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Temporal experience and the philosophy of perception

Christoph Hoerl

Abstract:

In this chapter, I discuss some ways in which debates about temporal experience intersect with wider debates about the nature of perception in general. In particular, I suggest that bearing in mind some general questions about the nature of perception can help with demarcating different theoretical approaches to temporal experience. Much of the current debate about temporal experience in philosophy is framed in terms of a debate between three specific main positions sometimes referred to as the *extensional model*, the *retentional model* and the *cinematic model*. It is typically assumed that the differences between these three models are obvious. Yet, on closer inspection, it turns out to be surprisingly difficult to make out what exactly distinguishes the cinematic model from the extensional one, on the one hand, and from the retentional model, on the other. I criticise some existing ways in which the models are sometimes demarcated from one another, before suggesting that the differences between the three views become clearer if the debate between them is seen as turning on contrasting pictures of the nature of perceptual experience they embody.

Temporal experience and the philosophy of perception

As attested to by the multifarious contributions to this handbook, temporal experience has become a particularly vibrant research area in recent philosophy. The growth (or rather resurgence) of interest in this topic is arguably fuelled, at least in part, by the hope of correcting a distorted picture of the nature of conscious experience that results from focusing only on experiences of static states of affairs, as much existing work on consciousness in effect does.¹ There is a growing consensus that getting it right about the nature of conscious experience requires giving an account of its temporal dimension; ignoring that temporal dimension means missing out on some of the most fundamental features of consciousness. In this respect, recent work on temporal experience can be seen to be animated by an intuition which can already be found in Husserl, who calls the analysis of time-consciousness “the most difficult of all phenomenological problems” (1893-1917, p. 286), but also “perhaps the most important in the whole of phenomenology” (ibid., p. 346).

Interestingly, if this intuition is along the right lines, it also, in turn, imposes something like a meta-philosophical constraint on philosophical approaches to temporal experience: The kind of explanatory account of our perceptual abilities they provide should also, at the same time, deliver an answer to the question as to *why* the temporal dimension of consciousness is of special relevance when it comes to accounting for its nature. Part of my aim in this chapter, ultimately, is to suggest that

¹ Even this last claim is perhaps not strong enough, because experiences of static, i.e. unchanging, scenes, too, have a temporal dimension to them, in so far as we experience them as unchanging *over a period of time*.

some approaches to temporal experience may fare better in meeting this meta-philosophical constraint than others.

However, my main focus will be on a second way in which work on temporal experience intersects with wider debates about the nature of conscious perceptual experience in general, even though this may not necessarily be recognized by the relevant authors themselves. Much of the current debate about temporal experience in philosophy is framed in terms of a debate between three specific main positions sometimes referred to as the *extensional model* (or *extensionalism*), the *retentional model* (or *retentionalism*) and the *cinematic model*. It is typically assumed that the differences between these three models are obvious. Yet, on closer inspection, it turns out to be quite difficult to make out what exactly distinguishes the cinematic model from the retentional model, on the one hand, and from the extensional model, on the other. In what follows, I will criticise some existing ways in which the models are sometimes demarcated from one another (e.g. in terms of the notion of ‘diachronic unity’, or of a distinction between ‘memory’ and ‘retention’), before suggesting that the differences between them become clearer if they are construed as embodying contrasting pictures of the very nature of perceptual experience.

1. Models of temporal experience: Picturing the differences

An initial, crude, characterization of each of the three main models of temporal experience might run as follows. As the name indicates, the cinematic model takes our perceptual system to operate in a way that is akin to the way a cinematic camera works: Just as a movie consists of a rapid succession of ‘still’ or ‘static’ images, perceptual consciousness consists of a succession of individual experiences, none of which is itself an experience of succession. In other words, we cannot, strictly

speaking, *perceive* instances of succession and change in the way we can, e.g., perceive colours. Rather, our awareness of succession and change has to be explained in some other way. Or so defenders of the cinematic model think. Both retentionalists and extensionalists, by contrast, do think that we can be directly perceptually aware of instances of succession and change. Retentionalists explain this awareness in terms of the idea that, whilst perceptual experiences are realized at a moment in time, they encompass not just what happens at that moment, but also a short stretch of what is by then already in the past. (That is, a portion of the past is itself ‘retained’ within the very experience – hence the name.)² Extensionalists, by contrast, deny that there can be any such thing as perceptual awareness of the past (just as defenders of the cinematic model do), and instead appeal to the idea that experience itself unfolds over time, and that individual experiences can extend through a period of clock time, in order to account for our perceptual awareness of succession and change.

On the face of it, this seems to give us three fairly clearly demarcated theoretical positions. Yet, one only has to take a closer look, for instance, at the diagrams used by Barry Dainton to illustrate each of them in the entry on temporal consciousness in the *Stanford Encyclopedia of Philosophy* (Dainton, 2010) to realize that matters may not be quite so straightforward.³

² On some versions of the view – notably Husserl’s (1893-1917) – experience also encompasses a future-directed element. I will set this aside for present purposes.

³ I do not mean the following remarks as a criticism of Dainton. I can’t think of any *better* way of illustrating the three models either, and I frequently use Dainton’s diagrams in my own teaching. My point, in some sense, is that besides trying to illustrate the three models, what they also illustrate is the difficulty in getting a clear fix on where exactly the differences between them lie.

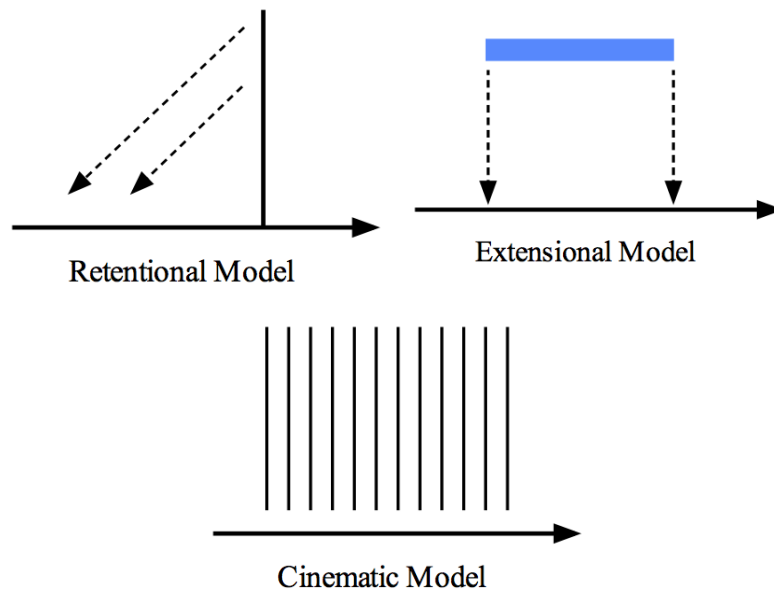


Figure 1. The three main conceptions of temporal consciousness (from Dainton, 2010)

Take, for instance, the difference between the cinematic model and the retentional model, as illustrated here. As already indicated, according to the cinematic model all that happens over time, in as far as perceptual experience is concerned, is that we have a succession of individual momentary experiences, each of which is an experience of what is the case at the moment we have the experience.⁴ Something like this succession of individual experiences, I take it, is what the vertical lines in the diagram illustrating the cinematic model represent. But whilst defenders of the cinematic model will want to insist that, perceptually speaking, all we are ever aware

⁴ I will speak in this way even though I think one should allow for a version of the cinematic model on which perceptual experience has something akin to a shutter speed. That is to say, the ‘moment’ taken in by each individual experience in fact consists of a very brief interval (otherwise it is unclear how anything like awareness of sounds or even of colours could ever get off the ground, because the physical phenomena that allow us to perceive them take some time to register on our senses). Just as with the individual images composing a film, however, this does not mean that those experiences themselves convey any temporal information.

of is how things are at a moment in time, they can of course allow that we also have a way (or ways) of becoming aware of things that go on over a period of time. For instance, at each moment in time, we are not just aware, through perceptual experience, of how things are at that moment in time. We are also at the same time aware, through memory, of how things were prior to that time, and can therefore have an awareness, e.g., of change and succession. In other words, to each of the vertical lines in the above diagram depicting the cinematic model, another arrow pointing backwards could be added to represent the awareness the subject has at that time, through memory, of how things were before. But that would of course yield a diagram that looks just like the diagram that is supposed to illustrate the retentional model. (The fact that that diagram only contains one vertical line is simply because, in contrast to the other two diagrams, it is drawn in a way that singles out only what happens at one moment in time, but more such vertical lines – with corresponding backward-pointing arrows – could be added to make it a more complete picture.) So, whilst the diagrams depicting the retentional model and the cinematic model look quite different, it in fact turns out that the differences between them are mainly due to what appear to be relatively arbitrary-looking choices about what is included and what is left out in each of them.

Now let us also consider the way the extensionalist model and the cinematic model, respectively, are illustrated in Figure 1. One thing the diagrams might be seen to suggest is that the distinction between the two models turns on something like a continuity vs. discreteness contrast – that the extensionalist model thinks of experience as a continuous process, whereas the momentary experiences the cinematic model conceives of are separated from one another with gaps between them. Again, though, it is not obvious that this is the crucial contrast. The essence of

the cinematic view – that experience, strictly speaking, is only ever of momentary states of affairs – seems compatible with the possibility of gapless transitions between individual such momentary experiences; conversely, versions of extensionalism are conceivable on which temporal experience is quantized, with each extended experience being made up of a sequence of experiential phases with brief periods of unawareness between them.⁵ Perhaps the only obvious difference between the two models captured by the diagrams is that the extensionalist thinks of what goes on over an extended period of time as ‘one experience’, whereas the defender of the cinematic model will insist that it is necessarily a succession of different ‘momentary’ experiences. As we will see, though, it is quite difficult to pin down what the substance of the disagreement, thus put, is supposed to be.

Clearly, highlighting these issues would be of relatively little interest if they concerned merely the fact that diagrams are of limited help when it comes to explaining the differences between the three models of temporal experience. I think a case can be made, though, that they ultimately trace back to some substantive questions regarding the demarcation between those models themselves. In what follows, I want to make a case for the following two claims in particular: (1) The challenge of demarcating retentionalism from the cinematic model ultimately resides in the question as to what distinguishes retentionalism from one particular version of the cinematic model already alluded to, which I will call the *memory theory*. (2) The challenge of demarcating extensionalism from the cinematic model ultimately resides in the question as to what distinguishes extensionalism from another version of the

⁵ Whilst this may be an unconventional way of thinking about the extensional model, it is in fact one that may be more in line with perceptual psychology. See, e.g., the evidence for discrete temporal sampling in visual perception discussed in Busch and VanRullen (2014).

cinematic model, which I will refer to as the *resemblance theory*. I will then go on to argue that, in each case, one way of responding to the relevant challenge of demarcation is by conceiving of the respective theories as embodying a different understanding of the nature of perceptual experience in general.

2. Two variants of the cinematic model, part 1: The contrast with retentionalism

Probably the most prominent proponent of a cinematic model of temporal experience is Thomas Reid,⁶ who writes:

It may here be observed, that if we speak strictly and philosophically, no kind of succession can be an object either of the senses, or of consciousness; because the operations of both are confined to the present point of time, and there can be no succession in a point of time; and on that account the motion of a body, which is a successive change of place, could not be observed by the senses alone without the aid of memory (Reid 1785, p. 270).

As he goes on to explain in more detail:

[S]peaking philosophically, it is only by the aid of memory that we discern motion, or any succession whatsoever: We see the present place of the body; we remember the successive advance it made to that place. The first can then

⁶ Other defenders of versions of the cinematic model of temporal experience are Charles A. Strong (1896), Gilbert Plumer (1985), Francis Crick and Christoph Koch (2003), and Philippe Chuard (2011).

only give us a conception of motion, when joined to the last (Reid 1785, p. 271).

Reid is here putting forward what I will call the *memory theory* version of a cinematic model of temporal experience, according to which our awareness of temporally extended goings-on (at least if it is to be awareness of them *as such*) has to involve a combination of perceptual experience and memory.

A view of essentially this kind was also what Husserl (1893-1917) ascribed to Brentano, and in response to which Husserl developed his own retentionalist model of temporal experience.⁷ A key impetus behind Husserl's work on time-consciousness is his realization that the memory theory faces several deep problems, which his retentionalist model seeks to overcome. Where Husserl agrees with the memory theory is in the thought that an awareness of temporal goings-on must involve a past-directed element alongside an awareness of the present. Yet, to mention just one problem with the memory theory, it is unable to explain the apparent phenomenological difference between two quite different ways in which succession and change can figure in our awareness, as exemplified by the contrasting experiences we have when we look at the hour hand and the second hand of a clock, respectively. Both hands are in fact moving (supposing all is working properly), and in the case of the second hand, we are *aware of it moving* when we look at it. In the case of the hour hand, by contrast, we can at best become *aware that it has moved*; we cannot discern

⁷ Husserl's critique is largely based on his notes from a lecture course Brentano gave in 1885/86. As Nicolas de Warren (2009, p. 55) discusses in detail, in taking these as his source, Husserl is either "oblivious or indifferent to the progression in Brentano's thinking" in subsequent years.

its movement just by looking at it.⁸ Thus, it seems we need an account of two separate ways in which awareness of the present can interact with past-directed awareness to yield awareness of succession and change, but the memory theory provides for only one.⁹

Husserl thinks the right way to respond to problems with the memory theory such as this is by postulating a second form of past-directed awareness distinct from memory. This is what he calls *retention*. The direct perceptual experience of succession and change is different from cases in which we have to draw on memory to become aware of succession and change, in virtue of the fact that, in the former

⁸ Plumer (1985), who endorses a version of the cinematic model, recognizes that it is committed to denying that there is a genuine phenomenological difference here, and he somewhat heroically maintains that there is indeed no such difference. As he says (1985, p. 28f.), “[Broad] claims that he cannot see either the minute- or the hour-hand moving. [...] I suspect he did not look at them very long (who does?).” Note that ‘see’ is supposed to be understood in a loose sense here, Plumer’s main claim being that there is no significant phenomenological difference between this case and that of the second hand. As he goes on to say, strictly speaking “no matter what hand you are looking at, at an instant you are *seeing* the hand where it is at an instant and *remembering* it where it has been for however long you looked. Depending on how fast the end of the hand is moving, you may be able to notice quickly (through sensation and memory) a difference in position, or a longer look may be required” (ibid. p. 28).

⁹ Even more prominent in Husserl’s own writings is (what he takes to be) another problem with the memory theory. Memory, he argues, presupposes a capacity for temporal experience. When we recollect events in the past, what we recall are themselves things that go on over time – we recall the plane accelerating before take-off, or the ball flying towards the window. But if recollection presupposes experiences of such things to be recalled, it cannot explain our capacity to have such experiences. Note, though, that Husserl would need to have some explanation why a similar problem doesn’t also arise for his retentionalist model of temporal experience, and then it is not clear why the memory theorist can’t avail herself of an analogous explanation.

case, an element of past-directed awareness is built into the very perceptual experience itself. In retention, we are directly aware of a portion of the past itself, as part of the experience, in contrast to the more indirect awareness we have of the past when we recollect past experiences. Or so Husserl thinks.

Thus, going by Husserl, it looks as though the distinction between the cinematic model of experience (at least in the guise of the memory theory) and the retentional model turns crucially on the difference between the concepts of memory and retention. Yet, how much of a genuine explanation of the difference between the two models does this give us? As Dainton complains (with some justification, I think):

This is all well and good, but [...] we need to ask: to what extent is the explanation merely verbal rather than real? Husserl is *stipulating* that retentions have precisely the properties they need to have for his purposes. Although they occur in the present, they directly intend the immediate past, the past and nothing else. But how is this possible? [...] Husserl tells us what retention is not, and what it does, but provides no explanation of how it accomplishes this. [...] Husserl gives us a ‘new word’, but nothing more.” (Dainton 2000, pp. 155f.)¹⁰

Husserl wants to explain how his account is different from the memory theory by appealing to the distinction between retention and memory, and in particular the thought that retentions are part of the same ‘act of consciousness’ as our perceptual awareness of the present, and provide for a direct awareness of the past alongside it,

¹⁰ The reference to a ‘new word’ is meant to echo one of Husserl’s own criticisms of Brentano.

whereas recollection and perception each constitute a separate act of consciousness. Yet, this can easily look like a mere *re-description* of the complaint that the memory theory fails to account for our apparent ability to become directly aware of instances of succession and change within perceptual experience itself. For a genuinely explanatory alternative account of temporal experience, more seems required.

3. Two variants of the cinematic model, part 2: The contrast with extensionalism

Viewed at some level of abstraction, problems remarkably similar to the problems with Husserl's attempt to distance his own retentionalist model from the cinematic model of temporal experience also plague some existing attempts to demarcate extensionalism from the cinematic model. Recall that one of the few things the diagrams illustrating the cinematic and the extensionalist model in the *Stanford Encyclopedia of Philosophy* can be seen to show is that the extensionalist will think of what goes on over an extended period of time as 'one extended experience', whereas the defender of the cinematic model will insist that it is necessarily a succession of different 'momentary' experiences. Just as with Husserl, it thus appears that the crucial issue at stake is whether something other than our awareness of what is present at one moment in time can form part of one and the same experience – that something other being, for Husserl, an awareness of what is just-past, and for the extensionalist, an awareness, at other moments in time, of what is present then.

Once again, though, it can be hard to get a handle on what exactly the substance of the debate is supposed to be, if it is framed in terms of this issue. In the context of the debate between extensionalism and the cinematic model, this issue is often conceived of in terms of the question as to whether there can be a relation of 'diachronic unity' between non-contemporaneous experiences (see, e.g., Chuard's

(2011) discussion of Dainton (2000)). Yet, just as with Husserl's attempts to distinguish the concept of retention from that of memory, the notion of diachronic unity is hardly free of obscurities.¹¹ Moreover, it is once again easy to get the feeling that the appeal to the notion of 'diachronic unity' simply amounts to a description, in other words, of the distinction the extensionalist wants to draw between the idea of one temporally extended experience and the idea of a mere succession of discrete experiences, rather than providing an explanation of what the difference between the two consists in.¹²

That there should be any difficulty in distinguishing between the cinematic model and extensionalism might perhaps at first seem surprising, given what has been said so far about the cinematic model. Note that, unlike with retentionalism, it seems that there isn't even a *prima facie* problem distinguishing between extensionalism and the memory theory. Awareness of succession and change, according to the extensionalist, does not require any backward-looking element at all – whether conceived of as retention or memory. As our temporally extended experiences unfold, she will say, all we are perceptually aware of are events as and when they happen. But if extensionalism is so obviously different from the memory theory, how can there

¹¹ On this, see also Tye (2003, p. 107), though see also Hoerl (2013b sec. 6) for a critical discussion of Tye's own appeals to the notion of 'unity'.

¹² On this, see also Phillips (2014), pp. 149f. Instead of appealing to the notion of unity, Phillips proposes that what should be considered distinctive about the extensionalist's view is that it involves a commitment to the claim that "there are certain durations of experience that are *explanatorily* or *metaphysically* prior to their temporal subparts" (ibid., see also Soteriou, 2007, for related ideas). The characterization of extensionalism that I outline below is intended to be compatible with the idea that extensionalists should be seen as being committed to a claim along those lines. However, it focuses on other issues regarding the dialectic between extensionalism and its rivals.

nevertheless be a problem of demarcating it from the cinematic model of temporal experience?

It is interesting to note that, in contrast to Reid, there are some defenders of the cinematic model who maintain that it is much less in conflict with the kinds of phenomenological considerations that motivate its rivals than it might appear at first sight.¹³ John Locke, for instance, seems to explicitly endorse a version of the cinematic model when denies that “we get the notion of succession [...] from our observation of motion by our senses” (Locke, 1690, bk. II, ch. XIV, §6). Instead, when we observe an object in motion, all this produces in us, according to him, is a “train of successive ideas” (ibid.), each as of the object in a different location. Yet, just moments later he seems to happy to talk about perceptions of motion, when he points out that they require the relevant motions to occur at a certain speed, and that some objects, such as the shadows of sundials, move too slowly for their movement to be perceived (see ibid., §11).¹⁴

What I want to suggest, in short, is that the reason why it can be difficult to get clear about the difference between the extensionalist and the cinematic model is the same as the reason as to why it can come to seem that there isn’t much of a conflict between the cinematic model and our ordinary phenomenological intuitions.

Consider, for instance, the following passage from Philippe Chuard, in which he tries

¹³ Reid is explicit that the memory theory version of the cinematic model that he advocates implies that we are systematically in error about the phenomenology of experience, and that his account “seems to contradict the common sense and common language of mankind, when they affirm that they see a body move, and hold motion to be an object of the senses” (Reid, 1785, p. 270).

¹⁴ See also the quotation from Plumer in footnote 8. As I pointed out there, despite explicitly endorsing a version of the cinematic model, Plumer is happy to talk about ‘seeing’ the hands of a watch moving.

to argue that the cinematic view – which he refers to as ‘atomism’ – can account for the seeming continuity of conscious experience.

[C]onsider a succession of instantaneous sensory experiences of the sort atomists countenance. It’s possible, if atomism is true, that small gaps separate adjacent experiences in the succession — short intervals where no sensory experience occurs, so that the succession is really discontinuous. Atomists can perfectly acknowledge that it seems as though there aren’t any such gaps — the succession seems smooth and continuous. One putative explanation for this is that the gaps are simply too short to be noticed: they fall below some relevant threshold for accessibility (Chuard 2011, p. 11, see also *ibid.*, p. 17).

I take it that the explanatory issue Chuard is trying to get at is something like the following. According to the cinematic model, the experiential process itself consists of ‘a succession of instantaneous sensory experiences’ with gaps between them (or so we are to assume for the sake of the argument). Yet, when we look at an apple rolling across a table, for instance, we do not have an impression of seeing the apple first in one place and then, after an experiential gap, seeing it in another place. We seem to see it the whole time, and see it rolling continuously during that time. How can these two facts be reconciled with one another?

Chuard’s answer is that the gaps in experience are too small to be noticed. Thus, the transitions between individual experiences, and therefore also the transitions of the apple from one position to another, seem continuous. We have reconciled the experience of continuity with the *de facto* discontinuous nature of the experiential process.

Note that the crucial idea that does the work here is that of an apparent *resemblance*, due to limitations in our introspective capacities, between our stream of experiences and the putative object of awareness – the movement of the apple. Because of these limitations in our introspective capacities, the succession of our own experiences resembles a smooth succession more than the discontinuous one it actually is, and this, it seems, is also what is supposed to explain how we can appear to be aware of the movement of the apple in the seemingly continuous way we are – even though the movement of the apple itself is not, strictly speaking, an object of perceptual experience, because all we have is a mere succession of discrete experiences of it occupying a succession of different places.

In general, I want to argue that the reason why it can look difficult to demarcate between the cinematic model and the extensional model of temporal experience is that, apart from the memory theory, the cinematic model can also come in the guise of what I will call the *resemblance theory* of temporal experience. On this theory, whilst the stream of consciousness is made up of the type of succession of momentary perceptual experiences envisaged by the cinematic model, none of which are themselves experiences of succession or change, we can nevertheless become aware of succession and change in the seemingly direct way we do because the stream of such experiences is itself successive and changes over time in a way that resembles and reflects the changes in the objects we perceive.

Thus, if the extensionalist model of temporal experience is to be genuinely different from the cinematic one, we need an answer to the question as to just how it differs from the resemblance theory. Similarly, as I have argued, we need an answer to the question as to how the retentionalist model of temporal experience differs from the memory theory in order to get clear about how the retentionalist model differs

from the cinematic one. To some extent, existing debates between proponents of the respective models already implicitly acknowledge these points, in so far as they turn on questions about the unity of experience over time, or alleged phenomenological differences between retention and memory. As I have also sought to bring out, however, framing the differences between the three models in this way runs into danger of making the disputes between them look like mere verbal ones. In the next section, I will try a different tack.

4. An alternative attempt at demarcation

“[N]o kind of succession can be an object either of the senses, or of consciousness; because the operations of both are confined to the present point in time, and there can be no succession in a point in time” (Reid, 1785, p. 270). This, we saw, is how Reid motivates his endorsement of the cinematic model of temporal experience. But why exactly does Reid think that the operation of the senses ‘is confined to the present point in time’, and how exactly is that claim meant to bear on the question as to whether we can perceive succession? I think it is plausible that an important background assumption in play in Reid’s argument is the particular view of the nature of perception he holds.

Reid’s view of the nature of perceptual experience is plausibly interpreted as a version of what Bill Brewer has termed the ‘object view’ of perception. According to this view, as Brewer explains, “the most basic characterization of perceptual experience is to be given by citing and/or describing certain *direct objects* with which the subject is *acquainted* in such experience” (Brewer, 2011, p. 16). On such a view, the relevant direct objects – on some versions, mind-independent physical entities, on others mind-dependent entities such as sense-data – are themselves constituents of the

experience, and they are what account for the specific nature of individual experiences.¹⁵ The acquaintance relation, by contrast, in virtue of which the relevant objects figure in our experience, is in an important sense an entirely generic relation. There is a basic, binary, distinction to be drawn between standing, or not standing, in such a relation to a given object. But beyond that, for any object to which I do stand in such a relation, I stand to it in the same relation.

This type of approach to the nature of perceptual experience is also sometimes referred to as *the relational view of experience*.¹⁶ Such a relational view does indeed seem to be committed to the idea that perceptual experience is ‘confined to the present point in time’, both in the sense that we can only be perceptually aware of events that presently impinge upon our senses, and in the sense that we can’t experience those events as anything other than present.¹⁷ There is an intuitive sense in which past events are simply no longer around to figure as a constituent of our

¹⁵ Reid is typically interpreted as a direct realist, i.e. as holding that it is mind-independent objects themselves that figure in experience in this way, though matters are complicated by the fact that he also assigns ‘sensations’ a crucial role in perception.

¹⁶ See, e.g., Campbell (2011). The term ‘relational view’ is typically reserved for direct realist versions of the general approach, i.e. ones on which perceptual experience is most basically conceived of as a relation to mind-independent entities. Brewer’s term ‘object view’, by contrast, is meant to be neutral on the question as to whether the relevant entities are mind-dependent or mind-independent. The latter question is also tangential to my concerns in this paper.

¹⁷ The finite speed of, e.g., sound or light, does of course imply that, strictly speaking, events that figure in perceptual experience in fact happened some time ago – some of them even a considerable amount of time ago. The point here is that those events are, at any rate, not experienced *as past*. For present purposes we can remain neutral as to whether this implies that our experiences of them are therefore in some respect illusory, or whether experience is should in fact be seen as being neutral about the timing of distal events (in contrast to the timing of those events being registered).

experience in the way envisaged by the relational view. For us to continue to experience events after they have ceased to impinge on our senses, and to experience them as something other than present, it would seem that our perceptual system itself would have to modify the way in which they are experienced from how they were experienced when we first encountered them in experience, which is at odds with the idea that its sole role is to put us in a relation of acquaintance with objects of experience, and that it is these objects that account for the specific nature of our experience. If perceptual experience is a matter of standing in a generic relation of awareness or acquaintance to items that serve as the objects of experience, any past such items, such as past events, are ones we have already stood in such a relation to in the past, when they happened, and we now stand in that relation to present such items instead.¹⁸

For much the same reasons, I believe, a retentionalist account of temporal experience has to involve an approach to the nature of perceptual experience that differs from the relational or object view. The main such alternative in the literature is now typically referred to as *the representational view of experience*. Brewer, who also

¹⁸ Recent defenses of the object or relational view often stress that the relation in question should be conceived of as a *three-place* relation between the perceiver, the scene perceived, and a ‘standpoint’ from which the perceiver perceives the scene (Campbell, 2011). This standpoint is supposed to be what accounts for the obvious differences there can be, for instance, between experiences of the same object seen from different spatial viewpoints, or between experiences of the same object in different sense modalities. Against this background, a version of the relational view might be thought conceivable which allows for the idea that events can be experienced ‘as past’ as well as ‘as present’, where the difference between the two lies with one’s *temporal* point of view on them. Some of the remarks above are meant to indicate what seem to me to be important disanalogies between time and space that cast doubt on the viability of such a position, though this is an issue that deserves a more detailed treatment than I can give it here.

calls this the ‘content view’, speaks of a view according to which “perceptual experience is most fundamentally to be characterized by its *representational content*, roughly, by the way it represents things as being around the perceiver” (Brewer, 2011, p. 54). Perceptual experience, on this view, is a matter of the perceiver being in a certain kind of representational state, where this is to be conceived of as a state with a content in the sense of a set of veridicality or accuracy conditions.¹⁹ The work of the perceptual system, essentially, is to put the subject into a state of this kind.

Adopting such a view of perception, it becomes possible to see how perceptual experience can encompass a past-directed element as envisaged by the Husserlian notion of retention.²⁰ Even though past events can no longer be the objects of sensory experience as conceived of by Reid, the subject can of course now still be in a state with a representational content in which these events figure as just-past.

What I am suggesting, then, is that the retentionalist’s opposition to the cinematic model (at least as it is found in thinkers such as Reid) is at least in part a matter of the retentionalist rejecting the general approach to perceptual experience that informs that model and adopting a representational view of experience, which takes as basic the idea of perceptual experiences as having a content in the sense of veridicality or accuracy conditions. More to the point, the veridicality or accuracy conditions of perceptual experience, as the retentionalist conceives of them, always include conditions that range over what has just been as well as what is present. That,

¹⁹ Siegel (2010) provides a detailed discussion of this approach to the nature of perceptual experience.

²⁰ In Hoerl (2013a), I offer an interpretation of Husserl according to which certain changes in his theory over time can be explained in terms of the idea that, in the course of developing his retentionalist view of temporal experience, he abandons an earlier theory of experience sometimes referred to as the ‘apprehension – content’ schema, and comes to adopt a form of representationalism about experience instead.

the retentionalist will say, is what is required for instances of succession and change to be able to figure in perceptual experience.

This gives us a way of understanding the dialectic between the cinematic model and the retentionalist model that does not turn on the kinds of difficult-to-make-precise claims about phenomenological differences between retention and memory that feature heavily in the existing literature on the retentional model. It also helps us see better, I think, what precisely unites Husserl's retentionalism with other variants of retentionalism put forward by authors such as Rick Grush (2005, 2006) and Geoffrey Lee (2014b), some of whom explicitly cite Husserl as their inspiration, but whose accounts also significantly diverge from Husserl in some of the details. What they all share is the attempt to account for temporal experience within the general framework of a representational view of perceptual experience, by arguing that experience has a content that encompasses more than what happens at an instant.

What, then, of the other demarcation problem, that of explaining what the difference consists in between the extensional model and the cinematic model? I have said that the extensionalist, if she is to clarify how her position is genuinely different from the cinematic model, needs to distance herself from the idea that extensionalism amounts to a version of the resemblance theory of temporal experience. In fact, such a need plausibly also arises for another reason. It is, I think, evident from the frequent accusation that extensionalists face that they are committing a vehicle/content confusion.

The "vehicle/content" terminology (in the relevant sense) is again one that belongs specifically to one of the two general approaches to perceptual experience that I distinguished above, viz. the representational view of experience. As we saw, perceptual experience, according to this view, is a matter of the subject being in a

certain state with a representational content in the sense of veridicality or accuracy conditions. The distinction between vehicle and content, in this context, is typically used to emphasise the distinction between the properties of the state that does the representing – i.e. the vehicle – and the properties (of the objects that are being perceived) that are being represented by the state – i.e. its content. According to the representationalist, the latter properties are fixed by some of the former, but it is nevertheless important not to confuse the two.

To commit a vehicle/content confusion is to assume, simply because of a failure to distinguish between vehicle and content, that what fixes the properties a mental state or event represents is that the mental state or event itself possesses the same properties. This latter assumption is of course one that is implicit in the resemblance theory, according to which we become aware of change in the world, because it produces in us a succession of experiences that is itself changing. The idea, in other words, is that the mechanism by which the content of temporal experience is fixed is resemblance: experience is accurate in so far as it itself, as an occurrence with a certain sort of temporal structure, resembles the temporal structure of the occurrences it is an experience of.

The idea that extensionalists endorse a version of the resemblance theory, and are committing a version of the vehicle/content confusion in doing so, is expressed by Michael Tye as follows:

Granted, I experience the red flash as being before the green one. But it need not be true that my experience or awareness of the red flash is before my experience or awareness of the green one. If I utter the sentence

The green flash is after the red flash,

I represent the red flash as being before the green one; but my representation of the red flash is not before my representation of the green flash. In general, represented order has no obvious link with the order of representations. Why suppose that there is such a link for experiential representations? (Tye, 2003, p. 90)

One strategy the extensionalist might use to respond to this passage is to treat the question at the end as a genuine rather than a rhetorical one, and offering reasons as to why temporal experience should be thought of as constituting an exception, in the sense that there are special grounds for thinking that what fixes the temporal structure of what is experienced is the temporal structure of the experience itself.²¹ This would be one way of responding to the charge that extensionalists *confuse* content and vehicle, because the claim would be that the idea of a resemblance relation between the temporal properties of experience and the temporal properties that are experienced can be argued for on independent grounds, and does not just arise from a failure to distinguish between vehicle and content.

In as far as it would saddle the extensionalist with an endorsement of the resemblance theory, though, this strategy of avoiding the charge of committing a vehicle/content confusion also carries with it a significant cost. For, as I have argued, the resemblance theory can also be interpreted as a version of the cinematic view of temporal experience, and it is at least unclear, as things stand, what sort of genuine

²¹ For a related argument that ‘time is special’, see Phillips (2014, p. 139), though he puts the argument to a somewhat different purpose. For critical discussion, see also Lee (2014a).

alternative to the cinematic view an extensionalist of the sort we are considering at the moment is proposing. Even more to the point, though, the resemblance theory of temporal experience seems to be explanatorily vacuous. As with resemblance theories of experience in general, it faces the obvious problem that it seems to presuppose what it is trying to explain. In assuming that a resemblance between temporal features of our own experience and temporal features of the world can be made to do explanatory work in accounting for our awareness of the latter, it seems to take our ability to become aware of the former for granted. For the succession of our own experiences to explain our awareness of temporally extended goings-on, it seems, we would have to have a way of becoming introspectively aware of that succession as such, i.e. not just successively become aware of each experience in turn, but become aware of their succeeding each other.²² And it is not at all clear that it is any easier to account for our introspective awareness of temporal features of our own stream of experiences than it is to account for our awareness of temporal features of the world presented in experience. In fact, we have made no progress in explaining how an awareness of succession is possible.²³

²² Note, for instance, that the passage from Chuard that I quoted in the previous section seems to imply the existence of such an introspective ability. We are being told that “the gaps [between individual experiences] are too short to be noticed: they fall below some relevant threshold for accessibility” (Chuard 2011, p. 11). Chuard doesn’t spell out the relevant notion of ‘access’ in any detail, but whatever makes it possible must be something, it seems, that can at least potentially inform us about *gaps in the transition between one experience and the next* (were those gaps larger than they typically are). As such, it is something capable of informing us not just of what is the case at one time, but also of how things unfold over time.

²³ Compare here also Ruth Millikan’s critical discussion of what she calls the ‘passive picture theory’ of perception, and her charge that it produces “a façade of understanding that overlooks the need to

I think a better strategy for the extensionalist to use in order to respond to the charge of committing a vehicle/content confusion – which will at the same time serve to distinguish her view from the resemblance theory – is to reject the representationalist assumptions on which, e.g., the argument from Tye that I quoted above is based. The charge of a vehicle/content confusion only makes sense against the background assumption of a representational view of the nature of perception. If, by contrast, we see the extensionalist as being motivated by a relational view of experience, it can be sidestepped altogether. On the relational view of experience, there is no representational vehicle the subject instantiates, the particular properties of which fix the contents of her experience. This of course does not mean that questions about the temporal properties of experience don't also arise for the relational view of experience, but they do not involve the idea of two things, the temporal properties of which can either match each other or not, as envisaged by the picture of experiences as involving both a vehicle and a content. The question for the relationalist is whether the relation of acquaintance, in which we stand to objects of experience, on her view, is most fundamentally a relation in which we stand to objects at a time, or must most fundamentally be seen as something that itself unfolds over intervals of time. As I have suggested, an extensionalist motivated by the relational view of perception will argue that we need to think the latter because we can perceive instances of succession: because the relation of acquaintance is a generic one in which we simply either do or do not stand to items, perceiving instances of succession must involve standing in such a relation to a succession of such items over time, as they succeed each other. Experiencing goes on over time, on this view, and this is why the items that can figure

give any account *at all* of the way the inner understander works, any *account* of the mechanics of inner representation” (2000, p. 112).

in experience include not just individual entities that succeed each other, but the very instance of succession in which they partake. Yet, the only sense in which this makes experience temporally structured is that such different entities can figure in it in turn.²⁴

This, then, would be a way for the extensionalist to respond to the charge of committing a vehicle/content confusion that would, at the same time, serve as a way of demarcating her view from the cinematic model in the guise of the resemblance theory of temporal experience. If what I said before about the retentional model is along the right lines, it would of course also imply that the debate between retentionalists and extensionalists, too, should be seen as being informed by a different view of the nature of perceptual experience on each side – the representational view and the relational view of perception, respectively. In concluding, I will briefly look at whether our discussion might also be able to contribute something to deciding between them.

5. Concluding remarks

I have argued that viewing debates between different approaches to temporal experience as turning on contrasting views of the very nature of perceptual experience that those approaches embody might help us to come to a better understanding of what the differences between them consist in.

²⁴ This interpretation of the extensionalist model is developed in further detail in Hoerl (2013b), where I also discuss reasons for thinking that there is a maximum period of time that individual experiences can span (which is in fact something retentionalists, too, should hold, for the same reasons). These reasons, I believe, form the substance behind the traditional notion of the ‘specious present’.

One part of my argument in which this thought has played a crucial role was in the claim that the ‘cinematic model of temporal experience’ can actually take two quite different forms. Defenders of the cinematic model are, in effect, pulled in two different directions, each implicitly motivated by a different view of the nature of perception. In its memory theory guise, it can be seen to be motivated by a relational view of experience, which views perception as a particularly direct form of contact in which we can stand to things in the world around us when they are temporally present. In its resemblance theory guise, it can be seen to be motivated by the idea that experiences constitute a representation of what they are experiences of, with the added thought that, at least in the case of experiential representations of temporal properties, the mechanism of representation is resemblance.

What I also hope to have shown is that, once the two different versions of the cinematic view are clearly distinguished from one another, it becomes obvious that neither of them constitutes a viable theory of temporal experience – the memory theory flies in the face of phenomenology, and the resemblance theory is explanatorily vacuous.

This leaves the retentional model and the extensional model as the two main contenders, which I have suggested are again best seen as embodying a representational and a relational view of experience, respectively, to demarcate them from the versions of the cinematic model they would otherwise be hard to distinguish from. How should we decide between them? At this point I wish to come back to an issue I raised at the beginning of this chapter. There I said that there is something like a meta-philosophical intuition that might be seen to be driving the recent resurgence of interest in the topic temporal experience: This is that we leave out something central to the nature of conscious perceptual experience itself if we ignore its temporal

dimension. If what I have been saying in this chapter is right, I now want to suggest, the retentionalist might be seen to face more of a difficulty when it comes to accounting for this intuition than the extensionalist does. The retentionalist model, I have suggested, is best seen as applying a representational view of experience to account for experiences of change and succession. At its most basic, what that means is that the retentional model allows temporal properties to figure in the representational content of experience alongside other properties. If this is all there is to the retentional model, though, then it is a legitimate question to ask why temporal experience should be accorded any special sort of status when it comes to giving an account of the nature of conscious perceptual experience.²⁵ If experience is construed as a matter of being in a state with a certain representational content in the sense of veridicality or accuracy conditions, why think that, amongst those veridicality or accuracy conditions, those that concern temporal properties are somehow special?

If we adopt the extensionalist model of experience, by contrast, it perhaps becomes somewhat easier to see why considerations about temporal experience might be thought to be able to contribute something quite distinctive to our overall account of the nature of perceptual experience. I have suggested that the extensionalist model is best interpreted as an attempt to account for temporal experiences within the framework of a relational view of perception. The distinctive contribution it can be seen to be making to such a view is that it shows that the relation of acquaintance is not just one in which we stand to objects of awareness at a time, but also one which

²⁵ I think this forms an important background issue behind Husserl's own struggles to come to a settled view on the nature of temporal experience, and in particular his continued attempt to reconcile his retentionalist account with the idea of a special role within experience for what he calls the 'primal impression', i.e. the awareness of what is present.

displays an essential on-going aspect – that somehow, within the general framework of a relational view of experience, we have to account for the idea of experiences as most fundamentally things that unfold through a period of clock time. As Brian O’Shaughnessy says: “Even the unchanging perception of a fixed immobilized world conceals a processive continuity, that of the perceiving itself, which is occurrently renewed in each instant [...] And this is how it is with experience as such”

(O’Shaughnessy, 2000, p. 63).²⁶

²⁶ For helpful comments and discussion, I am grateful to Elliot Carter, Ian Phillips, and members of the Warwick Mind and Action Research Centre.

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