Anticipation and Prudential Concern

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There is an intimate connection between personal identity, prudential concern, and anticipation. But just how close is the connection? In this paper, I develop and motivate phenomenal accounts of both anticipation and prudential concern which suggest that the link between anticipation and personal identity and the one between anticipation and prudential concern is less tight than often assumed. I start by arguing against two influential accounts of anticipation, and present an alternative view based on the notion of phenomenal continuity, which detaches anticipation from identity. Next, I consider the relationship between anticipation and prudential concern and make the case that, here too, there is more space between the two than orthodoxy alleges. A qualified form of anticipation may be sufficient for prudential concern, but anticipation is not necessary for prudential concern. Finally, I argue that prudential concern is grounded in phenomenal continuity, rather than psychological continuity. This secures a close alignment between anticipation and prudential concern and offers a plausible explanation as to why anticipation is a guide to prudential concern.

Keywords: personal identity, prudential concern, anticipation, imagination, consciousness, *de se* attitudes, Parfit

1 Introduction

We care about our own future in a special way, different from how we care about other people's future, including that of our children. Derek Parfit (1971, 1984, 2007) famously argued that this special kind of concern is not based on personal identity. I have reason to be prudentially concerned about my fission offshoots, Lefty and

Righty, even though they are not identical to me. Parfit took prudential concern instead to be grounded in psychological continuity, which connects me to both Lefty and Righty.¹

At the same time, prudential concern is closely linked to anticipation. A future person whose experiences I can anticipate having seems to deserve my prudential concern. It is furthermore natural to think that we can anticipate only our own experiences. This creates a tension. On the one hand, the connection between psychological continuity and prudential concern suggests that prudential concern comes apart from identity. On the other hand, the link between prudential concern and anticipation suggests that prudential concern is based on identity after all.

In response, Parfit (2007) considered introducing a notion of *quasi-anticipation*, similar to that of quasi-memory (Shoemaker, 1970). Like quasi-memory, quasi-anticipation does not presuppose identity. But Parfit was not convinced by this proposal. First, he was doubtful about its conceptual coherence. Second, he worried that the notion would be too wide, and therefore unaligned with psychological continuity (Parfit, 2007, p. 22-23). Parfit himself left the tension ultimately unresolved. This is an unstable situation. We need to resolve the tension. But how? Should we sever the apparent link between anticipation and identity? Should we give up on the idea that prudential concern is grounded in psychological continuity? Or should we instead reinstate the connection between personal identity and prudential concern?

My aim here is to clarify the links between the key notions involved and to resolve the above tension. In particular, I will consider the following four connections:

- 1. *Prudential Concern—Identity*: May a future individual deserve my prudential concern even though they are not identical to me?
- 2. *Anticipation—Identity*: Is it possible to anticipate experiences that will not be one's own?
- 3. *Anticipation—Prudential Concern:* Are there future subjects who deserve my prudential concern but whose experiences I cannot anticipate?

¹ When discussing prudential concern here we are not simply asking about the actual extension of our special concern, rather, we are asking to whom we *ought* to extend this special concern.

4. *Prudential Concern—Psychological Continuity*: Is prudential concern grounded in psychological continuity or some other relation?

For the most part, I will not explicitly discuss the first connection and follow Parfit in maintaining that prudential concern and identity can come apart.² I will furthermore take for granted Parfit's moderate view that it is at least sometimes the case that a future person deserves our prudential concern.3 Regarding the other three connections, I will argue for the following claims. First, anticipation does not require identity; it is possible to anticipate someone else's experiences. Anticipation does instead involve the presupposition that the anticipated experiences are 'phenomenologically downstream' from one's own present experiences. Second, while a qualified form of anticipation seems sufficient for prudential concern, it is not necessary. We may have reason to prudentially care about a future person even though we cannot anticipate their experiences. Third, phenomenal, rather than psychological, continuity should be regarded as the basis for prudential concern. The fact that both anticipation and prudential concern are based on phenomenal continuity allows for a close alignment between anticipation and prudential concern and offers a plausible explanation for why anticipation provides guidance about prudential concern.

2 Prudential Concern and Identity

Let us briefly recapitulate Parfit's argument for the claim that identity is not what matters in survival (Parfit, 1971, 1984, 2007). His core case involves fission. Assume that Original fissions into Lefty and Righty. Assume further that Lefty and Righty both stand in the continuity relations to Original that support our everyday survival—both are physically and psychologically continuous with Original. (Imagine, for instance, that Original physically divides like an amoeba into two, and that both

² For the view that identity is what matters, alleged counterexamples from fission notwithstanding, see e.g. (Lewis, 1976b).

³ For the 'extreme claim' that nothing matters in survival see (Parfit, 1984, §102, p. 307). According to Parfit, the extreme claim is supported by a 'defensible' argument (Parfit, 1984, §102, pp. 311–312). For a sustained argument for this view see e.g. (Ehring, 2021).

offshoots share Original's entire psychology.) According to orthodoxy, neither Lefty nor Righty is (determinately) identical to Original. But since both have everything that grounds our ordinary survival, both have everything that could matter from a Reductionist perspective (Parfit, 1984). Hence, both Lefty and Righty deserve Original's prudential concern, and identity is therefore not necessary for prudential concern.

We have already noted that this conclusion appears to clash with the intimate connection between prudential concern and anticipation. An explicit conflict arises from two additional assumptions. According to the first, there is a constitutive link between prudential concern and anticipation. According to the second, anticipation requires identity. Are these assumptions plausible? Let us first consider the connection between anticipation and identity in §3. In §4, we can then have a closer look at the link between anticipation and prudential concern.

3 Anticipation and Identity

3.1 The Identity Account of Anticipation

It seems *prima facie* plausible that we can only anticipate our own future experiences. I can anticipate my painful visit to the dentist tomorrow, but I cannot anticipate my daughter's experiences of getting her teeth drilled. The reason seems to be that the first set of experiences are mine, while the second are not. Here's Parfit:

[...] it is only our own experiences to which we can look forward. And we can fear or dread only our own pain. Though I may care more about my child's pain, I cannot, it seems, fearfully *anticipate* that pain. We might call this *anticipatory concern*.

Anticipation seems, then, to presuppose identity. If I cannot anticipate my child's pain, that seems to be because this will not be my pain. (Parfit, 2007, p. 22)

We have to read Parfit carefully here. His point is *not* that I cannot fear or dread *the* fact that my child will be in pain. Obviously, I can and would do that. What Parfit denies is that I can fear or dread having my child's pain. This, on the other hand, seems true.

It is generally assumed that anticipation, in the intended sense, involves experientially imagining a certain episode from the inside (see e.g. Velleman, 1996; Parfit, 2007; Ehring, 2021). One imagines from the first-person perspective what it would be like to undergo a certain experience or to perform a certain action. Further, anticipation has a temporal orientation and involves the assumption that the relevant experience lies in the future.⁴ Combined with the identity condition, this gives us the following view of anticipation:

The Identity Account

S anticipates having experience *e* if and only if

- S imagines having experience *e* from inside;
- S believes that *e* lies in the (personal) future;
- S = subject of experience e.

It is important to note that our project here is to give an account of a certain mental state, and not that of providing a semantic analysis of anticipation reports in English. The proposed accounts are therefore not meant to capture all uses of 'S anticipates ...'. They are intended to throw light on the mental state associated with *anticipating having a certain experience*. According to the Identity Account, I can anticipate having a future subject's experience if and only if I can imagine having their experience from the inside and if that future subject is me.

Anticipation is arguably not a *factive* mental state—anticipating having an experience does not entail that the experience will in fact occur. Suppose I anticipate my experiences at tomorrow's dentist visit to involve a lot of pain. As it turns out, my teeth are fine, and the episode is completely pain-free. I am not under any pressure, it seems, to revise the initial judgment to the effect that I didn't really anticipate my experiences at the dentist and only *seemed* to do so. I can felicitously report this episode as follows: *I anticipated the dentist visit to be painful, but in fact it wasn't.*⁵ The world

⁴ This assumption may involve one's *personal time*, rather than external time (Lewis, 1976a). Suppose I expect to time-travel back to the 18th century. I can anticipate my experiences of stepping out of the time machine even though they lie in the external past.

⁵ Compare this to a factive mental state where there is pressure to retract the initial judgment when p is false: I didn't really see/know that the cat is on the mat, I only *seemed* to see/know it.

where the relevant experience *e* occurs is therefore oftentimes the world of anticipation, rather than the actual world. And unless my anticipation is maximally specific, *e* will occur in a whole *set* of possible worlds, rather than a single world.

The Identity Account has initial appeal because it gets the basic data right. Consider the following two cases:

Case 1: My flu shot

I believe that I will receive a flu shot tomorrow.

Assessment 1: I can anticipate my experiences of receiving a mildly painful flu shot.

Case 2: Ani's flu shot

I believe that my daughter Ani will receive a flu shot tomorrow.

Assessment 2: I cannot anticipate Ani's experiences of receiving a mildly painful flu shot.

The Identity Account gives the right verdicts of these cases. It predicts that assessments 1 and 2 are accurate, as case 1 satisfies the identity clause, while case 2 does not. In case 1, the subject of the experience is identical with the subject who is engaged in the act of anticipation. In case 2, the subject of experience is Ani, while the anticipating subject is me.

So far so good. But the account faces counterexamples. Consider the following scenarios:

Case 3: Lefty's flu shot

I am told that I will be put into a fissioning device tonight and fission into Lefty and Righty. Lefty will wake up in a red room and receive a flu shot. Righty will wake up in a blue room and will not receive a flu shot.

Assessment 3: I can anticipate Lefty's experiences of waking up in a red room and receiving a mildly painful flu shot.

Case 4: Biden's flu shot

I am convinced that I am Joe Biden. I hear on the news that Biden will receive a flu shot tomorrow.

Assessment 4: I can anticipate Biden's experiences of receiving a mildly painful flu shot.

If assessments 3 and 4 are correct, the Identity Account is in trouble, since it entails the opposite judgments. In case 3, the (notional) subject of the anticipated experience is Lefty, whereas the anticipator is me. (Remember that we are assuming that Lefty and I are distinct.) In case 4, the notional subject of anticipation is Biden. The Identity Account therefore claims that I cannot anticipate Lefty's or Biden's experiences. But that seems wrong. Consider first case 3. Assume that I possess the relevant beliefs, i.e. I believe that I am about to split into two and that one of my successors, Lefty, will wake up in a red room and receive a flu shot, while the other, Righty, will not. It is pre-theoretically plausible that if I now picture from the first-person perspective waking up in a red room and receiving a flu shot, I am thereby anticipating Lefty's experiences.

Consider next case 4. Suppose I am firmly convinced that I am Joe Biden (perhaps because I was brain-washed into believing this). Suppose further that I then receive information that Biden will get a flu shot tomorrow. When I now in response imagine from the inside receiving a mildly painful flu shot tomorrow, it is once more plausible that the subject of my imagining is Biden, and that the episode constitutes an anticipation of his experiences.⁶

One might be tempted to think that the fact that anticipation involves imagination from the inside or from the first-person perspective straightforwardly entails that the notional subject is identical with the anticipator. But that is not so. For instance, the Biden case is in important respects analogous to a case where I imagine from the inside being Napoleon. Here we should treat Napoleon as the notional subject of imagination rather than myself (Williams, 1973; Velleman, 1996; Weber, 2023, 2024). Treating Biden as the notional subject of anticipation also explains, among other things, why I adjust my anticipation in response to information about Biden. For instance, were I to learn

⁶ To forestall a potential misunderstanding, we should note that above descriptions of the cases should not be taken to imply that the subject himself/herself would report the content of his anticipation in precisely those terms. For instance, when I anticipate Biden's flu shot experiences under the delusion that I am him, I would most likely not describe the imagined experiences as *Biden's*. After all, we rarely talk about ourselves in the third person. Rather, I would report them as *my* experiences.

that Biden is allergic to flu shots, I may imagine tomorrow's experiences as involving an anaphylactic shock.

We can further substantiate the above assessments of the cases. Note, first, that the cases are accompanied by characteristic attitudes and responsive dispositions. Were I to learn that Lefty or Biden will be tortured tomorrow, I would feel *fear* and *dread* about having these experiences. This seems subjectively rational even in case 4, given my false identity belief. Second, both cases pass Unger's *pain avoidance test* (Unger, 1992): I would be disposed to accept some pain now to spare Lefty or Biden from much greater pain tomorrow, even if my preferences were purely selfish.

Cases 3 and 4 and similar counterexamples suggest that the Identity Account is too restrictive. We need to relax the identity clause. We should keep in mind that alternative proposals need not only make room for the counterexamples, but they also need to get the basic cases 1 and 2 right.

3.2 Velleman's Account of Anticipation

In a complex and subtle discussion, Velleman (1996) has offered an alternative view of anticipation. Velleman's proposal does not require identity between notional and anticipating subject. It therefore has the potential to accommodate the counterexamples. At the core of Velleman's account is a contrast between anticipation and simple imagination from the inside. When I imagine from the inside being someone else, such as Napoleon, my imagining crucially involves an act of *stipulation*—I need to consciously specify the identity of the notional subject of my imagining (Velleman, 1996, p. 59). In contrast, genuine anticipation lacks such a stipulative element. In anticipation, I do not have to explicitly decree whose experiences I am imagining. The notional subject of anticipation is instead determined by a causal process, initiated by the act of anticipation itself. Velleman writes:

When I frame an image prefiguring an experience that will follow in the image's wake, causally speaking, I needn't specify for whom the experience will follow: in the context of the image, the experience is simply 'to follow'—to follow the image itself, that is. (Velleman, 1996, p. 73)

Velleman claims furthermore that anticipation 'impinges' on the character of the anticipated experience, either by leaving a memory trace, or by 'colouring' the

experience. This impingement condition can then arguably replace the Identity Account's temporal condition as it implies that the anticipated experience follows the act of anticipation. We can summarize Velleman's view as follows:

Velleman's Account

S anticipates having experience *e* if and only if

- S imagines having experience *e* from the inside;
- *e* contains a causal trace of the act of anticipation *a*;
- the subject of *e* is determined free of stipulation through a causal process leading from *a* to *e*.

On the positive side, we can note that Velleman's Account gets cases 1 and 2 right. I can anticipate my own experience e, since it is causally related to my anticipation token a. I cannot anticipate my daughter's experience e^* , since it is not causally related (or not in the right way) to my attempted act of anticipation a'.

Let us then turn to the downsides of Velleman's account. First, demanding that anticipation necessarily precludes stipulation seems too strong.⁷ I may anticipate my experiences during tomorrow's dentist visit and in addition consciously stipulate that I am the subject whose experiences I am anticipating. This act of stipulation arguably does not turn genuine anticipation into mere pseudo-anticipation. Velleman, on the other hand, suggests that the stipulation itself introduces an alienating element which undermines anticipation. He writes: 'the second thought [i.e. the stipulation] of whose perspective I was entering would be an alienating thought, one too many for the intimacy that holds among selves' (Velleman, 1996, p. 76). More plausibly, we might instead say that the stipulation is simply *redundant* in cases of genuine anticipation, as the notional subject of anticipation is already secured through the relevant causal process.

Another worry with Velleman's account concerns cases where the anticipated experience does not in fact eventuate. In such cases, there simply is no causal process that connects the actually occurring anticipation token a_{actual} with the merely possible

⁷ A related concern is raised by Ehring (2021, pp. 41-43).

experience $e_{possible}$. Velleman's account is therefore incomplete. Perhaps we could fill this gap by demanding that in such cases the relevant causal pathway proceeds from the *non-actual* anticipation token $a_{possible}$ occurring in the relevant anticipation worlds to the experience token $e_{possible}$ occurring there.

A more serious, and for us more relevant, difficulty concerns *fission*. Velleman claims that we cannot anticipate the experiences of our fission offshoots. This can mean two things. First, it can mean that we cannot anticipate the experiences of both Lefty and Righty at the same time. Second, it can mean that we cannot anticipate their individual experiences one at a time. It seems correct that we cannot anticipate the experiences of both fission offshoots together. But Velleman thinks that we also cannot anticipate their experiences one at a time (Velleman, 1996, p. 73). Velleman's reason for this is the following alleged dilemma (see also (Ehring, 2021, §1.2)). Either the notional subject of imagination is selected by stipulation or by the relevant causal process. If it is selected by stipulation, my imagining does not qualify as a genuine anticipation (Velleman, 1996, p. 76). But in cases of fission, the notional subject cannot get selected causally either, since both fission offshoots stand in symmetrical causal relations to the anticipation token. Either way, we cannot anticipate the experiences of our fission offshoots, according to Velleman.

Note, first, that Velleman's verdict is intuitively implausible. If the pre-theoretic assessment of cases like 3 above is correct, then we can indeed anticipate the experiences of our fission successors one at a time. But Velleman's conclusion should also be rejected on theoretical grounds, because his reasoning rests on a false

⁸ According to (Ehring, 2021), the explanation for the impossibility of anticipating both Lefty's and Righty's experiences together lies in the potentially incompatible character of Lefty and Righty's experiences. He holds that we can anticipate both sets of experiences in cases where Lefty and Righty have identical experiences, or where their experiences always alternate. While I agree with many points in Ehring's discussion, I believe instead that the explanation for our inability is based on the fact that an attempt to imagine both Lefty's and Righty's experiences from the inside would require one to simulate a *disunified* state of consciousness. But we are unable to intentionally simulate such disunified states of consciousness. (This leaves it open whether our consciousness is in fact always unified.) Hence, the inability carries over to cases where Lefty's and Righty's experiences are qualitatively identical.

⁹ This judgment is shared e.g. by (Sider, 2018) and (Ehring, 2021). Ehring constructs several elaborate counterexamples to Velleman's claim. In my eyes, the rather baroque character of these examples is unnecessary and obscures the fact that the underlying intuition is rather straightforward.

dichotomy. Explicit stipulation and causal process are not the only ways in which the notional subject of anticipation can be determined. To see this, consider again case 3. I have argued that by imagining waking up in a red room and receiving a flu shot I am plausibly anticipating Lefty's experiences. How, if not through the causal process or stipulation, does Lefty get selected over Righty? Lefty is determined as the notional subject by the qualitative content of my imagining together with the relevant background beliefs, e.g. my belief that Lefty will be the only fission offshoot who wakes up in the red room and receives a flu shot. Schematically, I imagine a subject who is *F*, and according to my background assumptions Lefty is *the F*. We can dramatize this aspect of the case further by imagining that the fission-device will tattoo the name 'Lefty' on Lefty's left arm and the name 'Righty' on Righty's right arm. I might then imagine waking up, checking both arms and finding the "Lefty" tattoo on my left arm. The qualitative content of my imagination determines that Lefty is the subject whose experiences I am anticipating. No additional act of stipulation is required. Velleman's supposed dilemma is therefore spurious.

Velleman's account faces another difficulty involving *duplication*. Imagine the following scenario:¹⁰

Case 6: Amnesiac

I am told that I will receive a brain zap which will wipe my brain clean of all memories, beliefs, character traits, etc. The brain zap will leave my stream of consciousness uninterrupted. My brain-zapped successor, Amnesiac, will then receive a flu shot.

Assessment 6: I can anticipate Amensiac's experiences of receiving a mildly painful flu shot, while lacking any memories, beliefs, character traits from my previous life.

This case illustrates in a particularly drastic way that we can anticipate experiences that lack a memory connection to, or any other impingement by, our earlier act of anticipating them. Here, the causal influence of the earlier act of anticipation is screened off by the brain zap. There are more mundane examples to illustrate this point. Consider my anticipation of playing a Bach fugue in front of a large audience tomorrow. I imagine that I am completely absorbed in the performance. All my

¹⁰ A similar case is presented in (Shipley, 2002). Shipley's argument targets Velleman's view of prudential concern, rather than his account of anticipation.

attention is focused on playing every note just right. As imagined, my experiences are free of any causal trace of today's anticipation. They would have been exactly the same had I not anticipated them. We can agree with Velleman that anticipation *often* colours the anticipated experiences, but this is not necessarily so.

Summing up. By relaxing the identity condition on anticipation, Velleman's proposal makes a step in the right direction. However, the proposal faces several difficulties. First, the no-stipulation condition needs to be weakened. Second, the account is silent on how the notional subject of anticipation is determined in cases of merely imaginary experiences. It also delivers the wrong result for, third, fission, and fourth, duplication. Fifth, there are counterexamples to the impingement condition.

3.3 The Phenomenal Account of Anticipation

In this section, I will sketch an alternative account of anticipation based on the notion of *phenomenal continuity*. The proposal is motivated by the following idea: when we anticipate a future experience *e*, we assume that the experience lies 'phenomenally downstream' from our present experiences—were we to continue along our stream of consciousness or its extension, we would eventually arrive at the anticipated experience.

The crucial notion of phenomenal continuity can be made more precise as follows (see Dainton and Bayne, 2005). Our ordinary streams of consciousness, stretching from morning to evening, are constituted by overlapping chains of diachronically coconscious experiences. Temporally adjacent experiences are diachronically coconscious in that they are experienced together in the same specious present. "Think of what it is like to suffer a prolonged toothache, or to hear an extended tone played on a flute, or to watch a balloon float slowly across the sky. Each phase of your experience merges seamlessly with the next, and the next [...]" (Dainton and Bayne, 2005, p. 554). Overlapping chains of diachronically co-conscious experiences form our streams of consciousness.

However, neither the diachronic co-consciousness relation nor its ancestral can join separate streams, such as today's and yesterday's stream. Since the boarders of anticipation reach beyond the confines of a single stream, an adequate view of anticipation needs to extend the relevant phenomenal relation to bridge the gap between separate streams. This 'bridge problem' has been addressed by Phenomalists

about personal persistence such as Dainton and Bayne (2005, §VI). I will here follow their proposal to construct a *modal* bridge between streams. The core idea behind this proposal is the following: yesterday's and today's stream are phenomenally continuous in a modal sense in that had yesterday's stream of consciousness not been interrupted during the night, had I for instance spent the whole night partying, the two streams would have formed a single continuous stream. A complication with this simple idea is that today's stream would have been rather different after a sleepless night from how it actually is. We should therefore shift our focus to the modal properties of the entity that produces the streams, e.g. our brains. My brain is such that, had it continued to produce experiences during the gap, it would have filled the gap by creating a smooth continuation of the initial stream. We can then say that the experiences in today's and yesterday's stream are phenomenally continuous_{modal}, since the entity that produced them could have produced a smooth stream stretching from yesterday to today (for details see Dainton and Bayne, 2005, §IX). While somewhat technical, the notion of phenomenal continuity_{modal} is meant to capture the mundane sense in which one's present experiences are phenomenally connected to one's experiences as a young child, but unconnected to other people's experiences.

Here then is the phenomenal view of anticipation:

The Phenomenal Account

S anticipates having experience *e* if and only if

- S imagines having experience e from the inside (in a world that otherwise closely corresponds to S's assumptions about actuality);
- S assumes that *e* lies in the (personal) future;
- S assumes that e is phenomenally continuous with his/her current experiences.

Anticipation can be understood as a special form of imagination from the inside. It differs from plain inside imagination in several important ways. First, anticipation is essentially oriented towards the (personal) future. Second, anticipation places a condition on the notional subject of experience. While inside imagination is more or less unconstrained with regards to the identity of its notional subject (one can imagine being Napoleon, Mother Theresa, or Sherlock Holmes, etc.), in anticipation, the subject of the anticipated experience is assumed to be phenomenally continuous with oneself.

In all ordinary cases, phenomenal continuity implies identity. But this implication can fail in cases of fission where phenomenal continuity may be one-many. Third, the worlds of anticipation are more constrained than the worlds of imagination. We generally assume that the circumstances in which the anticipated experience occurs closely conform to our assumptions about actuality—our belief worlds reign in the worlds of anticipation. Things unfold in much the same way that we would expect them to unfold in the actual world; people behave how we would expect them to behave; physical objects follow standard causal laws, etc. This is not in general the case for the worlds of imagination. In imagination, we are allowed to suspend many assumptions about actuality. We can imagine pigs flying, material objects levitating, our friends acting completely out of character, and so on.

Despite these differences, anticipation and inside imagination share many formal features. First, both are perspectival. We can model the perspectival character of anticipation using a Lewisian conception of mental content (Lewis, 1979; Recanati, 2007; Ninan, 2008; Weber, 2023, 2024). On this view, the content of both inside imagination and anticipation is modelled by sets of centered possible worlds, i.e. <individual, time, world> triples. Second, in both inside imagination and anticipation the perspective is that of the subject—both are *de se* attitudes. This can be captured by the fact that the anticipator imaginatively self-ascribes the relevant centred content. She locates herself in imagination as the designated individual at the centre of the centred worlds. Third, both anticipation and inside imagination are essentially experiential. The anticipator/imaginer simulates what it is like to be the subject of anticipation/imagination. As a result, worlds with unconscious rocks or zombies at the centre are excluded from the content of anticipation/imagination. Fourth, when we imagine or anticipate a temporally extended episode, we imaginatively ascribe a whole sequence of centered worlds to ourselves, simulating a segment of a possible stream of consciousness. When projecting our conscious perspective forward in anticipation, we do not necessarily fill in all the phenomenal gaps leading from our present experiences to the anticipated experience, but we assume that the gaps can in principle be filled in. In other words, we presuppose that there is a continuous path from our current experience to the experience we anticipate.

The qualitative content of anticipation combined with the content of one's beliefs often suffices to determine the identity of elements of one's anticipation, including that of the subject. We have already sketched the general template for this above. My belief worlds may entail that a = the F, and the content of my anticipation may present a

certain element as F. Together this determines that this element = a. For instance, my belief worlds may entail that Lefty = the person with the Lefty-tattoo. According to the content of my anticipation, each centre-individual has a Lefty-tattoo. The two factors then settle that Lefty is the notional subject of anticipation. In other cases, my beliefs may directly entail the identity of certain entities in the content of anticipation. For instance, my firm belief that I am Biden rules out all worlds where the subject is distinct from Biden.

In a third type of case, the content of anticipation together with my beliefs may leave open certain elements' identity, including that of the subject. There are then two possibilities. First, their identity may genuinely remain open. For instance, my anticipation need not settle whether the chair I anticipate sitting on is identical to my office chair. Or suppose I am an amnesiac with no idea about who I am. As far as I know, I might be Biden, or Trump, or Harris, etc. Then in some worlds of anticipation, the subject is Biden, in some it is Trump, in others Harris, etc. Second, I may settle the elements' identity by a conscious fiat. Such stipulations can be modelled using the notion of an *identification base*. The identification base contains individuals from my belief (or supposition) worlds. By identifying elements from the qualitative content of imagination with individuals from the identification base, I can settle their identity by stipulation.¹¹

Now that the broad outlines of the phenomenal view of anticipation are clear, let us see how the account handles the above cases. For cases 1 and 2, the account predicts that I can anticipate my own but not my daughter's experiences, given that I am assuming that my later self will be phenomenally continuous with me, and that my daughter Ani won't be. The account also gives the intuitively accurate verdicts in cases 3 and 4, i.e. that I can anticipate both Lefty's and Biden's experiences. In case 3, I assume that my present stream of consciousness will lead into Lefty's stream (as well as into Righty's). In case 4, I erroneously presuppose that my present experiences are phenomenally connected to Biden's future experiences. What of the duplication and the amnesiac case? In case 5, I assume that my experiences from tomorrow are phenomenally continuous with my present experiences. The existence of the duplicate on Mars has no bearing on this. Hence, the phenomenal view has it that I can

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¹¹ For this account of imagination see (Schwarz, 2013); a similar picture is presented in (Kung, 2010).

anticipate the experiences of my future self in this scenario. Regarding case 6, the account entails that I can anticipate Amnesiac's experiences. Severing the psychological connections between me and Amnesiac leaves the phenomenal link between us untouched, such that the brain zap happens within a single continuous stream of consciousness. Hence, the Phenomenal Continuity Account delivers the intuitively correct assessments in all cases.

The benefits of the phenomenal account of anticipation go beyond its capacity to accommodate our judgments about the cases. By detaching anticipation from identity, it resolves the theoretical tension we observed at the outset, and which arose for Parfit's position. Further, as I hope to make clear in §5, together with a complementary phenomenal grounding of prudential concern, it provides an attractive picture of the connection between anticipation and prudential concern.

4 Anticipation and Prudential Concern

We have noted the intimate connection between anticipation and prudential concern. Velleman views anticipation as the foundation of prudential concern. He claims that whether a future person deserves my prudential concern depends on whether I can anticipate his experiences, whether I have 'access to his point of view'. Velleman writes:

My aim is to argue for the reinterpretation of our self-regarding concern about the future. What matters most, I shall suggest, is not whether the person I now regard as self will survive into the future; it's whether there will be a future person whom I can now regard as self. And whether I can regard a future person as self, I shall argue, doesn't necessarily depend on whether he will be the same person as me; it depends instead on my access to his point of view. (Velleman, 1996, p. 42)

Both Parfit and Velleman believe that prudential concern and identity come apart. But since Velleman's view of anticipation, like the phenomenal account proposed here, does not require identity, he does not face the same tension as Parfit. Should we follow Velleman and treat anticipation as constitutively linked to prudential concern? Let us split this question into two more detailed ones. First, is anticipation sufficient for justified prudential concern? Does the fact that I can anticipate a future subject's experiences show that I should be prudentially concerned about him? Second, is

anticipation necessary for justified prudential concern? Should I extend my special concern only to subjects whose experiences I can anticipate? We will consider these questions in turn.

4.1 Is Anticipation Sufficient for Prudential Concern?

It seems *prima facie* plausible that anticipation is sufficient for prudential concern. When I can anticipate a future subject's experiences, this subject seems to deserve my prudential concern. But this intuition may be due to the fact that the cases of anticipation which most readily come to mind all involve identity. And identity may in turn suffice for prudential concern (Parfit's fission cases only show that identity is not necessary for prudential concern). However, if the phenomenal account of anticipation is correct, we have to broaden our view and also consider cases where the notional subject is distinct from the anticipator. These cases fall into two classes. First, there are Biden-type cases where the anticipator has mistaken beliefs about his/her identity. Second, there are fission cases where several subjects are phenomenally connected to the anticipator. Let us consider these in turn.

Biden-type cases of mistaken identity seem to be counterexamples to the sufficiency claim. Suppose, as I have argued, that I can anticipate having Biden's experiences (given my mistaken identity belief). Still, it does not seem plausible that Biden really deserves my prudential concern. If that is so, the fact that one can anticipate a future person's experiences does not show that one ought to have prudential concern for this person—anticipation does not suffice for prudential concern.

But things are more complicated. We should distinguish between a subjective or epistemic aspect of prudential concern and an objective one.¹³ The fact that I can anticipate Biden's experiences makes it *subjectively reasonable* for me to have prudential concern for him, given my distorted epistemic situation. But that does not mean that

¹² That identity is sufficient for prudential concern is plausible on a Neo-Lockean view of personal identity. Things may look different from an Animalist perspective (Olson, 1997). For instance, it may be plausible that one has no reason to prudentially care about a permanently unconscious human organism, even if that organisms is oneself.

 $^{^{13}}$ I am grateful to an anonymous referee for this journal for helping me to clarify this issue.

I *objectively ought* to have prudential concern for Biden, irrespective of my epistemic situation. We may then say that anticipation is sufficient for subjectively rational prudential concern. And that *informed* anticipation, i.e. anticipation where the presupposition of phenomenal continuity is in fact fulfilled, establishes that one objectively ought to have prudential concern for a given future person. Since my anticipation of Biden's experiences does not qualify as informed—his experiences will not in fact be phenomenally continuous with mine—the case is not a counterexample to the claim that one objective ought to have prudential concern for a future person if one can anticipate his/her experiences in an informed way. So we can maintain the qualified sufficiency claim.

Let us next consider fission cases. Do these cases show that anticipation is not sufficient for prudential concern? We can now distinguish between two different readings of this question. First, does the fact that I can anticipate Lefty's experiences make it *subjectively rational* for me to have prudential concern for Lefty? Second, does informed anticipation of Lefty's experiences establish that I *objectively ought* to have prudential concern for him/her?

According to the phenomenal account of anticipation, anticipating Lefty's experiences involves the assumption that his/her experiences will be phenomenally continuous with mine. This makes it subjectively rational for me to extend my special concern to Lefty. The phenomenal account offers the following explanation for this connection. I have a special concern for *my own current* experiences. These experiences, and only they, have a special *urgency* and *presentness*. Only my current pain is directly felt by me. But, on the assumption of phenomenal continuity, the experiences I can anticipate *will*, by my lights, have the same urgency and presentness in the future that my current experiences have right now. This expectation of future urgency and presentness makes it subjectively reasonable for me to have special concern for Lefty.

Is it also the case that I objectively ought to have prudential concern for Lefty? Yes, this seems plausible, too. The fission case, it is assumed here, really involves phenomenally continuity. Lefty's future experiences are related to my present ones in just the way that my current experiences are related to my experiences from yesterday; they are a genuine continuation of my experiences and will therefore in fact acquire a special urgency and presentness in the future. I should therefore care in a special way about the character of these experiences, e.g. look forward to Lefty's positive experiences and dread Lefty's painful experiences.

Obviously, the same applies to Righty. Does the fact that my informed anticipation extends to two separate sets of experiences undermine the above reasoning? One might think so: that I can also anticipate Righty's experiences shows that neither Lefty's nor Right's experiences will strictly speaking be mine—we have assumed that I am not identical with either Lefty or Righty. However, the intuition that this undermines my reason for prudential concern is arguably based on the fact that in all ordinary cases, distinctness of subjects implies phenomenal dis-continuity. The case of fission is exceptional in that it combines distinctness of subjects with phenomenal continuity. We can then say that the phenomenological continuity between Lefty and me trumps the logical discontinuity between us.

We can also make a Parfitian case for the claim that Lefty and Righty objectively deserve my prudential concern (see §2). Both Lefty and Righty have everything that grounds our ordinary survival, including phenomenal continuity. So, unless we implausibly believe that personal identity is itself a further primitive fact with a special significance, both have everything that could reasonably ground prudential concern.

4.2 Is Anticipation Necessary for Prudential Concern?

Is anticipation necessary for justified prudential concern? In short, the answer is: no. We may have reason to prudentially care about a future person even though we cannot anticipate their experiences. Anticipation is based on imagination from the inside. But there are limits on which types of experiences we can imagine having. These limits are set by the types of experiences we are already familiar with. There are then situations where our successors have alien experiences, which we cannot imagine having and therefore cannot anticipate. Clearly, the fact that our future selves may enter unfamiliar experiential states is in itself not enough to undermine our prudential concern for them. Consider the following cases:

Case 7: Vision flu-shot

I was born blind. I am told that I will receive a drug treatment tonight which will cure my blindness. I will wake up in the morning with full vision and receive a flu shot.

Assessment 7a: I cannot anticipate my experience of waking up and having visual sensations of receiving a flu shot.

Assessment 7b: Vision-me does deserve my prudential concern.

Case 8: Echolocation flu-shot

I am told that surgeons will operate on me tonight and endow me with biological sonar. In the morning, I will make my way to the medical centre to get my flu shot using echolocation.

Assessment 8a: I cannot anticipate my experiences of navigating to the medical centre using echolocation.

Assessment 8b: Echolocation-me does deserve my prudential concern.

It is highly plausible that someone who is blind from birth cannot imagine or anticipate what it is like to see. Similarly, we cannot imagine or anticipate what it is like to have echolocation (Nagel, 1974). These limits on our imagination do not undercut our prudential concern for our sensorily more gifted successors—I should still care in a special way about Vision-me or Echolocation-me, since their experiences will in the future have the same urgency that my current experiences have now. I simply cannot picture these experiences, because of limitations of my imaginative capacities. We can strengthen this case by noting that I would clearly survive as Vision-me or Echolocation-me in the above cases. Assuming that personal identity is sufficient for prudential concern (see fn12), this shows that they deserve my prudential concern and that anticipation therefore is not necessary for prudential concern.

How far do the relevant imaginative limitations extend? Similar claims have been made in the discussion on transformative experience. For instance, Paul (2014) claims that prospective parents do not know what it is like to be a parent, and that we do not know what it would be like to become a vampire. This suggests that prospective parents cannot anticipate their future experiences as parents, and that we cannot anticipate our future lives as vampires. These cases are less clear-cut than the ones involving new sensory modalities. Are prospective parents really entirely unable to anticipate what it is like to be a parent? Or is it just very hard to imagine this? We do not have to decide this question here. For our purposes it is enough that there are clear counterexamples to the necessity claim.¹⁴

¹⁴ Distinguish between two types of cases. Cases in the first class involve experiences which are *accessible* either directly or through a process of *imaginative scaffolding* (Kind, 2020). Imaginative scaffolding may involve "imagining additions to [one's] present experience, or [...] imagining segments gradually subtracted from it, or [...] imagining some combination of additions, subtractions, and modifications." (Nagel, 1974, p. 479). Cases of the second type concern experiences which are *inaccessible* to us, even

As the bounds of inside imagination, and thus anticipation, are constrained by our existing phenomenal repertoire, anticipation is not in general necessary for prudential concern. The connection between anticipation and prudential concern is therefore less intimate than Velleman assumes. Let us next inquire into the metaphysical basis of prudential concern. Is prudential concern grounded in psychological continuity, as Parfit believed? Or is it based on a different relation?

5 Prudential Concern and Phenomenal Continuity

Parfit believed that what we care about in survival is for our psychology to continue on: 'In our concern about our own future, what fundamentally matters is relation R, with any cause.' (Parfit, 1984, p. 287).¹⁵ In other words, Parfit saw prudential concern as grounded in psychological continuity.¹⁶ Above, I have proposed an account of

when relying on imaginative scaffolding. Being a parent may belong to the first class. The relevant experiential state may in principle be accessible to us (given enough effort). That notwithstanding, we may still be unable to access this state in practice, because we do not know which more basic experiential states need to be combined in which way to achieve the target state. See also the discussion in (Lewis, 1988) concerning *knowing what an experience is like under a description*.

The following analogy may help to illustrate the contrast. Imagine that you are painter. In the first scenario, there is a scene which you cannot directly observe—you have only been given an incomplete description of it. In a sense, you can produce a painting that matches the scene, since you are able to produce a corresponding combination of coloured patches, given the hues available in your palette. Yet, there is another, more salient, sense in which you are unable to reproduce the scene, since you do not know which combination of coloured patches to aim for. In the second scenario, the scene contains an object with an odd colour, such that your palette lacks the required hue. You also cannot replicate that hue by combining the paints from your palette. In this situation there is no sense in which you can produce a painting matching the scene. Becoming a parent may be analogous to the first scenario, rather than the second.

¹⁵ See (Sidelle, 2011; Sauchelli, 2019) for a discussion of Parfit's causal requirement. Like Sauchelli, I believe that, on the most plausible reading, the causal mechanism required for psychological continuity must be *information preserving*, or in Lewisian terms, it must support a *suitable pattern of counterfactual dependence* (Lewis, 1980) between prior and posterior psychological states.

¹⁶ As Gustafsson (2021) has pointed out, psychological continuity should here be understood as temporally ordered, since a temporally unordered account would implausibly entail that Lefty should have prudential concern for Righty. If, as I will argue here, prudential concern is instead grounded in

anticipation based on phenomenal continuity and I have also suggested that informed anticipation provides the basis for prudential concern. This leads to a clash with Parfit's view, in case psychological continuity and phenomenal continuity can diverge. To adjudicate this conflict, we should look at examples where psychological and phenomenal continuity come apart and assess whether our intuitions favour the psychological or the phenomenal side. Phenomenal continuity turns out to be the more attractive foundation for prudential concern.

Cases of psychological-phenomenal divergence come in two varieties. First, there are cases of psychological continuity without phenomenal continuity. Second, there are cases of phenomenal continuity without psychological continuity. Both types of cases favour phenomenal over psychological grounding of prudential concern. To start, consider an example of the first type.

Case 9: Duplicate

I am told that Martians will remotely scan my body tonight and create an atom for atom copy of me. Tomorrow, there will be me on Earth and Duplicate on Mars. Both are psychologically continuous with me_{today}. Only my future self, but not Duplicate, is phenomenally continuous with me_{today}.

Assessment 9: Duplicate does not deserve my prudential concern.

We have already discussed this case above, but here the relevant assessment concerns Duplicate. Suppose that the duplication device's mechanism supports the right pattern of counterfactual dependence between earlier and later psychological states, i.e. had my psychology differed in such-and-such a way, Duplicate's future psychological states would have varied accordingly. This establishes psychological continuity between me and Duplicate. Suppose further that the connection between Duplicate and me fails to support a phenomenal continuity between us. There is no chain of co-conscious experiences, modally or otherwise, linking my conscious states with that of Duplicate, because, we may assume, phenomenal continuity requires continuity of the underlying neural architecture.

There is a strong pre-theoretic intuition that Duplicate does not deserve my prudential concern. If the Martians informed me that they will torture Duplicate for some cruel

phenomenal continuity, this relation, too, must be construed in a temporally ordered way, for the same reason.

experiment, I would feel sorry for him, but I would not fearfully anticipate this prospect. In addition, the case does not pass Parfit's Indifference Test (Parfit, 2007, p. 16). If forced to choose, I would have a strong preference for my own survival over that of Duplicate. These intuitions seem justified and can be further corroborated. Since Duplicate is not phenomenally connected to me, his future experiences will at no point acquire the immediate urgency that my own future experiences will have. Furthermore, on the assumption of phenomenal discontinuity, I cannot anticipate having Duplicate's experiences. True, I have just argued that anticipation is not in general necessary for prudential concern. But the exceptional cases, Vision-me and Echolocation-me, differ from the Duplicate case in crucial ways. The explanation for my inability to anticipate Vision-me's or Echolocation-me's experiences is based on the alien character of their experiences. This explanation is consistent with the assumption that their alien experiences are phenomenally continuous with mine. I expect Vision-me's and Echolocation-me's experiences to matter to me in the special way in which my present experiences matter to me now, even though I cannot picture them. This is not the case with Duplicate. Here, my inability to anticipate his experiences is grounded precisely in the fact that his experiences are, and will remain, unconnected to mine.

Consider next my zombification:

Case 10: Zombie

I will receive an injection tonight which will destroy my capacity for conscious experience and turn me into zombie. The treatment will leave my non-phenomenal psychology untouched. My zombified successor, Zombie, is psychologically continuous with me, but phenomenally dis-continuous, since he lacks a conscious inner life.

Assessment 10: Zombie does not deserve my prudential concern.

Chalmers (1996, §1) distinguishes between the psychological and the phenomenal aspects of our minds. On this picture, we may imagine that my phenomenal life comes to an end, but that my psychology continues on. I will still have internal states that play the exact same psychological roles that my ordinary mental states played before; i.e. the way in which these states are causally connected to informational inputs, to each other, and to my behaviour remains the same. I cannot anticipate being Zombie, since Zombie has no experiences whatsoever.

I have just argued that anticipation is not necessary for prudential concern. In itself, the fact that I cannot anticipate Zombie's experiences does therefore not show that

Zombie does not deserve my special concern. However, this claim is independently plausible. To many, irrevocably losing the capacity for consciousness seems to mark the end of one's existence. Although Zombie shares my psychology, he does not appear more deserving of my special concern than a lifeless, unconscious robot that has been programmed with an identical psychology. One may still think that Zombie deserves at least some of my concern. Even if true, the type of concern that I would have for him seems radically different from the type of concern I have for my ordinary future self. For instance, I would not fear the prospect of Zombie's undergoing torture, as Zombie feels neither pain nor distress. Nor would I look forward to him eating ice cream, since he cannot experience its taste. As Zombie has no inner life at all, none of his inner states would matter to me in the way my conscious experiences matter to me. Any residual concern I may in fact have for him is likely to be merely instrumental. I may desire e.g. that Zombie's existence remains unperturbed, so that he can continue to provide for my family or complete my plans and projects, e.g. finish the book manuscript I have been working on for years. But my concern here is ultimately not for Zombie himself. Rather it is grounded in the concern I have for my family or for the fulfilment of my plans. Zombie is replaceable; his role could equally well be played by someone else with the same psychological profile.

The cases of Duplicate and Zombie suggest that psychological continuity is not sufficient for prudential concern—both are psychologically continuous with me, but neither deserves my prudential concern. Instead, the cases suggest that phenomenal continuity is the basis of prudential concern.

Consider next a scenario involving phenomenal continuity without psychological continuity. The most famous example of this type is from Williams (1970).

Case 11: Amnesiac

I will receive a brain zap. The brain zap will sever all psychological connections to my previous self. My brain-zapped successor, Amnesiac, is phenomenally continuous with me, but not psychologically continuous.

Assessment 11: Amnesiac does deserve my prudential concern.

Assume that Amnesiac's experiences are in fact phenomenally continuous with my present experiences. We can easily imagine that I remain conscious throughout the brain zap procedure, such that Amnesiac and I are connected by an uninterrupted stream of consciousness. There is then a strong intuition that Amnesiac deserves my prudential concern. I would clearly dread the prospect of Amnesiac getting tortured,

and I would look forward to his eating chocolate ice cream instead. Similarly, I would be disposed to accept a mild pain now to spare Amnesiac from great pain tomorrow. And these attitudes and dispositions do not seem irrational or unjustified.

Parfit, in contrast, thinks that Amnesiac does not deserve my prudential concern. He writes '[...] should I be egoistically concerned about the future of this person? [...] I believe that the answer should be No.' (Parfit, 1984, p. 284). Parfit's assessment here is not based on our pre-theoretic intuitions about the case. Rather, it is the outcome of other theoretical commitments. According to Williams (1970), the Amnesiac case can be presented in two different ways, supporting either a psychological or physical view of personal identity. When presented from a third-person perspective, it supports the psychological account. When presented from the first-person point of view, it supports, somewhat surprisingly, the physical account. Similarly, Parfit (1984, Section 96) discusses the case solely against the backdrop of contrasting physical and psychological views of prudential concern. He assumes that, since Amnesiac is not psychological continuous with me, the two of us are linked only by physical continuity. Since Parfit is independently convinced that physical continuity alone cannot ground prudential concern, he concludes that there is no reason to extend my prudential concern to Amnesiac, and that our conflicting intuitions are therefore irrational.

However, with the distinction between psychological and phenomenal continuity in hand, we can see that the contrast between psychological and physical continuity is not exhaustive—Amnesiac is not only physically continuous with me, but also phenomenally. The case then appears in a different light. Appeal to phenomenal continuity also explains why our intuitions change when switching from a third-personal to a first-personal presentation of the case. When given a first-personal description, we tacitly presuppose that there is phenomenal continuity between ourselves and Amnesiac. That explains our judgment that we can anticipate Amnesiac's experiences, and why we regard him/her as deserving of our prudential concern.

It is important to note that the appeal to phenomenal continuity is compatible with a reductionist stance. The phenomenal account of prudential concern does not commit us to an anti-reductionist Cartesianism (Johansson, 2007). Rather, phenomenal continuity is best seen as a natural phenomenon and is likely to (at least nomologically) supervene on certain physical facts. The intuition that Amnesic

deserves our prudential concern can therefore not simply be dismissed as a manifestation of a naïve Cartesian picture of ourselves.

Let us sum up. When considering cases where psychological and phenomenal continuity come apart, our intuitions strongly favour the phenomenal approach to prudential concern. Psychological continuity seems neither sufficient for prudential concern, as the cases of Duplicate and Zombie indicate, nor necessary, as the Amnesiac example suggests. Our intuitive judgments are supported by the idea that the subjective ground for our prudential concern for a future person is the expectation that their experiences will have the same immediate urgency which characterises our current experiences. And when this expectation is fulfilled, as it is in the case of informed anticipation, the phenomenal states of the person whose experiences I am anticipating will indeed acquire this urgency. So here I objectively ought to be prudentially concerned for him/her. This explains the intimate connection between anticipation and prudential concern.

6 Conclusion

I have proposed a phenomenal account of anticipation, and a corresponding phenomenal view of prudential concern. Both are independently attractive, since they explain our pre-theoretic judgments about the relevant cases. But they also form an appealing package that secures a close alignment between anticipation and prudential concern and explains why anticipation is a guide to prudential concern. The proposed account furthermore resolves the theoretical tension that arises for a position like Parfit's which separates prudential concern from identity but maintains a close link between prudential concern and anticipation. In my eyes, these theoretical benefits suffice to show that the phenomenal approach deserves to be taken seriously.

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