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# Explaining away temporal flow – thoughts on Prosser’s ‘Experiencing Time’

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## ABSTRACT

I offer some responses to Prosser’s ‘Experiencing Time’, one of whose goals is to debunk a view of temporal experience somewhat prevalent in the metaphysics literature, which I call ‘Perceptualism’. According to Perceptualism: (1) it is part of the content of perceptual experience that time passes in a metaphysically strong sense: the present has a metaphysically privileged status, and time passes in virtue of changes in which events this ‘objective present’ highlights, and moreover (2) this gives us evidence in favor of strong passage. Prosser argues that perception cannot be sensitive to whether the strong passage obtains, and therefore cannot represent strong passage in a way that gives us evidence of its truth. Although I accept this conclusion, I argue that Prosser’s argument for it is problematic. It threatens to over-generalize to rule out uncontroversial cases of perceptual knowledge, such as our knowledge that we live in a spatial world. Furthermore, a successful argument ruling out perceptual evidence for strong passage would have to give constraints on the theory/observation distinction of a kind not provided by Prosser’s discussion. I also comment on several other parts of the book.

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## 1. Introduction

The goal of Prosser’s book<sup>1</sup> is to offer a comprehensive account of the different aspects of our awareness of time, in a way that debunks a view of temporal experience somewhat prevalent in the metaphysics literature. This view, which I’ll call ‘Perceptualism’, says (1) that it is part of the content of perceptual experience (or maybe of our experience of time more generally), that time passes in a metaphysically strong sense: the present has

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<sup>1</sup>Prosser (2016). Page references are to this book.

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a metaphysically privileged status, and time passes in virtue of changes in which events this 'objective present' highlights (I'll call this the 'A-theory', or 'strong passage'), and moreover (2) that this gives us evidence in favor of strong passage. Prosser's view is that experience does not in any literal sense represent the A-theory, but we nonetheless need to give an account of experience that explains this intuition. Along the way he offers accounts of how time can seem to pass at different rates, why it seems like we're moving toward the future, and the nature of the 'specious present', along with much other interesting material. I'll comment here on a few salient highlights.

## 2. Do we have perceptual evidence for strong passage?

Prosser's main line of attack against Perceptualism involves what I'll call a 'perceptual sensitivity' argument. The idea is that strong temporal passage is not the kind of thing that we could be perceptually sensitive to, in the way that we are perceptually sensitive to features like shape, size, color, etc. Without perceptual sensitivity we can't gain perceptual knowledge of the relevant feature. Compare : X claims knowledge through sense perception that ghosts exists. Y's response : ghosts cannot causally effect our sense apparatus and therefore cannot be known through perception.

More specifically, Prosser's view is that perception gives us knowledge of features by containing distinct experiential elements that are differentially sensitive to those features: for example, there is a quality space of types of shape percepts, and changes in experience through this space track changes in the configuration of shape properties around the observer. However, there isn't similarly a quality of experience whose role is to track whether or not time is passing! *Every* feature of experience might be sensitive to the existence of temporal passage because the existence of any experience *at all* might depend on it, but there is no *single* feature that differentially signals passage. The idea, as I understand it, is that if a feature is not one that is knowable through perception, then it's also not one we can get perceptual evidence for (as Perceptualism requires).

What to make of this argument? I agree that we can't get experiential justification for the A-theory from perception. The A-theory is an abstract metaphysical hypothesis about the nature of time, which is, intuitively, not the kind of thing perception is in the business of telling us about: perception only delivers more mundane information about the layout of macroscopic objects and events around us; it doesn't weigh in on metaphysical debates. But has Prosser given us the right explanation of why that is so?

One concern I have about the perceptual sensitivity argument is that it threatens to over-generalize. The fact is there are at least *some* very general features of the world that we know about through sense perception (in a sense). We know that we live in a spatial world; we know that we live in a temporal world. We know that the world contains solid three-dimensional bodies that have colored surfaces that are only visible under illumination; and we know that we live in an illuminated world. How do we know these things? Certainly our experience doesn't have a single feature that is differentially sensitive to the spatiality of the world; at best, none of the features of experience would exist were the world non-spatial because experience wouldn't exist. Rather, we are able to perceive the *specific* ways in which the world is spatial, temporal, etc., and then immediately *infer* that we live in, e.g. a spatial world.

I think it would be natural for the fan of strong passage to say something similar: our perceptual/psychological states have features that are differentially sensitive to specific temporal facts that involve the passage of time: for example, I might be aware of a specific event occurring and then getting further and further into the past as I attend to it in memory. My perceptual and memory states have features that differentially track these features of the event. I infer from my awareness of such specific temporal facts that I live in a world where time passes, and so the A-theory is true.

There is an obvious response to this (as Prosser outlines [50]), which is that even if the A-theory is in fact true, and so I am sensitive to specific A-theoretical facts, I can't be aware of them *as* A-theoretical facts. That is, I'm not justified in applying such theoretically loaded concepts to my experience; rather, I should use neutral temporal concepts that do not a priori entail that the A-theory is true (or that the B-theory is true).

I agree that this is surely what we should say here; the problem is in explaining why we are entitled to say it. In effect, the problem is to put some conditions on the observation/theory distinction that entail that metaphysically loaded temporal concepts are on the wrong side of the divide. To my mind, *that is the key issue in explaining what is wrong with Perceptualism*. Furthermore, I doubt that perceptual sensitivity considerations help us address it (or at least not on their own). (Compare: an individual claims to know that light is an electromagnetic wave through direct perceptual observation. It would be right to complain that 'electromagnetic wave' isn't a concept that can be applied observationally to experience. But the reason for this *isn't* that we aren't perceptually sensitive to electromagnetic waves (we are!), nor that we don't have a feature of experience that tracks whether light is an electromagnetic wave.)

We could try saying: any a priori consequence of an observational judgment (i.e. one framed only in observational terms) must be such that we have a direct perceptual sensitivity to the obtaining of that consequence. But that would be too strong: as mentioned, we aren't perceptually sensitive to the spatiality, temporality, solidity, etc. of the world, but we can still know about these features through observation.

We could also try saying that the contents of observational concepts must be reflected in the right way by phenomenology or phenomenal contents (e.g. maybe 'electromagnetic wave' isn't reflected in phenomenal content). But now the problem is that the A-theorist thinks that the more loaded concepts *are* reflected phenomenally, so we are unlikely to get leverage this way.

We could try saying that observational concepts should be as theoretically neutral as possible. But it's not totally clear how to understand this constraint. We already saw that requiring perceptual sensitivity to all consequences of observational judgments is too strong. Another view of this kind says that observational judgments should be as epistemically conservative as possible, in the sense that the manifest image is limited to facts about experience, understood in such a way that we can directly infer nothing about the environment from them; the leap beyond experience is ampliative. But many philosophers would reject this conservatism. Think about the plethora of cases in philosophy where the issue arises, that is, where there is a disagreement about whether our initial data include more than experiential facts. For example, in philosophy of physics, there is a debate about whether certain theories, like wave function monism, are incompatible with our perceptual evidence of a 3D spatial world (Albert 1996; Maudlin 2007; Ney 2012); or we might look at the old debate about the reality of color: do we have perceptual evidence that surfaces have mind-independent colors (e.g. Gow 2014)? As Prosser appreciates, in these debates, some theorists will regard hypotheses which explain our experiences but which are incompatible with certain ordinary beliefs about our perceptual environment as akin to skeptical hypotheses that can be (defeasibly) set aside on the basis of perceptual evidence (Pryor 2000; Maudlin 2007). If such anti-conservatism is viable, so we can sometimes take environmental facts as part of our initial data, how do we decide which ones get in the privileged group? Why not propositions that entail strong passage? It would be nice to get some independent philosophical leverage for or against different views on this question, and also for or against conservatism; but I doubt that perceptual sensitivity arguments alone will do this work. Since Prosser doesn't give a story about the theory/observation distinction, it's hard to know what he would say here.

### 3. Projectivism and temporal passage

Prosser thinks that we have to explain why it seems to us that time passes, but since we don't literally experience A-theoretical passage, it must be that there is a more indirect explanation. What is his alternative proposal? It has multiple aspects because he thinks that there are multiple aspects of our experience of passage that need accounting for. He does however have a proposal about the form that any explanation must take: our sense of passage is to be explained in terms of the representational contents of perceptual experiences. Specifically, we should isolate the relevant experiences and then describe their contents, and explain *why* they have the contents that they have. An example is his explanation of our sense of 'dynamic change' – according to him, this is really an experience as of objects enduring (in a metaphysically loaded sense) through change; and the presence of this content is explained in terms of our use of 'object files' to represent objects.

Before looking at any specific proposals, let's ask: What are the alternatives to this style of explanation? A lacuna in the book, I think, is that he doesn't take seriously enough the idea that the correct account will have a *projectivist* character: that is, it will involve the idea that strong passage enthusiasts are mistaking one or more features of their own minds for mind-independent features. He does briefly consider and reject one kind of 'projectivist' view, on which it is a *purely qualitative* feature of experience (i.e. one not captured in terms of the experience's content) that explains passage experience – passage experience is like the experience of secondary qualities, on views that treat us as literally projecting qualitative aspects of experience onto external objects [p.167]. An important point here, I think, is that this is not the only kind of 'projectivist' view that we can have, and moreover there is a kind of projectivism that seems particularly salient in the case of explaining passage experience (more on the other kind of projectivism below).<sup>2</sup>

This is the view that our sense of a 'moving now' or 'dynamic change', etc. comes from illicitly projecting an awareness of genuine *psychological change* onto the world, where these psychological changes consist in the constant updating of our tensed perspective on the world. Because our temporal perspective is constantly changing, our tensed mental representations (memories, experiences of what is presently happening, and anticipations) all have to be constantly updated to keep up. There is a kind of psychological conveyor belt, whereby events come into consciousness, and then gradually 'fade' into the past. In so far as we are aware of this

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<sup>2</sup>For a precedent in the literature, see Miller (1984), who attributes to Husserl a view similar to the one I describe here.

psychological change, we might mistakenly think it is an objective change in the world itself. The 'now' is moving along! Events are moving into the past away from us! Crucially, this kind of projectivism doesn't involve projecting non-intentional qualia, but rather projecting other kinds of psychological properties: changes in tensed representations. In so far as it involves the content of experiences, it is the contents of *introspective* experiences, not first-order perceptual experiences of the kind Prosser considers. It's true that the projectivist will have to explain why we are prone to such an error when we aren't in other cases (e.g. spatial updating), but nonetheless this is surely a plausible story.

It must be acknowledged that Prosser does at least come close to endorsing some such story himself. He says 'we are ... aware of a changing of A-series designations over time, which may give rise to a sense of passage insofar as passage is construed as a changing of A-properties' (201). He also gives an explanation in terms of the represented adicity of A-relations and certain disanalogies with our awareness spatial relations (e.g. we can control our motion through space but not through time) for why we might mistakenly objectify these relations.

However, he never explicitly says that the illusion of passage involves mistaking psychological change for mind-independent change, nor does he describe his view as a kind of projectivism. I think this matters. One reason is that once we are thinking in projectivist terms, certain questions become salient: in particular, what is the nature of our introspective awareness of the relevant psychological properties, and why does such *introspective* awareness seem like *perceptual* awareness of mind-independent change? Also, are we merely introspecting *that* our tensed perspective has updated, or are we aware of an ongoing process of update (the 'flow' of time, perhaps) (compare: being aware that the second hand has moved vs. being aware of it moving)?

Another is that, once such a projectivist view is on the table, it makes it unclear why there is any need for the kind of account he gives in terms of the content of world-directed perceptual experiences. I think this is particularly clear in the case of his account of 'dynamic change' in terms of an awareness of objects as enduring, which is worth some independent discussion.

#### 4. Perceiving endurance and temporal passage

Here's how he describes that view:

... the illusion of dynamic change comes about because of the illusory and indeed contradictory way in which change is represented, involving the

representation of something retaining simple numerical identity through the change. Intuitively, this captures a sense of one state of affairs giving way to a new incompatible state of affairs; yet certain things continue to exist *through* these changes. (186)

But why isn't the sense of one state affairs giving way to another incompatible one adequately captured in terms of an awareness of one (mistakenly objectified) tensed perspective giving way to a conflicting one?

The endurance explanation also seems independently questionable to me. For one, it's odd that Prosser argues that perception can't represent the A-theory as true, but he's comfortable with the idea that it represents endurantism as true. I'm strongly inclined to think that perceptual experience is neutral on endurantism/perdurantism, and pretty much every other controversial metaphysical debate (it's not as if attracting mates on the savannah depended on having accurate metaphysical views, as the rarity of good philosophers attests!). And just as with strong passage, there could be features of our experience and cognition of objects that tempt us toward endurance views, without literally representing endurantism as true.

Prosser does however offer motivation for this asymmetry in his position. He appeals to the idea that we use 'object files' to represent objects existing over time (180–184), pointing out that it is computationally economical to do things this way rather than using separate representations of different temporal parts of the object. But it seems that at best this gives us an explanation for why we don't explicitly represent objects *as* perduring, i.e. as having temporal parts, by individually representing those temporal parts. Importantly, explicitly representing objects *as* enduring is not the only other option – as Prosser acknowledges, experience could be simply *neutral on object metaphysics*. I don't see why the object file view isn't best interpreted as metaphysically neutral.

Another motivation, I think, is that it is only if object experience is given this stronger construal that it can explain why people are tempted on the basis of this experience to believe in strong passage. For example, in discussing Hoerl's critique of his earlier work, he says 'If all there is to motion experience is the experience of at-at motion, which is compatible with the B-theory, then why should this be mistaken for a wholly incompatible feature of the world?' (185). So we're invited to accept the experienced endurance view as an inference to the best explanation of A-theoretic intuitions, rather than as independently motivated.

But is it the best explanation? One problem is that, as Prosser acknowledges, there are situations where we seem to experience the flow of time, even though we are experiencing transient events rather than enduring



objects: for example, while listening to music. So the explanation is at best partial. But furthermore, if whatever factor explains flow experience in the music case is also present in object experience cases, won't that undermine the inference to the endurance explanation? At the very least, we need to consider what this factor is.

At this point, we might put the projectivist story back on the table. Why isn't it enough to say that we mistake awareness of the incompatible tensed representations of the world we have at different times for an awareness of the world itself changing in an objective way: the 'now' moving forwards? As I said, it's true that we'll need an account of *why* we make this mistake. But assuming we have this, the explanation will presumably apply both in the music case and the object awareness case – so would presumably make the endurance explanation superfluous. This is especially plausible since the projectivist story would also explain the feeling that change involves a deep incompatibility between states of affairs at different times, which was an alleged virtue of the endurance explanation.

One feature of Prosser's account that allegedly favors the endurance explanation is his view that whatever represented proposition explains the appearance of dynamic change must be a necessary falsehood. He understands endurance through change as involving a kind of incoherence – one and the same object have conflicting properties (even though at different times). So endurance meets the necessary falsehood constraint. Other explanations (such as the projectivist one), even though otherwise plausible, might not meet the constraint.

But what motivates the constraint? Prosser gives a complex argument that dynamic change experience can't represent something contingent. The idea is that for any contingent proposition that is perceivable, there is a world where a subject perceives that proposition, and *in addition* has experience of dynamic change; since the dynamic change experience is a separate experience, it cannot represent the contingent proposition. Since the argument works for *any* contingent proposition, dynamic change experience can't represent any contingent proposition. This leaves open that it represents a necessary truth, but Prosser thinks that the best candidates are going to be necessary falsehoods.

The problem here is: Why should someone who thinks that dynamic experience represents something contingent agree with the claim that dynamic experience can always be superimposed as an *additional* element on an experience of any contingent proposition? For example, my projectivist thinks that dynamic change experience is really an introspective experience of my mind changing in a certain way – so it represents a contingent

proposition. On this view, it won't be true that dynamic change experience can be superimposed on an introspective experience of the relevant psychological changes because it is *the same* experience.

## 5. Functionalist intentionalism

There is another place where Prosser's view that temporal experience can be fully accounted for in terms of perceptual contents faces problems, some of which, as I will argue, also push him in the direction of a more projectivist style of account (albeit of a different kind).

According to Prosser, many important aspects of our experience and thought about the passage of time can be explained in terms of our mentally representing 'SEF relations': subject/environment functional relations. The idea is that concepts like 'happening soon', 'happened just now', 'quickly', 'slowly', 'approaching', and also our general sense of the past/future distinction and our sense of time passing at a certain rate are all to be understood in terms of our representing the functional significance (with respect to behavior or cognition) of objective temporal relations. For example, events that are happening 'soon' are (perhaps) ones that certain kinds of preparatory action are appropriate for, or events that are happening 'quickly' are (perhaps) ones that are more difficult to discriminate and respond to than events happening 'slowly'.

Prosser's view is that temporal experiences *represent* functional properties (representational functionalism), but he motivates this partly in terms of a view on which they *supervene on* functional properties, or are individuated by their functional roles (metaphysical functionalism). In particular, he is a kind of internalist functionalist about experiences in general – they are determined by functional structure internal to the brain. One place this is illustrated is the case of duration experience: for Prosser, my functionally equivalent but slowed-down twin on 'Slow Earth' will have experiences qualitatively like mine in response to counterpart stimuli which differ only in their objective durations; similarly, an individual on earth who is structurally like a human but whose processing is uniformly faster will have 'slow motion' experiences of the world.

His argument for representational functionalism also appeals to intentionalism: the view that the phenomenology of experience is constituted by its representational content (e.g. Byrne 2001). So, for example, two phenomenally identical duration experiences must represent the same property, and have their qualitative character in virtue of representing this property. What is this property? It can't be an objective duration property because, e.g. me

and my Slow Earth twin have phenomenally identical duration experiences that are normally caused by different objective durations, and which are plausibly both veridical. What could it be then? Prosser's idea is that, because functional supervenience holds, the only good candidates for the property represented whenever there is a duration experience of this phenomenal type will be functional properties, more specifically SEF relations. Hence, temporal experiences are individuated by representing SEF relations.

I'm happy to accept functional supervenience for duration experiences (see Lee [2017] for more detail). I want bring out how the inference from metaphysical to representational functionalism just outlined leaves us with a view that is problematic for Prosser. The trouble is that it the SEF relation relevant to experiencing a particular objective temporal property will be something like 'causing an internal state with such and such functional role', where the relevant internal state just *is* the experience; so in effect, the experience represents 'the temporal property that causes this kind of experience'. For example, me and my phenomenal twin might have temporal experiences that are hooked up to different temporal properties in the environment but which play the same internal functional role. So if we are both successfully representing *different* objective temporal properties of our environments with the *same* contents, these contents must pick out these temporal relations in terms of their relation to (presumably, their causal impact on) our functionally identical internal states, that is, in terms of their relation to our functionally grounded experiences.

So the SEF view turns out to be very close to the view that a temporal experience represents a temporal property as 'whatever is the normal cause of this kind of experience'. This view that inherits many of the same problems is a classic dispositionalist secondary quality view, on which we experience the dispositions of objective qualities to produce subjective effects in us. Notoriously, to avoid circularity, such dispositional views (e.g. of color) are pressed in the direction of saying that the (e.g. color) experience is individuated independently of the fact that it represents this dispositional property because the dispositional property is defined in terms of the experience. Similarly, I suspect that Prosser will be pressed toward saying that duration qualia are not individuated in terms of representing an SEF property defined in terms of the functional basis of the experience, but rather non-intentionally individuated (presumably in terms of *having* that functional role, rather than *representing* that role). That is, he will end up giving up any strong

form of intentionalism, and instead have to accept non-intentional temporal qualia (or something similar, such as qualitative 'modes of presentation' in experience).<sup>3</sup>

This all plays out in an instructive way when we look at the details of his account of duration experience. Prosser's view, as I understand him, is that me and my Slow earth twin's phenomenally matching experiences pick out different objective durations because different objective durations play the same functional role, in particular with respect to causing internal states. However, there's an attractive alternative, which is to say that we experience *relative* duration: I experience the durations and rates of events relative to the rates of processes in my head, and my twin experiences them relative to the (slower) rates in his head.

Prosser rejects this view however, rightly pointing out that it is very difficult to give an account of what individuates the internal process against which duration is measured (also see Lee [2017] for discussion). He develops his alternative functionalist account in terms of the notion of an 'A-second' – a subjective measure of time, given by the relevant represented functional relation. Me and my neurally accelerated twin experience different number of physical seconds passing per 'A-second'. But how exactly are we to understand this notion of a functionally defined subjective measure?

An important problem here is that any alternative to the relative duration view must also explain how experience involves a *metric* on objective durations. But simply pointing out that different represented durations play different functional roles for us (in particular, they cause different internal states) doesn't clearly get that for us. Why think that the functional roles will naturally stand in distance relations? The problem is obscured by the use of the term 'A-second'. It's true that if there is a privileged subjective *unit* of time, determined by a functional role (e.g. the duration that causes a special anointed duration experience), then this would provide a metric. But Prosser agrees that subjective duration experience is unit-free, so presumably his view is that *different* SEF relations determine different subjective durations, rather one relation giving us a unit that is represented in every duration experience. But, again, why think these different SEF relations will determine a subjective metric in a natural way? More generally, I fail to see how an intentionalist like him can avoid this problem without appealing to

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<sup>3</sup>Admittedly, this is oversimplistic because there are views on which temporal qualia are individuated independently of the fact that they represent certain objective temporal relations (in virtue of their causal relations to experience), but nonetheless they are intentionally individuated in a different sense: e.g. they might involve intentional relations to sense-data (e.g. Ayer 1955) or primitive 'edenic' qualities (Chalmers 2006).

the rate of some internal process to ground the ‘subjective rate of passage’, even if this process is hard to specify.

You might think at this point that an intentionalist like Prosser should therefore embrace the relative duration view to avoid the problems with the SEF view discussed above. However, I don’t think that this helps in the end because (in my opinion) the relative duration view ends up looking quite similar to the functional view. The argument is spelled out in Lee (2017), but very briefly, the problem lies in trying to understand the quantity ‘how much time has passed relative to the rate of the internal time-keeper’ (e.g. a sand-clock or a gradually ramping neuron). If we wish to avoid a view on which time is represented in neural units (e.g. the length of one neural tick!), then arguably the best we can do here is interpret this as the view that the time-keeper’s state (how much sand has fallen through the clock, or how intensely the gradually ramping neuron is firing) as representing ‘the duration that normally causes this time-keeper state’, or something like that. I believe this leaves us in a similar situation to the one Prosser’s original representational functionalist view left us in, so is of no help to him.

Where does this leave us? For duration experience, I think that both Prosser’s favored view, and the most plausible alternative, the relative duration view, both lead us toward the view that temporal phenomenology is individuated independently of how it picks out objective temporal relations as its representational content. More discussion would be needed before we can justifiably draw conclusions about what positive view of temporal experience this suggests, but I think it’s fair to say that once both Prosser’s version of intentionalism and the relative duration view are off the table, this is highly suggestive that we will have to embrace some form of anti-intentionalist view, like a qualia view. This might (or might not [Shoemaker 1994]) be given a projectivist spin: experience might seem like it is directly acquainting us with mind-independent temporal relations, but really we are aware of subjective features of experience that play the role of representing these features, and we mistakenly ‘project’ these onto the world. So this is a place where another kind of projectivism about temporal experience perhaps ought to be taken seriously.

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