## **Perdure and Murder**

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The rich resources of the Four-Dimensional metaphysics have been brought to bear upon many traditional philosophical problems in recent years. Alas, the implications of Four-Dimensionalism for bioethics have gone largely unexplored. Hud Hudson is the rare exception. Relying upon a Four-Dimensional metaphysics of temporal parts<sup>1</sup> and a belief in unrestricted composition, <sup>2</sup> he argues that there is little reason to identify the perduring human embryonic animal and the perduring human person. He makes the intriguing claim that if abortion is wrong, then it is not because the human animal within its mother's womb is a person. This he rightly claims "is a very significant result" for "an overwhelming amount of the literature on abortion and infanticide (as well as much of the public debate on these topics) seems to turn on the question of whether or not the human fetus is a person." [3, p. 153]. However, I am going to argue that one doesn't have to reject unrestricted composition and the Four-Dimensionalist claim that things perdure to consider mindless embryonic human animals to be persons. Thus if abortion is wrong, it may be due, in part, to the mindless embryo being identical to a later thinking person.

Let's now turn to the reason why if there are temporal parts and composition is unrestricted, Hudson insists the person can't be identified with the animal. He maintains that animals are not persons for, at best, they would merely share *some* of the thinking stages, i.e., momentary temporal parts, composing a person. The normal human animal typically consists of thinking stages through most of its

any period of your life, such as the first half, there is a temporal part of you that exists only then.

<sup>&</sup>lt;sup>1</sup> Temporal parts are the distinctive components of Four-Dimensionalism. A temporal part of an entity will exist only at a time and will then overlap all of the entity's other parts that exist at that time. The Four-Dimensionalist claims that for

<sup>&</sup>lt;sup>2</sup> Unrestricted composition is taken to mean that *Necessarily, for any collection of objects, the Xs, there exists a Y, such that the Xs compose Y.* So not only are there archipelagos, but a scattered object that consists of you and an archipelago.

<sup>&</sup>lt;sup>3</sup> To *perdure* means to persist in virtue of temporal parts.

<sup>&</sup>lt;sup>4</sup> I accept perdurance and unrestricted composition just for the sake of argument. The same is true for Hudson's claims that the concept 'person' is maximal and that only a part of the organism found "beneath its skin" is truly thinking.

life and non-thinking stages during its embryonic months. There is also a distinct creature, perhaps a large temporal part of the human animal, whose temporal parts are all capable of thought. Which one is the person? Hudson finds it more plausible to identify the person with the entity consisting of *only* thinking stages rather than something like the human animal which also has non-thinking temporal parts.

However, since there are countless things that consist of only thinking temporal parts in a Four-Dimensional metaphysics, Hudson contends that the only non-arbitrary selection of stages to be given the label "person" are those thinking stages which are *not* embedded within a larger thinking being. Thus persons are *maximal* thinkers. And it isn't any kind of thinking, such as that produced by *merely* sentient stages, that is sufficient for composing a maximal person. Also needed are self-conscious thoughts appropriately related via psychological continuity and connectedness. Even that is not enough because Hannah could be vaporized in an atomic explosion and in an incredible cosmic coincidence, a psychological duplicate of her materializes on a distant planet [3, p. 132]. So there must also be the right kind of causal connection, an *immanent cause* involving earlier thinking stages bringing about later thinking stages [3, p. 132].

Hudson contends that appealing to the animal's *potential* to have a thinking stage will not succeed in rendering an animal identical to a person. The Four-Dimensionalist typically accepts unrestricted composition and so there will be countless objects that have thinking stages. Some of the thinking beings in the more generous ontology will also have mindless embryonic human stages or even human gametes as temporal parts. There will even be an object that consists of an ancient 8<sup>th</sup> century BC Babylonian sandal and President Obama. If one advocates a restricted compositional principle to avoid such scattered objects, if it doesn't bring an unwelcome vague existence [5, pp. 212-213], then it usually means excluding from one's ontology scattered objects like Hawaii, planetary systems, the letter 'i' and a hour glass of falling sand [3, p. 108; 10]. Thus it appears that if mindless embryos are persons because they have later thinking parts, then there was an additional person present in ancient Babylonia in virtue of

the sandal that was an early temporal part of an object composed of it and the later thinking Obama stages. But surely that object isn't an early part of a person endowed with the moral status that is typically thought to accompany personhood.

So the dilemma Hudson presents us with is that if we want to deny a person exists in ancient Babylonia due to the sandal existing there and it possessing the later Obama thinking stages, then we must also deny that the mindless embryo is a person in virtue of its future thinking stages. My response is to suggest there are grounds for claiming that some but not all potential thinkers are themselves persons even when they haven't yet manifested that potential. There is a way to distinguish potential thinkers via the relations unifying the stages of a natural kind in order to then claim that the animal is also a person while other beings that have thinking stages for just some of their existence are not persons. The idea is roughly that the mindless embryonic stages are the same kind of stages of the latter thinking person – i.e., they are all *living* stages of an animal. There are mindless animal stages linked by life processes to thinking animal stages. Their diachronic (as well as synchronic) unity is due to their parts being caught up in the same life processes. They are stages of the same token of a natural kind, not parts of two things of distinct kinds cobbled together in virtue of the principle of unrestricted composition. The gerrymandered entity composed of the ancient sandal and President Obama doesn't have later sandal stages that happen to think. The capacity is not found in the developmental telos of the sandal. It is not the nature of the earlier stages to give rise to later thinking stages. But one does find such a telos programmed into all the stages of Obama, even the mindless ones.

So we can grant that mindless human animals are persons without having to bestow the title on every object which has mindless stages preceding its thinking ones. However, there may also be a single relation, psychological continuity, unifying all of the thinking stages of the person. So Hudson could appeal to the existence of a non-gerrymandered, 'natural', psychological unity relation in to order apply the label 'person' to the perduring object consisting of only thinking stages. Thus my approach might seem to commit us to there being two kinds of persons – some that are mindless for a time, others that

are always thinking. And that admission will run afoul of Hudson's maximality principle that persons are not to be found within larger persons [3, p. 121]. However, I shall put forth arguments that reveal the best candidate for the label 'person' to be the one that was once a very little mindless animal. So it will not be, as Hudson claims, "arbitrary and unmotivated" to identify the human person and human animal.

I now will show that the psychological continuity and connectedness criterion favored by Hudson *collapses* into animal identity. What I mean by *collapses* is that there are cases which tend to elicit from us descriptions of one thinking entity being identified with another thinker that cannot be explained by a psychological criterion of personal identity being satisfied. The intuitions we have there about identity can only be accounted for by both thinkers being the same animal. So what we want to say are stages of a persisting person in cases involving the dreaming and the awake, the rational and the demented, divided and reunited minds, can only be construed as such if an appeal is made to the biological persistence conditions of animals.

The first problem for the psychological account of identity involves a twist on Reid's famous critique of Locke's memory criterion [6]. Locke claimed that one's identity extended as far back in time as one's memories. Reid revealed a failure of transitivity by envisioning an old general who could remember his first military campaign as a young soldier, the young soldier could recall being flogged as a school boy for stealing from an orchard, but the general couldn't remember being flogged. Therefore, the general is *not* identical to the boy, yet he is identical to the young soldier, who is identical to the boy. This absurdity could be avoided by appealing to psychological continuity, i.e., overlapping chains of psychological connections [12, pp. 206-08]. Psychological continuity involves the general being able to remember a time (his first military campaign) at which he could remember being flogged. So an overlap of memories will suffice in lieu of a direct memory connection. But the transitivity problem returns with a modified version of Reid's scenario that Perry named the Senile General case [13, p. 19]. The senile general could remember being flogged (or remember a time at which he could remember a time that he was flogged). So he is identical to the boy. The young soldier could remember being flogged, so he too

is identical to the boy. But the general couldn't remember his more recent experience as a young soldier, nor could he remember any other time at which he then could remember his first military campaign.

This renders the general identical to the boy but not identical to the young soldier, who is also identical to the boy. So if they are to be identified, as it intuitively seems they should, an appeal to their being the same animal can do what an appeal to psychological continuity cannot.

A second scenario where a psychological criterion of identity collapses into a biological one involves a temporary division of a mind. Consider Parfit's My Physics Exam scenario where there is just a short term loss of a unified consciousness due to cutting the corpus collassum so one person can direct both hemispheres to work on different parts of a test [12, pp. 246-248]. The hemispheres are reunited after the dual work is done. As Parfit himself notes, the most plausible response is that there was one person temporarily cut off from himself. To account for that intuition, something other than a single causal chain of psychological continuity must be relied upon. Four-Dimensionalists usually qualify the criterion of psychological continuity for branching cases so the result is that there are two distinct persons continuous with the same earlier stage. They do so by insisting that psychologically continuous x and y are stages of the same person if there is no stage z that is psychologically continuous with x or y but simultaneous and distinct from either y or x. So during the exam there are two streams of thought that have stages that are simultaneous but distinct from each other, thus ensuring that there is not a single person despite their both being psychologically continuous with shared earlier stages. But this will deliver the counterintuitive result that there is not a person with the briefly divided mind but that there were two persons present at that time since they involve simultaneous but distinct stages [1]. If the intuitive response is to be preserved, then it appears that we must appeal to a rather ad hoc modification of the psychological criterion or claim that it must be because it is the same animal doing the thinking.

One can also undermine the psychological continuity criterion for identity by taking issue with Locke's account of Socrates awake and Socrates asleep [6, p. 343]. Locke conjectured that if sleeping Socrates was psychologically cut off from waking Socrates then they would not be the same person.

Imagine that your waking and dream states are not psychologically connected. You cannot recall your dreams and these dreams don't follow from your waking life. I suspect that few readers would follow Locke and deny that they were states of the same person, interpreting the psychological disconnect as evidence of two people sharing a body. Since there isn't any psychological continuity between the waking and the sleeping, then what makes them the same person must be that they are the same living animal.

A fourth scenario undermining psychological continuity theories relies upon our reactions now to the possibility of future pain after the onset of amnesia or even more debilitating impairments [14]. Consider the prudential concern many envision having for the being with their brain after a stroke undermines the brain's capacities for rationality and self-consciousness, leaving a mere sentient child-like mind. If told earlier that the being with our damaged brain will suffer horrific pains unless we take on almost as much physical pain before losing our memories and capacity for self-consciousness, most of us would consent to the lesser pain to ensure the greater does not transpire. Such a show of apparently prudential concern for an animal in the future, despite the absence of psychological continuity and the reflective capacities associated with personhood, suggests an adherence to an animalist, i.e., biological account of our identity.

Hudson contends that an individual suffering "profound senility" would not be a person [4, p. 222]. There wouldn't be the requisite self-consciousness and psychological continuity. But our prudential concern in the typical philosophy thought experiments suggests we would survive such a loss of mental capacity. So while I think this should lead Hudson to abandon his belief that *we* are essentially self-conscious persons [4, p. 218], given unrestricted composition, it need not lead him to deny that there are beings that are essentially self-conscious with psychologically continuous stages.

<sup>&</sup>lt;sup>5</sup> Hudson operates on the methodological assumption that the reliance upon personal identity thought experiments will end in a stalemate [4, p. 217]. I find there to be more truth in his later "acknowledge(ment) that my dismissal of the fanciful thought experiment defense may have been uncharitable and over-hasty…" [4, p. 233].

However, if anything deserves the title "person", we do. So given Hudson's commitment to a maximality principle, he should accept that we persons are not essentially self-conscious psychologically continuous thinkers, merely self-conscious for just a period of our lives. We're persons because of our capacity for self-consciousness, but that capacity is not actualized during all of our stages. Of course, even if Hudson were to admit this, it still wouldn't commit him to identifying the human person and the human animal. He could instead claim we persons are identical to a maximal being composed of all merely conscious stages rather than only self-conscious, psychologically continuous stages. McMahan and the pre-dualist Unger offer Three-Dimensional versions of this thesis [7; 15], claiming that we survive as long as the same brain produces sentience (consciousness). So what I propose to do next is provide thought experiments which suggest that our prudential concern reveals that we persons believe ourselves to be not even essentially sentient. The thought experiments reveal that the future sentient states we are concerned with can be deemed ours only if they are united by a biological criterion.

An additional benefit of my interpretation of this is that I do not have to defend embodied or extended cognition [11, pp. 87-94] against Hudson's claim that only a (neurological) part of the organism found beneath the skin produces thought (3, pp. 143-44; 4, pp. 224-5], though I might have to draw on Noonan-style pronoun revisionism to do so. Hudson argues that just as it is arbitrary to apply the label 'person' to an organism with embryonic non-thinking temporal parts, so it would be arbitrary to apply the label to anything with spatial parts (hair, nails, bone marrow) that don't contribute to thought. We can accept Hudson's claim that organism has parts irrelevant to the production of thought without being committed to the claim that the person is spatially as well as temporally smaller than the organism.

Consider that we care prudentially for the stroke victim that would result from damage to our brain reducing its capacities to realizing mere sentience. I don't believe this shows that it is mere

<sup>&</sup>lt;sup>6</sup> That means that the referent of "I" is not the thinking part but the perduring animal/person. [10, pp. 63, 210]

consciousness or sentience, not self-consciousness that is essential to our persistence. I think instead that our prudential responses in such scenarios should actually be construed as showing that it is biological continuity that determines our persistence conditions. Ask yourself whether your concern for your postinjury self with just a rudimentary mind really is due to your possessing the *same organ* that underlies consciousness or is it rather that it is just the *same animal* that is conscious? I think it is the latter and this can be seen by pondering the following twist. Consider whether your reaction to the prospect of coming out of a stroke-induced coma with pain and pleasure sectors intact but no cognitive capabilities above this will be different if such sentience is a result of different parts of your cerebrum being rewired during the coma to realize pain and pleasure when you awaken? I suspect that most readers would have prudential concern despite different parts of the brain contributing to such sensations.

Readers might respond that doesn't show that we persons are animals but that what matters for the person's survival is that the different sentience-realizing structures are in the *same* cerebrum. If so, consider a second case where, early in someone's life, in the absence of injury and before a web of beliefs and desires arises, different parts of a developing brain play a role in receiving and processing painful and pleasurable signals. Imagine one is in the brainstem and the other is in the cerebrum. Would it be correct to say there were two thinking beings in one body? And if one is destroyed, is it correct to claim there remains then only one thinking being? My intuitions are that we would not. And would readers say that there is a new thinking being produced by fusion if there is the later development of a self-conscious person who provides the respective pain or pleasure reports when either the sector in the brainstem or cerebrum is "stimulated"? I very much doubt it. And for all we know, this is roughly what happens in child development. The initially physically dispersed realization and thus psychologically unrelated fragmented mental states of the baby are only later psychologically united as the older child obtains reflective access to the different states. The child can come to say that "I am in pain now and earlier had pleasant experiences," reflectively linking what before had been experienced without the capacity for reflection upon those experiences. Even if such conjectured development is not how we

actually develop, our reactions to such a counterfactual assumption about ourselves does illuminate what we take ourselves to be: living human animals, rather than brain unified thinkers.

I don't see any reason to identify ourselves with parts of the consciousness-producing central nervous system [3; 7], nor with a larger being only if it *continuously* possesses the same functioning brain-like structure [15], rather than holding that these pains and pleasures would be mine because they are subserved by parts caught up in the same biological life and belong to the same animal. It seems arbitrary to insist upon the brain - understood to include the brainstem, cerebellum, midbrain and cerebrum etc. - as providing us with ownership of our thoughts given that in the described scenario there are neither causal connections providing psychological connections between the pains and pleasures, nor is it the same part of the brain that multiply realizes both states. Perhaps if the very same part of our brains served to realize our pains and pleasures, then it would make a little more sense to insist upon that bit of anatomy as being essential to our persistence. But that isn't the case. So to then insist that the thoughts are ours as long as *some* part of the brain produces them seems unwarranted. The boundaries of the brain have been somewhat arbitrarily drawn by the authors of anatomy texts rather than determined by a unified function. The brain does many things, only some which involve thought. Since thought production is not what unifies all the parts of the brain, there is little reason to claim we persist as long as somewhere in that brain our various thoughts are produced.

So it appears that the two most prominent psychological criteria of identity (*self*-conscious psychological continuity or a *mere* brain-based consciousness) can't deliver the intuitive response - that there is but one and the same thinker in the stroke case. What can do so is the animalist account in which human persons and human animals are identical. Thus it makes sense to claim that the only person in the stories is the animal. As long as our animal can have pleasures and pains into the future, we have some prudential reason to obtain the former and avoid the latter. Since it is the life of the human animal that unites our thoughts as being thoughts of the same thinker, it would be arbitrary if we persons did not extend as far back in time as our animal did, which first existed in virtue of mindless embryonic stages.

Hudson makes the conditional claim that if the embryonic animal is a person, then it is presumptively wrong to abort it. He denies the antecedent while I affirm it. Hudson just said he would presuppose without argument that persons and (merely) sentient beings have moral status [3, p. 151]. That strikes me as uncontroversial, given that his perduring sentient being and person possess only conscious stages. I don't want to help myself to his assumption since there will be readers who deny that the mindless can be harmed. So it isn't enough to show that there is such a distinction between the potential of animal stages to give rise to thinking animal stages while there is no such potential of sandal stages to give rise to later thinking stages. The appropriate immanent causation unifying stages and the developmental telos might seem not to be enough to establish the possibility of harming or benefiting something with moral status. A further argument will have to be made why mindless fetal animals have interests and can be immorally harmed while the sandal/Obama entity cannot be harmed while the sandal stages are present.

Before encountering Hudson's challenge, I had thought it was part of a sound argument that the mindless would be benefitted and harmed by being identical to a later being whose first mental experience could be good or bad for it. This stood in stark contrast to claims by McMahan [8] that early abortion wasn't wrong because there wouldn't be any psychological connections between the mindless and sentient. It seemed to me that if mindless X was identical to a later sentient Y, then if the first mental experiences of Y were good for it, then in virtue of the identity of X and Y, we should also say that it would be good for mindless X to develop and experience such experiences. And it could be a harm if its development was terminated and X never obtained the good experiences.

I didn't worry about the sperm or egg, or their scattered composite because, like Marquis and Stone [8, 14] I was working with an ontology in which the latter didn't exist and the first two went out of existence at fertilization. So potential mattered, but gametes and contraception didn't provide a reductio of the view for as Marquis argued "Prior to conception there is no individual that is the same individual as the later human being that has, or would have had, a valuable life. Individual identity does

not survive fusion or fission, whether contraception, amoeba reproduction or brain bisection are the examples" (8, p.33). But this is just false if we accept 4D unrestricted composition. A consequence is that Marquis and Stone can't avoid contraception posing a reductio of their potential provides moral status argument by claiming that there are no such creatures that were once gametes and later thinkers.

The line of reasoning that I earlier embraced might now seem to be especially dubious when applied to an entity that had a sandal stage earlier in its career and sentient stages much later. While it is true that it is one and the same entity that was a sandal for a segment of its existence and sentient during for a later period, it doesn't seem that the thing with sandal stages and sentient stages would earlier have been harmed if the sentient stages were prevented from arising. So it seems that if the mindless can be benefited or harmed, there necessarily must be more to account for this than the identity of the mindless with an entity that has a valuable future.

Why should the mindless fetus have moral status and be capable of being harmed when it seems the sandal/Obama person composite didn't have moral status at the time that its ancient temporal parts were mindless? I believe the answer starts with the recognition that mindless animals have *interests*: they have an interest in food and survival and flourishing of a sort. We can speak of things going well for mindless animals, their functioning as they should. They have a good. As creatures with a good, a later mental life can earlier be in their interest. That mental life will serve the animal's interests or telos. Just as other organ systems served to keep the organism alive and flourishing, so will its later cognitive systems. That isn't true of the sandal that is part of a sandal/Obama entity. The sandal's functioning properly doesn't prepare the way for the Obama stages to flourish. The sandal stages don't serve some end or telos (be it survival, reproduction, flourishing, knowing God) that Obama's stages do as well. One can't speak of such footwear as having any interests or good, so it can't have an interest in the later well-being of its Obama stages. Any mention of something being good for the sandal, like polish preserving its leather, is parasitical upon serving its wearer's ends which can be furthered by the polish extending the sandal's longevity. But we can speak of thinking stages of Obama having an interest in

their later thinking stages and the whole they compose. I suggest that we can likewise speak of the mindless human animal having an interest and benefiting from its later minded states. It doesn't matter that it can't be interested in i.e., self-consciously desire those later interests be fulfilled. Nor can the merely conscious newborn [9]. Some philosophers might bite a bullet and claim that infanticide isn't wrong in the absence of a conscious desire to survive. But can one really deny that a newborn just seconds old, not uncomfortable but unaware that being held, fed or talked to by its mother would be pleasing, has then an interest in such undesired events transpiring? And why should it matter if the newborn was unconscious but would moments later consciously enjoy the same? Both have an interest in thriving, conscious states being but one manner in which the living flourish.

An interest in the welfare of the human animal is lacking in the sandal stages as well as the stages of the gametes. This claim is less evident in the latter. But notice that the gametes' genetic makeup and lives are distinct from those of the animal that emerges from their fusion. So while the biological function of the gametes is to produce a human animal, the gametes could have each served their biological function through fusing with different gametes. The gametes and the resulting human animal are not caught up in the same life; in other words, the lives of the gametes unfold according to natures that are distinct from the life and nature of the subsequent animal. It is not the nature of the individual gametes to make the *particular* animal that emerges from them flourish than another. So even if the gamete is a temporal part of the same larger entity as a human animal, the former's nature is not such that it is to produce thought and other goods in *that* embedding entity. Contrast that with the living stages of the perduring human animal. We can describe their nature as being such that they immanently produce the goods of later stages. The same life, governed by the same genetic constitution, produces the later goods. Thus we can speak of the stages of the animal having an interest in the later stages of the animal in the way that we cannot speak of the temporal parts of the gametes having a nature to serve the later temporal parts of *the* animal, even though gametes and the human animal are all temporal parts of

larger entity. So I agree with Stone, even though he's assuming a Three-Dimensional metaphysics, when he writes:

What the fetus *is* finally, is something that makes *itself* self-aware: that good is the fetus's good – this is its nature. Anything benefits from the good which it is its nature to make for itself. I submit that we have a prima facie duty to all creatures not to deprive them of the conscious goods which it is their nature to realize. [13, p. 821]

Understanding the realization of a thing's nature in the sense of the healthy development of a living being is the morally relevant sense of potential. It is not the nature of the gamete to realize a particular capacity that is there in the post-fertilization embryo. So even if there is a single entity composed of an earlier gamete temporal part and a later human being temporal part, it initially doesn't have an interest in the development of the human being's particular capacities and would not be harmed by its failure to so develop. The same appeal to health and proper function to spell out the relevant sense of potential can avoid the alleged reductio of potential posed by totipotent cells in the early embryo or a skin cell that could be transformed into the clone of a human being. Thus the skin cell or totipotent embryonic cell that is arranged so as to develop in an identity preserving way into an infant human being didn't earlier have such development as its proper function and so those cells did not have such development in their interest. Moreover, basing the morally relevant sense of potential upon proper function avoids having to rely upon a conception of active potential that is often hard to distinguish from passive potential in puzzling cases. A congenitally retarded embryo may not have the active potential to develop but it does have an interest in healthy development for its kind and so it could have moral standing. Thus if some intervention could lead to health, that should be done despite the absence of active potential. "Potential" in the abstract may lend itself to "promiscuous" interpretations and thus not provide

<sup>&</sup>lt;sup>7</sup> Someone might claim that the scattered object composed of the two gametes has an interest in the resulting embryo thriving. But the scattered object is not alive, unlike its two component gametes, and so has no biological interests. It is like the sandal in being without interests. Its parts may have a telos to produce a life, but it, qua composite, doesn't.

bioethicists with useful guidance for determining the moral status and interests of entities before they have minds, but restricting the morally relevant sense of potential to the more precise notions of health and proper function can serve us much better.8

## References

- [1]Brueckner and Buford. 2008. The Psychological Approach to Personal Identity: Non-branching and the Individuation of Person Stages. Dialogue. 47: 377-386.
- [2] Hudson. 1999. Temporal Parts and Moral Personhood. *Philosophical Studies* 93: 299-316.
- [3] Hudson. 2001. A Materialist Metaphysics of the Human Person. Cornell University Press
- [4] Hudson. 2007. I am not an Animal! In Persons: Human and Divine, 216-234.
- [5] Lewis. 1986. Plurality of Worlds. Oxford University Press
- [6] Locke. 1975. An Essay Concerning Human Understanding.
- [7] McMahan. 2002. The Ethics of Killing: Problems at the Margins of Life. Oxford University Press.
- [8] Marquis. 2004. Korcz's Objections to Future of Value. Journal of Social Philosophy. 56-60.
- [9] Manninen. Revisiting the Argument from Fetal Potential. Philosophy, Ethics and Humanities in Medicine. 2007. 2:7.
- [10] Noonan. 2003. Personal Identity. 2<sup>nd</sup> ed. London: Routledge Press
- [11] Olson, Eric. 2008. What are We? A Study in Personal Ontology. Oxford University Press.
- [12] Parfit. 1983. Reasons and Persons. Oxford University Press
- [13] Perry. 1975. In *Personal Identity*, 2<sup>nd</sup> Edition. University of California at Berkeley Press
- [14] Stone. 1987. Why Potentiality Matters. Canadian Journal of Philosophy. 17. 816-31.
- [15] Unger. 2000. The Survival of the Sentient. Philosophical Perspectives. 14. 328-45.

<sup>&</sup>lt;sup>8</sup> I would like to thank Hud Hudson, Steve Napier and Jason Eberl for comments on an earlier and longer version of this paper which will appear as "Embryos, Four-Dimensionalism and Moral Status" in Persons, Moral Worth and Embryos: A Critical Analysis of Pro-Choice Arguments, Springer Press 2011. I was also helped by discussions with David Shoemaker and Eugene Mills and others in the audience at the 2011 meeting of the Southern Society for Philosophy and Psychology. I benefited from a discussion of potential with John Lizza at the 2011 Central APA. My greatest debt is to Adam Taylor who discussed multiple drafts of this paper with me which led to a great number of improvements.