

## What Matters in Survival: Persons and Their Life Trajectories

**Abstract:** In this paper, I argue that standard psychological continuity theory fails to account for an important feature of what is important in survival. I offer a theory that can account for this and that avoids two other implausible consequences of standard psychological continuity theory.

### 1. Introduction<sup>1</sup>

Most of us have the intuition that we, as persons, persist over time — that despite changes in our bodies or our personalities, some relation holds between the various ways we once were, to the way we are now, which makes us one and the same person.<sup>2</sup> In other words, we believe that our identity can be maintained over time. But what allows for this, or what makes this true? From a scientific point of view, it is reasonable to believe that if persons are anything, they are psychological and physical entities. On this world view, then, personal identity can be sustained only in virtue of the relations between either the physical or the psychological states of a person over time. One of the main questions that then gets explored is whether it is our psychological states or our physical states that determine our survival over time.

The most frequently accepted idea about what is most important in survival is the view that our psychologies must persist over time. I too accept this view, however, I do not accept the idea that all psychological accounts are equally good. Specifically, I claim that at least

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<sup>1</sup> For the sake of neutrality, the singular pronoun ‘they’ and its variants will be used throughout.

<sup>2</sup> This assumes that the puzzle about whether change over time is possible has been resolved, and resolved in favor of a relational theory of identity preservation over time.

one psychological view — the standard version — cannot accommodate the idea that one of the things important to us is not only that we survive, but that we survive as persons. I argue that this ought to be accommodated, and that therefore we need a different account of what is important in survival. I offer a view that can capture more of the features we take persons to naturally have than the standard view can, and therefore this alternative captures more of what is important in survival. The view has other positive aspects as well, since it also lacks certain other implausible consequences of the standard view, as well as explaining certain cases the standard view cannot.

## **2. Arguments for the Psychological Continuity Theory of Survival**

The psychological continuity view holds that when we have the right kinds, or enough connections between the psychological states we once had and the psychological states that we now have, we are psychologically continuous beings, and this is sufficient for our persistence over time as one and the same person.

One of the most convincing arguments in favor of psychological continuity theory is offered by Parfit (1999). To prove that psychological continuity is what is most important in survival, he asks us to consider the following hypothetical scenario: Suppose that, in order to survive, you require an operation that involves splitting your brain in two, and disposing of what has become the unhealthy hemisphere. The doctors then transplant the healthy hemisphere into a body qualitatively indistinguishable from your own. Assume one hemisphere can support your previous psychology on the whole. That is, the post-operative person will be psychologically continuous with the pre-operative person. As Parfit notes, I believe correctly, most of us would agree that this procedure maintains what matters in survival. And this shows that it is psychological continuity, not physical continuity that matters

in survival.

### **3. Psychological Continuity Theory and The Failure to Survive**

Despite the intuitiveness of psychological continuity theory, and despite how compelling Parfit's argument for it may be, as the theory is standardly understood, it has several problems. At least one particularly worrisome problem is that it actually fails to fulfill its purpose. While popular, it becomes clear rather quickly, given two well-known separate observations, that this theory cannot serve as a theory of personal identity. These observations consist in noting that psychological connections can be duplicated, and that they are also a matter of degree.<sup>3</sup> Each of these observations serves as an independent reason for rejecting psychological continuity theory as a potential theory of personal identity.

The proof that psychological connections can be duplicated comes from considering what are called "fission" scenarios, which are, again, best described by Parfit. These are scenarios in which a single person undergoes some process whose end result is the creation of two distinct persons, each of them psychologically continuous with the original. To illustrate the idea, consider the following twist on Parfit's previous thought experiment. Once again, suppose you are to undergo some procedure similar to the previous one, except that this time, both hemispheres of your brain are transplanted into two separate bodies, qualitatively indistinguishable from your own. Now, the question is: which of these two persons is you? It seems wrong to pick either of them, since this would be arbitrary. It also seems wrong to say they are both you, since two things cannot be one and the very same thing. Last, it also seems wrong to say that they compose a single entity that is you, since the two fission products are clearly separate persons.

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<sup>3</sup> See Schetchman (2001) for more detailed discussion.

Because of the fission case, Parfit paradoxically concludes that identity is not what matters in survival — that actually persisting into the future is unimportant. Surviving does not, or should not, really matter to us. This follows from the fact that we earlier agreed that what was important to us is psychological continuity. Since fission products maintain this with respect to the original person, they therefore maintain what is important in survival, but because they cannot be identical to you, it follows that it cannot be identity that matters in survival (1984: 261-265).<sup>4</sup>

The second observation — that psychological connections between earlier and later ways of being a person are a matter of degree — shows that psychological continuity, if it expresses an equivalence relation at all, does so only as a matter of stipulation, in virtue of introducing an arbitrary cut off for the number of connections that constitute continuity over time. However, objects are not identical by stipulation, but as a matter of metaphysical fact. Therefore, since we agreed that psychological continuity was what was important for survival, and it cannot express a true identity relation, identity cannot be what is important in survival.<sup>5</sup>

Accepting the previous consequence leads to a shift in focus from strict theories of personal identity to looser theories of what matters in a person's survival. These theories are "looser" than theories of identity because survival-mattering relations need not be equivalence relations. But what is it for something to matter in survival if not identity? Generally speaking, something that matters in a person's survival is sustained just in case two separate conditions hold.

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<sup>4</sup> The fission case was originally introduced by Wiggins, and subsequently discussed in his (1980). Williams (1976), preceding Parfit, also made this point in what he described as the "reduplication argument."

<sup>5</sup> The treatment of Parfit's argument is brief. For more discussion of the details of Parfit's arguments, along with issues about interpretation, see Johansson (2010).

### *What Matters in Survival*

- (1) A later person B has what matters in the future survival of an earlier person A just in case the relations that hold between A and B are such that their presence allows A to identify with B in the same way as they would if A really was B in the future.
- (2) An earlier person A has what matters in the past survival of a later person B just in case the relations that hold between A and B are such that their presence allows B to identify with A in the same way as they would if A had really been B in the past.<sup>6</sup>

The suggestion is that there is something qualitatively indistinguishable that can be had as what we could have had, supposing we had we actually persisted in the normal way. If this seems unpalatable, well, it is. But the challenge coming from Parfit is to offer something in the way of an argument that identity is what really matters in survival, while remaining consistent with our initial judgements concerning psychological continuity theory. Parfit sees no way to accomplish this, and I am inclined to agree. Therefore, whatever we thought we were doing in offering theories of personal identity, must now give way to offering theories of what matters in survival.

The question now is: how does the standard account of psychological continuity — requiring both similarity between a subject's earlier and later adjacent mental states, and causal or counterfactual dependency of that subject's current mental states on its previous mental states — fare as a theory of what matters in survival?<sup>7</sup> I will now argue that it misses something fundamental for what matters in survival. Later, I propose an expansion of

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<sup>6</sup> For arguments that there are both forward and backward looking requirements in order to have what matters in survival see Schetchman (2001). For other definitions of what matters, see Martin (1995), Perry (1976), and Unger (2003), among others. It should be noted that Parfit is not consistent in his use of the term 'survival'. 'Survival' sometimes stands for persistence (1984), while at other times, he drives a wedge between the two concepts (1971). I will follow the more natural (1984) use.

<sup>7</sup> See Lewis, 1983 for this characterization. See Shoemaker (1970) who points out problems with the causal-connectedness requirement. For problems with the similarity requirement, see MacIntosh (1993).

psychological theory that accommodates what the standard theory cannot.

#### **4. Survival and Missing Person Cases**

To see what's wrong with standard psychological continuity theory — that it is missing something — I consider a case in which a psychological subject satisfies only that theory's requirements for having what matters independently of any other factors that might be present. The kinds of cases that can do so are those I call “virtual immersion” scenarios. These scenarios involve isolating psychological subjects from their spatial-temporal contexts so that all that can be considered when assessing the plausibility of standard psychological continuity theory is the presence of just that — psychological continuity. Such cases reveal just how little is required on the standard theory to have what matters in survival.

One particularly vivid, and familiar virtual immersion case comes from Nozick (1998), and involves something called the “experience machine.” This is a machine into which a person can choose to enter that will then provide that person with a never-ending supply of the experiences they find desirable, despite the fact that these experiences will be completely illusory. According to Nozick, however, we would not choose to enter the machine, because what we value is more than simply having certain experiences. We also want those experiences to be accurate representations of our interactions with our surrounding environment. According to Nozick, we do not just want to have certain experiences of doing things, we want to really do them. This is why, when presented with the option to enter the machine, many of us, I believe, would recoil in horror at the prospect of entering it, viewing the subject's life who enters it as mere simulacrum of what they once were. We react as we do to the prospect of entering the machine because, in entering it, our lives would cease to have the kind of value that, for many of us, makes a life meaningful or purposeful — a life

lived with intention. And this requires, minimally, that a psychological subject perceives the world as it is, is able to form true beliefs about it, and is able to rationally interact with their environment on the basis of such perceptions and beliefs.

But what does having a life that is purposeful entail concerning what matters in survival? Well, first consider what kinds of beings have purposeful lives. Minimally, beings that have purposeful lives are sentient, have desires, goals, and values, and have the power to form intentions, plans, and commit to projects based on those desires, goals, and values.<sup>8</sup> Now as a matter of actual fact, the only beings that we have confirmed have these capacities are humans. However, as Locke noted, these capacities do not appear to be conceptually tied to being a human organism, as we can imagine non-human beings having these capacities as well. Beings that have at least these capacities, we call “persons.” Therefore, what we lose when we enter the experience machine is a particular property — that of being person. The reason we find that prospect horrifying, I claim, is because being a person is part of what is required for having what matters in survival.<sup>9</sup>

Entering the experience machine, then, constitutes an existential threat. However, since the being in the experience machine has everything that standard psychological continuity entails matters in survival — its adjacent mental states would be similar, and their current mental states would causally depend upon their previous ones — according to that theory, we lose nothing that matters in survival by choosing to enter it. When considering our

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<sup>8</sup> For arguments that having plans and projects are important for having what matters in survival, see Perry (1976).

<sup>9</sup> Olson (2010) would wholly disagree. For Olson, what matters in survival is not relative to being a certain kind of thing at all. For considerations against this claim, see Rudder Baker (1999).

survival, we should therefore have no preference one way or the other with respect to entering the machine, or insofar as we are hedonists, we should prefer it. Any reaction of horror is really simply a reaction to a certain kind of lifestyle choice, perhaps. It is not a reaction concerning what matters in survival. The standard psychological continuity theorist is therefore committed to denying that entering the experience machine threatens what matters, and insofar as I am correct that entering it threatens an individual's status as a person, they are therefore also committed to denying that personhood matters in survival. However, I claim that this is false – that being a person is plausibly part of an account of what matters in survival.

While I have offered some considerations in favor of the claim that a being in the experience machine fails to be a person, I will now develop the idea that persons must be competent believers in order to count as persons. I will then take up the question of why we should believe that being a person matters in survival.

#### **4.1 Psychological Subjects and Personhood**

To show that a being in the experience machine fails to be a person, I consider a particular thought experiment, as well as at least one of our everyday practices, which both illustrate this point. Thought experiments are important evidence for this claim, since they allow us to pull certain concepts apart that do not come apart in the actual world, and everyday practices concerning being a person are also important evidence, because arguably, being a person is, in part, a socially determined fact. If that is correct, then any theory of persons that wildly deviates from our common social practices of defining persons is suspect.

First, consider another familiar thought experiment in which a being's experiences are wholly illusory – that of being a brain in a vat. Now ask yourself whether a brain in a vat is a



person, being careful not to confuse having some moral rights with having the moral rights of a person. My own answer to the question is that I do not think that a brain in a vat is a person, even if it is a fully cognitive being.<sup>10</sup> I suspect many would agree. Arguably, the brain in a vat scenario is analogous to the experience machine. In both cases, the psychological subjects involved are wholly deluded about their own experiences and their actual place within their external environments. Insofar as we are inclined to say that a brain in a vat lacks personhood, we should be equally inclined to say this of the experience machine case.

Second, the extent to which a psychological subject is deluded is in fact a criterion we do use for judging whether a psychological subject is a person. Consider, for instance, the seriously psychologically ill whose beliefs do not track reality, or the Alzheimer's patient who gradually loses their memories, and whose character changes. At some point, in both cases, as the patient either lacks, or loses the ability to track reality, we begin to believe that the person we once knew is no longer present. This is not, however, because a complete newly formed person has come to occupy their place. Rather, it is because of their diminished capacity to be full persons altogether. This shows that seriously compromised knowers are commonly understood as less than full persons, and that therefore the fully compromised knower should not count as a person at all.<sup>11</sup> It follows, then, that the beings like those in the experience machine, or who are mere brains in vats, who have only psychological states, will not count as persons, and if personhood matters in survival, they also will not satisfy the condition(s) for having what matters in survival either.

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<sup>10</sup> See Gallagher (2007) who also argues that a theory that entails that a brain in a vat is a person has somewhere gone wrong.

<sup>11</sup> Other considerations involve whether and how persons are constituted by being agents. Some believe that agency is essential for being a person (Korsgaard, 1989), while others believe that being an agent is different from being a person (Strawson, 1997; Wilson, 2005). I cannot resolve that dispute here.

## 4.2 Personhood and What Matters in Survival

To show that personhood matters in survival, I once again consider a thought experiment, as well as at least one of our everyday practices, which both reveal that we would choose to survive in the loose sense, over strict survival. Or, that we would choose death over an existence as a non-person.

To illustrate the importance of personhood for having what matters in survival, imagine that you are faced with a terminal illness, and the doctors offer you a choice between two scenarios. The first scenario presents a situation in which your identity is maintained, but your personhood is not, and the second scenario presents a situation in which your identity is compromised, but your personhood is maintained. I think it is clear that given a choice, we would choose the second scenario over the first.

Now consider the first scenario. Suppose you are ill, and the doctors can save you only by removing your brain, placing it into a vat of brain sustaining liquid, and implanting it with a chip that allows you to telepathically project your thoughts onto a screen with which others can interact. However, also suppose that the chip's encoded vocabulary is very limited, and so most of your complex thoughts will go unexpressed. First, it is reasonable to think that such a being has lost their personhood, or at least much of what constituted being a person. Second, it is also reasonable to suppose that despite a failure to maintain the status of being a person, the being that existed prior to the surgery still strictly persists after the surgery.

Now consider the second scenario. In this scenario, the doctors can save you, but only by first storing your psychological states on a chip requiring them to reformat your psychological states into a digital format, and then destroying your current brain and body. The doctors then create a new body just like yours from rapid-growth stem cells, and your

psychological states are formatted for the new brain, and then transplanted in the new body's brain. So far as you're concerned, the only discernible difference between before and after the procedure is that you now have a healthy brain and body. And everything that made you a person prior to the surgery is present in the being after the surgery.

Now which scenario would you choose? I suspect that most would choose the second option over the first one despite the first one being a case that preserves identity, and the second case threatens it. This illustrates that our desire to be continued by a being that is a person is more important to us in our survival than even strict persistence.

In fact, this idea is already encoded in our own current practices. We already know, for instance, that people create advanced directives specifying under what conditions they no longer want to be resuscitated. Typically, this has to do with their ability to be fully functional persons. Persons will, and do, choose death, then, over failing to maintain their personhood illustrating that without the property of personhood, not even the preservation of identity is enough to have what matters in survival.

Thus far, I have argued that the being in the experience machine meets the standard psychological continuity theorist's criteria for what matters in survival over time. But these are scenarios, I claim, that threaten our personhood, which I argued matters in survival. If that is correct, then the experience machine case shows that standard psychological continuity theory fails as an account of what matters in survival. I now suggest that the reason for this is that, while its proponents of the standard psychological continuity theory have thoroughly jettisoned the concept of a Cartesian Ego as the locus of personal identity, they have not eliminated all remnants of Cartesian theories of persons. The theory still, for instance, retains the Cartesian idea of persons as fundamentally environmentally independent cognitive

beings.<sup>12</sup> This is where the theory goes wrong.

## **5. The Life Trajectory Theory of What Matters in Survival**

The Cartesian picture, and the attendant standard psychological continuity theory, fail to recognize that a person is the kind of being that not only thinks, but also lives a life, and a living a life is a much broader endeavor than merely having a series of connected psychological states. While I agree that persistent people are at least this, I also believe that persons live lives, and that doing so is part of what it is to be a person, and therefore matters in survival. Living a life creates what I call a subject's "life trajectory," which is constituted by the continuous path of an informed psychological subject of experience through an external context, and this requires having certain external relations to the environment. The experience machine, as well as the brain in a vat scenario, both threaten something that matters in survival — being a person — because they both prevent subjects not only from living a meaningful life, but from the continued living of their lives altogether — an aspect of a person's ordinary existence. The life trajectory theory thus incorporates the idea that persons are fundamentally tied to an external environment, a fact that, as we saw, can be illustrated by completely removing them from such contexts.<sup>13</sup>

But what exactly does it take to continue a life trajectory? Well, it takes several things,

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<sup>12</sup> Though few standard psychological continuity theorists have offered necessary and sufficient conditions for being a person at a time, some have considered and rejected at least one idea -- that a person is the subject of psychological states or experiences that have a deep unity not shared between separate persons. See Hume (2000), Parfit (1984), Strawson (1997), and Unger (1990). Kant (1999), in fact, found this issue so pressing that he gave it its own moniker "The Unity of Apperception." Even the neuro-scientific literature has coined an expression for it: The Binding Problem. For a defense of the idea that persons are fundamentally unified beings see Korsgaard (1989).

<sup>13</sup> This idea is put forward in McDowell (1997) although for different reasons and to support a different anti-reductionist hypothesis.

including psychological continuity, as well as having a psychology that tracks reality. Being connected to an external environment It also requires something else as well, however – something that has yet to be given a systematic treatment. Because life trajectories are in part individuated in virtue of a subject's interactive relations to their environment, which in turn, confer certain extrinsic properties upon them, I claim that life trajectories are maintained, in part, by the continued having of at least some of these extrinsic properties. In developing this idea, I will explain three features of the life trajectory theory: (1) the nature of the extrinsic properties that a subject living a life has; (2) which of these extrinsic properties matter in survival; and (3) what continuity consists in with respect to these extrinsic properties. The first two questions are answered rather simply, the answer to the third question, however, is rather complex.

### **5.1 Extrinsic Properties**

To begin with the first question: a person's life involves facts about a psychological subject's relations to an external context over time. For example, my life is the life of a psychological subject who is her father's second-born child, a fact that individuates the beginning of my life trajectory as well as continuing to individuate it since I continue to have that extrinsic property over time. Another example might be that I own three Catahoulas, or that I live at a certain address, that I am the sole author of this paper, and so on. All of these facts individuate my life trajectory. Of course, similar facts individuate every other person's life trajectory.

Furthermore, not only do certain extrinsic properties individuate life trajectories, they also come in different flavors: temporary, long-standing, and permanent. Examples of these kinds of extrinsic properties, respectively, include: the properties of my now drinking a cup of coffee, and of wearing a pair of jeans; my properties of owning three dogs, and of living in

Upstate New York; and lastly, my properties of being my father's second-born child, and of being the author of this paper.

The concept of permanent extrinsic properties, since they may not be grasped as intuitively as the others requires some explanation. These are properties that originate in virtue of a subject's relations to their external context, but they do not essentially depend upon the continuous holding of those originating relations. Because having such properties do not depend upon the continuous holding of the originating external relations, these properties are held permanently. For example, I am still my father's second-born child 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.

## **5.2 Survival-mattering Extrinsic Properties**

To address the second question concerning which, if any, of a subject's extrinsic properties must be maintained in order for that subject's life trajectory to continue, it has to be the permanent extrinsic properties. It cannot be the temporary or long-standing extrinsic properties, since these are properties that come and go, that begin to hold and cease to hold of a subject, all the time. Therefore, acquiring or losing these properties cannot threaten what matters in a subject's survival. The only properties that hold throughout the life of a subject are permanent extrinsic properties.<sup>14</sup> It must therefore be the continuity of these properties, if any, that figure in an account of what matters in survival. After all, these are lost only upon the cessation of a subject. One motivation for thinking that such properties do matter in

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<sup>14</sup> Perry (1976) also raises the issue of whether having certain properties – for him, those that relate a subject to their past – are special in an account of personal identity, since no one but the subject could have them. Ultimately, however, Perry thinks that this is a consideration in favor of an identity theory of persons, unlike the current hypothesis under consideration.

survival is because, at least in part, the fact that subjects have these permanent properties is part of what allows them to have a sense of continuity over time — that allow an earlier subject to identify with a later one, and a later one with an earlier one — thereby satisfying the earlier offered definition of what it is to have what matters in survival.

### **5.3 Continuity and Extrinsic Properties**

I now turn to the third question. An answer to this question must address a certain worry that has its roots in a problem raised by Butler (1736) to Locke's (1694) early psychological continuity theory of personal identity — the idea that a later subject is identical to an earlier subject just in case the later subject remembers having had the earlier subject's experiences. According to Butler, the only way we can know if a later subject remembers being an earlier subject is if we know already that that later subject that has the memory is identical to the subject of the event being remembered. This is because categorizing a mental state as a memory at all requires that that mental state must accurately represent the past of that subject. This is what it is to have a memory. For example, if you have a memory of having gone to Niagara Falls, then that memory encodes the fact that it was you, the person remembering, who experienced going to Niagara Falls — that the subject of the memory is identical to the subject who had that experience. As a theory of personal identity, then, the memory theory is uninformative.

The same worry arises for the idea that a later subject must maintain the permanent extrinsic properties of an earlier subject. Like the memory theory, the life trajectory theory, can also be argued to presuppose identity. If a later subject has the permanent extrinsic properties of an earlier subject, this could only be because that later subject is identical to that previous subject. To illustrate, suppose you possess the property of being the author of

a certain paper. According to the life trajectory theory, a property like that must be continued by any candidate continuer of an earlier subject. On the face of it, however, the only person who could continue that property is the person who actually wrote the paper. It would seem, therefore, that any later subject who legitimately continues your life trajectory, which includes the property of having written that paper, must be identical to you.

In response to Butler's original objection to the memory criterion, several writers – most notably Shoemaker (1970) – have introduced a different notion of memory, one that does not define memories as having to be accurate in the previous way to count as memories, and therefore it is not subject to Butler's worry. On Shoemaker's account, which Parfit draws on, these types of memories are described as "quasi-memories," or as "q-memories." The idea is that a later subject's q-memories, while not based on facts actually experienced by a later subject strictly identical to the earlier subject, are qualitatively indistinguishable from having genuine memories.<sup>15</sup>

I claim that the life trajectory theory, just like the memory theory, can likewise be refined to escape circularity, by appeal to having "quasi-properties," or "q-properties," rather than ordinary properties. Given this refinement, the extrinsic property requirement on the continuation of a life trajectory theory now takes this form: if a future subject is to have what matters in the survival of an earlier subject – the continuation of that earlier subject's life trajectory – then that future subject must possess the q-properties corresponding to the

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<sup>15</sup> 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 (not in necessarily in the normal way), in some appropriate way, by the current psychological subject's predecessor. To not require this, is to jettison the causal requirement altogether, and to allow for random doppelgangers to be psychologically continuous with a later subject.



permanent extrinsic properties of that earlier subject.

But what under what circumstances does a future subject possess the q-properties corresponding to an earlier subject's permanent extrinsic properties? I claim that having the q-counterparts of another's permanent extrinsic properties requires satisfying two conditions.

*Continuity in Extrinsic Q-Properties*

(1) A later subject B has the q-property corresponding to an earlier subject A's permanent extrinsic property just in case B relates to and is able to relate to their current external context in a way qualitatively indistinguishable from the way in which A related at the time of their cessation.

(2) A later subject B has the q-property corresponding to an earlier subject A's permanent extrinsic property just in case B relates to their external context in a way qualitatively indistinguishable from the way in which A would have done after moment t.

Now that I have specified the conditions for having extrinsic q-properties, the next step is to give a more precise explanation of the nature of these conditions.

To see how conditions (1) and (2) apply, suppose that a subject A ceases to exist at moment t, and another subject B, psychologically continuous with A in the standard sense, comes into existence at t. Now consider a specific permanent extrinsic property. Suppose that at moment t, A has the property of being the author of a certain paper.

Concerning the previous property, in order for B to satisfy condition (1) — to be indistinguishable from A with respect to having had that property — several things would have to be true. Suppose that, at moment t, A believed and remembered authoring the paper, took credit for having done so, was given such credit, and so on. To count as having the q-counterpart of that property, B would have to believe they were the author of the paper, remember having authored it to the extent that A did, have the same attitudes towards the paper that A had, be able to take the same actions with respect to the paper that A did, and so on. In order for all of these facts to be true of B, B must at least be psychologically

continuous with A. However, since B could be a brain in a vat and still be psychologically continuous with A, clearly psychological continuity is not sufficient to guarantee that B is A's continuer, since in that case, B would not be able to relate to their environment in the very same way as A did. What must also be true of B, is that B is capable of occupying A's previous environmental niche. Assuming these facts hold of B, then they would satisfy condition (1). This is likewise true for each of A's past extrinsic properties.

Concerning condition (2), if B is A's successor with respect to our sample property, then, if A would have been the author of a certain paper had they continued, so too would B have to continue to have the q-counterpart of being the author of a certain paper. Notice that, with respect to this condition, the way in which B is indistinguishable from A is somewhat different from the way in which B is indistinguishable from A with respect to condition (1). This is because, up until moment t, there were definite ways in which A had the extrinsic property of being an author. However, we have no knowledge of, or perhaps even any way to even determine, the ways in which A would have had that property after moment t. All that we know is that A would have continued to have had that property, given that it was one of A's permanent extrinsic properties, and therefore that they could not lose it. For this reason, to satisfy condition (2), with respect to our sample property, B needs only to continue having the q-counterpart of being the author of a certain paper. That is, B's having the q-counterpart of A's property of being the author of a certain paper, must always remain one of B's permanent extrinsic properties. It can never be lost.

We have now seen what must be true in order for B to satisfy conditions (1) and (2) with respect to a particular extrinsic property. However, we might also wonder about the global requirements involved in their satisfaction. For instance, must B have all, or only most,

of A's permanent extrinsic properties? With respect to condition (1), the answer is relatively clear. Insofar as it must be true that B would have occupied A's environmental niche in a way qualitatively indistinguishable from the way A actually did, this would entail that B must have all of the q-counterparts of A's previous permanent extrinsic properties. The answer, however, may not seem so clear, with respect to condition (2). On the face of it, had A survived, there are all sorts of different permanent extrinsic properties that they could have gained after moment t. However, condition (2) does not state that B must have all or even any of the q-counterparts of the permanent extrinsic properties that A could have had, only those that A would have had. Therefore, any of A's merely possible permanent extrinsic properties are irrelevant to whether B can continue A's life trajectory. All that is required is that B has the q-counterparts of the permanent extrinsic properties that A has at moment t, since it is only those properties about which we can say that A would have had them, had A survived.<sup>16</sup>

As worded, the theory is quite strong in its global requirements, but it need not be this strong. The same points could be made by replacing the notion of qualitative indistinguishability with the notion of significant discernible difference. To keep the main points in focus and accessible, however, I will present the theory in its simplest, even if strongest, form.

## **6. The Appeal of the Life Trajectory Theory**

I have argued that being a person is required for having what matters in survival, that at least part of this involves living a life, and that continuing to live a particular life is tied up with the continuation of a subject's extrinsic properties. I then offered an identity neutral account of

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<sup>16</sup> For an extended treatment of these conditions relying on and spelling out the modal notions in more detail, see Appendix A.

how this might work.

Some advantages of accepting the life trajectory theory that are already clear. For instance, because it requires that a psychological subject does in fact live a life, it makes many of the features that matter for personhood matter in survival, recommending it over the standard psychological continuity theory. It can also appeal to both those who believe that identity matters in survival, and those who do not, also making it appealing, though no more appealing than the standard view, as there are ways that it too can be revised in order to accommodate identity as mattering in survival.

What I will now do is point out what I take to be two further advantages of the view that the standard theory lacks. The first concerns the consequences of the theory for the fission scenario. The second concerns the consequence for different cases of virtual immersion scenarios.

### **6.1 Fission and the Unity Reaction**

The first consequence of the life trajectory theory is that, even if we accept it in its identity neutral form, it does not require accepting fission as a form of survival. While this is obviously a happy consequence for identity theorists, it is also one for non-identity theorists, since even some of these theorists have expressed doubts about accepting fission as a case in which we have what matters in survival.<sup>17</sup> After all, accepting this was initially done in order to consistently accept psychological continuity theory, at least in its standard form. However,

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<sup>17</sup> See Korsgaard, 2003; Schetchman, 1996; Sosa, 1990; Rovane, 1998; Unger, 1997; Whiting, 2002; Wolf, 1986; among others. Other psychological continuity theorists, however, embraced the apparent fission consequence – that fission products maintain what matters in survival. Lewis (1983), for instance, agreed that we have what matters in fission cases, as do some others (Moyer, 2008; Ehring, 1995). Embracing fission and rejecting identity as what matters have been nearly treated as conceptually linked, but they are not. You can accept one without the other.

the life trajectory theory does not have this consequence.

The question that might now arise is this: why would someone want to reject fission cases as those in which we have what matters if they are willing to reject identity as what matters? That is, if identity is not what matters, why not accept that multitudinous forms of continuation are perfectly acceptable? Or, in the other direction, if multitudinous forms of continuation are not acceptable, why not just be an identity theorist? The answer to the last question is that the belief that identity is not what matters in survival is not solely supported only in virtue of fission considerations, as we've already seen. There are several reasons someone might have for rejecting identity as what matters that have nothing to do with fission, two of which have been discussed — Parfit's argument from degree, and Butler's argument from uninformativeness.<sup>18</sup>

Answering the first question takes a bit more explanation. I'll start by noting that the question itself fails to appreciate two different reactions concerning what matters in survival, which Belzer (2005) calls the "unity reaction" and the "identity reaction." The identity reaction is simply the idea that what is required for having what matters in survival is identity -- that the relations that hold between persons and their successors must be reflexive, symmetric, and transitive. The unity reaction, however, is the idea that having what matters in survival over time at least requires remaining a unity – an organizational entity that is a complex or systematic whole – over time.<sup>19</sup>

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<sup>18</sup> Other reasons might involve relying the notion of q-memories to argue against the rationality of caring about something that makes no qualitative difference to an experiencer, or they might involve arguments against treating the project of theorizing of about the nature of persons as on a par with theorizing about the nature of natural kinds generally.

<sup>19</sup> See also Perry (1972) for discussion of this distinction.

While not obvious at first, we can in fact distinguish between something's being a unity over time from the concept of its being a persistent object over time. Imagine, for instance, a sports team that wins a championship every year, but that every year, that team also changes its membership entirely. In this case, we have a unity that wins the championship every year for which we can cheer, but we do not have some particular persistent object that does the winning each year. There is no group of winners, for instance, that we can congratulate on their long-lived success.

Because the concepts of being a unity over time and being identical over time can come apart, it is possible to believe that one is necessary for having what matters in survival without believing that the other must be. And this is precisely what the non-identity theorist might want to endorse — that being a unity matters in survival, but being identical over time does not. Putting this in terms of psychological continuity theory, only a being that can be considered a psychological unity over time can have what matters in survival, even if that unity is not a persistent object over time.<sup>20</sup> Now why would being a unity over time matter in survival? Well, many reasons, not all of which I can mention, but here are a few: a psychological unity can have long term goals, make decisions and carry them out, be held responsible for having taken certain actions, have hopes and dreams whose realization can be said to satisfy the desires of that dreamer. Being a unity over time is a minimal condition for performing certain functions and having certain attitudes. And these properties are all

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<sup>20</sup> Note that this does not commit to a particular theory of what counts as making for a psychological unity, only that there must be a unity over time in order to have what matters in survival. It does not, for instance, require what many have failed to find — a well-integrated stream of consciousness, for instance. unified consciousness For criticisms of specific accounts of what this unity must consist in, particularly narrative unity, see Christman (2004).

plausible candidates for being part of what matters in survival. In fact, all of these properties are properties we think of persons as having. Suppose a non-identity theorist was attracted to the unity reaction. If so, they could adopt the life trajectory theory, since life trajectories, are by their nature, unities. Conditions (1) and (2) on the continuity of q-properties ensure that the life trajectory theory admits only of one-to-one relations between earlier persons and their successors, even if those relations are not identity preserving — a unity requirement. Call any theorist who accepts this requirement — who finds the fission consequence undesirable — and yet who also rejects an identity theory of what matters in survival a “Parfitian unitarian.”

Now how do conditions (1) and (2) ensure that life trajectories must be unities — that they do not allow fission cases as those in which we have what matters? Well, imagine once again that a psychological subject A has authored a certain paper. Now consider A at a particular moment *t*, after having done so, and suppose that at *t*, A undergoes a Parfitian procedure that ends with the creation of two subjects B1 and B2, both psychologically continuous with, and yet distinct, from A. That is, suppose that A fissions. Now, does the life trajectory theory allow for both B1 and B2 to have what matters in A’s survival? Well, they could if, in addition to maintaining psychological continuity, both B1 and B2 can continue A’s life trajectory — that both B1 and B2 possess the q-properties corresponding to the permanent extrinsic properties of the subject A, such as being the author of a certain paper.<sup>21</sup>

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<sup>21</sup> Parfit argued that non-branching psychological continuity cannot be what matters in survival, because this is a matter of the intrinsic relations between earlier and later subjects. However, in fission scenarios, each fission product can claim to be intrinsically psychologically related to their predecessor. Whether there are two or not is an irrelevant extrinsic factor. Does this very same reasoning apply to the life trajectory theory? The short answer is “no.” On my view, it does not directly matter whether there are one or two persons who have the same intrinsic relations to an earlier subject, since conditions (1) and (2) ensure that more than intrinsic properties matter in survival.

But do they? I argue that the answer is “no.”

Regarding condition (1), if B1 and B2 could satisfy it, it must be possible for both B1 and B2 at moment *t*, each psychological duplicates of A, to have the *q*-counterpart of being the author of the relevant paper. However, now consider how A had that property. A had that property in the form of having been the singular author of that paper. Therefore, only one person at a time can relate to the world as the author that paper in the same way that A once did. We could try giving B1 and B2 some kind of authorial status, however, perhaps that of having co-authored the paper in question. But having the property of being a co-author would not make B1 and B2 able to continue A’s permanent extrinsic property of being the author in a way qualitatively indistinguishable from the way in which A had that property at moment *t*. And, the reason is fairly clear: being the author of a certain paper is a property that has a very different character from, say, being the co-author of a paper.<sup>22</sup> If you are a co-author of a paper, for example, you would not believe that you are the author of the paper, you would recall having authored only parts of it, and you would not identify with that paper as only your own, and so on. Fission products, therefore, cannot satisfy condition (1) for having the *q*-counterparts of A’s extrinsic permanent properties.

Now what about condition (2)? The second condition demands that both B1 and B2 cannot lack, or lose those properties that A would have had after moment *t*.<sup>23</sup> As we saw, one of the properties that A would have had after moment *t* is being the author of a certain paper.

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<sup>22</sup> This would be true even on a weaker version of the theory as well.

<sup>23</sup> One potential objection to this criterion is that it begs the question. The issue can be understood in the following way: in assuming that there are permanent extrinsic properties, haven’t I guaranteed that fission cannot preserve what matters in survival? My answer to this question is “yes.” All of this I will admit to. What I will say though is that the idea that we have permanent extrinsic properties is far more basic than the idea that we can survive fission, so if anyone is begging the question, it is the fission sympathizer, not myself.



Now in order for B1 and B2 to have this property, they must be able to be said to currently have that permanent property. However, A had the property of being the single author of a certain paper, and this is not something that two people can have at once. While it is true that both B1 and B2 can claim to be psychologically continuous with something that once was the author of a certain paper – and this is not something that just anyone can claim. Still, having once been the author of a certain paper no more counts as having that property's q-counterpart than would merely having once had all of my memories count as having my q-memories. Neither fission product, then, can maintain what is required for what matters in survival. The best they can do is sustain the past tense version of this property, and this violates condition (2) – that any successor of an earlier person must sustain that property in its permanent, and therefore, present tense form.

In sum, concerning permanent extrinsic properties, for example, the property of being the author of a certain paper, it is possible for fission products to have only the past tense or shared counterparts of these properties, neither of which qualifies as having the corresponding q-property. Fissioning, then, violates both conditions (1) and (2) for the continuation of a life trajectory, and therefore fission fails to maintain what matters in the survival of persons over time.

The life trajectory theory is therefore more plausible than standard psychological continuity theory since it is consistent with identity neutral theories of persons, and yet it does not require accepting this on certain grounds – that psychological states can be duplicated.

### **6.3 Virtual Immersion Scenarios**

The second consequence for the life trajectory theory is that it can explain and predict a range of intuitions about virtual immersion cases. To illustrate, I reconsider the experience machine

and a variant on that case.

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 de-correlated with facts about an external context. The explanation for this horror was that, in such a scenario, we lose what matters for our survival due to our lack of being appropriately connected to an external environment, and therefore suffered the loss of our personhood.

But now, instead consider the anticipation we might feel if all psychological subjects could rid themselves together, en masse, of the shackles of bodily decay by immersing their psychologies within a shared, interactive virtual world in which they are maintained independently of their bodies. Suppose that, somehow, our aging, dying biological bodies become obsolete. Surely, at least some of us would not view these scenarios as constituting a threat to what matters in our survival. Indeed, we might, and probably would, look forward to a scenario like this as a way of achieving immortality.<sup>24</sup>

I'll now compare the two cases with respect to their treatment according to standard psychological continuity theory, and according to the life trajectory theory. As we saw already, standard psychological continuity theory predicts that we do have what matters in cases of virtual immersion, and therefore it can predict our reaction of anticipation to the second case. However, as we also saw, it cannot predict our reaction of horror to experience machine cases. In contrast, it appears that the life trajectory theory can predict our reaction of horror, but it cannot predict our reaction of anticipation. Therefore, standard psychological continuity

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<sup>24</sup> For details about ways these possibilities might be realized and their potential implications, see Chalmers (2010). Sauchelli (2017) addresses how such "life extending" techniques may or may not fit with certain narrative conceptions of what matters over time.

theory gets it wrong for the first virtual immersion case, but right for the second one. And, the life trajectory theorist gets it right for the first case, but wrong for the second one.

However, things are not always as they seem. As it turns out, the life trajectory theorist can, in fact, predict the correct reaction to the second virtual immersion case. To see this, we need only to re-conceptualize what it means to exist in an external context. Our natural assumption is that these kinds of contexts must be identified with spatial temporal contexts. But this assumption might be rejected if technology advances to the point of allowing for purely virtual interactions. In this case, the notion of a mind-independent external world need not involve connections to an ordinary physical environment. We could instead think of a purely virtual environment as mind-independent – as external – assuming that we have shared experiences of that virtual environment together with the ability to affect that shared environment in certain predictable, systematic law-like ways. If this is how we understand immersion within a virtual environment, then we might still reasonably ascribe extrinsic properties to subjects in contexts like these. The life trajectory theorist could then say that the second case of virtual immersion preserves what matters in survival after all.

The life trajectory theory is therefore more plausible than standard psychological continuity theory, since it can predict both our reactions of horror and of anticipation to different cases of virtual immersion.

## **7. Objections**

While there are several objections to the life trajectory theory, I can now consider only two. The first considers different ways fission might be realized that raise the possibility that it does preserve what matters in survival. The second considers whether permanent extrinsic properties have enough intuitive importance that a subject losing them truly loses what matter

in survival.

### **7.1 Fission Scenario Variants**

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

One non-standard fission scenario is explored by Martin (1995) known as “fission rejuvenation.” In this scenario, we suppose that when we are, 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 our death, at which point the fission product, whose psychological states have been updated via chip implants to maintain psychological continuity with the original subject, awakens and picks up 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 theory for what matters in survival. However, this conclusion is a bit too fast. It is not clear, for instance, whether this is truly a case of fission or simply one of sophisticated body cloning together with a kind of mental state transfer process. The claim that fission rejuvenation counts as a true of fission would need to be established before we could draw any conclusions about the life trajectory theory.<sup>25</sup>

### **7.2 Extrinsic Properties and What Matters in Survival**

It may seem odd to say that having been born in a certain location at a certain time is something that would intuitively matter to us in survival. However, we must be cautious in the

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<sup>25</sup> See Martin (1995) for reasons for thinking it truly is a case of fission.

interpretation of the claim that what matters in survival is having certain q-properties. Although I do earlier offer a brief reason for thinking that such properties do intuitively matter, I do not offer much in the way of a defense of this claim. But this is not that significant. The claim that what matters in survival is the continuation of some extrinsic q-properties is not supported on the grounds of our direct intuitions. The fact that we should care about the continuation of extrinsic properties is a consequence that follows from other intuitions we do have, like the intuition that we do not have what matters in the experience machine case, given that our connection to an external context is lost, and therefore so is our personhood, something that does intuitively matter in survival. To account for this intuition, it was then conjectured, not deduced, that part of what matters in our survival is the continuation of our life trajectory, an idea that was analyzed in terms of the continuity of certain extrinsic properties over time. Caring about such properties, then, is an implication of caring about being connected to the external environment and remaining a person. That is, the closure principle for the intuitiveness-operator, such as there is, is false. Simply because a claim is intuitive, and some other claim follows, does not mean that the second claim must likewise be intuitive.

## **8. Concluding Remarks**

I offer a theory, according to which, certain extrinsic q-properties must be maintained in order for a later subject to preserve what matters in the survival of an earlier subject. I also argued that the theory fares better with respect to our intuitions about certain cases, such as fission and different kinds of virtual immersion scenarios.<sup>26</sup> Since standard psychological continuity

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<sup>26</sup> The position explored shares similarities with other views, but is still distinct. In particular, the externalist aspect of the life trajectory hypothesis is not new, and neither is the Parfitian view of identity. However, their specific way I combine these theses is novel. For comparison, Whiting's (2002) work supports Parfitian singularism, but is driven by internalist

theory cannot accommodate as many of our intuitions as the life trajectory theory can, it ought to be rejected in favor of the latter theory. What matters in survival is more than the internal relations that hold between earlier and later subjects, external relations matter too. And at least one theory — the life trajectory theory — can accommodate this fact.<sup>27</sup>

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considerations. In contrast, Lindemann's (2014) work on personal identity is externalist, but hers is one focused on social relations, rather than all external relations.

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