

³⁵⁸ Section 3.2 above.

property or activity of the larger substance, though it may be localized in one of its spatial parts. For instance, though thought may be manifested more readily in the brain or the head of a human being, because none of these “candidates” are substances, it is ultimately the human being herself that is doing the thinking.

HA has the resources, then, to provide two interrelated responses to the problem of rival candidates. First, it says that none of the parts of a human being are substances. Inasmuch as any of the rival candidates are parts of human beings, they are thereby eliminated from candidacy for being me; they just are not the right type of thing. Secondly, by denying substancehood to any part of a human being, these parts are also eliminated from candidacy for being the thinker of one’s thoughts; they simply cannot have that power or property attributed to them. Importantly, HA is able to do all this without having to deny the existence of those objects. Toner is quite adamant about this point: “it is no part of my view of substance to claim that only substances exist...I’m not saying that the carbon atoms in you don’t exist (just that they’re not substances). This is not a form of eliminativism.”³⁵⁹ And elsewhere he says, “My view is not committed to the claim that there are no brains or livers or cells or hands: it is committed only to denying that those things are substances.”³⁶⁰ So I can say that I do have hands, feet, a head, cells, and constituent carbon atoms, but these must be understood as either functional or elemental parts and not substances. If we allow this suggestion, then HA offers a powerful reply to the rival-candidates objection, that, by avoiding eliminativism, is a considerable improvement upon that given by OA.

In addition to solving the problem of rival candidates, Toner argues that the entailments of Aquinas’ unicity doctrine can also be used to mitigate animalism’s “Corpse Problem.”³⁶¹ Recall from section 2.2.1 above that the dead body that is left after the death of an organism needs to be accounted for: either it is the same body that existed prior to the organism’s death (and was thus coincident with the animal) or some new entity has “popped” into existence. Promulgators of the corpse problem insist that neither of these options is very appealing. Van Inwagen’s solution is to deny that there is any

³⁵⁹ Toner, “On Substance.”

³⁶⁰ Toner, “Hylemorphic Animalism”.

³⁶¹ *Ibid.*

material composite after the death of an organism; there are only material simples arranged in an accidental order. It would be preferable, Olson and Hershenov admit, if the animalist did not have to resort to this eliminativist strategy. And in an attempt to offer their own replies, they have emphasized the radical dissimilarity between the organism and the corpse. This, I suggested, is an important first step in solving the problem, but in order to give a full account of corpses, the animalist should look to the resources of hylomorphism. In what follows I will demonstrate how HA resolves the puzzle of dead bodies.

What we learn from the unicity doctrine is that all of the parts of a substance get their identity, indeed their very being, from the single substantial form of the substance itself. Consequently, any part that is removed from the substance and is thus no longer directed by its substantial form, is, an entirely new entity, if it should gain its own existence. For according to hylomorphism, there is no actual part that is first subsumed by the form of a substance and then gains its own substantial form. Instead, a selection of prime matter, understood as potentially any substance, has undergone a “substantial change,”³⁶² for no actual entity can survive the loss of its substantial form.³⁶³

Let us assume, then, that if there is such a thing as ‘the body’ and it is not identical to the human being itself, it would have to be a part of the human being. Notice that based on what we concluded above, the coincidence of the body and the animal is no problem for hylomorphism. The body will not qualify as a substance as long as it is a part of the human being, and thus it will not be a thinker. But what must also be the case is that the body cannot survive the loss of a human being’s substantial form. Now, according to HA, the substantial form of a human being - its rational soul - is, in virtue of being a soul, the principle of a human being’s life. So once the event of a human life ceases, this signals the departure of its substantial form. Therefore, even if there is such a thing as ‘the body,’ it will not persist beyond the death of the organism, and the purported symmetry in the corpse problem is simply not there. As Toner puts it, “[D]eath is a

³⁶² “Sometimes, indeed, the same actual thing is different now from what it was before, as in motion according to quantity, quality and place; but sometimes it is the same being only in potentiality, as in substantial change, the subject of which is matter” (Aquinas, *ST*, I, q. 45, a. 2, reply obj. 2)

³⁶³ “...the substantial form gives being simply; therefore by its coming a thing is said to be generated simply, and by its removal to be corrupted simply” (Aquinas, *ST*, I, q. 76, a. 4, corp.).

substantial change...When the animal dies, whatever is left over is not the same thing that was there before. This answer to the corpse problem simply falls out of hylemorphic animalism. It's not a bullet we have to bite."³⁶⁴

An interesting question for the hylomorphist is, once we have granted that death is a substantial change, and that no actual part of the human being has survived, what *is* left? What can we say about the remains of the (formerly) living? Brown remarks that although Aquinas himself never explicitly answers this question, the hylomorphist has two options: either the matter formerly configured by a rational soul takes on a new substantial form, the form of a corpse, or a deceased human being immediately breaks down into smaller elemental substances.³⁶⁵ Contemporary hylomorphists seem to be split on this issue.³⁶⁶ While it may not be essential for HA to choose one option over the other, I think there is room for an intermediate position. It certainly appears that a corpse is, for a while at least, a single something. It may very well be a substance. Admittedly, its substantial form would be of a peculiar type. Instead of ensuring the unity and activity of the substance it would provide for disunitive functions and passivity. But after a certain length of time, the corpse will inevitably break down into elemental substances as a result of its characteristic operation of putrefaction.

In summary, HA avoids the supposed dead body dilemma by rejecting both options. First, by including an account of substantial change, an advocate of HA can deny that the dead body need be accounted for prior to the organism's death; simply put, it just was not there. Even if there were such a thing as the organism's body, and it was

³⁶⁴ Toner, "Hylemorphic Animalism." This is essentially the same as what Aquinas says on the subject: "when life departs the body is not left specifically the same; the eyes and flesh of a dead man, as is shown in the *Metaphysics*, Book VII [by Aristotle], are only improperly called eyes and flesh. When the soul leaves the body another substantial form takes its place; for a passing away always involves a concomitant coming-to-be" (Aquinas, *Commentary on De Anima*, Lecture 1, 226).

³⁶⁵ Brown, *Aquinas and the Ship of Theseus*, 84.

³⁶⁶ Oderberg, in discussing the example of a dog, seems to prefer the former: "in dead flesh, from the moment death occurs, *not only is the substantial organic canine form absent but it is also replaced by the very form of a dead thing*, in which new functions of decay and disintegration immediately begin to occur" ("Hylemorphic Dualism," 83, emphasis added). Haldane, on the other hand, appears to argue for the latter: "Change, then, may be of two sorts, accidental and substantial. In the first case a substance persists through modifications of its attributes; in the second it is destroyed and replaced by another substance or an aggregate of these, *as when an organism dies and decomposes into a heap of chemical compounds*" ("A Thomist Metaphysics," 96, emphasis added). Brown as well finds the second option more plausible (Aquinas, 84), while Toner does not commit to either ("Hylemorphic Animalism").

coincident with the animal, the entailments of the unicity doctrine allow HA to side-step the problem of too many thinkers. But barring that admittance, the hylomorphist can undermine the corpse problem by claiming that death does in fact introduce a new substance (or substances) in place of the organism. Second, though a corpse (or aggregate of elemental substances) emerges from the remains of a living thing, this does not entail that it “pops” into existence. Recall that for hylomorphism the underlying subject of substantial change is prime matter. Prime matter is not actually anything, but its potentiality to take on various substantial forms serves as an explanation for what takes place during the death of a human being. If by ‘pops into existence’ the advancers of the objection imply that the corpse’s emergence is completely unexplained, then HA rejects this suggestion as well. Importantly, neither of these solutions is available for OA. The only option appears to be van Inwagen’s eliminativism. One of the most salient virtues of HA is that it is not required to take the eliminativist route, and the supposed dilemma of dead bodies is just another opportunity for hylomorphism to demonstrate its resourcefulness.

Thus far I have argued that hylomorphism, interpreted as hylomorphic animalism, can properly respond to many of the problems faced by other views including: intransitivity, circularity, rival candidates and dead bodies. I have also argued that it can do so without falling into the questionable position of substance dualism or resorting to mereological nihilism. But since the first chapter I have not given adequate weight to the so-called “transplant intuition” almost universally accepted by PCT theorists. In the remaining sections of this chapter I will explore an alternative interpretation of hylomorphism, one which grants more plausibility to the possibility of preserving one’s identity via cerebrum transplants.

3.3 Contingently Animalist Hylomorphism

Although Aquinas himself remarks that we are *essentially* animals,³⁶⁷ David Hershenov has recently argued, based on other claims that Aquinas makes, that he should not have held that position and modern hylomorphists should not follow him in that

³⁶⁷ See p. 108 above.

regard.³⁶⁸ Instead, Hershenov says that we should understand ourselves as being *contingently* animals. What he means by this is that ‘human animal’ should not be construed as our “substance sortal” (that which picks out the kind of thing we most fundamentally are), but rather as a “phase sortal,” or a category of which we are members only for a certain duration of our existence, the membership being an inessential property of that which we are.³⁶⁹ In other words, the term ‘animal’ should be attributed to us in the same way ‘adolescent’ or ‘teacher’ or ‘husband’ is. It is true that at one time I was identical to a child and at another time I was identical to an adolescent, but I have since left those categories, even though I am still the same human being. Hershenov argues that we can likewise survive a loss of our ‘animality.’ As a way of differentiating this stream of hylomorphic thought from the hylomorphic animalism examined above, let us refer to Hershenov’s and other Hershenov-type positions as *Contingently Animalist Hylomorphism*, or CAH.

As Hershenov explains, his position is a form of animalism in the sense that it preserves Olson’s thinking animal argument.³⁷⁰ When the animal thinks, it is not the case that a person or a proper part of the organism also thinks. There are not two thinkers for every one of my thoughts. Rather, I am the only thing that presently thinks my thoughts, and I do this *qua* animal. But what the contingency stipulation allows us to do is to survive in some dramatic cases without having to do so as that same or any animal. For instance, Hershenov argues that advocates of CAH can (and should) hold that we would survive a cerebrum transplant *as the transported cerebrum* rather than the animal that is left behind.³⁷¹ Thus, Hershenov views CAH as a “hybrid view that offers a way to capture

³⁶⁸ David Hershenov, “A Hylomorphic Account of Thought Experiments Concerning Personal Identity,” *American Catholic Philosophical Quarterly*, Vol. 82, No. 3 (2008): 482. As should be evident from my descriptions in chapter two of some of his other claims regarding personal identity, Hershenov is actually an animalist and does not himself subscribe to hylomorphism. His argument is that those who do consider themselves hylomorphists should accept a contingency stipulation.

³⁶⁹ *Ibid.*, 482-483. The sortal terminology comes from Wiggins, *Sameness and Substance*.

³⁷⁰ Hershenov, “Soulless Organisms? Hylomorphism vs. Animalism,” *American Catholic Philosophical Quarterly* (Forthcoming).

³⁷¹ Hershenov also argues that the contingency stipulation will allow us to be present in purgatory despite not being animals in that state (“A Hylomorphic Account,” 498; “Soulless Organisms?”) See also David Hershenov and Rose Koch-Hershenov, “Personal Identity and Purgatory,” *Religious Studies*, Vol. 42 (Dec. 2006): 439-451. Though I find this discussion fascinating, it isn’t one that I will be engaging in here. He also says that the contingency stipulation would allow us to survive inorganic part replacement, but this too is an aspect of his view that I will leave to the side.

the belief that we are animals and yet that we are to be found wherever our transplanted brain is functioning.”³⁷² In the following, I will attempt to elaborate on Hershenov’s interpretation of hylomorphism by outlining its motivations, analyzing its applications, and demonstrating how, even with its acceptance of the transplant intuition, CAH is not as easily undermined by the difficulties that confronted PCT theorists in chapter one.

3.3.1 A Hylomorphic Account of Cerebrum Transplantation

According to any hylomorphic account of personal identity, each of us must be identical to a composite of form and matter. Following in this tradition, Hershenov insists that a human individual is “a single substance, a thinking, living creature resulting from a soul configuring matter.”³⁷³ He also emphasizes a few of the traditional hylomorphic assertions I made earlier: namely, that a human individual is neither composed of two distinct substances nor is she identical to only her soul.³⁷⁴ But what he also stresses is the fact that the substantial forms of human beings, their rational souls, are remarkably different from the forms of inanimate objects and the souls of non-human organisms. As noted above,³⁷⁵ a particular feature of Thomistic hylomorphism is its pronouncement that the rational soul of a human being must itself be immaterial due to its ability to grant cognitive and self-reflective capabilities. It is these rational capacities that distinguish human beings from other animals and allow religiously-minded hylomorphists to say that we are “made in God’s image.”³⁷⁶ So if our persistence conditions turn out to be strikingly different from those of other animals, Hershenov says, this should not be too surprising.³⁷⁷ And because an individual’s capacities for rationality and freedom of the will are the very things that make him a distinctly human creature, “[i]f those capacities have gone with the cerebrum then there is reason to think that the person has moved.”³⁷⁸

Based on these points, Hershenov gives the following hylomorphic interpretation of cerebrum transplantation: First, the rational soul configures the body so as to make it

³⁷² Hershenov, “Soulless Animals?”

³⁷³ Hershenov, “A Hylomorphic Account,” 491.

³⁷⁴ *Ibid.*

³⁷⁵ P. 100.

³⁷⁶ *Ibid.*, 494.

³⁷⁷ *Ibid.*

³⁷⁸ *Ibid.*, 492.

the sort of thing capable of being rational. Prior to any kind of transplantation this is the animal. But in the case of a brain transfer, the very seat of the physical manifestation of a human being's rational capacity is moved, taking with it the individual's rational soul.

Hershenov explains:

The person's soul will configure less matter during the transplant procedure than it did before 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.³⁷⁹

Hershenov's interpretation of cerebrum relocation as a case of amputation rather than transplantation is inspired by the work of neuroscientist D. Alan Shewmon. In his 1985 article, "The Metaphysics of Brain Death, Persistent Vegetative State, and Dementia," Shewmon introduces various thought experiments in an attempt to answer the following question: "what is the minimum part of the human body still capable of supporting the human essence?"³⁸⁰ Backed by the empirical foundations of his area of research, Shewmon provides a scientific case for the possibility of preserving one's consciousness in the cerebrum, even after the human being's limbs, organs, torso, skull, and brain stem have been removed.³⁸¹ While it is certainly a matter of debate whether or not his scientific conclusions remain valid today, the important philosophical contribution of Shewmon's work is his rephrasing of the traditional brain transplant thought experiments in terms of amputations.

If one's identity can be preserved by saving just the cerebrum, then according to CAH, in a transplant case, the rest of the animal could be left on the operating table while the individual herself is transported across the room. Indeed, it seems one could leave a *living*, biologically human animal behind as long as its brain stem is left intact and

³⁷⁹ *Ibid.*, 492-493.

³⁸⁰ D. Alan Shewmon, "The Metaphysics of Brain Death, Persistent Vegetative State, and Dementia," *The Thomist: A Speculative Quarterly Review*, Vol. 49, No. 1 (Jan., 1985): 44.

³⁸¹ Shewmon, "Metaphysics of Brain Death," 44-52.

functioning seemingly without interruption.³⁸² But if, as Hershenov himself claims, the removed cerebrum is configured by one's rational soul as its substantial form, then the human organism left behind cannot also be configured by that same substantial form. If it is in fact a living human organism on the operating table, then it is an entirely new entity from what was there before, configured by its own substantial form. The removal of a functioning cerebrum, then, would constitute a substantial change. Likewise, if one's cerebrum is successfully transplanted into another cerebrumless (but still living), biologically human organism, then that organism's substantial form will be usurped by the formal influence of one's own rational soul, thus completing another substantial change. This process of swapping animals in and out of existence is one of the main reasons Olson finds CAH implausible.³⁸³ I would agree that it is a concern for the view (as even Hershenov admits³⁸⁴), but before addressing this and other problems for CAH, I would like to make a few more points of clarification.

One of the more important facets of CAH I want to emphasize is that it is not necessarily committed to the "actualism" of some forms of PCT. In other words, it need not be the *overt* psychological characteristics of a human individual that trace her persistence over time, but rather, the *underlying capacities* for realizing certain levels of cognition and self-reflection, which are in turn ensured by the continuation of one's substantial form.³⁸⁵ For this reason, CAH theorists D. Alan Shewmon and Mark Spencer have argued that cases of cerebrum transplantation must be understood as importantly different from real-world instances of dementia, reversible comas, and even persistent

³⁸² See D. Alan Shewmon, "Recovery from 'Brain Death': A Neurologist's Apologia," *Linacre Quarterly*, Vol. 64, No. 1 (Feb., 1997): 70-72, for more on this.

³⁸³ Olson, *What Are We?*, 173-174. Toner makes a similar complaint in "On Hylemorphism and Personal Identity," *European Journal of Philosophy* (Forthcoming).

³⁸⁴ Hershenov, "A Hylomorphic Account," 493.

³⁸⁵ In addition to the discussion below, Hershenov also notes that his position is compatible with the assertion that each of us began our existence as a fetus or perhaps even an early embryo (*Ibid.*, 494). The complicated debate over when the hylomorphist should say we begin to exist is not one I will be entering into here, but see Robert Pasnau, *Thomas Aquinas On Human Nature*, 100-130; John Haldane and Patrick Lee, "Aquinas, the Embryo and the Ethics of Abortion," *Philosophy*, Vol. 78, No. 2 (2003): 255-278; Robert Pasnau, "Souls and the Beginning of Life (A Reply to Haldane and Lee)," *Philosophy*, Vol. 78, No. 4 (2003): 521-531; Haldane and Lee, "Rational Souls and the Beginning of Life (A Reply to Robert Pasnau)," *Philosophy*, Vol. 78, No. 4 (2003): 532-540.

vegetative states.³⁸⁶ In the former cases, the capacity for rationality is physically removed and one's identity can be traced by following the spatio-temporally continuous path of the cerebrum itself. But in the latter situations, one may describe a patient's psychological capacities as being 'thwarted' by her condition rather than being removed.³⁸⁷ In that case, the rational soul would remain with the body.

To see why this may be so, consider two important features of the rational soul as substantial form that Spencer brings to light:

First, (1) the soul is first and foremost the form of a body; in its natural condition it informs a body, and it will naturally tend to inform a body until material conditions deteriorate to the point where it simply can no longer do so. Second, (2) the human soul is a rational soul and so will implement these powers in relation to matter as long as possible. However, if the implementation of its rational capacities is not possible, the same soul will continue to implement its lower powers rather than separate entirely from matter and take on a separated existence in which it can only implement some powers unnaturally without matter.³⁸⁸

The key to understanding Spencer's assertion (that the rational soul will remain with the body even after a loss of overt psychological activity) is Aquinas' unicity doctrine, mentioned above. Recall that for Aquinas, there is not a separate substantial form that actualizes a human being's biological life, but rather, this activity is placed under the dominion of the individual's rational soul. So if the biological unity of the human being is retained, and its rational capacities have not been physically removed (as they would be in the case of cerebrum transplantation), then the same substantial form will continue to serve as a principle of biological unity, and one's identity will be preserved. In a related scenario, Shewmon remarks, "the personal identity of a brainless body probably depends critically *on the manner in which it loses the brain*, i.e., whether the brain is physically removed from it intact or is destroyed in situ."^{389, 390}

³⁸⁶ Shewmon, "Recovery from 'Brain Death,'" 70-75; Mark Spencer, "A Reexamination of the Hylomorphic Theory of Death," *The Review of Metaphysics* (Forthcoming).

³⁸⁷ For instance, see Hershenov, "A Hylomorphic Account," 496.

³⁸⁸ Spencer, "A Reexamination of the Hylomorphic Theory of Death."

³⁸⁹ Shewmon, "Recovery from 'Brain Death,'" 71. While Shewmon is dealing here with the issue of "whole-brain death," his statement can be easily translated to Spencer's discussion by replacing the terms 'brain' and 'brainless' as 'cerebrum' and 'cerebrumless.'

³⁹⁰ A more difficult question for CAH is what to make of the animal that comes into existence when the cerebrum is removed. Does it have a rational soul as its substantial form? Hershenov thinks that it does not:

CAH, then, is capable of providing some insightful and explanatory resources for an account of cerebrum transplantation. But in an attempt to bridge the gap between animalism and PCT, it seems to reintroduce some of the problems having to do with the latter, while at the same time arousing its own unique concerns. Shewmon's and Spencer's formulations have, for instance, been criticized as violating the intrinsic requirement of identity in the same way closest continuer views do. In the next section, I will attempt to alleviate some of these worries before turning to a general evaluation of the two hylomorphic views explored in this chapter.

3.3.2 Problems Old and New

As I mentioned above, both Toner and Olson criticize CAH for its assertion that animals can “pop” in and out of existence simply by moving around a functioning cerebrum. Recall that according to CAH, a new animal comes into existence when a functioning cerebrum is removed from the body and also a cerebrumless, albeit living, human organism goes out of existence when a functioning cerebrum is successfully added to it. But Olson says, “This is all perfectly absurd. At any rate, if we think about the persistence of human animals and other intelligent organisms in this way, we shall depart significantly from the concept of a living organism that today's life sciences operate with.”³⁹¹ For in both cases there seems to be no interruption in the life-sustaining or metabolic activities of the organism during the procedure.³⁹² How, then, can we say that anything has died?

A “popping-into-existence” objection would be a strange one coming from Toner.³⁹³ As we have already seen, Toner accepts that at the cessation of life processes, a

“[w]hat is left behind is a mindless animal that doesn't have the capacity for thought and action” (“A Hylomorphic Account,” 492). Shewmon on the other hand argues that the capacity is there in virtue of it being biologically human, and thus it is informed by a rational soul (Shewmon, “Recovery from ‘Brain Death,’” 73). He points out that there is an important difference between the question of personal identity (which entity is identical to the prior human being) and what he calls “somatic enumeration” (how many rational animals are present in the thought experiment) (*Ibid.*, 70). Because my thesis is one about personal identity, deciding on the issue of somatic enumeration is not essential to my arguments.

³⁹¹ Olson, *The Human Animal*, 119.

³⁹² *Ibid.*, 117.

³⁹³ To be fair, Toner doesn't explicitly make this claim. He only asserts that it would be strange if human animals had different persistence conditions than other animals (“On Hylomorphism and Personal Identity”). The point I am trying to make is that he shouldn't put too much weight on this assertion, given other things he says.

human body no longer exists (even though there appears to be some persistent material object), and that a corpse takes its place. Toner's account avoids a similar objection of unexplained-existence by utilizing notions of substantial change and the underlying subject of that change, prime matter. As I will explain more fully below, I think an advocate of CAH can offer a similar explanation of the cerebrum transplant.³⁹⁴ If the language of substantial change can mitigate the corpse problem, perhaps it can do the same here.

As Hershenov notes, the CAH theorist can also present a similar *tu quoque* to Olson.³⁹⁵ Let us assume, for the sake of argument, that a detached cerebrum can in fact engage in the psychological activities necessary for personhood in the Lockean sense. But according to OA, I am essentially an animal. So even if my cerebrum is removed and it is in some sense a person, it is not an animal and thus it cannot be me. In this case a new "person" has popped into existence just by removing one's cerebrum. Moreover, this "cerebrum-person" will cease to exist once it is successfully 'replanted' in another living animal. This is due to the fact that Olson interprets cerebrum transplants as having no more ontological significance for the organism than liver or kidney transplants.³⁹⁶ In response, then, to Olson's objection, the CAH theorist could reply that he too is committed to having entities pop in and out of existence.³⁹⁷

The CAH theorist can also point out that, even within the biological sphere, there are cases in which an organism can cease to exist without dying in the traditional sense. Consider the example of amoebic division. When an amoeba divides, the most common biological interpretation is that it ceases to exist and spawns two offshoots, neither of which are identical to the original.³⁹⁸ But there is no amoeba-corpse or dead body left behind. It also seems like there is no interruption in the amoeba's life processes. If one observes the career of the pre-fission amoeba and then focuses on either of the offshoots

³⁹⁴ Shewmon actually does try to provide such an account in his "Metaphysics of Brain Death."

³⁹⁵ Hershenov, "A Hylomorphic Account," 493-494. Harold Noonan also uses an argument of this sort to defend his PCT account ("Animalism versus Lockeanism," 305). Notably, this type of reply cannot be directed against Toner as he espouses a Boethian definition of 'person' ("Hylemorphic Animalism").

³⁹⁶ Olson, *The Human Animal*, 117.

³⁹⁷ Notably, Olson himself considers this type of rebuttal a genuine concern for his animalism (*Ibid.*, 121).

³⁹⁸ *Ibid.*, 114.

after fission, it may appear as if there is an unbroken continuum of biological life. Olson himself admits this exception: “when an amoeba divides, nothing happens that *looks* much like death. Nothing begins to decay, and no corpse results. So we know that an organism *can* cease to exist without interruption of its vital functions and without leaving behind any lifeless remains.”³⁹⁹

Neither of the types of substantial change that CAH includes in its account of cerebrum transplantation will be exactly like amoebic division, but this exception importantly opens the door for some cases that do apply. For instance, consider some examples offered by Shewmon:

Many plants and certain lower animals, such as starfish and planaria, have the capacity for severed parts to grow into new complete organisms. Here we observe the multiplication of living substantial forms through the mere physical separation of parts, as opposed to the ordinary route of natural reproduction. The severed part loses its participation in the original organism’s substantial form, but instead of decaying, it has enough functional unity of its own to stay alive and to develop into a whole organism again. The functional unity indicates that a new substantial form was actualized at the moment of separation of the part.⁴⁰⁰

If we interpret cerebrum transplantation as a physical separation of the animal from the human individual rather than a removal of the cerebrum from the animal, then perhaps we can understand the process as being similar to that described here by Shewmon. In a human case, the individual would split, with the cerebrum carrying the identity of the original person and a new, living, biologically human organism coming into its own existence, configured by a new substantial form.⁴⁰¹ While this process is admittedly strange and perhaps even counter-intuitive, it is both possible and with some biological precedence. Its peculiarity, I would argue, is due largely to the fantastic nature of cerebrum transplant thought experiments to begin with.

If the first substantial change in CAH’s account of cerebrum transplantation is to be understood as a kind of “regeneration,” then perhaps the second should be viewed as a

³⁹⁹ *Ibid.*

⁴⁰⁰ Shewmon, “Metaphysics of Brain Death,” 41.

⁴⁰¹ Notably, some traditionally-minded hylomorphists suppose that something very similar to this process might occur at the onset of monozygotic twinning. See, for example, Benedict Ashley and Albert Moraczewski, “Is the Biological Subject of Human Rights Present from Conception?” in Benedict Ashley and Albert Moraczewski, *The Fetal Issue* (Braintree, MA: The Pope John XXIII Medical-Ethics Research and Education Center, 1994): 33-59.

type of “grafting.” When a functioning cerebrum is placed into a cerebrumless, biologically human organism, we would have to say that the rational soul of the former subsumes the very existence of the latter; there is now a numerically different human body from what was there before. But where has the original human organism gone? Has it died? Based on exceptions that even Olson recognizes, we *could* say that the original organism has died without having to produce a corpse or demonstrate a discontinuity in its life processes. But I think Toner’s analysis of substantial parts helps the most here. Instead of the original animal ceasing to exist entirely, its powers and properties are “absorbed” by the substance introduced by one’s rational soul, which may in turn allow it to enjoy a “nominal” or “virtual” presence within the larger entity. Once again, the description of cerebrum transplantation that the advocate of CAH will have to give is almost strikingly bizarre, but I hope to have shown that such an account is at least minimally coherent.

A greater problem for CAH, I think, is the problem of psychological fission that plagues many formulations of PCT. Earlier I argued that the intuitive pull of Shoemaker’s Brown/Brownson scenario can be undermined by bringing in the possibility of double-transplants.⁴⁰² If transplanting even half of Brown’s brain into Robinson’s body preserves enough of the relevant psychology to warrant the conclusion that Brownson just *is* Brown, then it seems we can do the same with the other half of Brown’s brain and have just as much reason to call Brownsmith Brown. But as quickly became evident, they cannot *both* be Brown. So logically, the existence of an equal candidate would have to eliminate the other from candidacy. However, if an assertion of personal persistence depends on facts outside of the relations held between Brownsmith or Brownson and the original Brown, then this will not only violate the intrinsic identity requirement defended by Wiggins and others, but it will also lead to a myriad of epistemological issues such as the ones I outlined above. Consequently, the problem of fission is a serious difficulty for accounts of personal identity that rely on psychological or even brain criteria, and it is not immediately apparent how CAH is immune to this objection. If this worry cannot be

⁴⁰² Section 1.2.1 above.

resolved by the account, then CAH may only have a slight edge over the PCT views I dismissed by the end of chapter one.⁴⁰³

As I noted earlier, the distinct location of a human being's substantial form in time and space carries with it a necessity for spatio-temporal continuity between two stages of an individual's career.⁴⁰⁴ A CAH theorist, therefore, should reject the possibility of identification across psychological "jumps" such as brain-state transfers or teletransportation.⁴⁰⁵ As a result, psychological reduplication should not be a problem for CAH. But even if it insists on spatio-temporal continuity in order to avoid reduplication, this alone will not allow CAH to avoid the related problem of fission. For each cerebral hemisphere *would* be spatio-temporally continuous with the original animal, and that is why it is such a pesky problem.

Advocates of CAH are markedly brief concerning the problem of fission. Hershenov's only comment is that "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."⁴⁰⁶ Spencer also says that the soul is "unable to be divided or duplicated among many material substrates."⁴⁰⁷ While it is true that the relation of form to a selection of matter is usually one-to-one, this does not by itself offer much in the way of analysis. Shewmon notes that "even though the human soul has a spiritual dimension, it [also] constitutes the principle of physical unity and immanent dynamism of the body. To assert that one and the same principle of somatic unity was informing two physically discrete and independent unities makes little sense."⁴⁰⁸ Here we have an interesting suggestion that within the very conception of substantial form is a no-splitting clause. Any two parts configured by a single substantial form would have to be rigidly united, or as St. Thomas puts it, they would have to compose something that was

⁴⁰³ Even if its solution to fission is less than successful, CAH is, in the very least, in accordance with Olson's thinking animal argument. So it has that much to offer if nothing else.

⁴⁰⁴ Section 3.2.1 above.

⁴⁰⁵ Strangely, Eleonore Stump seems to give some weight to the plausibility of Shoemaker's brain-state transfers (Stump, *Aquinas*, 174), but it seems clear to me that she shouldn't say that lest she inherit all of the problems for Shoemaker's position I outlined in Chapter one.

⁴⁰⁶ Hershenov, "A Hylomorphic Account," 498.

⁴⁰⁷ Spencer, "A Reexamination of the Hylomorphic Theory of Death."

⁴⁰⁸ Shewmon, "Recovery from 'Brain Death,'" 71.

“absolutely one.” Complete physical separation would seem to be at least minimally sufficient for two parts not being one thing absolutely. Unlike Shoemaker’s similar “no-branching” clause, this hylomorphic no-splitting stipulation appears to be an integral part of its formulation. As Toner might say, “it isn’t a bullet we have to bite.”

With these suggestions in mind, we can formulate an account of fission for CAH with at least some level of detail. I think an advocate of CAH should say, not that the original rational soul ends its existence as a configurer when both of the two cerebral hemispheres are successfully *planted*, but when the very act of splitting the cerebrum is performed outside of the skull of the original animal. The cerebrum-split should then be understood as similar to amoebic division, in that the human individual composed of a selection of cerebral matter and his rational soul ceases to exist and spawns two offshoots. One could, I suppose, insist that the split is more like the starfish whose lost appendage grows into its own organism while the original starfish persists. This would be a hylomorphic equivalent of the closest-continuer view. But for reasons I will reiterate below, CAH should try to avoid that route if possible. It should instead hold that cerebrum division results in the death of the original human individual.

CAH, then, can offer an analysis of fission that seems less ad hoc than that offered by Shoemaker. But it will only truly be successful if it can also solve the epistemological problems associated with that account. For example, consider a scenario in which one comes to know that a certain human being (call him Brownson) exhibits many of the beliefs, memories, desires and intentions of a previously-existing human being, Brown, as a result of a brain transplant. But what we also find out is that this gentleman has only one of Brown’s original cerebral hemispheres. For Shoemaker, in order to establish that Brownson is identical to Brown we would have to know whether or not the transplant of the second hemisphere was successful, even if but for a moment. For if at the time of transplantation there were two equal candidates, then this would eliminate both from candidacy. But as I have argued above,⁴⁰⁹ determining the non-existence of rivals would be a very difficult, if not impossible, task.

According to my interpretation of CAH, the success of Brown’s second transplant is completely irrelevant in determining the identity of Brownson. If we can determine that

⁴⁰⁹ See section 1.2.3.

Brownson's "Brownian" cerebral hemisphere is a result of division mid-transplant, then this is enough to establish that Brownson is *not* Brown. During the very act of splitting his cerebrum, Brown's original substantial form departed from his matter and Brown himself ceased to exist. I think this solution would also preserve Wiggins' "Only a and b" rule.⁴¹⁰ Recall that according to this condition, whether a certain entity 'b' is identical to an earlier entity 'a' should depend solely on the relations between 'a' and 'b' rather than the relations 'a' may have to some entity 'c.' In the present case, the identification of Brown and Brownson is dependent on whether or not Brownson is carrying an entire cerebrum or just a single hemisphere. If he is only carrying a single hemisphere of Brown's original brain,⁴¹¹ then this hemisphere's history of separation from its other half is a genuine event in *its* history. We are not required to give an account of the other half in order to determine its status.

There are two further clarifications to be made in order to solidify this account. First, if one's cerebrum were to be split while still a proper part of the original organism, this would not suffice for fission. Hershenov, for instance, insists that even if severing the corpus callosum of a 'planted' brain resulted in an apparent psychological disunity between the two cerebral hemispheres, this would not be a problem for CAH:

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.⁴¹²

Secondly, there may be some rare cases in which a single hemisphere transplant is sufficient for the preservation of one's identity. For example, consider a case in which a stroke victim irretrievably loses functionality in large sections of his brain. It might then be plausible to assume that after this terrible event, the physical manifestation of his capacity for rationality is located in only one of the cerebral hemispheres. Perhaps in this case, taking that cerebral hemisphere and placing it elsewhere would preserve the

⁴¹⁰ Section 1.2.3 above.

⁴¹¹ Actually, due to its new substantial form, it won't in any relevant sense be the same hemisphere that Brown had.

⁴¹² Hershenov, "A Hylomorphic Account," 497-498.

patient's identity. Though I think Shewmon and Spencer are less likely than Hershenov to accept this suggestion, it may be something for the CAH theorist to consider.

As a related objection to CAH, some have accused Shewmon's and Spencer's formulations of collapsing into a closest-continuer view, and thus violating the intrinsic requirement for identity.⁴¹³ For it seems, according to these accounts, that one's identity can be preserved in a Persistent Vegetative State (PVS) only if there is not a better candidate with one's functioning cerebrum elsewhere. But as Spencer argues, hylomorphism has the resources to overcome this objection. He explains that the soul is the "guarantor of personal identity," and that "the disembodied brain in the thought experiment is not just the best candidate for the person or the closest continuer of his psychology – rather, it really is the person because the brain is informed by the same soul by which the original whole person was informed."⁴¹⁴ Once the cerebrum is removed, so goes the person, and even if that cerebrum is ultimately unsuccessful in its transplant, the animal left behind cannot "regain" the individual's identity. As Spencer continues, "The presence of the soul in the brain or in the body is only dependent on where it can best implement its powers *at the moment of separation*, not on what is occurring elsewhere than the place where it is."⁴¹⁵

Although he insists that his formulation of CAH is not susceptible to a closest-continuer objection in its analysis, Spencer admits that his view may have epistemological problems.⁴¹⁶ If Shewmon is correct in saying that serious cases of cerebral collapse are "as though some macabre neurosurgeon had opened up the skull, removed the entire brain, and deposited it down the garbage disposal," then it seems we could have a problem determining whether a patient's cerebrum was physically removed or if it disintegrated through natural means.⁴¹⁷ But I am not so sure that Spencer needs to concede much weight to this concern. I think Shewmon is sensationalizing here, and it

⁴¹³ Hershenov, for example, makes this claim in "A Hylomorphic Account," 496, but he has since found Spencer's responses plausible ("Soulless Organisms?"). For more on closest-continuer theories see section 1.2.2 and 1.2.3 above.

⁴¹⁴ Spencer, "A Reexamination of the Hylomorphic Theory of Death."

⁴¹⁵ *Ibid.*, emphasis added.

⁴¹⁶ *Ibid.*

⁴¹⁷ Shewmon, "The Metaphysics of Brain Death," 32-33.

seems there would have to be *some* observable difference between the skull of a patient in which the cerebrum deteriorated gradually and one in which an operation was carried out in order to physically remove the cerebrum intact.⁴¹⁸ Certainly for the external observer, a cerebrum transplant would not appear to interrupt the life processes of the individual, and it might be hard for that person to tell the difference, but this is just a complication of the thought experiment, and not a real philosophical concern.

3.3.3 Conclusion

In this chapter, I have set out to accomplish three things. First, I wanted to outline a clear and workable explication of a generalhylomorphic ontology in order to elicit the aspects relevant for an account of personal identity. In its simplest formulation, hylomorphism is a theory that posits form and matter as the two fundamental components of every material object. But as I have argued, the notions of ‘form’ and ‘matter’, when at work in a conception of *human beings* are riddled with complexities, and though I cannot hope to have explored all of them here, what I have included should be sufficient to support the rest of my arguments.

My second task was to present an animalist interpretation of hylomorphism and demonstrate how it can both capture the insights of standard animalism, and, with the help of its larger metaphysical framework, respond to its concerns. I have not given complete defenses of many of the Thomistic doctrines, such as the simplicity of the soul or the unicity of substantial forms, but what I do hope to have shown is the resourcefulness of these suppositions in the personal identity debate once their plausibility has been granted. If problems such as intransitivity, circularity, rival candidates and dead bodies warrant the serious consideration I have given them here, my conclusion is that the animalist may have compelling reasons to switch his support to hylomorphic animalism. This is essentially my response to the problems examined in chapter two.

In the remaining sections of chapter three I chose to return to the motivations and concerns that were introduced by psychological continuity accounts in chapter one. If the so-called “transplant intuition” has the intuitive appeal that many PCT theorists think it

⁴¹⁸ Shewmon himself seems to retract these remarks later (“Recovery from ‘Brain Death’”), and even within the original article he admits that cerebral disintegration will leave signature sections of scar tissue (“The Metaphysics of Brain Death,” 35).

does, then in order to solve the problems associated with these ever-popular thought experiments, we should seriously consider a departure into what I have referred to as contingently animalist hylomorphism. Though its solutions were convoluted and at times bizarre, I think this properly displays the price that must be paid in order to defend anything like psychological continuity.

The overarching goal of my thesis, then, has been to defend a twofold conclusion: *If a personal identity theorist wishes to give a certain amount of weight to the transplant scenario, then she should subscribe to CAH. If, however, she finds the problems pertaining to transplantation too much to overcome, and is convinced by animalism's critique of PCT, then she should subscribe to HA. Either way, hylomorphism wins.*

LIST OF REFERENCES

- Ashley, Benedict and Albert Moraczewski. "Is the Biological Subject of Human Rights Present from Conception?" In *The Fetal Issue*. Edited by Benedict Ashley and Albert Moraczewski. Braintree, MA: The Pope John XXIII Medical-Ethics Research and Education Center, 1994: 33-59.
- Aquinas, Saint Thomas. *Commentary on De Anima*. In *Thomas Aquinas on Human Nature*. Edited by Thomas S. Hibbs. Indianapolis: Hackett, 1999.
- . *Commentary on St. Paul's First Letter to the Corinthians*, 15. In *Thomas Aquinas: Selected Philosophical Writings*. Edited by Timothy McDermott, Oxford: Oxford University Press, 1993: 192.
- . *De Ente et Essentia*. In *Thomas Aquinas: Selected Philosophical Writings*. Edited by Timothy McDermott. Oxford: Oxford University Press, 1993: 90-114.
- . *De Mixtione Elementorum*. In *Thomas Aquinas: Selected Philosophical Writings*. Translated by Timothy McDermott. Oxford: Oxford University Press, 1993: 117-120.
- . *De Principiis Naturae*. In Gyula Klima, et al., *Medieval Philosophy: Essential Readings with Commentary*. Translated by Gyula Klima. Malden, MA: Wiley-Blackwell, 2007: 157-167.
- . *Summa Contra Gentiles*. In *Summa Contra Gentiles: Book Two: Creation*. Translated by James F. Anderson. Notre Dame, IN: University of Notre Dame Press, 1992.
- . *Summa Theologica*. Translated by Fathers of the English Dominican Province. New York, NY: Benziger Bros, 1948.
- Aristotle. *Categories*. In *Aristotle: Selections*. Translated and Edited by Terence Irwin and Gail Fine. Indianapolis: Hackett, 1995.
- . *De Anima*. Translated by Hugh Lawson-Tancred. London: Penguin, 1986.
- . *Metaphysics*. In *Aristotle: Selections*. Translated by Terence Irwin and Gail Fine. Indianapolis: Hackett, 1995.
- Ayers, Michael. *Locke: The Arguments of the Philosophers*. London: Routledge, 1990.
- Baker, Lynn Rudder. *Persons and Bodies*. Cambridge, UK: Cambridge University Press, 2000.
- Barnes, Gordon P. "The Paradoxes of Hylomorphism." *The Review of Metaphysics*, Vol. 56, No. 3 (Mar., 2003): 501-523.
- Berryman, Sylvia. "Ancient Atomism." *The Stanford Encyclopedia of Philosophy* (Fall 2008 Edition), edited by Edward N. Zalta, <<http://plato.stanford.edu/archives/fall2008/entries/atomism-ancient/>>.
- Boethius, Anicius Manlius Severinus. *Theological Tractates*. Translated by H.F. Stewart, E.K. Rand and S.J. Tester. Cambridge, MA: Harvard University Press, 1973.
- Brown, Christopher. *Aquinas and the Ship of Theseus*. London: Continuum, 2005.
- Butler, Joseph. "Of Personal Identity." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 99-106.
- Carter, W.R. "Will I Be a Dead Person?" *Philosophy and Phenomenological Research*, Vol. 59, No. 1 (Mar. 1999): 167-171.
- Chisholm, Roderick. *The First Person*. Brighton: Harvester, 1981.
- . "On the Simplicity of the Soul." *Philosophical Perspectives*, Vol. 5, Philosophy of Religion (1991): 161-181.

- . "Parts as Essential to their Wholes." *The Review of Metaphysics*, Vol. 26, No. 4 (June, 1973): 581-603.
- . *Persons and Objects*. London: George Allen & Unwin, 1976.
- Copleston, Frederick. *A History of Philosophy, Vol. 2: Medieval Philosophy from Augustine to Duns Scotus*. New York: Doubleday, 1962.
- Dennett, Daniel. *Brainstorms: Philosophical Essays on Mind and Psychology*. Cambridge: MIT Press, 1978.
- Descartes, René. *Discourse on the Method*. In *Descartes: Selected Philosophical Writings*. Translated by John Cottingham, Robert Stoothoff and Dugald Murdoch. Cambridge: Cambridge University Press, 1988: 20-56.
- . *Meditations on First Philosophy*. In *Descartes: Selected Philosophical Writings*. Translated by John Cottingham, Robert Stoothoff and Dugald Murdoch. Cambridge: Cambridge University Press, 1988: 73-122.
- . "Objections and Replies." In *Descartes: Selected Philosophical Writings*. Translated by John Cottingham, Robert Stoothoff and Dugald Murdoch. Cambridge: Cambridge University Press, 1988: 123-159.
- . *The Passions of the Soul*. In *Descartes: Selected Philosophical Writings*. Translated by John Cottingham, Robert Stoothoff and Dugald Murdoch. Cambridge: Cambridge University Press, 1988: 218-238.
- Eberl, Jason. "Aquinas on the Nature of Human Beings." *The Review of Metaphysics*, Vol. 58 (Dec. 2004): 333-365.
- . "Varieties of Dualism: Swinburne and Aquinas." *International Philosophical Quarterly*, Vol. 50, No. 1 (2010): 39-56.
- Feldman, Fred. "The Termination Thesis." *Midwest Studies in Philosophy*, Vol. 24 (2000): 98-115.
- Feser, Edward. *Aquinas: A Beginner's Guide*. Oxford: Oneworld Publications, 2009.
- Grice, H.P. "Personal Identity." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 73-98.
- Haldane, John J. and Patrick Lee, "Aquinas, the Embryo and the Ethics of Abortion." *Philosophy*, Vol. 78, No. 2 (2003): 255-278.
- . "Rational Souls and the Beginning of Life (A Reply to Robert Pasnau)." *Philosophy*, Vol. 78, No. 4 (2003): 532-540.
- Haldane, John J. "The Metaphysics of Intellect(ion)." In *Intelligence and Philosophy of Mind*, Edited by Michael Baur. ACPA Proceedings, Vol. 80 (2007): 39-55.
- . "Mind-World Identity Theory and the Anti-Realist Challenge." In *Reality, Representation and Projection*. Edited by John Haldane and Crispin Wright. Oxford: Oxford University Press, 1993: 15-38.
- . "A Return to Form in the Philosophy of Mind." *Ratio*, Vol. 11, No. 3 (December, 1998): 253-277.
- . "A Thomist Metaphysics." In *The Blackwell Guide to Metaphysics*. Edited by Richard M. Gale. Oxford: Blackwell, 2002: 87-109.
- Hawley, Katherine. "Fission, Fusion, and Intrinsic Facts." *Philosophy and Phenomenological Research*, Vol. 71, No. 3 (2005): 602-621.
- Hershenov, David and Rose Koch-Hershenov. "Personal Identity and Purgatory." *Religious Studies*, Vol. 42 (Dec. 2006): 439-451.

- Hershenov, David. "APA Panel Talk on Organisms, Persons, and Bioethics," *APA Newsletter on Philosophy and Medicine*, Vol. 9, No. 1 (Fall 2008): 8-11.
- . "Do Dead Bodies Pose a Problem for Biological Approaches to Personal Identity?" *Mind*, Vol. 114, No. 453 (Jan., 2005): 31-59.
- . "A Hylomorphic Account of Thought Experiments Concerning Personal Identity." *American Catholic Philosophical Quarterly*, Vol. 82, No. 3 (2008): 481-502.
- . "Identity Matters." *The Continuum Companion to Metaphysics*. Edited by Manson, N. and Barnard, R. Continuum International Group. (Forthcoming).
- . "The Memory Criterion and the Problem of Backward Causation." *International Philosophical Quarterly*, Vol. 47. No. 186 (June 2007): 181-185.
- . "The Metaphysical Problem of Intermittent Existence and the Possibility of Resurrection." *Faith and Philosophy*, Vol. 20, No. 1 (Jan., 2003): 24-36.
- . "Persons as Proper Parts of Organisms." *Theoria*, Vol. 71, No. 1 (March, 2005): 29-37.
- . "Soulless Organisms? Hylomorphism vs. Animalism." *American Catholic Philosophical Quarterly*. (Forthcoming).
- . "Van Inwagen, Zimmerman and the Materialist Conception of Resurrection." *Religious Studies: An International Journal for the Philosophy of Religion*, Vol. 38 (December 2002): 451-469.
- Hibbs, Thomas S. *Thomas Aquinas on Human Nature*. Indianapolis: Hackett, 1999.
- Hobbes, Thomas. "Of Identity and Difference." In *Body, Man, and Citizen*. Edited by Richard S. Peters. New York: Collier Books, 1962: 125-129.
- Hoffman, Joshua and Gary Rosenkrantz. *Substance: Its Nature and Existence*. New York: Routledge, 1997.
- Hudson, Hud. *A Material Metaphysic of Human Persons*. Ithaca, NY: Cornell University Press, 2001.
- Hume, David. "Of Personal Identity." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 161-172.
- Kim, Jaegwon. "Lonely Souls: Causality and Substance Dualism." In *Soul, Body and Survival: Essays on the Metaphysics of Human Persons*. Edited by Kevin Corcoran. New York: Cornell University Press, 2001: 30-43.
- Klima, Gyula. "Man=Body+Soul: Aquinas' Arithmetic of Human Nature." In *Thomas Aquinas: Contemporary Philosophical Perspectives*. Edited by Brian Davies. Oxford: Oxford University Press, 2002: 257-274.
- Lee, Patrick, and Germain Grisez. "Total Brain Death: A Reply to Alan Shewmon," *Bioethics*. (Forthcoming).
- Lee, Patrick and Robert P. George. *Body-Self Dualism in Contemporary Ethics and Politics*. New York: Cambridge University Press, 2008.
- Leftow, Brian. "Souls Dipped in Dust." In *Soul, Body and Survival: Essays on the Metaphysics of Human Persons*. Edited by Kevin Corcoran. New York: Cornell University Press, 2001: 120-138.
- Lewis, David. "Survival and Identity." In *Personal Identity*. Edited by Raymond Martin and John Barresi. Malden, MA: Blackwell Publishing, 2003: 144-167.
- Locke, John. "An Essay Concerning Human Understanding." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975, 33-52.

- Loftus, Elizabeth and J.E. Pickrell. "The Formation of False Memories." *Psychiatric Annals*, 25 (2005): 720-725.
- Mackie, David. "Personal Identity and Dead People." *Philosophical Studies*, Vol. 95, No. 3 (1999): 219-242.
- Martin, Raymond and John Barresi. *Personal Identity*. Malden, MA: Blackwell Publishing, 2003.
- McDermott, Timothy. *Thomas Aquinas: Selected Philosophical Writings*. Oxford: Oxford University Press, 1993.
- McMahan, Jeff. *The Ethics of Killing: Problems at the Margins of Life*. Oxford: Oxford University Press, 2002.
- Merricks, Trenton. "How to Live Forever without Saving Your Soul." In *Soul, Body, and Survival*. Edited by Kevin Corcoran. New York: Cornell University Press, 2001: 183-200.
- . *Objects and Persons*. Oxford: Oxford University Press, 2001.
- . "There are No Criteria of Identity Over Time." *Noûs*, Vol. 32, No. 1 (March, 1998): 106-124.
- Nagel, Thomas. "Brain Bisection and the Unity of Consciousness." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 227-246.
- Noonan, Harold. "Animalism versus Lockeanism: A Current Controversy." *The Philosophical Quarterly*, Vol. 48, No. 192 (July 1998): 302-318.
- . *Personal Identity*. London: Routledge, 1989.
- Nozick, Robert. *Philosophical Explanations*. Cambridge, MA: Harvard University Press, 1981.
- Oderberg, David S. "Concepts, Dualism, and the Human Intellect." In *Psycho-Physical Dualism Today: An Interdisciplinary Approach*. Edited by A. Antonietti, A. Corradini, and E.J. Lowe. Lanham, MD: Lexington Books/Rowman and Littlefield, 2008: 211-33.
- . "Hylemorphic Dualism." In *Personal Identity*. Edited by E.F. Paul, F.D. Miller, and J. Paul. Cambridge: Cambridge University Press, 2005: 70-99.
- . "Hylomorphism and Individuation." In *Mind, Metaphysics, and Value in the Thomistic and Analytic Traditions*. Edited by John Haldane. Notre Dame, Indiana: University of Notre Dame Press, 2002: 125-142.
- . *The Metaphysics of Identity Over Time*. New York: St. Martin's Press, 1993.
- . *Real Essentialism*. New York: Routledge, 2007.
- Olson, Eric. "Animalism and the Corpse Problem." *Australasian Journal of Philosophy*, Vol. 82. (2004): 265-274.
- . "An Argument for Animalism." In *Personal Identity*. Edited by Raymond Martin and John Barresi. Malden, MA: Blackwell Publishing, 2003, 318-334.
- . "A Compound of Two Substances." In *Soul, Body and Survival: Essays on the Metaphysics of Human Persons*. Edited by Kevin Corcoran. New York: Cornell University Press, 2001: 73-88.
- . *The Human Animal: Personal Identity Without Psychology*. New York: Oxford University Press, 1997.
- . "Is There a Bodily Account of Personal Identity Over Time?" In *Identity and Modality*. Edited by Fraser MacBride. Oxford: Oxford University Press, 2006: 242-259.

- . "Replies." *Abstracta*, Special Issue I (2008): 32-42.
- . "Thinking Animals and the Reference of 'I'." *Philosophical Topics*, Vol. 30 (2002): 189-208.
- . "Was I Ever a Fetus?" *Philosophy and Phenomenological Research*, Vol. 57 (1997): 95-110.
- . *What are We?* New York: Oxford University Press, 2007.
- . "What does Functionalism Tell Us about Personal Identity?" *Nous*, Vol. 36 (2002): 682-698.
- . "Why I have No Hands." *Theoria*, Vol. 61 (1995): 182-197.
- Parfit, Derek. "Personal Identity." *The Philosophical Review*, Vol. 80, No. 1 (January, 1971): 3-27.
- . *Reasons and Persons*. Oxford: Oxford University Press, 1984.
- Pasnau, Robert and Christopher Shields. *The Philosophy of Aquinas*. Boulder, CO: Westview Press, 2003.
- Pasnau, Robert. "Souls and the Beginning of Life (A Reply to Haldane and Lee)." *Philosophy*, Vol. 78, No. 4 (2003): 521-531.
- . *Thomas Aquinas on Human Nature*. New York: Cambridge University Press, 2002.
- Perry, John. *Personal Identity*. Berkeley: University of California Press, 1975.
- Persson, Ingmar. "Our Identity and Separability of Persons and Organisms." *Dialogue*, Vol. 38 (1999): 521-533.
- Plantinga, Alvin. "On Mereological Essentialism." *The Review of Metaphysics*, Vol. 28, No. 3 (March, 1975): 468-476.
- Quinton, Anthony. "The Soul." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 53-72.
- Reid, Thomas. "Of Mr. Locke's Account of Our Personal Identity." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 113-118.
- Robinson-Riegler, Gregory and Bridget Robinson-Riegler. *Cognitive Psychology: Applying the Science of the Mind*, Second Edition. Allyn & Bacon, 2007.
- Ross, James. "Immaterial Aspects of Thought." *The Journal of Philosophy*, Vol. 89, No. 3 (Mar. 1992): 136-150.
- Shewmon, D. Alan. "The Brain and Somatic Integration: Insights into the Standard Biological Rationale for Equating 'Brain Death' with Death." *Journal of Medicine and Philosophy*, Vol. 26 (2001): 457-78.
- . "The Metaphysics of Brain Death, Persistent Vegetative State, and Dementia," *The Thomist: A Speculative Quarterly Review*, Vol. 49, No. 1 (Jan., 1985): 24-80.
- . "Recovery from 'Brain Death': A Neurologist's Apologia," *Linacre Quarterly*, Vol. 64, No. 1 (Feb., 1997): 30-96.
- Shoemaker, Sydney and Richard Swinburne. *Personal Identity*. Oxford: Blackwell, 1984.
- Shoemaker, Sydney. "Eric Olson: The Human Animal" *Nous*, Vol. 33, No. 3 (1999): 496-504.
- . "Identity, Properties and Causality." In *Identity, Cause and Mind*. Oxford: Oxford University Press, 2003: 234-260.
- . "A Materialist's Account." In *Personal Identity*. Oxford: Blackwell, 1984: 67-132.
- . "Personal Identity and Memory." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 119-134.

- . "Persons and Their Pasts." *American Philosophical Quarterly*, Vol. 7, No. 4 (October, 1970): 269-285.
- . *Self-Knowledge and Self-Identity*. Ithaca, NY: Cornell University Press, 1963.
- . "Self, Body, and Coincidence." *Proceedings of the Aristotelian Society*, Vol. 73 (1999): 287-306.
- Snowden, Paul. "Personal Identity and Brain Transplants." In *Human Beings*. Edited by David Cockburn. Cambridge: Cambridge University Press, 1991: 109-126.
- Spencer, Mark K. "A Reexamination of the Hylomorphic Theory of Death." *The Review of Metaphysics* (Forthcoming).
- Stump, Eleonore. *Aquinas*. New York: Routledge, 2003.
- . "Non-Cartesian Substance Dualism and Materialism without Reductionism." *Faith and Philosophy*, Vol. 12, No. 4 (1995): 505-531.
- . "Resurrection, Reassembly, and Reconstitution: Aquinas on the Soul." In *Die menschliche Seele: Brauchen wir den Dualismus? The Human Soul: Do We Need Dualism?* Edited by Bruno Niederberger and Edmund Runggaldier. Frankfurt: Ontos Verlag, 2006: 151-172.
- Thomson, Judith Jarvis. "People and Their Bodies." In *Reading Parfit*. Edited by Jonathan Dancy. Oxford: Blackwell, 1997: 202-229.
- Toner, Patrick. "Emergent Substance," *Philosophical Studies*, Vol. 141 (2008): 281-297.
- . "Hylemorphic Animalism." *Philosophical Studies* (Forthcoming).
- . "An Old Argument Against Co-location." *Metaphysica*, Vol. 8, No. 1 (2007): 45-51.
- . "On Hylemorphism and Personal Identity." *European Journal of Philosophy* (Forthcoming).
- . "On Substance." *American Catholic Philosophical Quarterly* (Forthcoming).
- . "Personhood and Death in St. Thomas Aquinas." *History of Philosophy Quarterly*, Vol. 26, No. 2 (2009): 128-138.
- Unger, Peter. *Identity, Consciousness and Value*. New York: Oxford University Press, 1990.
- Van Inwagen, Peter. "The Doctrine of Arbitrary Undetached Parts." *Pacific Philosophical Quarterly*, Vol. 62 (1981): 123-137.
- . *Material Beings*. Ithaca, NY: Cornell University Press, 1990.
- . "A Materialist Ontology of the Human Person." In *Persons: Human and Divine*. Edited by Peter van Inwagen and Dean Zimmerman. New York: Oxford University Press, 2007: 199-215.
- . "The Possibility of Resurrection." *International Journal of Philosophy of Religion*, Vol. 9, No. 2 (1978): 114-121.
- White, Kevin. "Aquinas on the Immediacy of the Union of Soul and Body." In *Studies in Thomistic Theology*. Edited by Paul Lockey. Houston: Center for Thomistic Studies, 1995: 209-280.
- Wiggins, David. *Identity and Spatio-Temporal Continuity*. Oxford: Blackwell, 1967.
- . *Sameness and Substance*. Cambridge, MA: Harvard University Press, 1980.
- . *Sameness and Substance Renewed*. Cambridge, UK: Cambridge University Press, 2001.
- Williams, Bernard. "Are Persons Bodies?" In *Problems of the Self*. Cambridge: Cambridge University Press, 1973: 64-81.

- . "Personal Identity and Individuation." In *Problems of the Self*. Cambridge: Cambridge University Press, 1973: 1-18.
- . *Problems of the Self*. Cambridge: Cambridge University Press, 1973.
- . "The Self and the Future." In *Personal Identity*. Edited by John Perry. Berkeley: University of California Press, 1975: 179-188.
- Wilson, Jack. *Biological Individuality*. Cambridge: Cambridge University Press, 1999.
- Wuellner, Bernard. *Dictionary of Scholastic Philosophy*. Milwaukee: Bruce Publishing Company, 1956.
- Zimmerman, Dean. "The Compatibility of Materialism and Survival: 'The Falling Elevator' Model." *Faith and Philosophy*, Vol. 16, No. 2 (April, 1999): 194-212.
- . "Material People." In *The Oxford Handbook of Metaphysics*. Edited by Michael Loux and Dean Zimmerman. Oxford: Oxford University Press, 2003: 491-526.
- . "Problems for Animalism." *Abstracta*, Special Issue I (2008): 23-31.