

What Matters in Survival: The Fission Problem, Life Trajectories, and the Possibility of Virtual Immersion

Abstract: One goal here is to motivate and illustrate the possibility that we can accept Parfitian arguments about the importance of personal identity, while rejecting fission as an instance of preserving what matters in survival. That is, singular existence over time is required for preserving what matters, even if identity is not. The second goal is to develop and motivate a of what matters in the survival of persons that can accommodate and explain this possibility. At least one way we can realize this second goal is to accept an externalist conception of what matters, specifically, that what matters in the survival of persons is the continuation of what is called their “life trajectories,” which involves retaining some of a person’s extrinsic properties in addition to their standard intrinsic psychological properties. The motivation for this particular externalist conception of what matters comes from considering the implications of certain kinds of cases of complete virtual immersion – the immersion of a psychological subject in a completely virtual world, in some cases, a world in which her experiences are entirely de-correlated with events in the objective world. Replacing standard psychological continuity theory of what matters in survival with the life trajectory theory not only rules out fission cases as those in which we have what matters equally as well as in single cases on metaphysical grounds, achieving our first goal, it can also explain our reactions to different virtual immersion scenarios, unlike a simple psychological continuity theory. Therefore, simply on explanatory grounds alone, the life trajectory account is to be preferred over standard psychological continuity accounts.

1. Introduction

Debates about the nature of personal identity, or of what matters to us in our survival, often focus on offering defenses of a particular view of its nature in contrast with other views. For instance, some argue for a psychological continuity theory, some for a bodily continuity theory, others for a social constitution theory, or various other alternatives.¹ Of course, the most popular and intuitive idea is that, when identifying with a being in the future, our psychologies must persist in some form or other. For this reason, from this point forward, the idea that psychological continuity is an essential component in an account personal

¹ For the origins of psychological continuity theory, see Locke (1964); For one example of a bodily continuity theory, see Olson (1997). The origin of social constitution theories can at least be traced to back to work by Mead (1913).

identity, or of what matters to us in our survival, will be assumed to be correct. The focus, then, will be on issues within psychological continuity theory, rather than on offering arguments in favor of this view. Specifically, we will initially focus on an issue arising from Parfit's work (1971, 1984, 1995, 1999) that will be known as "Parfit's homework problem."

Parfit's homework problem has to do with the possibility of a person fissioning, a scenario in which a single person undergoes some process, the end result of which is the creation of two distinct persons, each psychologically causally dependent upon, and psychologically qualitatively identical to the original person. Parfit, of course, famously argued for the idea that if we accept psychological continuity theory, then on pain of inconsistency, we must also accept fission as a form of survival equally as good as ordinary singular survival, and that therefore identity does not matter for survival.

This particular argument of Parfit's poses a challenge for those who wish to accept some form of psychological continuity theory, and who are sympathetic to the idea that identity is not what matters, but who also wish to reject fission as a form of survival, those who balk at the fission consequence, which apparently follows from accepting psychological continuity theory. Call those who have such a reaction "Parfitian singularists."

Parfit's challenge, or homework problem, for a Parfitian singularist is to find some survival-mattering difference between ordinary cases of singular survival and fission cases.² This is rather difficult, since metaphysically speaking, fission products are equally psychologically continuous with their predecessor, and therefore it appears that there is no reason not to grant them the status of fully maintaining what matters in survival. For a

² For a Parfitian singularist view, though she herself does not use the same terminology, see Whiting (2002).

Parfitian singularist, responding to this challenge requires examining the standard psychological continuity theory of what matters in survival, and what it might be missing.

To test psychological continuity theory, a certain type of case is considered that maintains all and only the psychological continuity of a particular subject, which nicely isolates and reveals what is missing in standard psychological continuity theories. This type of case, hereby dubbed a “virtual immersion” case, in at least in one instance, involves a scenario in which a psychological subject’s experience do not in any way track their objective environment, experiences that are fully illusory. What this shows us is that existing within and tracking an objective environment is important in an account of what matters in survival, illustrating that part of what is missing in standard psychological continuity theories is a focus on the extrinsic properties of a psychological subject. This, in turn, suggests an alternative account of what matters in survival.

The view suggested has as its core tenet that it is the continuation of what is called a psychological subject’s “life trajectory,” within and through an objective context, that matters in survival. Unlike pure psychological continuity theory, this theory incorporates various relations between a psychological subject and their environment as part of a theory of what matters, which prove to make it impossible for fission products to maintain it, thereby accommodating Parfitian singularism. At the same time, it also accommodates our intuitions about different virtual immersion scenarios much better than an internalist conception of psychological continuity theory. The life trajectory theory, then, is well justified by its explanatory value alone.

To begin, we will review Parfit’s argument for the conclusion that identity is not what matters in survival. Next, we will explore reasons for accepting this conclusion that are not

dependent on considerations about fission, and explain why someone might be tempted by Parfitian singularism, a view that stems from intuitions about Parfit's original thought experiments concerning the importance of psychological continuity as well as the fission consequence. Recall that the fission consequence was a discovery, a conclusion that followed as a result of accepting Parfit's version of psychological continuity theory, the standard version. Recall also that this conclusion was rather surprising, and counter-intuitive at the time it was revealed. It turns out that there are good reasons for this reaction, reasons we will explore, those that a current psychological continuity theorist might still have for resisting fission as a form of survival. In exploring the motivations for Parfitian singularism, the standard theory of psychological continuity is also described. Afterwards, a specific case of virtual immersion, and its implication for standard psychological continuity theory is presented. The life trajectory view is then hypothesized and developed in detail, applied to fission and virtual immersion scenarios, and ending by considering objections and replies to the view.

2. The Argument from Fission: Why Identity Does Not Matter

Parfit begins his argument that identity does not matter in survival by first illustrating that what matter to us is psychological continuity rather than bodily continuity. To do so, Parfit asks us to consider the following kind of hypothetical scenario: suppose that in order to survive you require an operation that involves splitting your brain in two, disposing of one half, and then transporting the counterpart to another body just like yours. Assume that half of your brain can fully support your previous psychology, so that there will be no disruption in psychological continuity between the pre-op and post-op beings. Many of us would have no qualms about having this operation with respect to what matters to us in our survival.

However, since physical continuity is absent in this case, it seems that it cannot be physical continuity that matters; instead, it must be psychological continuity that matters.

The conclusion that identity is not what matters in survival, rests at least in part on another thought experiment. Parfit asks us to further imagine that we undergo an operation similar to the previous operation, with the exception that, this time, both brain hemispheres are transplanted into two separate bodies qualitatively identical to your previous one. This experiment shows that psychological continuity can be maintained twice over, thereby proving itself insufficient to maintain identity.³ However, since we agreed that what matters in survival is psychological continuity, it follows that we must accept that it cannot be identity that matters.⁴ This argument is what fundamentally constitutes Parfit's homework problem for the Parfitian singularist. How can we maintain our intuition about the first case – that in it what matters is maintained – but also reject the apparent consequence that fission does so equally as well?

3. Non-fission Based Motivations for Rejecting Identity as What Matters in Survival

After Parfit's argument that psychological continuity was not sufficient to preserve identity, some psychological continuity theorists, though on different grounds, embraced his conclusion that fission is a form of survival equally as good as singular survival (Lewis, 1983; Martin, 1995).⁵

³ See Williams (1976) for the making this point about psychological continuity originally, otherwise known as the "reduplication argument."

⁴ While this is a rather simplified version of Parfit's argument that could be construed in more sophisticated ways, the main point here is to show that there is clearly an issue concerning how to deal with fission if one accepts psychological continuity theory. For a detailed discussion of how to interpret Parfit's arguments see Johansson (2010).

⁵ For Lewis, it is because, even if fission occurs, this scenario is still one in which the identity of the person is maintained. However, we are not here concerned with explicating any specific identity theory and therefore we will not explore the specifics of Lewis's version of an identity theory.

Fission scenarios provide us with one reason for accepting that identity is not what matters in survival. However, we could also be motivated to be Parfitian about identity for different reasons. We might, for instance, find Parfit's argument that psychological continuity comes in degrees compelling. Alternatively, we might find compelling the idea that maintaining a type of psychological continuity, qualitatively indistinguishable from a type that is identity-preserving, is all that could rationally be wanted in desiring to survive.

The first reason for rejecting identity as what matters follows this line of reasoning: psychological continuity comes in degrees, but identity, of course, is all or nothing. So, if a subject B has a high degree of psychological continuity with a previous subject A, for the psychological continuity theorist, what matters has been preserved. But, of course, identity is a relation that does not admit of degrees. Objects cannot be sort of identical to one another; It is either one and the same object or it is not.⁶ Therefore, if psychological continuity is what matters in survival, identity is not.

The second reason is grounded in Parfit's response to Butler's (1736) objection that Locke's memory criterion presupposes the identity of the person in question. According to Butler, genuinely remembering having experienced something presupposes that it was that very person who had the original experience. In other words, in order to know that person B remembers having been person A, we must already know that person B is identical to person A.

To defuse this objection, Parfit relies on the notion of quasi-memories, first introduced by Shoemaker (1970). Quasi-memories are those that appear genuine to the experiencer, but are not based in facts about a previous person strictly identical to the

⁶ Williams (1970) takes this as a reason for rejecting psychological continuity theory as a theory of what matters in survival.

current experiencer. In this way, a Lockean might say that a person B is psychologically continuous with a person A insofar as person B has quasi or q-memories of having been person A.

Of course, this maneuver applies to a variety of mental states and attitudes such that a person can q-have all of an earlier person's previous psychological states. While these psychological states would be dependent upon an experiencer's psychological predecessor, that predecessor need not be strictly identical to the current subject of the psychological states in question.⁷

What this shows is that something qualitatively identical to genuine psychological continuity can be maintained in a subject of experience that does not preserve that subject's diachronic identity. And, if the preservation of genuine psychological continuity does not differ qualitatively from maintaining q-psychological states, the way is open to claim that q-psychological continuity is all that could rationally matter for a psychological subject's survival, a view that does reject identity as what matters in survival.

So, in fact, we can be Parfitian about identity for reasons other than the possibility of fissioning. As we've seen, there are at least two separate considerations against the idea that identity is what matters in survival, both stemming from Parfit's own work. Having made room for Parfitian singularism, the next task is to positively motivate taking such a position

⁷ Note that quasi-memories as described here must come from a person's psychological predecessor and not just from anywhere. See Sidelle (2011) for an argument that the causal requirement on the preservation of personal identity entails this. For Sidelle, the memory must be caused by (not in necessarily in the normal way) but, in some appropriate way, by the current psychological subject's predecessor. To not so require it, is to jettison the causal requirement altogether, and to allow for random doppelgangers to be psychologically continuous with a later subject. Memory-like experiences can be induced in any number of ways, of course, but these would not be memories at all, if not caused in the normal way, and would not even be quasi-memories, if not caused in the appropriate way. Rather, they would be fake or so-called memories.

at all.⁸

4. Psychological Continuity Theory and Motivations for Parfitian Singularism

The standard form of psychological continuity theory, characterized by Lewis (1983) rather succinctly, consists of a commitment to similarity between a subject's adjacent mental states, and causal or counterfactual dependency of a subject's mental states on their previous mental states over time.⁹ And, this is all there is to be said about what must be maintained in order for a psychological subject to have what matters in their survival. On Parfit's view, psychological continuity, on its own, is sufficient to preserve what matters.

However, as we saw, at least by Parfit's lights, as a theory of personal identity, psychological continuity theory fails because a person's psychology is duplicable, as well as for other reasons, reasons that opened up conceptual room to take up Parfitian singularism. Recall that this position maintains that identity is not what matters in survival, but rejects that fissioning is a form of survival equally as good as a case in which it does not occur. That is, while we might believe that psychological continuity is not sufficient for preserving identity, we can still believe that we also need one-to-one relations between psychological subjects over time in order to have what matters in survival.

Still, what could possibly motivate Parfitian singularism? It seems that the traditional reason that theorists have been concerned with singularity over time is exactly for non-Parfitian reasons – because identity is what matters in survival. Once we relinquish identity

⁸ See Olson (1997) and Williams (1970) and (1976) for arguments against psychological continuity theory that favor a bodily continuity view. Each point out several problems with the psychological criterion of identity, the least of which is that it entails counting two people who share the same personality as one and the same person (Williams, 1976), which is absurd. Parfit, of course, deals with this issue by rejecting identity as what matters in survival. A view we are accepting as correct here.

⁹ For details on problems with this view, see Shoemaker (1970) who points out problems with the causal-connectedness requirement. Also, for problems with the similarity requirement, see Duncan MacIntosh (1993).

as mattering for survival, it is not at all clear why we should care about rejecting fission cases as instances of having what matters.¹⁰

Well, one reason, provided by Martin (1998), also a Parfitian, has to do with projecting ourselves into a fission-based future. It is nearly, if not completely, impossible to conceive of doing so, unless we have only one candidate continuer with which to identify. Whiting (2002) defends a similar view, arguing that the Lockean claim that the self considers itself as such is constitutive of what matters, something that again can be done only if there is just one candidate continuer in the future with which to identify. Another reason, provided by Korsgaard (2003), is that rational planning itself presupposes that we have a unified self in the future onto which we can project the fulfillment of our goals. Additionally, Wolf (1986) offers practical reasons for why we should prefer a singular successor to a multitude of them. It would be difficult, for instance, to divide up a life that was once simply one life. Furthermore, Johnston (2003) points out that fissioning would not allow us to identify with any one particular person at all as especially important to us, and this he claims is counterintuitive. Lastly, narrative views (Schetchman, 1996) of the self are predicated upon the idea of telling a coherent story about a particular person's life. This would also be difficult to do if fission were an acceptable form of survival. Parfitian singularism then has this going for it: it can maintain a rather reasonable ontological stance on persons, while at the same time, performing damage control at the level of psychological or conceptual understandings of persons. This is enough to warrant discussing the view further.

¹⁰ Of course, none of what's been said addresses someone whose pre-theoretical intuition is that fission preserves what matters, but it is doubtful that anyone sincerely has such an intuition. As already pointed out, the fact that fission preserves what matters to us in our survival was a consequence of other strongly held beliefs, not an initial intuition, not even for Parfit.

Having motivated the singularist intuition, why accept Parfit's stance on identity? Well, it is predicated upon a scientifically respectable form of reductionism, and reductionism plus the psychological continuity thesis is what leads to the fission consequence, and the need to respond to it. Secondly, the idea that some degree of psychological continuity is required for what matters in our survival has intuitive pull regardless of arguments against it. Moreover, Parfit's commitments about what constitutes psychological continuity are more plausible than, say, narrative accounts in which a great degree of integration of the self, and a great degree of self-awareness, are required for personhood. When we consider various psychological configurations of various types of people, it seems clear that narrative accounts are potentially too stringent in their requirements for counting as a person, as compared to what is required on the standard psychological continuity theory.

5. Virtual Immersion and the Failure of Psychological Continuity Theory

Having now motivated Parfitian singularism, the next step is to examine standard psychological continuity theory, and to cast doubt on the idea that it is the correct account of what matters in survival. This is accomplished by pointing out what defenders must say about virtual immersion scenarios. In fact, we will eventually consider two variants of such cases. As we'll see, the pure psychological continuity theorist must say in both cases that what matters is fully maintained. Considering these types of cases helps us understand one diagnosis for why pure psychological continuity theory cannot solve the fission problem. It is due to its sole focus on internal relations between mental states, which is not only a rather anemic understanding of the nature of personhood, but is arguably a remnant of Cartesian ideas about the mind, something we ought to have jettisoned long ago.

At least one particularly vivid case of virtual immersion comes from Robert Nozick (1998). It involves something he calls the “experience machine” – a machine into which a person can enter that can provide them with a never-ending supply of those experiences they find desirable. On this understanding of what constitutes virtual immersion, the choice to enter the machine would involve choosing to identify oneself with a sort of solipsistic being whose experiences would not track the objective environment. This description can be understood as one way we might realize the possibility of virtual immersion.

Notice, of course, that choosing to enter the machine does not compromise or threaten a subject’s psychological continuity. Thus, we have everything that matters for survival on the standard psychological continuity theory. The experience machine, therefore, is useful in isolating what pure psychological continuity theorists believe matters.

Now, despite the fact that, in entering the experience machine, a person would maintain their psychological continuity, many of us, I suspect, would recoil in horror at the possibility of entering it, viewing the persistence of the thing in the machine as a mere simulacrum of what that person once was, and viewing the entrance into the machine as a fate in many ways like death.¹¹ That is, we may have doubts about whether the mere persistence of the psychology of a particular person is sufficient for maintaining what matters in survival. And, the reason for this doubt, in this case, is that entering the experience machine threatens the persistence of personhood altogether, something

¹¹ Of course, the horror is not directed at what it would be like to be in the machine, but at the prospect of entering the machine altogether. This horror need not be taken as a worry about ourselves as persons in the machine, which would support the idea that we survive stepping into the machine. After all, for many of us, the prospect of death is horrifying, but this horror, arguably, is not had because we are worried about what will happen to us after that event. We fear the event itself because it entails the end of our existence. Likewise, my explanation for why we regard the event of entering the experience machine with horror is that it entails the cessation of our personhood, though clearly, not the cessation of our psychologies.

conceptually required for having what matters in survival in an account of what matters in the survival of persons.¹² If this is correct, the experience machine case shows that one criterion for maintaining what matters in the survival of persons is that we must first have a being who is not in a brain-in-a-vat like scenario. Our thought experiment raises the question of whether our personhood depends upon our continued existence within our given objective environments, a question ignored by pure psychological continuity approaches. Our intuitive reaction to such scenarios indicates that the answer to this question is that it does.

6. What Matters in Survival: The Life Trajectory Hypothesis

The experience machine case illustrates that, in addition to all of the standard psychological requirements, there might also be some externalist constraints on what matters in a person's survival over time. This suggests a hypothesis about what matters in survival. It is as follows: the externalist constraints on what matters in survival requires, not just the continuation of a subject's psychology, in the Parfitian sense, but also the continued living of that subject's life, which involves being embedded in a particular environment. This continued living of a life we will understand as constituting a person's life trajectory.¹³ A life trajectory will be defined as the continuous path of a psychological subject through an objective context, a path created and maintained by the subject's being appropriately related to that environment. The life trajectory theory incorporates the idea that persons are fundamentally, and inextricably tied to their external environments, a fact that, as we saw, can be illustrated by completely removing them from such contexts and placing them in a

¹² There are many reasons for believing that psychological subjects in brain-in-vat like scenarios are not persons: they lack epistemic, practical, and moral agency, for example.

¹³ Of course, this does not follow deductively in any sense. It is merely a correlative hypothesis suggested by the idea that existing within an objective context matters to us in our continued existence as persons.

virtual immersion scenario. So, then, let us adopt, as a working hypothesis, John McDowell's (1997) dictum that persons can be understood as such only within the objective context in which they participate – that it is a necessary condition on having persons at all that they exist within and track their objective contexts. And let us offer the life trajectory thesis as a way of realizing this idea.

While the externalist aspect of the life trajectory hypothesis is not new, and neither is being a Parfitian about identity, the specific combination of these two theses is novel. For example, consider Whiting's (2002) Parfitian singularist view. For Whiting, unlike the life trajectory hypothesis, what resolves Parfit's homework problem is an internal affair. According to Whiting, what makes non-branching psychological continuity preferable to fission is that the former involves taking an attitude of self-concern, constitutive of what matters, towards non-branching future stages of a psychological subject. Of course, both Whiting's and the life trajectory theory accept Parfit's views on identity, but only the life trajectory view resolves the fission issue by appealing to externalist factors. Next consider Lindemann's (2014) work on personal identity. While Lindemann does argue for an alternative externalist view of selves that is psychological in nature, hers is a narrative social constitution account. The life trajectory account differs from hers in that it includes non-social relations as well in an account of what matters in survival. Notice too that while the life trajectory account is inspired by Strawson's (1966) idea of thinking of person's in terms of their paths through an objective context, the life trajectory hypothesis will prove to differ significantly in its commitments about what counts as existence within an objective context. Lastly, the life trajectory view differs from McDowell's (1997) non-reductionist externalist thesis, which claims that we must include objective contexts in an account of persons, in

that it is explicitly committed to a reductionist externalist account.

Having introduced the life trajectory hypothesis and distinguished it from other views, we'll now return to exploring the view in more detail. As we now know, on the life trajectory theory, in order to have what matters in survival, a psychological subject must have not only psychological continuity over time, their life trajectory must likewise continue, again, in the Parfitian sense. If we do suppose this, we must now ask about its implications for a theory of what matters in a person's survival over time.

Adopting the life trajectory view involves accepting two requirements on maintaining what matters in survival: first, to have what matters, there must be at least qualitative psychological continuity between earlier and later psychological subjects; and, second, in keeping with the insight that immersion within an objective context matters in survival, certain extrinsic properties of those earlier and later psychological subjects must also continue to quasi-hold over time. In other words, to have what matters in survival, a previous psychological subject must be continuous with a current psychological subject both with respect to their psychologies and their extrinsic properties, at least qualitatively. Before defining what is required for an extrinsic property to be qualitatively maintained over time, or to quasi-hold of a subject over time, we will first look at the nature of a life trajectory in more detail, and then examine the nature of extrinsic properties.

7. Life Trajectories, Extrinsic Properties, and Q-extrinsic Properties

As we have seen, unlike its predecessors, the life trajectory hypothesis does not make the Cartesian error of ignoring a subject's relations to her environment. Instead, it incorporates the insight that external relations are important in an account of the nature of personhood.

From an intuitive point of view, a person's life involves facts about a psychological

subject and her relations to an objective environment over time. These facts will individuate a person's life trajectory. For example, my life is the life of a psychological subject related to her late father as his second-born child, a fact that individuates the beginning of my life trajectory as well as continuing to individuate it in virtue of my continuing to have that extrinsic property over time. My life is also the life of a person that includes a multitude of biographical facts, some current, others historical. For instance, my city of birth was Yorkton, and I am the sometimes-reluctant owner of three Catahoula canines. I am also the sole author of this paper. All of these facts individuate my life trajectory. Of course, similar sorts of facts individuate every other person's life trajectory. We individuate life trajectories in the same manner as we might individuate the trajectory of any other object over time.

7.1 Extrinsic Properties

Extrinsic properties come in different flavours: temporary, long-standing, and permanent. Examples of these kinds of extrinsic properties, respectively, include: my now having the properties of drinking a cup of coffee, and of currently composing this paper; my now having the properties of having a tenure-track job, and of living in Upstate New York; my now having the properties of being my father's second-born child and of being the author of this paper.

Clearly, these previous extrinsic properties are held by me in virtue of facts about my relations to my environment. However, while the first two sorts of extrinsic properties are dependent upon my occurrent relations to my environment, the last two examples are not so dependent. Instead, the last two examples depend merely on their having originated in relations between myself and an objective environment. Speaking more abstractly, the fact that some of a subject's extrinsic properties do not depend on the occurrent existence of the

relata, in virtue of which they have that extrinsic property, explains why once one has acquired these kinds of properties, they are held permanently. For example, a person like myself is still the second-born child of my father long after he has died, and I continue to be the author of this paper even if it, and all of its instantiations, are destroyed.

7.2 Quasi-having Extrinsic Properties

Of course, if what was being offered as a criterion of what matters for survival is that the extrinsic properties of a psychological subject must be genuinely held by a candidate continuer of that subject over time, then this proposal would presuppose the continued persistence of the identity of the psychological subject in question, just as Butler pointed out that genuine psychological continuity does. However, as mentioned previously, we will rely on the notion quasi-having certain psychological properties, except that now we will be applying it to the continued holding of a subject's extrinsic properties.

Speaking loosely, let us say that psychological subject B quasi-has subject A's extrinsic properties just in case subject B can conduct herself with respect to the world and themselves in exactly the way subject A could have conducted themselves had subject B strictly survived as subject A. More precisely, in order for a later subject B to quasi-have an earlier subject A's extrinsic properties, they must meet two separate conditions, conditions that preserve what will be called the "form and character" of subject A's extrinsic properties.

The form requirement on the quasi-continuity of extrinsic properties is as follows:

A subject B quasi-has subject A's extrinsic properties with respect to their forms only if subject B can be ascribed those very same extrinsic properties in the same permanent or temporary forms in a way qualitatively indistinguishable from the way in which subject A previously had those properties

For instance, if a subject B quasi-has a permanent property that A previously had, then subject B must be able to be ascribed that very same property currently. In contrast with

permanent extrinsic properties, the form requirement for temporary extrinsic properties, given their temporary nature, requires only that subject B must be said to have once had those very same temporary properties as subject A previously had. The life trajectory hypothesis of what matters in survival, then, requires that if the subject of a life trajectory has certain extrinsic properties in a particular form, any candidate continuer of that subject must be able to be ascribed those properties in a qualitatively indistinguishable form from the way in which their predecessor had those properties. That is, a candidate continuer must be able to quasi-have their predecessor's extrinsic properties in the very same form as their predecessor had them.

The character requirement, the second requirement on the quasi-having of extrinsic properties, takes this form:

A subject B quasi-has a subject A's extrinsic properties with respect to their characters only if subject B can participate within their environment in a way qualitatively indistinguishable from the way in which subject A previously did with respect to those extrinsic properties.

This second requirement is somewhat vaguer than the first, in the same way that the similarity requirement for psychological continuity is vague. Nevertheless, it is still a notion with some intuitive content. The character of a property involves certain ways of interacting with the world. A candidate continuer B can be ascribed extrinsic properties with the same character as subject A's only if subject B can act with respect to themselves, and the outside world around them, in the very same way that subject A could have acted with respect to themselves and the outside world around them in virtue of having had that property. Regarding the character requirement on temporary properties, the same point applies as applied in the case of maintaining the form of an extrinsic property: subject B would merely have to be able to act as if she had once had that property, not as if she still

has it, unlike she would have to be able to do with respect to subject A's permanent extrinsic properties.¹⁴

To make these conditions more concretely accessible, let us look at an example in which a later psychological subject B quasi-has the extrinsic properties of an earlier subject A. Imagine that I, subject A, am in a car accident. Someone calls my father and tells him that his child was fatally injured, but not to worry, they cloned her body and saved her psychology on a very sophisticated computer. The psychology stored on this computer has now been downloaded into to the cloned body's brain. Someone on the phone tells my father that his daughter, subject B, is really anxious to see him. Despite the fact that, at least for many identity theorists, strict identity is destroyed in this case, the replacement for me can act as my father's second-born child just as well as I could have had I not had the accident, both with respect to myself and my father. In this case, subject A's extrinsic properties are quasi-had by subject B, sustaining both the form and character of subject A's extrinsic properties.¹⁵ According to the life trajectory view, it is therefore possible to have what matters in survival insofar as a candidate continuer both quasi-has a prior ancestor's psychological and extrinsic properties.

8. Applications: Fission and Virtual Immersion

Because all that is required for maintaining what matters in survival on the life trajectory view is the quasi-having of a subject's psychology and extrinsic properties within an

¹⁴ While admittedly the character requirement is indeed somewhat vague in the same way as the similarity requirement in psychological continuity theories, there is this difference: the quasi-having of temporary extrinsic properties can allow for massive differences in a subject's temporary extrinsic properties without thereby losing what matters in survival.

¹⁵ This is true despite the fact that the clone does not actually have my extrinsic properties since this would require identity preservation, and it is true even though the clone itself will have different permanent extrinsic properties true of it: such as having a different birth date, or what have you than I have.

objective context, it is a view that does not require maintaining a subject's identity in order to have what matters. However, even though the life trajectory view is not an identity theory, it is still a view that will prove to rule out fission as a case in which we have what matters, thereby responding to Parfit's homework problem directly. The solution to the fission problem lies in the differences between the extrinsic properties fission products can quasi-have as compared to the single case. In addition, the view can explain our intuitions about the experience machine, as well as another intuition about a different case of virtual immersion.

8.1 Fission Scenarios

Of course, even on the life trajectory view, the reason we do not have what matters in a fission case cannot be because it threatens the continued holding of more temporary kinds of extrinsic properties, since these are properties that come and go, that begin to hold and cease to hold of a subject all the time, even in the single case. Given the requirements on the quasi-having of temporary extrinsic properties – that any candidate continuer must be able to claim only that she once had them and be able to so conduct herself – a fission product can arguably sustain this kind of continuity and so cannot be distinguished on these grounds from non-fission products. With respect to temporary extrinsic properties, nothing is threatened in fission that could not also be threatened in the single case; fission threatens neither the form nor the character of such properties.

However, while fission products can in fact quasi-have a previous subject's temporary extrinsic properties, they cannot meet the requirements for quasi-having other kinds of extrinsic properties. In particular, fission products cannot meet the requirements for the continued quasi-holding of those extrinsic properties that are independent of occurrent

relations to the environment, those that are had permanently by a psychological subject. This is because for many of these properties, it is logically impossible for two people to quasi-have them. Fission-products are therefore ruled out as continuers of life trajectories as defined here.

Consider first why fission products cannot maintain the form of certain permanent extrinsic properties, properties like being a second-born child. If I fission, both fission products would be related in a certain manner to the person, namely myself, who had the property of being a second-born child. However, in this case, both fission products have an equal metaphysical claim on this property. However, because only one thing at a time can be someone's second-born child, neither of the fission products can be said to currently quasi-have that property. The form of this property, then, is threatened. True, both fission products are psychologically continuous with something that once was my father's second-born child, not something just anyone can claim. But having once been my father's second-born child no more counts as quasi-having the extrinsic property of being my father's second-born child than would merely having once had all of my memories count as quasi-having my psychology. Therefore, in this particular case, neither fission product can satisfy what is required to maintain what matters in survival.

Let us now turn to exploring why fissioning threatens the character of certain permanent extrinsic properties. This time, let us consider the example of being the author of this paper. Suppose I fission. Of course, neither of the fission products can be said to be the author of this paper, since there are now two continuers. But it might be thought that both of them can be continuers of me because both of them, like me, have a kind of authorial status – in their case, the status of being an author, or perhaps, of being a co-author. Thus, both

fission products sustain my necessarily permanent authorial status; they sustain its form of being permanent and therefore can be said to continue me.

Unfortunately, the previous move is defeated by considerations about the character of the property in question. I originally had authorial status by having a property with the character of sole authorship, and this entails conducting myself in certain ways. For instance, as a sole author, I will take sole credit for the ideas contained within the paper. In contrast, the fission products could be said to have authorial status only by having something like the property of being a co-author, and the character of that property is strikingly different from the character of the property of being a sole author. If I am a co-author, I do not take full credit for the ideas contained within the paper, and neither do I have any of the other typical properties of being a sole author. It turns out, then, that if we try to ascribe the property of authorship to our two fission products, we must ascribe that property in such a way that it has a different character than the original property, thereby violating the character requirement on the quasi-having of extrinsic properties.

As we have seen, at best, fission products can maintain only the past tense or the shared counterparts of certain permanent extrinsic properties, neither of which counts as maintaining their form and character.¹⁶ Fissioning, then, violates the requirements for the continuation of a life trajectory, and therefore fails to maintain what matters in the survival of

¹⁶ Why isn't the character condition enough? Well, let us consider fission products with respect to the property of being my father's second-born child. We might think that even the character of this property is threatened by fission, because fission products could not act in a way qualitatively indistinguishable from me with regards to being my father's second-born child, simply on the grounds that there are now two individuals qualitatively indistinguishable from me in the world. It might seem then that the form requirement is doing no work in my theory. But now suppose that one of the fission products is sent to another inhabitable planet, never to be seen again. In this case, the fission product left behind could maintain the character of my extrinsic property of being my father's second-born child, but still could not maintain its form.

persons over time.¹⁷

8.2 Virtual Immersion Scenarios

Now that we have seen that we cannot have what matters in survival in fission, we will turn to some intuitions about cases of virtual immersion. As it turns out, the life trajectory view can quite nicely explain and predict a range of intuitions about various forms of virtual immersion, better in fact than the psychological continuity theorist can.

In the experience machine case, we imagined the horror and anxiety we would feel about the possibility of identifying with a being immersed in a world in which their experiences were entirely solipsistic and de-correlated with facts about an objective context. The explanation for this horror was that, in such a scenario, we lost what mattered in our survival due to our lack of being appropriately connected to an objective context, and therefore suffered the loss of our personhood.

But now, instead, consider the anticipation we might feel if all psychological subjects could rid themselves of the shackles of bodily decay by immersing their psychologies within a virtual world, a world that could maintain their psychologies independently of their bodies. Suppose that, somehow, our bodies become obsolete. Our initial attitudes to these possibilities, possibilities in which we have a chance to escape from our aging, dying biological bodies, appear to support the intuitions of the psychological continuity theorist, since surely we would not view these scenarios as constituting a threat to what matters in

¹⁷ Perry (1976) also raises the issue of whether having certain properties, for him, those that relate me to my past, are special in an account of personal identity, since no one but me could have them. Ultimately, Perry thinks that this is not a consideration in favor of an identity theory of persons. And I agree, though I do think that certain kinds of extrinsic properties, those permanent properties that could be had only by one person, not necessarily by me, are required for having what matters in survival.

our survival. Indeed, we would, and probably should, look forward to them as a way of achieving immortality. How this would be achieved need not concern a Parfitian, for the Parfitian is committed already to its being sufficient for survival that psychological continuity is indeed preserved in this scenario. There are more or less violent ways, of course, that this possibility might be realized that would likely make a difference to those with other commitments about personal identity, but those do not concern us here.¹⁸

Earlier, we supposed that our reaction to the experience machine, to being virtually immersed, should be one of horror. Yet, as just noted, we might also think of the possibility of virtual immersion as ensuring our immortality. The psychological continuity theorist gets it wrong for the first case, but right for the second case. And it appears that the life trajectory theorist gets it right for the first case, but wrong for the second case.

However, just like the psychological continuity theorist can say that the second case is a case of having what matters in survival, so too can the life trajectory theorist. All that is needed is to reconceptualise what it is to exist in an objective context. Our natural assumption, of course, is to identify an objective context with the spatial-temporal world. But this assumption might be rejected if technology advances to the point of allowing for purely virtual interactions. After all, the notion of objectivity does not itself necessarily involve physicality, at least, not without argument. We could have a purely virtual objective environment in which there were shared experiences of that virtual environment together with the ability to affect that shared environment in certain predictable and systematic ways. If this is how we should understand immersion within a virtual environment, then we might still reasonably ascribe extrinsic properties to subjects in these kinds of contexts. The life

¹⁸ For details about ways we might realize this possibility and its potential implications, see Chalmers (2010), and Sauchelli (2017) addresses how such “life extending” techniques may or may not fit with certain narrative conceptions of what matters over time.

trajectory theorist can then say that the second case preserves what matters in survival after all. Only a solipsistic existence in which the experiences of a subject are merely illusory would constitute the cessation of something that properly matters to us in our survival as persons. The life trajectory view, then, is congruent with the horror we experience when contemplating these kinds of possibilities, and also with the anticipation we experience when contemplating others.

The previous considerations illustrate that the life trajectory hypothesis is to be preferred over the psychological continuity theory, because it can accommodate our intuitions about both ways of being virtually immersed. The psychological continuity view does not do so, because on the psychological continuity view, both ways of being virtually immersed would equally maintain what matters in survival, contrary to our intuitions.

9. Objections

We will now consider four separate objections to the views expressed here. The first objection addresses the issue of whether there is any point in offering a metaphysical theory of what matters in survival if an identity theory is rejected. The second questions whether there is any true disagreement between standard the psychological continuity theorist and the life trajectory theorist. The third objection specifically addresses the concept of a permanent extrinsic property, and my reliance on such a concept. And the last objection entertains different ways we might realize fission that raise the possibility that it could very well preserve what matters in survival.

9.1 Theories of What Matters in Survival

Suppose we accept the claim that identity does not matter in survival. The question of what it is for something to matter in survival then becomes rather pressing, since without an

account of this concept, the debate about what matters in survival threatens to devolve into an entirely value-laden affair, making any serious metaphysics of the nature of persons a pointless enterprise. That is, if we reject identity as what matters in survival, there does not seem to be anything in principle barring us from taking anything that matters in a life worth living as a survival-mattering property.¹⁹ Intuitively, however, there is a difference between what matters in a life worth living and what matters in survival, a difference that we ought to be able to capture.

To illustrate the previous worry, consider a person who cares deeply about the preservation of their right toe. If rejecting identity as what matters in survival threatens the distinction between a life of value and survival, our right-toe-caring person could claim that they would cease to have what matters in survival upon its removal. But this seems wrong. On the face of it, for this person, it is a life worth living that cannot be right toe-less. It is not the case that they would cease to have what matters in survival upon its removal. A more plausible example is a situation in which a person believes that they would no longer have what matters in their survival if they could not pursue their career of choice. However, having a certain career is not intuitively part of what matters in survival. Instead, this particular person's belief expresses hyperbole. Really, what the person means is that their life would be valueless if they lacked a certain career, not that they would lack what matters in survival.

Traditional wisdom has it that what marks the distinction between a life worth living and survival is the difference between maintaining identity or not, but of course, Parfitians about identity do not have recourse to this way of drawing the distinction. Fortunately, this is not the only way to draw the distinction that still gives it some metaphysical bite.

¹⁹ Thanks to Michael Watkins for pushing me on this distinction.

Suppose we understand caring about our survival in the following way: if a care counts as a potential care about survival, then it must be a care about at least one of the properties that is part of an account of the metaphysical nature of persons. In contrast, cares that track properties that are not part of an account of the nature of persons, other types of cares, the types of cares concerning the removal of our right toes, or the end of a particular career path, track facts about a life worth living, not what potentially matters in survival. In other words, a necessary condition on a care counting as a care about survival is for it to be concerned in some way or another with a characteristic that is part of an account of the metaphysics of persons.

While this approach does not rule out a role for our intuitions about what matters in our theories of persons, it does put some needed constraints on how they should count.²⁰ Given these constraints, we must limit ourselves, in asking about what matters in survival, to only facts about the metaphysical nature of persons. Because our cares about survival proper must be fundamentally concerned with the nature of persons, this vindicates developing a metaphysics of personhood despite failing to care about identity. That is, there is still a point to doing the metaphysics of persons even if one is a Parfitian about identity mattering.

9.2 Understanding the Fission Problem

Another objection to the life trajectory theory is that there is really no disagreement between the Parfitian singularist and the fission sympathizer; no one who accepts fission as a form of survival holds that there would be no differences between fission cases and other cases of

²⁰ Even so, it is still difficult to cleanly distinguish between cares about survival and cares about a life worth living given that the correct account of the metaphysics of persons is unknown. For this reason, intuitions must be considered carefully and in tandem with multiple hypotheses about the metaphysics of persons.

ordinary survival. Merely pointing out differences between the cases does nothing to disprove the idea that fission could be a form of survival. The issue is not merely to find a difference between the cases. Rather, to truly refute fission sympathizers, it would need to be shown that not only is fission less preferable to a singular existence, but that it is a fate equivalent to death.

However, this way of thinking about the fission problem fails to respect the distinction just made between caring about what matters in survival and caring about a life worth living. Of course, anyone can agree that there might be aspects of a life worth living absent in the fission case that are not absent in the any ordinary case of survival. What a fission sympathizer cannot admit, however, is that there are survival-mattering metaphysical differences between fission scenarios and ordinary cases. After all, the fission scenario was compelling to psychological continuity theorists as a case of survival equally as good as ordinary survival because there were no metaphysical differences between the cases, apart from the failure of identity preservation. But, on the life trajectory account, there are in fact deep metaphysical differences between those cases in which we fission, and those in which we do not, having to do with the extrinsic properties that can be properly ascribed to fission products.

Now, once we see that there are survival-mattering metaphysical differences between fission cases and single cases, we can see that there is, in fact, a deep disagreement between the life trajectory theorist and standard psychological continuity theorist. On the life trajectory view, it is not merely that the stuff of a life worth living is missing in fission cases, it is that there are survival-mattering metaphysical differences between cases of fission and non-fission, differences that have to do with the nature of

personhood, and with what matters in survival.

9.3 On the Reliance on Permanent Extrinsic Properties

The third objection to the view offered is that it is just simply false that there are any permanent extrinsic properties; all of our extrinsic properties are contingent upon subsequent events. For instance, I may have the extrinsic property of being the sole author of a book, let us say, but lo and behold, 10 years later, a co-author and I revise the book, and arguably the property of sole authorship is lost. Well, the property of being the sole author of the original is not lost, but we'll allow the example for the sake of argument.

A related worry is that, in making extrinsic properties matter in survival, the issue of whether fission can preserve what matters has been, in essence, defined away. The response to this worry is as follows: the constraint of maintaining certain extrinsic properties in order to maintain what matters in survival is motivated by considering of our intuitions about certain kinds of virtual immersion cases, which are supposed to serve as a reason independent of our negative reaction to the fission scenarios.

While the previous objection has merit, it strikes me as putting the cart before the horse. That is, while some properties may turn out not to be permanent, there are still some that are, like being my father's second-born. Nothing could change that fact save for death or fission. Therefore, in order for us to agree that there are no permanent extrinsic properties at all, we already have to accept fission as a possible way of surviving. To argue that because fission could change this property, and that therefore there are no such properties, is already to accept fission as a way of surviving, and this is the very question at issue.

9.4 Fission Scenario Variants

So far fission has been rejected as a way of surviving equally as good as surviving singularly on metaphysical grounds. But there might be other ways of fissioning that maintain everything that the life trajectory hypothesis requires. If so, only one particular way of fissioning, rather than fissioning altogether, would be ruled out.

Suppose a subject's entire world fissions, so that we have exact duplicates of the subject and their environment.²¹ Now, in such a case, it would appear that the two fission products, now existing in separate worlds, would be psychologically continuous with, and could also be ascribed the permanent extrinsic properties of their predecessor. Therefore, everything that the life trajectory view requires for maintaining what matters in survival is preserved, and yet, this is a fission scenario. What should the life trajectory theorist say about such a fission case? Well, it is not clear what to say, in fact. The only thing to say at this point is that the life trajectory hypothesis applies to subjects within a world, not necessarily to cases in which a subject's entire world fissions. That's a different question to explore. And even if the life trajectory hypothesis is merely a world relative theory, it still represents an alternative to those who believe that fission can occur within a world and maintain everything that matters for survival, which the life trajectory hypothesis does not allow.

Another possible fission scenario is one explored by Martin (1995) known as fission rejuvenation. In this scenario, we suppose that at say 30 years old, a scientist offers us the opportunity to undergo fission, and to then continue our life as before. Meanwhile, our unconscious fission product remains physically preserved until we have reached the point of expiration. At the point of our expiration, our fission product, who has been having their psychological states updated via mutual respective chip implants, awakens, and picks up

²¹ Thanks to Eric Schwitzgebel for pressing me on this.

where we left off. We can imagine this continuing indefinitely. Again, we seem to have a case of fission, and one that meets the requirements of the life trajectory hypothesis for what matters in survival. However, it is actually questionable whether this is truly a case of fission or of highly efficient, sophisticated body cloning. That this is a true case of fission would need to be established before we could draw any conclusions about the life trajectory view.

10. Concluding Remarks

To summarize, on the life trajectory view, three conditions must be met in order for us to have what matters in survival. First, there must be continuity of a person's psychology over time, at least in the extended sense of Parfit's notion of quasi-having an earlier subject's psychological states. Second, for a psychological subject to count as a person at all, she must exist within, and track, an objective context. For this reason, the topic of a person's persistence, or better, of what matters in the survival of that person, must be concerned with those psychological subjects that exist within and track objective contexts. Third, in order to maintain what matters in a particular person's survival over time, that person's life trajectory must too survive in the Parfitian sense, and this involves a later subject's being able to quasi-have a previous subject's permanent extrinsic properties, found to involve the satisfaction of two further requirements: the form and character requirements.

Contra fission sympathizers, there is a kind of property absent fission cases that is required for us to have what matters in survival. Nevertheless, it is not the kind of property that entails an identity criterion for having what matters. We can, therefore, reject the importance of identity, without accepting fission cases as forms of survival equally as good as ordinary cases. As we saw, the kind of property missing in the fission case is a kind of

extrinsic property whose importance becomes clear in the context of considering certain thought experiments concerning ways of being virtually immersed.

We must, however, be cautious in our interpretation of the view being offered. Specifically, it is not the claim that the continued having or quasi-having of permanent extrinsic properties is something that we might intuitively believe matters in survival that is being defended. Rather, the argument is that it is a consequence of caring about survival that we must too care about these properties. The experience machine case established that there is something we care about, namely, maintaining our connection to an objective context, and this care is indicative of a fact about the metaphysics of persons – that it is a care that indicates something about what matters in our survival as persons. It was then conjectured, though not deduced, that what we really care about in survival is the continuation of our lives and this was understood as caring about the continuation of our life trajectories. We then saw that this requires the continued quasi-holding of certain extrinsic properties over time. Caring about such properties is, then, a prescriptive consequence of the view.

The life trajectory view is justified because, in addition to explaining our troubled relationship to fission cases, it also explains the different reactions that we, as psychological subjects, have to different ways of understanding the possibility of virtual immersion.²² This further illustrates the explanatory power of, and therefore further confirms, the view being proposed. Some possibilities, those where our existing within, and tracking of, an objective context can be maintained, we excitedly anticipate, exactly the life trajectory theory predicts

²² There are other advantages to this view as well. For example, unlike pure narrative views, it can allow for variously psychologically configured beings to count as persons still. Furthermore, unlike a social constitution view, which runs into difficulties explaining how a person could resist certain oppressive circumstances, this view, because it relies on more than a person's social environment to individuate persons, can allow for this.

we should. Others, such as those where we are solipsistic subjects misrepresenting the facts of the objective environment, as we are in the experience machine, should rightly be viewed as threatening what matters most to us in our survival – the continuation of our life trajectories over time.²³

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Bibliography

Butler, Joseph. (1736). "Of Personal Identity," in *The Analogy of Religion*, reprinted in Perry 1975, pp. 99–105.

Chalmers, David. (2010). "The Singularity: A Philosophical Analysis." *Journal of Consciousness Studies*. 17:7-65.

Garrett, Brian. (1998.) *Personal Identity and Self-Consciousness*. London: Routledge.

Giberman, Daniel (2014). "Person and Place." unpublished manuscript.

Hudson, Hud. (2001). *A Materialist Metaphysics of the Human Person*. Cornell University Press.

Johansson, Jens. (2010). Parfit on Fission. *Philosophical Studies*. 150: 21-35.

Johnston, Mark. (2003) "Human Concerns without Superlative Selves." *Personal Identity*. Eds. Raymond Martin and John Barresi. Blackwell Publishing.

----- (1987). "Human Beings." *Journal of Philosophy* 84: 59–83

Korsgaard, Christine M. (2003). "Personal Identity and the Unity of Agency: A Kantian Response to Parfit." *Personal Identity*. Eds. Raymond Martin and John Barresi. Blackwell Publishing.

Lewis, David. (1983). "Survival and Identity." *Philosophical Papers, Vol. 1*. Oxford: Oxford University Press. 55-78.

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Lindemann, Hilde. (2014) *Holding and Letting Go*. Oxford: Oxford University Press.

Locke, John. (1975). *An Essay Concerning Human Understanding, 2nd Edition*. Ed. Peter Niddich. Oxford: Oxford University Press. Originally published in 1694.

MacIntosh, Duncan. (1993). "Persons and the Satisfaction of Preferences: Problems in the Rational Kinematics of Value." *The Journal of Philosophy*, Vol.XC, No.4. 163-80.

Martin, Raymond. (1998). *Self Concern*, Cambridge: Cambridge University Press.

-----.(1995). Fission Rejuvenation. *Philosophical Studies* 80.1: 17-40.

McDowell, John. (1997). "Reductionism and the First-Person." *Reading Parfit*. Ed. Jonathan Dancy. Oxford: Blackwell Publishers. 230-250.

Mead, George, Herbert. (1913). "The Social Self." *Journal of Philosophy, Psychology and Scientific Methods*. 10: 374-80.

Nagel, T. (1986). *The View from Nowhere*. Oxford University Press.

Noonan, Harold W. (2003). *Personal Identity, Second Edition*. London: Routledge.

Nozick, Robert. (1998). "The experience machine." *Ethical Theory: Classical and Contemporary Readings*. Ed. Louis Pojman. Wadsworth Publishing Co. 152-53.

-----.(1981). *Philosophical Explanations*. Harvard University Press

Olson, Eric. T. (2010). "Personal Identity." *The Stanford Encyclopedia of Philosophy*. Ed.

-----.(1997). *The Human Animal: Personal Identity without Psychology*. New York: Oxford University Press.

Edward N. Zalta. <http://plato.stanford.edu/archives/win2010/entries/identity-personal>.

Parfit, Derek. (1999) "Experiences, Subjects, and Conceptual Schemes." *Philosophical Topics*, 26 (1/2):217-70.

-----.(1995). "The Unimportance of Identity." *Identity*. Ed. Henry Harris. Oxford: Oxford University Press. 13-45.

-----.(1984). *Reasons and Persons*. Oxford: Clarendon Press.

-----.(1971). "Personal Identity." *The Philosophical Review* 80: 3-27.

Perry, John. (1976). "The Importance of Being Identical." Amelie Oksenberg Rorty (ed.), *The Identities of Persons*. University of California Press.

-----.(1972). "Can the Self Divide?" *Journal of Philosophy* 69: 463–488.

Sauchelli, Andrea. (2017). Life-extending enhancements and the narrative approach to personal identity. *Journal of Medical Ethics*. doi: 10.1136/medethics-2016-103923

Schechtman, M. (1996). *The Constitution of Selves*, Ithaca: Cornell University Press.

Shoemaker, Sydney. (1984). "Personal Identity: A Materialist's Account." *Personal Identity*. Eds. Sydney Shoemaker and Richard Swinburne. Oxford: Basil Blackwell Limited. 67-132.
----- (1970). "Persons and their Pasts." *American Philosophical Quarterly* 7. 269-285.

Sidelle, Alan. (2011). Parfit on 'The Normal/A Reliable/Any Cause' of Relation R. *Mind*. 120/479: 735-760.

Strawson, Peter. (1966). *The Bounds of Sense*. London: Methuen.

Unger, Peter. (1990). *Identity, Consciousness, and Value*. Oxford University Press.

Whiting, Jennifer. (2002). Personal Identity. In *The Blackwell Guide to Metaphysics*. Ed. Richard M. Gale. Blackwell Publishers. Oxford. 190-218.

Wiggins, David. (1980). *Sameness and Substance*. Oxford: Blackwell.

Williams, Bernard. (1976). *Problems of the Self*. Cambridge: Cambridge University Press.
----- (1970). "The Self and The Future." *Philosophical Review* 79, no. 2 (1970): 161-180.

Wolf, Susan. (1986). "Self-Interest and Interest in Selves." *Ethics* 96(4): 704-720.