Time and Tense in Perceptual Experience

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1. Introduction

I hear a melody; I feel raindrops running down my face; I see a car approaching a set of traffic lights, then I see it remaining stationary for some time. In each of these experiences, I am directly perceptually aware of things unfolding in time in a certain way. In what follows, I will call this aspect of perceptual experience "temporal experience".

From a philosophical point of view, we can distinguish between three different kinds of question one might ask about temporal experience: (1) A metaphysical question: which accounts of the nature of time are consistent with the existence of temporal experience? (2) A psychological question: which kinds of information-processing mechanism can explain the occurrence of temporal experience? (3) A phenomenological question: how should we best describe the content and nature of temporal experience, considered as a specific type of conscious phenomenon?

My primary concern will be with the third type of question, though I will say a little about how it relates to each of the other two in later sections of this paper. I will argue for two interconnected claims: that temporal experiences are best characterised as having a content that is tenseless, and that such experiences are essentially of the nature of a process that takes up time, viz., the same time as the temporal process that is being experienced. Both claims have been made before, though usually separately from each other, and I don’t believe the connection between them has been sufficiently recognized.

1. Philosophers writing about our experience of time, in a broader sense, also sometimes include phenomena such as relief or regret (cf. Prior, 1959). As the title of this paper already indicates, my interest will specifically be in a narrower notion of temporal experience conceived of as perceptual experience as of things moving, changing, etc.

2. For examples of work addressing this type of question see, e.g., Prosser, 2007; Mozersky, 2006; Williams, 1992.

3. This type of question is examined, e.g., in Grush, 2008, section 2; Le Poidevin, 2007, ch. 6; van Gelder, 1999.

4. For the first, see e.g. Oaklander and White (2007, p. 339), who cite Russell.
As I will use the term in this paper, to say that the content of temporal experience is tenseless is to say that it is best captured using notions such as ‘before’ and ‘after’. According to this view, when we perceptually experience a succession between two events, for instance, our experience simply presents us with one of them as happening before the other. This contrasts with a view according to which the content of temporal experience is tensed, i.e., best captured using notions such as ‘past’, ‘present’, or ‘future’. On that view, when we have a perceptual experience of succession between events, we experience some of them as past while experiencing others as present (and perhaps even further ones as future).\(^5\)

In the following two sections, I will argue that a number of problems with recent philosophical treatments of the phenomenology of temporal experience are connected to the fact that the authors believe that the content of such experience should be characterized as being tensed. In section 2, I outline a basic dilemma that so-called memory theories of temporal experience face, which can be traced back to the assumption that the content of such experience must be tensed. In section 3, I turn to so-called specious-present theories of temporal experience, and argue that a recent attack against such theories also relies on the assumption that the content of such experience is tensed (or at least that proponents of a specious-present theory are committed to this view). I develop a particular reading of the doctrine of the specious present that avoids that assumption. The way to make sense of the possibility of temporal experience’s having a tenseless content, I argue, is in terms of a reading of that doctrine that I call a molecularist reading. According to this reading of the doctrine of the specious present, temporal experience is itself a temporally extended process, and there is an explanatory connection between the temporal structure of experience itself and its phenomenology as experience, e.g., as of a succession of events. In sections 4 and 5, I defend this reading against two key objections. I finish, in section 6, by locating the view that emerges from my discussion within a broader taxonomy of views about the metaphysics of temporal experience, distinguishing between what I call primary-quality views and secondary-quality views of temporal experiences.

2. Memory theories of temporal experience

Let us call accounts of temporal experience tensed accounts if they have it that experiences as of something moving, changing, or remaining unchanged over a period of time have a content that is tensed. Conversely, let us call accounts of temporal experience tenseless accounts if they have it that such experiences have a content that is tenseless. Some philosophers already use the “tensed vs. tenseless” distinction to describe two positions in a rather different debate about the metaphysics of time. To avoid confusion, I will refer to those latter two positions, which I will say a little about towards the end of this paper, as the A-theory and the B-theory. The question as to whether a tensed or a tenseless account of temporal experience is correct concerns the way temporal relations, for instance, are presented to us in perceptual experience. The question as to whether the A-theory or the B-theory is correct is about what it is, in reality, in virtue of which temporal relations obtain. I will say something about possible ways of connecting up positions on those two questions in the final section, but for the purposes of this paper, I will try to remain neutral as to what the right answer to the second one is.\(^6\)

What is the motivation behind tensed accounts of temporal experience? Many philosophers have taken it as obvious that, in as far as there can be such a thing as, e.g., an experience of succession, that

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\(^6\) But see footnote 29, below.
experience must conform to what Miller (1984) has called the Principle of Simultaneous Awareness (PSA). Here is Dainton’s (2006) gloss on the basic idea behind this principle:

Let us suppose that you do see G occurring after R—you have an experience of succession. For this to be possible, it might seem that as you see G, you must also be aware of just having seen R. It cannot be the other way round: you cannot be aware of G when you see R, since when you see R, G has yet to occur. […] If we are directly aware of the immediate past, this awareness is located in the present. (Dainton, 2006, p. 133)

My main interest in what follows is not in PSA as such but in a corollary, which I think is implicit in the above quotation from Dainton. It appears integral to PSA that the contents of temporal experience are to be spelled out in tensed terms. In other words, on the most natural reading of PSA, to have an experience of succession, e.g., as of a whizz followed by a bang, is really to have an experience as of a present bang which was preceded by a whizz in the recent past.

In fact, though, there are two, somewhat different ways of making this basic idea more precise, depending on just which tensed notions we think best capture the experience. According to one type of account, what is really going on when we say that I have an experience of succession is that I have a perceptual experience of one event, say a bang, whilst also having a memory of another event, say a whizz, that happened in the recent past. In other words, my overall state of awareness has a past-tensed ingredient, corresponding to my memory of the whizz, and a present-tensed ingredient, corresponding to my experience of the bang. This type of account is sometimes referred to as a memory theory of temporal experience.

Ian Phillips has recently contrasted a traditional memory theory of temporal experience, understood along the lines just sketched, with what he calls a modified memory theory. Central to this latter theory is the thought that past experience can make a constitutive difference to the very way the present is experienced. Thus, when I hear a whizz and then a bang, there aren’t two separable contributions that my past experience of the whizz and the present experience of the bang make to my overall experiential state. I hear the bang itself in a particular way, i.e., as having been preceded by a whizz. This is how Phillips puts it:

The very encounter with the present is itself a way in which cognitive contact with the past is preserved because the way in which the current object of perception is encountered is constitutively dependent upon past experience. When I experience the [bang] cognitive contact with the preceding [whizz] is preserved as part of the character of the presentation of the [bang]. (Phillips, forthcoming, p. 19)

We can think of this modified memory theory as embodying a response to an objection to traditional memory theories of temporal experience that goes back, at least, as far as Broad (1923, p. 351; see also Russell, 1927, p. 205). Suppose half an hour ago you replaced the batteries in your alarm clock and you want to double check whether the new batteries are working. You might do this either by checking whether the hour hand is now in a different position from where it was half an hour ago, or, more simply, you might just look at the second hand to see whether it is moving. The two ways of checking seem to involve two quite distinct ways of becoming aware of the movement of the hour hand and the second hand, respectively. Or so we think. Yet, a traditional memory theory seems unable to tell us what the relevant difference comes to. Arguably, your becoming aware of the movement of the hour hand is the result of your perceiving its

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7. Phillips maintains that the modified memory account entails a denial of PSA (at least on one reading of the latter). However, Phillips’s understanding of what PSA comes to seems different from PSA as described in the above quote from Dainton. What Phillips calls PSA is in fact a form of temporal internalism, according to which the nature of my experience at a time is constitutively independent of what happened prior to that time.
current position whilst also having a memory of its previous position. But the traditional memory theorist wants to explain your awareness of the movement of the second hand in exactly the same terms. Thus, the phenomenological difference between the two cases has not been accounted for.

The proponent of a modified memory theory traces this basic problem with traditional memory theories back to the idea, implicit in such theories, that our awareness of temporally extended processes arises from the conjunction of two quite separate states of awareness—a perceptual experience together with a memory. The modified memory theory replaces this idea with the idea that we are dealing with just one state of awareness, a perceptual experience, but one the nature of which is constitutively dependent on what went before. Put in terms of tenses, we might also describe the basic suggestion as follows. Where traditional memory theories have it that my overall state of awareness can be decomposed into a past-tensed component and a present-tensed component, the modified memory theory instead suggests that the nature of the experience is actually best captured using the present perfect: in my very experience of the present bang, I experience it as having been preceded by the whizz.

Once the contrast between the two theories has been put in those terms, however, we might find ourselves wondering how much of an advance over traditional memory theories the modified memory theory actually offers. In fact, we seem to be landed with a dilemma. Prima facie, having an experience of succession requires being aware of two events that happen in succession—Phillips puts this in terms of the idea that a memory theory needs to explain how an experience of succession can involve “cognitive contact” not only with the present but also with the past. Now, the traditional memory theory does manage to explain this, by appealing to my memory of the past whizz as a separate component of my overall state of being aware of the whizz preceding the currently experienced bang. But it is clearly phenomenologically inadequate, as Broad’s objection shows. The modified memory theory, by contrast, claims that experiencing the succession is a matter of having a particular sort of perceptual experience of the present bang, namely as having been preceded by a whizz. Yet, it is difficult to read this as anything other than a denial of the idea that my present state of awareness involves an awareness of the past whizz itself, or that cognitive contact with that past whizz itself is indeed preserved, as Phillips puts it. Rather, it is easy to get a sense here that we are left with a view on which the whizz has a similar kind of paradoxical existence as the Cheshire cat, whose smile can still be around even if the cat no longer is.

In other words, it looks as though either the supposed preservation of cognitive contact with the past that memory theories of temporal experience are meant to account for is given an explanation that falsifies the phenomenology of temporal experience, or the explanation given actually ends up denying that cognitive contact with the past is indeed preserved in temporal experience; instead, all we experience is some form of proxy for that contact.

There is thus a basic dilemma that memory theories face, in so far as they seem to imply that experiences of succession have to be described either as involving separate present- and past-tensed ingredients, or in terms of the present perfect, i.e., as experiences of an event etc. cannot be explained in those terms. Le Poidevin’s account of temporal experience is a variant of Mellor’s (1998), which I discuss in section 4.

9. I think one underlying worry here concerns the manner in which the idea of a constitutive dependence of one’s present experience on the past is pressed into service in order to explain our awareness of things unfolding over time. It is plausible to think that there is a range of ways in which aspects of one’s present cognitive life might be constitutively dependent on a past experience. Consider, for instance, justification. Whether I am justified in holding a certain belief may depend on whether I arrived at it through constructing a complex proof or just as a result of guesswork. But, in this case, it is at least not obvious that the required constitutive dependence needs to involve an awareness of all the stages of the proof I had to go through. So, not just any way of spelling out the idea of constitutive dependence will do here.
as having been preceded by another event. In fact, it strikes me that an implicit recognition of this dilemma for memory theories is a key driving force behind much of the work on temporal phenomenology that recruits the Husserlian notion of retention. Use of the notion of retention, it seems to me, very often encapsulates precisely the idea that it is somehow possible to escape the dilemma I have sketched by providing something like a middle way between its two horns. Discussing the various subtle attempts that fall into this category goes beyond the scope of this paper, though. Instead, I want to consider whether there might be an alternative type of approach to temporal phenomenology on which the dilemma I have sketched never arises in the first place.

What, if any, alternative is there to memory theories of temporal experience? On a view that departs from PSA, which I will say more about in the next section, perceptual experiences are themselves essentially processes that unfold through time. Dainton describes this view in terms of what he calls, again following Miller (1984), the Principle of Presentational Concurrence (PPC). Here is how he explains the basic idea behind the principle:

When I see the red flash followed by the green flash, or when I hear a sequence of notes C-D-E, my experiencing of the succession does seem to run concurrently with the phenomenal contents which jointly constitute the succession; I am aware of the red flash before I am aware of the green flash. Or so it seems natural to say. (Dainton, 2006, p. 134)

As Dainton later also describes it, the claim is that “experiencing a temporally extended process requires time — just as much time as the process itself takes up” (ibid., p. 181). Moreover, I take it that it is meant to be part of PPC that this is an explanatory claim, i.e., that the concurrence between the process of experiencing and the experienced process can explain how it is possible for us to have experiences of succession. If this idea is even roughly along the right lines, though, it is difficult to see how tensed notions can have any application within the experience. Or so I will argue.

Following Reichenbach (1947), we can think of tensed notions as being “token-reflexive”. For instance, the reference of ‘now’ in a sentence is governed by the rule that it refers to the time when the sentence is uttered, and the reference of ‘a short while ago’ in a sentence is governed by the rule that it refers to a time before the sentence is uttered. Some philosophers have claimed that we can give a reductive analysis of the meaning of tensed notions in terms of their token-reflexivity, but, for present purposes, we can leave this issue open and allow that such a reductive analysis may not be possible. The point is just that token-reflexivity is one crucial feature of sentences involving tensed notions. And what goes for utterances of sentences, presumably, also goes for thoughtful thoughts involving tensed notions. However, in the present context we are dealing with perceptual experience rather than sentences or thoughts, and I am not convinced the idea that perceptual experience can have temporally token-reflexive ingredients is one that we can readily make sense of, at least not on the picture of experience suggested by PPC.

Consider the idea that perceptual experience might have temporally token-reflexive ingredients, for instance in the sense that it might present certain events as happening now and others as having happened a short while ago. Presumably, the relevant token-reflexive rules governing these notions, in the case of experience, have to be spelled

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10. More precisely, we should say that experiencing the process requires as much time as the process is experienced to take up, which can be different from the time it does take up. Dainton has no need for this qualification because he focuses on the case of our awareness of purely experiential items and their temporal features. Obviously, when it comes to perceptual experiences of events in our environment, especially of very remote events, there will be

11. Philosophers who endorse the token-reflexivity of tense, whilst denying that there can be a reductive analysis, include Smith, 1993, pp. 98–130; Lowe, 1998, pp. 88–92; and Fine, 2005.
out in terms of the relationships in which the times of the events in question stand to the time of the experience itself. But if the experience of a sequence of events takes up the same time that the experienced sequence of events itself takes up, there is nothing that falls within the experience to which the notion ‘a short while ago’ could apply, because there is nothing experienced as having happened at a time that pre-dates the onset of the experience.12 Thus, it also can’t be the case that, within the experience, any event is presented as happening “now” in contrast to others. Perhaps it might be thought that the experienced events are somehow all experienced as happening “now”, but, since they are not experienced as happening simultaneously with each other, it is far from obvious how we can make sense of such a claim, and what the motivation for it might be (I will return to this issue in section 5, below).

If it is indeed true, as I have suggested, that there are difficulties with making a tensed account of temporal experience compatible with PPC, it is worth exploring whether PPC may not in fact hold the key to making sense of an alternative to tensed accounts of temporal experience – i.e., an account of such experience according to which it has a tenseless content. This is what I will turn to next.

3. The specious present: atomism vs. molecularism

I think we can make the basic idea behind a tenseless account of temporal experience, developed along the lines of PPC, more concrete by looking at William James’s discussion of the specious present. By this I don’t mean that the doctrine of the specious present, as presented by James, unambiguously amounts to a version of the type of account I have in mind. Rather, as I wish to suggest, there are two conflicting readings of the doctrine of the specious present, which James does not properly distinguish, and once we distinguish clearly between them, we might see what is needed to develop a tenseless account of temporal experience in more detail.

Above, I quoted a claim from Dainton (2006, p. 181), according to which “experiencing a temporally extended process requires time – just as much time as the process itself takes up”. Call a view that incorporates this claim a molecularist view of temporal experience. More specifically, the molecularist has it that there is an explanatory connection between the structure of experience, as a temporally extended process, and its phenomenology, as experience, say, of a succession of events. Conversely, call a view of temporal experience atomistic if it assumes that perceptual experience is a momentary affair, but that what we can be perceptually aware of at a moment in time encompasses more than what happens at that moment in time. That is to say, for the atomist, it is not the temporal structure of the experience that explains how there can be, say, experiences of succession, but the idea that there is such a thing as perceptual awareness of what happened in the recent past (and perhaps also of the near future), alongside perceptual awareness of the present.13

I believe that the doctrine of the specious present, as sketched by James, allows for either a molecularist or an atomistic reading. One

12. What if we think of the overall experience as having temporal parts which are themselves experiences? Think, for instance, of the experience as of a whizz followed by a bang as having an experience of the whizz and an experience of the bang as a part. It is then of course true that the whizz predates my experience of the bang. But note that all I experience when the bang happens is the bang, so there is still no experience of a past whizz. Perhaps there is a temptation to say that, as part of the overall experience, I experience the whizz as in the past with respect to the bang (and we should then also say that I experience the bang as in the future with respect to the whizz). But these are not token-reflexive uses of ‘in the past/future’; they simply express the same relations between the two events as ‘before’ and ‘after’ do. A corollary here is that temporal experiences are not, as Soteriou (2007) calls it, homogenous down to smaller parts of them.

13. Note that I use the word ‘moment’, rather than ‘instant’ here (and also the analogy implicit in calling the view ‘atomistic’). I want to allow that the view in question might have it that experience can’t be instantaneous, but always in fact occupies a minimal interval of time (something like this seems to be Le Poidevin’s, 2007, view). The crucial point about atomistic views, for my purposes, is that, according to them, the temporal extent of the experience is incidental to the experience’s being an experience of a temporally extended interval. It is this ‘wrenching apart of the temporal structure of experience from the temporal structure of the objects experienced’, as Phillips (forthcoming, p. 10) puts it, that I take to be the defining feature of atomism.
way of bringing this out is by looking at Sean Kelly’s recent criticism of the notion of the specious present, which takes as its starting point the following, well-worn passage from James:

In short, the practically cognized present is no knife-edge, but a saddle-back, with a certain breadth of its own on which we sit perched, and from which we look in two directions into time. The unit of composition of our perception of time is a *duration*, with a bow and a stern, as it were—a rearward- and a forward-looking end. It is only as parts of this *duration-block* that the relation of *succession* of one end to the other is perceived. (James, 1890, Vol. I, pp. 609–10)

Immediately after quoting this passage, Kelly goes on to characterize James’s view as one according to which “we are in direct perceptual contact not only with what is now occurring but also with what has recently occurred and indeed with what is about to occur as well” (Kelly, 2005, p. 218). Kelly’s description here unambiguously makes James out to be an atomist. The doctrine of the specious present, thus interpreted, is a doctrine about what a subject can experience at a moment in time, and claims that, at a moment in time, a subject can be directly perceptually aware of more than what is actually happening at that moment in time.

Note, though, that it is at least not obvious that Kelly’s description actually captures what James had in mind. Admittedly, James’s characteristically colourful language leaves plenty of room for interpretation,

and there are perhaps other sections in *The Principles of Psychology* that might provide a better textual basis for Kelly’s reading. In the paragraph quoted, however, James seems to describe the specious present as a period of time *from* which the subject looks into the past and the future. At least on the face of it, this amounts to something different from saying that the subject’s awareness *of* the period of time that is the specious present is also a matter of being perceptually aware, at a moment in time, of other moments in time that lie in the past or the future with respect to it.

Kelly’s criticism of James essentially takes the form of a dilemma, starting out from a question that might be captured as follows: Suppose that I watch an object moving from A to B between *t₁* and *t₁₀* and also that *t₁* and *t₁₀* fall within the scope of one specious present, however this is to be interpreted further. It seems a legitimate question to ask what, in this case, I am aware of at *t₁*.

Now, one possible answer to this question runs roughly as follows: At *t₁*, I am aware of the object moving from A to B, because, at *t₁*, I do not just have a perceptual experience of where the object is at *t₁*, but, at *t₁*, I also have a perceptual experience of the position of the object at other times, from *t₁* to *t₁₀*.

The most glaringly obvious problem here is probably how to account for the perceptual awareness of the future that this answer seems to presuppose. However, setting this issue to one side (not all specious present theories are committed to the possibility of perceiving future events), the proposed answer is also problematic on phenomenological grounds. The basic problem is that, on the most natural interpretation, it falsifies the nature of our experience, because it suggests that, at *t₁*, I see the object both at A, and at B, and at all the positions it occupies on its path between them (akin to what one would see on a long-exposure photograph), rather than seeing what actually happens, namely the object moving from A to B. Thus, on this interpretation, the answer gets the phenomenology wrong.

14. Gallagher (1998) contrasts James’s notion of the specious present with Stern’s (1897) idea of *Präsenzzeit*, and in effect also suggests that James was an atomist, whereas Stern was a molecularist. I am not convinced that Stern himself saw the relation between James’s views and his own in this way (see Stern, 1897, p. 333 fn. 1). More interestingly, though, a passage in Stern suggests that he did see the connection between molecularism and a tenseless approach to temporal phenomenology. He writes: ‘Within the temporal present, there is an ‘earlier’ and ‘later’, just as there is a ‘right’ and ‘left’, a ‘closer’ and ‘further away’ in perceived space; yet, within the temporal present there is no ‘past’ or ‘future’” (ibid., p. 333, my translation).

15. A similar argument can already be found in Paton, 1929, pp. 319ff.
Yet, Kelly argues, there doesn’t seem to be any other possible way of interpreting the answer that we can make sense of. To avoid the problem just sketched, there would have to be a way in which a subject can be “perceptually aware of something that is not now occurring” (ibid., p. 220), in a way that is different from being perceptually aware of it as if it was now occurring, but we have been given no way of fleshing out what this might come to. Thus, as Kelly claims, we have to conclude that the doctrine of the specious present “simply makes no sense. It is committed to claims about experience that have no sensible interpretation” (ibid., p. 211).

I think there is clearly something to Kelly’s criticisms here. But we need not see them, in the way he does, as criticisms of the doctrine of the specious present as such. Their main target seems to be, more narrowly, an atomistic reading of that doctrine, and we can in fact see some of Kelly’s remarks as articulating a central insight behind the alternative, molecularist reading. One way of putting the molecularist view is by saying that my experience of the movement of the object from A to B is itself a process that unfolds over time. It starts at \( t_a \), when I see the object departing from A, and it finishes at \( t_{AB} \), when I see the object arriving at B. On this view, it is simply a mistake to ask what I am aware of at \( t_a \), and to expect the answer to show us, all by itself, how we can be aware of a sequence of events — a mistake of a type analogous to a category mistake, because it involves a misunderstanding of the ontological category that experience belongs to, as a process that unfolds over time rather than a momentary perceptual state.\(^\text{16}\)

Once again, I believe that what stands in the way of Kelly’s recognizing this possible solution to the puzzle he raises is the fact that he seems to think that the contents of temporal experience are to be spelled out in tensed terms, or at least that proponents of the doctrine of the specious present are committed to doing so. If we do make that assumption, it seems we do end up either claiming that experience presents non-simultaneous events as being simultaneous, i.e., as all happening now, or we end up with the seemingly paradoxical idea that I might now be perceptually aware of things that are, at the same time, experienced as no longer (or not yet) present. A molecularist reading of the specious present, however, can do without this problematic idea because, on such a reading, tensed notions play no role in accounting for the contents of temporal experience. I experience neither the whizz nor the bang as past (or future); my experience is rather as of each sound occurring in turn, and my experience’s taking this course is what constitutes my being aware of the whizz being followed by the bang. In a nutshell, on a molecularist reading of the specious present, I am perceptually aware of the succession of sounds as and when it happens, because they fall within the scope of one temporally extended experience.

So much for a basic sketch of molecularism, understood as one form that what I have called a tenseless account of temporal phenomenology might take. In what follows, I will look at two key objections to molecularism, conceived of along the lines just sketched. I think the objections ultimately fail, but they bring out the need to clarify, in two crucial respects, the connection between the molecularist’s claim that temporal experiences are essentially of the nature of a process that takes up time, and the claim that temporal experiences are best characterised as having a content that is tenseless.

4. A first objection: successive experiences vs. experiences of succession

I have introduced a distinction between two different types of accounts of temporal phenomenology. According to tensed accounts, experiences as of things changing, moving, or staying the same over a period of time are best characterized using tensed notions such as ‘present’ and ‘past’ (and perhaps ‘future’). According to tenseless accounts, such experiences are best characterized using tenseless notions, such as ‘before’ and ‘after’. I have also suggested that one way of

\(^\text{16}\) Related ideas are discussed in much more detail in Soteriou (2007). Soteriou does allow (as one should) that we can talk about there being a state of being aware of, say, the movement of an object, which one can be in over a period of time. However, this state obtains only in virtue of the occurrence of perceptual events or processes that go on over that period of time.
making sense of a tenseless account of temporal phenomenology is in terms of what I have called a molecularist reading of the specious present. On such a reading, the fact that perceptual experience itself unfolds over time is part of what explains how we can have experiences as of things changing, moving, or staying the same over time.

According to a first objection that I want to consider in this section, there is a certain kind of explanation that accounts of the phenomenology of temporal experience ought to be able to provide, but which the molecularist fails to provide. According to a second objection, to be considered in the following section, even the molecularist needs to appeal to tensed notions, specifically the notion of the present or ‘now’, to get the phenomenology of temporal experience right.

The first objection is sometimes associated with another famous passage in James’s *Principles of Psychology*, in which James says that “[a] succession of feelings, in and of itself, is not a feeling of succession” (James, 1890, Vol. I, p. 629). Intuitively, for me to have a perceptual experience as of a whizz followed by a bang, for instance, something more seems to be required than the brute fact that I first experience the whizz and then the bang. And, at least at first blush, it might appear that a molecularist view of temporal experience simply flies in the face of this intuition.

I think we need to be careful, though, in formulating the precise explanatory issue that James’s dictum raises. The crux of James’s dictum is that there are cases in which all we have is a sequence of separate experiences, rather than a temporal experience in the sense of a perceptual experience of succession, movement, etc. Thus, there is a need for an explanation as to why there are only certain temporal phenomena that we can be directly perceptually aware of. Put this way, though, I am not convinced the molecularist needs to disagree with James’s dictum as such. What she will resist, rather, is the suggestion that the required explanation needs to be one that is pitched at the level of the type of account she intends to give, *i.e.*, an account of the phenomenology of temporal experience. Thus, she can allow that there are in fact empirical, psychological constraints on temporal experience, such that there will be cases in which there is merely a sequence of separate experiences (say, because the experienced events are too spread out in time) rather than an experience of sequence. What she will deny is that this falsifies her description of the phenomenology of temporal experience, *viz.*, that when we have a perceptual experience as of a whizz being followed by a bang, for instance, the content of the experience is simply as of a whizz followed by a bang, and the experience takes the form of a process in which each of the two sounds is experienced in turn. From a phenomenological point of view, according to the molecularist, the empirical constraints on temporal experience simply manifest themselves as *limits* to temporal experience, *i.e.*, limits to the kinds of temporal phenomena we can be directly perceptually aware of.

I will try to make these points clearer by first examining in more detail just how the idea of limits to temporal experience figures in the molecularist’s account, and then criticising head-on what I take to be the main argument to the effect that James’s dictum can be accommodated only by abandoning molecularism.

One way in which the idea of a limit to temporal experience figures in the molecularist’s picture comes out when we consider how the molecularist would respond to Broad’s argument, mentioned in section 2, above. Broad’s point, to reiterate, was that an account of temporal phenomenology needs to explain what the difference comes to between seeing that the hour hand of a clock *has moved*, and seeing the second hand *moving*. Suppose you stare at the hour hand of a (working) clock for half an hour. At the end of that period, the hand is in a position that you can clearly visually discriminate from the position it was in half an hour earlier, which you can recall from memory. Yet, despite staring at it for so long, you never perceived the movement of the hand. The molecularist explains this fact in terms of the idea of an upper temporal limit, a maximum duration that acts of temporal experience can span — in Lockwood’s (2005, p. 365) evocative phrase, we take in what is happening in “gulps”. The reason why you cannot see the movement of the hour hand is that (perhaps because of limits
of attentional capacity) that duration is considerably shorter than half an hour, and indeed is shorter than the minimum period of time that it takes for the hour hand to travel between two positions that you can visually discriminate. Thus, even by staring at the clock for half an hour, you cannot change the fact that each of the individual experiences you will have during that time is actually much shorter, and that none of them is an experience as of the hour hand moving. In contrast, the second hand travels fast enough for you to visually discriminate several positions it traverses in the course of just one experience. That is why you can see the movement of the second hand. Thus, one central type of limit to temporal experience the molecularist will appeal to takes the form of an upper temporal limit to the duration such experience can span.

Another type of limit to temporal experience that the molecularist will appeal to can be brought out by considering an objection to molecularism put forward by Rick Grush (2008; see also section 5 of Grush, 2007; and Tye, 2003, pp. 90ff.), which is based on the existence of temporal illusions. One such illusion is apparent motion, in which two visual stimuli are presented, in short succession, at two different locations, but it looks to an observer as though there is just one stimulus, which is moving from the first location to the second. To adapt and slightly modify an example of Grush’s (the reasons for the modification should become obvious as we go on), suppose a subject looks at a screen during an interval \( t_4 \)–\( t_{10} \). Nothing happens on the screen during that interval except that, at \( t_5 \), a brief stimulus (a “flash”) is presented at location \( A \), and at \( t_6 \), another brief stimulus is presented at a separate location \( C \). If the interval between \( t_4 \) and \( t_6 \) and the spatial distance between \( A \) and \( C \) are each within a certain range, subjects viewing such a display will typically report seeing one stimulus moving from \( A \) to \( C \) between \( t_4 \) and \( t_6 \).

With a case like this in mind, Grush (2008, p. 155) puts his criticism of molecularism in terms of the following question, to which he says the molecularist has “no comfortable answer”: 17 “Presumably, the [molecularist] will maintain that the temporally extended perceptual act will not, at \( t_z \) [i.e., a time intermediate between the two flashes], be able to magically predict that there will be a flash at location \( C \) in the immediate future. And so the act will represent the environment as having a flash at \( A \) at \( t_4 \) and nothing at \( t_6 \). But what happens at \( t_z \), when the second flash occurs at \( C \)?” The idea, I take it, is that the overall experience of what happens between \( t_4 \) and \( t_6 \), as conceived by the molecularist, must have as a part an experience (covering the time between \( t_4 \) and \( t_6 \)) as of the first stimulus, followed by nothing. But then the overall experience of what happens between \( t_4 \) and \( t_6 \) cannot, at the same time, be an experience as of a stimulus moving from \( A \) to \( C \).

I think the most promising strategy for the molecularist to adopt, in response to this objection, is to insist that experiences can’t be sliced arbitrarily finely. In other words, there is a limit to the fineness of grain, as it were, of the temporal phenomena we can make out perceptually. As Grush himself notes (Grush, 2008, p. 149), there are in fact a number of constraints on temporal phenomenology studied by psychologists that take the form of a lower temporal limit. There is, for instance, a minimum amount of time—the “fusion threshold”—that needs to elapse between two stimuli before we can perceive them as occurring at different times rather than as being simultaneous. There is also a separate “order threshold”, a minimum amount of time that needs to elapse between two stimuli before we can discern the order in which they occur, even though we do perceive them as being nonsimultaneous (see Wittmann, 1999, for discussion). If there are such thresholds, though, the molecularist does not need to accept the crucial idea behind Grush’s criticism, that the overall temporal experience of what happens between \( t_4 \) and \( t_6 \), as conceived by the molecularist, must have as a proper part a further temporal experience, viz., of what happens between \( t_4 \) and \( t_6 \). The molecularist would have to accept that idea only if some claim like the following were true: If we considered only the experience of what happens between \( t_4 \) and \( t_6 \) in isolation, it would amount to an experience of succession, i.e., as of a stationary stimulus followed by nothing. But this need not be true, as the time interval involved may be too small to allow for an experience of
succession of the kind required here. (In this context it is important to note that apparent-motion phenomena require relatively small temporal separation between the stimuli, and disappear when the interval between the stimuli is increased.)

To this, it might be objected that, even on the molecularist’s account, there must be temporal experiences that include what happens at \( t_5 \) and \( t_6 \), but not what happens at \( t_4 \). The interval between \( t_6 \) and \( t_5 \) itself may be too short to allow for a perception of succession, but what, for instance, if we considered an experience covering the interval \( t_4 \) to \( t_5 \)? Would this not have to be an experience as of a period with a stationary stimulus occurring at the end?\(^18\) In my view, this objection relies on the same problematic step that we already identified in the preceding paragraph. The only thing that could motivate the claim that this experience must be as of a period with a stationary stimulus occurring at the end is the idea that it has as a proper part a further temporal experience, of what happens between \( t_4 \) and \( t_5 \). By extending the segment of experience under consideration further out into the past we do indeed make it possible for the experience to amount to an experience of succession, because extending the experience in this way can bring into its scope temporal phenomena that are coarse-grained enough to be perceived, such as the succession between nothing happening for a while, and then a stimulus appearing (assuming, as our example has it, that nothing happens in the period \( t_4 \) to \( t_5 \)). But, the molecularist will argue, this does nothing to show that, as part of this longer segment of experience, the subject is also able to perceive that, at the end, the stimulus occurring at \( t_4 \) is again followed by nothing.\(^19\) Rather, this segment of experience might be such that it does not distinguish between a stationary stimulus occurring at its end, and the onset of a movement of a stimulus occurring at its end. In other words, the molecularist can argue that any segment of experience occurring before \( t_4 \) will be neutral as to whether what is experienced at its end is a stationary stimulus or the onset of a movement of a stimulus; that neutrality is removed only at \( t_5 \).

In sum, on the molecularist picture, temporal experience has an upper and a lower limit, in the sense that only temporal phenomena that are discriminable within these limits (\( i.e., \) that don’t happen too fast or too slow) will be perceived. These limits, the molecularist will argue, reflect empirical, and empirically demonstrable, limitations of our perceptual systems, and are to be explained on the level of information-processing psychology. But they have concrete implications for the kinds of experiences of succession or change we can have, and under what circumstances we can merely have a succession of experiences. In that way, talk about such limits (especially the upper limit) can be seen as providing an answer to James’s question as to what the distinction comes to between an experience of succession and a mere succession of experiences.

Let me now turn to what I take to be the main line of thought that has motivated philosophers to think that James’s dictum does make trouble for molecularism. Something like the line of thought I have in mind can be found in Grush (2008, section 3), and also in Le Poidevin (2007, ch. 6), but perhaps its most succinct formulation can be developed out of the following passage from Mellor, in which \( e \) and \( f \) stand for two events, and \( pe \) and \( pf \) for the perceptions of each of those two events, respectively.

\[ \text{[C]learly I cannot see } e \text{ precede } f \text{ until I see } f, \text{ and can only do so then if my seeing } e \text{ has left some trace in me. In other words, for me to see } e \text{ precede } f \text{ just by seeing } e \text{ and } f, \text{ } pe \text{ must affect } pf \text{ in some way such that, had } pf \text{ affected } pe \text{ in that way, I would have seen } f \text{ precede } e. \text{ (Mellor, 1998, p. 115)} \]
The argument against molecularism that might be extracted from this passage involves three key claims, which I will list separately for ease of discussion:

1. I cannot perceive $e$ precede $f$ unless my perceiving $e$ has left some trace in me (that is still present when I perceive $f$).

2. For me to perceive $e$ precede $f$ just by perceiving $e$ and $f$, $pe$ must affect $pf$ in some way.

3. I cannot perceive $e$ precede $f$ until I perceive $f$.

I take it that (3), as Mellor wants it to be understood here, implies a straightforward denial of molecularism: My experiencing the whizz being followed by the bang is something that happens at the time when the bang is experienced, rather than a process that unfolds over the interval in which both the whizz and the bang happen. The argument that I want to examine in the following has it that (3), understood in this way, is supported by (2), which in turn is supported by (1). I will assume that that is supposed to be how the truth of (3) is to be established, if (3) is to be something other than pure stipulation. I will take it that (1) is true, but I will argue that accepting (1) need not commit one to accepting (2) or (3). Moreover, I will also argue that there is a way of understanding (2) that is compatible with molecularism.

Claim (1) can be seen as articulating a response to James’s dictum, and plausibly the minimum that is needed to respond to it. Arguably, one very basic way in which I may fail to have a perception as of a whizz being succeeded by a bang is if, by the time I hear the bang, all cognitive traces left on me by the whizz have been wiped out. In general, for any situation in which I do perceive $e$ precede $f$, there could be a counterfactual situation in which some form of neurological accident prevents me from perceiving $e$ precede $f$, even though I perceive both $e$ and $f$. Understood this way, (1) is most naturally read as a claim about

the psychology underlying temporal experience, i.e., as a claim about certain information processing mechanisms. The passage from Mellor suggests, though, that he thinks it directly implies a claim on the level of talk about perceptual experiences, viz., (2). According to this claim, temporal experience is the upshot of causal relations between individual perceptual experiences. Thus, having an experience as of the whizz preceding the bang just is a matter of having a perceptual experience of the bang that is causally influenced by one’s prior perceptual experience of the whizz.

To see what is wrong with this move from information processing to phenomenology, consider the precise way in which the idea of a trace figures in Mellor’s argument. I think we can grant that I won’t hear the whizz being followed by the bang if, by the time the bang occurs, all traces that the occurrence of the whizz has left on my cognitive life have been wiped out. Note, however, that it is true in the same way that I won’t hear the whizz being followed by the bang if, once the occurrence of the whizz has left its traces on my cognitive life, the occurrence of the bang fails to do so. The point here is that the thought that does the work in making (1) plausible is that the perception of succession is the upshot of the interaction between traces that different events leave on my cognitive life at different times. Yet, on the face of it, the notion of a trace, in this sense, is actually neutral as to whether the earlier trace should be described as causally affecting the later one, or vice versa. Indeed, from an information processing perspective, it is not easy to see how there could be something that makes one of these descriptions more appropriate than the other. In short, the plausible thought, which we need in order to respond to James’s dictum, that experiences of succession involve the retention of and interaction between cognitive traces that successive events leave on us, gives no particular support to (2), understood in terms of the idea that the perception of succession is a matter of having a perceptual

20. The passage from Mellor I have quoted suggests that he regards (3) as a truism. What is a truism, I believe, is that I will not have perceived $e$ precede $f$ until I have perceived $f$, which is different from (3).

21. At least this is how I will interpret (2) for the moment, because it seems this interpretation is required if (2) is supposed to support (3). See below for a different interpretation of (2).
experience that is causally affected by a separate earlier experience. The molecularist can accept (1) without thereby having to accept (2) and can thus block the argument for (3).

There is also another way in which the molecularist could block the argument for (3), namely, by arguing that there are ways of understanding (2) that do not entail (3). One way of understanding (2) is as expressing something like the following intuition. In order for me to perceive the succession between the whizz and the bang, it seems, the perception of the whizz must make a difference to the way the bang is being perceived. Put this way, though, I am not convinced the molecularist needs to disagree with (2). Even a molecularist could agree that there is a sense in which my experiencing the whizz being followed by the bang involves hearing the bang in a way in which I would not have heard it had I not previously heard the whizz. On her view, though, this is true in just the same sense in which it is true that my experiencing the whizz being followed by the bang involves hearing the whizz in a way in which I would not have heard it had I not later heard the bang. That is to say, she will insist that what the relevant difference comes to, here, is nothing other than the fact that, in a case in which I hear both the whizz and the bang, I do not hear just the whizz or just the bang, but have an extended experience of hearing the whizz being followed by the bang. Thus, on this understanding of (2), it gives no particular support to (3), if this is meant to imply a denial of molecularism.

In sum, the correct way for the molecularist to respond to James’s dictum is by acknowledging that there are limits to our capacity to experience temporal relations between events. She can also acknowledge that there is a need for a psychological explanation as to why these limits take the form they do. What she will reject, however, is the idea that more needs to be said, on the level of phenomenology, about what the difference consists in between a mere succession of experiences (if they are separated by durations longer than the span of the specious present) and an experience of succession (within the specious present), other than simply that, in the latter case, we do not just experience each event in turn, but also the temporal relationships in which they stand to each other.

5. A second objection: experience and presence

Let me now turn to a second type of objection to the view I have called molecularism — or rather, an objection to the claim that this view amounts to a tenseless account of temporal experience. The thought behind this objection is sometimes put in terms of the idea that “the present is experientially privileged” (Mozersky, 2006, p. 441), or that a key part of accounting for temporal phenomenology is to account for the “presence of experience” (Hestevold, 1990; Mellor, 1998). One way of putting the point is this: If we think that the content of perceptual experiences is to be spelled out in tenseless terms, it seems that we lose the sense in which experience is different from the mere possession of certain types of information. Arguably, I may be in possession of information about a whizz being followed by a bang, for instance, without this making it the case that I experience those events — they might in fact have happened some time ago, or be yet to occur. To explain what makes experience distinctive, the thought goes, we have to bring in the idea that experience makes the presence of certain phenomena manifest to us, where this involves characterising experience in tensed terms.22

One specific way to make this point more concrete is by considering the role experience plays in action. Suppose I see an apple roll across the table and catch it just before it drops to the floor. Arguably, in explaining why I acted just when I did, we will appeal to facts about my experience: e.g., that I could see the apple approaching the edge of the table. Yet it might seem that experience won’t be able to play this explanatory role, of explaining why I acted at one time rather than another, if all it provides me with is information about tenseless states of affairs. If my experience provides me merely with information, say, about the successive positions occupied by the apple during its movement, it won’t be able to inform my action, for in order to

22. Another way of putting the point is that, to get right the nature of conscious experience, we have to capture the way things are from the subject’s own point of view. Yet, a tenseless description of the contents of experience, on the face of it, abstracts from that point of view, which is itself changing over time. See my (1998) for a critical examination of the notion of a point of view, as applied to temporal experience.
have a reason for acting, I also need to know that the apple is moving now, rather than, say, its having already moved a while ago. Or so the thought goes.

I think this latter way of stating the point, in particular, helps to bring out that we need to distinguish two, quite different ways in which the objection at issue might be framed.

One way of framing the objection is to think it shows that, in as far as experience might span a period of time, one time must nevertheless be marked out as present and others as non-present within the experience, in order to explain why we act at that time. On this view, the objection amounts to an objection against molecularism as such, at least in as far as molecularism seems incompatible with the idea that, in experience, one time in contrast to others is marked out as present. However, it seems to me that this reading of the objection gets the motivation behind it wrong. Consider again the case of catching the apple just before it rolls off the table. The thought that my experience must mark out one time in contrast to others as present in order to explain why I act at that time seems to ignore the fact that my action itself is something that unfolds over time. There is no reason to think that the intentions behind my acting must slice time more finely than experience does on a molecularist account. Thus, for instance, my intention may most appropriately be put by saying that I intend to stop the apple from rolling, where its rolling is something that I can directly perceive (and react to), over a period of time, just as the molecularist has it.

Yet, this leads us directly to the second way of framing the objection at issue. For it might seem that what is nevertheless crucial for explaining why I act when I do is that I can see that the apple is rolling, where that ‘is’ has to be understood as being tensed, viz., present-tensed. The upshot here would not be that molecularism is wrong in claiming that experiencing movement or succession is a matter of one’s experience unfolding a certain way over time, and that, within this temporally extended experience, nothing is marked out as present in contrast to something else which is marked out as past. Rather, the point would be that molecularism nevertheless does not amount to a tenseless account of temporal experience, because there is a sense in which the whole movement or series of events that is being perceived is perceived as unfolding in the present.

One way in which one might try to flesh out this line of thought is in terms of the idea that it is actually apparent to me, as part of the phenomenology of an experience of succession, for instance, that the experienced events unfold at the same time as my experiencing them, and, in this sense, my experience presents each of them as present in turn, as well as presenting the unfolding of the sequence as present. This might give us a way of making sense of the idea that experience can present us with a succession of events, whilst at the same time making the presence of each of these events manifest in turn.23

I believe, though, that this line of thought looks compelling only if we are in the grip of a false dichotomy. The line of thought just sketched in effect agrees that the content of temporal experience is to be spelled out, in part, in terms of tenseless notions such as ‘before’ or ‘after’, specifying certain temporal relations between the events that are experienced. However, it nevertheless insists that there is also an aspect of the content of temporal experience that needs to be spelled out in tensed terms, i.e., by saying that it presents us with events as unfolding in the present or “now”. This will seem compelling if we assume that the only alternative to thinking of experience as tensed in this way is to think that, in addition to specifying certain temporal relations between the experienced events, temporal experience also presents these events as located at particular positions within a tenseless framework — as though experience could tell us, e.g., the date at which events happen, which is clearly wrong. Yet, this ignores a further alternative, which is perhaps best expressed by saying that, whilst experience can make certain (tenseless) temporal relations between events manifest to us, there is also a crucial respect in which it

23. A prima facie problem with this suggestion, however, is that it characterizes an aspect of the phenomenology of experience in a way that seems to presuppose possession of a concept of experience, on the part of the subject. One worry here is that we might want to say that creatures without the necessary concepts can have the experience in question.
is untensed — i.e., that experience presents events simply as “unfolding”, where this is to be contrasted both with the tensed “unfolding now (rather than some other time)” and with the tenseless “unfolding at time in (rather than some other time)”\textsuperscript{24}

We can perhaps make this point more concrete by looking again at the connection between experience and action. The argument I mentioned above has it that there needs to be a tensed ingredient in the content of experience, in order to explain the role experience plays in the timing of actions. As I see it, the molecularist's response to this should be to challenge the assumption that it has to be a feature of the content of my experience that explains the timing of actions.\textsuperscript{25} On the molecularist’s theory, there is already another feature of my experience that can explain why I act when I do, viz., the fact that my experience is itself a process that unfolds over the particular interval of time over which the experienced events are unfolding. I can, for instance, know how to reach out to stop the apple from rolling because I can see it rolling while I do so, without in either case having to represent when all this is happening with respect to other events. It is simply the fact that, as an occurrence, the experience happens when it does, rather than any feature of the content of the experience, that explains when I act.\textsuperscript{26}

In sum, the proponent of a tenseless account of temporal experience, understood along molecularist lines, can respond to the objection I have sketched at the beginning of this section by distinguishing two different ingredients in such a tenseless account. The core claim of the account is that perceptual experience presents us with tenseless relations that obtain amongst events, such as before/after relations. Yet, the account entails that there is also a respect in which the content of perceptual experience is best described as being neither tensed nor tenseless, but rather untensed, in as far as events are simply presented, say, as unfolding in a certain order, rather than unfolding in that order in the present (as supposed to some other time) or unfolding in that order at a certain tenseless date.\textsuperscript{27} It is not the possession of a certain

\textsuperscript{24} I think the line of thought just sketched can be regarded as an analogue of an argument regarding the spatial content of perceptual experience put forward by John Campbell (1998). As Campbell points out, whilst there is clearly a sense in which spatial experience is egocentric, it would be wrong to think that this means it is best captured in terms of relational notions such as ‘to the right of me’ or ‘to the left of me’. As he says, ‘in stating the spatial content of vision, we do not seem to need these relational notions. We do not need the general conception of something’s being to the left or right of an arbitrary subject’ (ibid., p. 128). Instead, the spatial content of experience is more appropriately stated by using monadic notions such as the notion of something’s simply being ‘to the right’, or ‘to the left’. The idea here is that indexicals like ‘I’ or ‘here’, which fill the second argument place in relational notions, come into play only where there can be a question, say, as to whether it is me an object is to the left of, or someone else. The way in which objects are presented in experience, by contrast, leaves no room for such a question — as Campbell (ibid., p. 129) puts the point, experience ‘lack[s] generality in whose right or left can be represented’. It seems to me that the thought that we need tensed notions (i.e., temporal indexicals) to capture the content of temporal experience is in fact analogous to the thought that the spatial content of experience should be characterised in spatial relational terms. Temporal experience also ‘lacks generality’ in the sense that it simply seems to leave no room for the question as to when the experienced events are happening in a way that would allow for different answers. Thus, temporal indexicals need not come into play when capturing the content of experience; that content can be captured without saying that it presents us with events as unfolding in the present or “now”.

\textsuperscript{25} The point here is specific to the timing of actions, i.e., when they occur. There will be other temporal aspects of my action that do need an explanation in terms of features of the content of my experience, even on the molecularist’s picture, such as the direction in which I move my hand, or the speed at which I do so. But, on the view I am proposing, the relevant features of the content

\textsuperscript{26} Again, there is an analogue here to considerations Campbell (1998) has put forward regarding the spatial content of experience. Arguably, we do not need to appeal to relational spatial notions to capture the explanatory role of experience for action because it is de facto the same subject who has the experience and is acting on the basis of it, and experience and action share the same coordinate system (involving locations specified in monadic spatial terms). I can pick up an object that I see on the right by reaching to the right, without in either case having to consider whose right it is. Similarly, it seems to me, we can capture the role experience plays in the timing of actions without using tensed notions because it is de facto the same period of time over which both the experience and the action are unfolding.

\textsuperscript{27} The threefold distinction here is somewhat parallel to a distinction drawn in some semantic theories that conceive of tenses as operators. On such
kind of content (i.e. tensed content) that marks experience off from the mere possession of information, but the fact that experience itself is an occurrent phenomenon.  

6. Primary and secondary quality accounts of temporal phenomenology

At the beginning of this paper, I distinguished between the issue as to whether what I called a tensed or a tenseless account of temporal experience is correct, and the issue as to whether the A-theory or the B-theory of the metaphysics of time is correct. Yet, recent discussions about the A- or the B-theory do in fact often make use of considerations regarding temporal experience, i.e., connect those two issues. Even though, for the purposes of this paper, I want to try and remain neutral regarding the debate between A-theorists and B-theorists, I wish to end by giving a brief sketch of how my argument in this paper might be thought to have an impact on one aspect of how this debate is conducted.

Very crudely speaking, A-theorists maintain that tenses, i.e., the distinctions between past, present, and future, mark out a distinction that exists in objective, mind-independent reality. One prominent argument in favour of the A-theory has it that we can point to certain features of temporal experience to support the view that that theory is correct. Here is a recent, not entirely neutral, characterization that Callender gives of the type of argument that I have in mind:

Contemporary analytic philosophers of time [who favour an A-theory typically point in a perfunctory way to various stock mental experiences as a justification of their byzantine metaphysical systems. One is told that we feel time pass or that the present is sensed as special—as if we know exactly what that means—and that we can only explain this through a tensed metaphysics. (Callender, 2008, p. 340)

Just after this passage, Callender says: “It’s time detensers [i.e., B-theorists] stand up for themselves and challenge the claim that experience favours tenses” (ibid.). As his own words make clear, however, there seem to be two, quite different ways in which this challenge might proceed. One might either deny that the idea that “we feel time pass or that the present is sensed as special” is phenomenologically adequate; or one might agree that it is, but offer an explanation of how experience can have that phenomenology that is compatible with the idea that reality itself is just as the B-theorists have it.

More schematically, we might characterize the situation as follows:

| Theories, the tensed/tenseless distinction is one that applies on the level of full sentences: the truth-value of tensed sentences varies over time, whereas the truth-value of tenseless sentences does not. What tense operators themselves modify, however, (at least in the most basic case) is not itself a full sentence, and thus falls outside the scope of the tensed/tenseless distinction. Rather, it is an expression that has a semantic value akin to a predicate of times. Cf. Evans, 1985, pp. 353ff.; Richards, 1982; Heny, 1982. |
| 28. This also explains how our experience is different from the way time is conceived of by a hypothetical being ‘outside time’ (which is an issue one anonymous reviewer pressed me on). What makes my experiences experiences of particular events is, in part, to be explained by the fact that my experiences themselves happen in time, and that I have those experiences when I do. What would make the thoughts of a hypothetical being ‘outside time’ (if some such thing is conceivable) thoughts about particular events would obviously have to be something different, such as, for instance, those thoughts employing a coordinate system involving dates in which events could be located. |
| 29. As one anonymous referee has persuaded me, though, there are at least two specific versions of the A-theory that this neutrality probably can’t extend to, even if others may be compatible with the account of temporal phenomenology I have put forward. Arguably, presentism has the consequence that there are no such things as processes, at least in the sense required by molecularism about temporal experience. Thus, presentism seems incompatible with molecularism (a point also noted by Dainton, 2008, p. 380). Secondly, there have been A-theorists who have claimed that tenseless terms such as ‘before’ and ‘after’ are to be analysed purely in terms of tensed ones. Typically, the suggestion here has been that what it means for A to happen before B can be spelled out in terms of a disjunction: either A is past and B present, or A is past and B future, or A is present and B future, etc. On such a view, the claim that perceptual experience presents us only with before/after relations would seem to have the rather unattractive consequence that the content of such experience is a disjunction. |
The argument for A-theory that Callender alludes to claims that there is a sense in which experience, on the face of it, presents us with a world which is just as the A-theorist has it, i.e., a world containing tenses, and that the best explanation for this is that the world does contain tenses. We might call this a primary quality account of temporal phenomenology, or rather a tensed version of such an account. With a few exceptions, 30 the predominant way in which B-theorists have opposed this view is by adopting what we might call a secondary quality account of temporal phenomenology, or more precisely, an error-theory version of such an account. Such an account actually agrees with the A-theorist on the phenomenology of experience, but disagrees with the A-theorist’s explanation of how that phenomenology arises. The general strategy, roughly speaking, has been to try and unmask tensed features of experience as something akin to secondary qualities—i.e., features that enter the content of our experience because of our own psychological make-up, rather than because of the way the world itself is.

If the argument I have presented in this paper is along the right lines, it suggests that this strategy is misguided, at least as far as perceptual experiences of succession, movement, etc. are concerned. I have argued that temporal experiences, in this sense, are best seen as having a content that is tenseless. Thus, the most straightforward rejoinder to the A-theorist’s argument would be to put forward a tenseless version of a primary quality account of temporal phenomenology. On such an account, perceptual experience, on the face of it, presents us with a world that is just as the B-theorist has it, i.e., a world containing only temporal relations of precedence and simultaneity, and the best explanation for this is that the world contains only temporal relations of precedence or simultaneity. It is, in other words, the A-theorist who faces the challenge to explain why the contents of perceptual experience do not accurately reflect the reality that, according to the A-theorist, is being experienced. 31

30. See, e.g., the first three authors mentioned in footnote 4.
31. What originally prompted me to write this paper was an invitation from Julian Kiverstein to contribute to a workshop on Consciousness and Time in

References


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