'A Succession of Feelings, in and of Itself, is Not a Feeling of Succession'

Christoph Hoerl
University of Warwick
C.Hoerl@warwick.ac.uk

Variants of the slogan that a succession of experiences (in and of itself) does not amount to an experience of succession are commonplace in the philosophical literature on temporal experience. I distinguish three quite different arguments that might be captured using this slogan: the *individuation argument*, the *unity argument*, and the *causal argument*. Versions of the unity and the causal argument are often invoked in support of a particular view of the nature of temporal experience sometimes called *intentionalism*, and against a rival view sometimes called *extensionalism*. I examine these arguments in light of the individuation argument. In particular, I show that the individuation argument is, at least *prima facie*, neutral between those two views of temporal experience; and once the individuation argument is in place, the unity and causal argument also lose their force against extensionalism.

1. Introduction

There is a particular type of slogan, making use of the rhetorical device of a *chiasmus*,[1] which has proved especially popular amongst psychologists and philosophers writing about our experience of time. The most well-known version of the type of slogan that I have in mind is probably William James's statement, in *The Principles of Psychology*, that 'a succession of feelings, in and of itself, is not a feeling of succession'

[1] The *Oxford English Dictionary* defines a *chiasmus* as a 'grammatical figure by which the order of words in one of two parallel clauses is inverted in the other'. In the type of slogan I have in mind, the relevant words are (a) a temporal term such as 'succession', (b) a mental term such as 'experience'. Often when a slogan of this type is used, Kant is a key influence. But it is actually quite difficult to find a clear-cut example in Kant's own writings. The closest he comes is probably in the note to the preface of the second edition of the *Critique of Pure Reason*, where he writes that 'the representation of something permanent in existence is not the same as permanent representation' (Kant 1781/87, Bxli). However, in as far as Kant has in mind here the larger agenda of the Refutation of Idealism, his concerns go considerably beyond those of the authors whose versions of the slogan I quote below.

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(James 1890, Vol. I, p. 629). But other authors have provided plenty of variations on the theme, as the following examples show:

> The succession in representation is not a represented succession. (Herbart 1834, p. 133; 'representation' here translates *Vorstellung*)
>
> A changing consciousness … is not the same thing as a consciousness of change. (Strong 1896, p. 153)
>
> The succession of sensations and the sensation of succession are not the same. (Husserl 1893–1917, p. 12; 'sensation' here translates *Empfindung*)
>
> [A] succession of ideas is quite different from an idea of succession. (Paton 1929, p. 318)
>
> Obviously we must distinguish … the perception of a sequence from a mere sequence of perceptions. (Sellars 1968, p. 232)
>
> [N]o succession of awarenesses … can, by itself, account for an awareness of succession. (Miller 1984, p. 109)
>
> It has long been recognized that a succession of experiences is one thing, and an experience *of* succession is quite another. (Dainton 2008a, p. 623)

At least some of the above authors seem to think of themselves as expressing a thought that is fairly obvious and uncontroversial. As it turns out, though, it is surprisingly difficult to isolate precisely what the thought (or thoughts) at issue might be. Or so I will argue. In particular, variants of James's slogan have sometimes been invoked to argue in favour of one, and against the other, of two contrasting conceptions of what it is for a subject to have an experience of succession (or what, in general, I will call *temporal experiences*). By contrast, I will aim to show that, in as far as there is a genuine intuition captured by James and the other writers quoted above, it is probably neutral between those two conceptions. I start by saying more about the two conceptions I have in mind.

2. Two views of (temporal) experience

Each of the statements quoted above is taken from a discussion of a particular aspect of *perceptual experience*. The authors of these statements are all ultimately concerned with the idea that we can simply perceive instances of succession such as the movements of an object through space, or the changes in tones that make up a melody. (I will say more on the assumption that we can simply perceive such things in Sect. 3, below.) Thus, we can give a general characterization of the key issue at stake in these statements — which is also the issue I will

focus on in what follows — in terms of the question as to what the relationship is between *a succession of experiences* and *an experience of succession*, where 'experience' is understood as perceptual experience. However, the differences in terminology between the quoted statements — between terms such as *feeling*, *representation*, *consciousness*, *sensation*, and *awareness* — also highlight that there may be quite different ways of conceiving what exactly the explanatory task at hand might come to. Those differences in terminology might make a difference to the question in so far as they reflect potentially quite different theoretical ways of conceiving of what, in general, having perceptual experiences consists in.

In fact, even though matters are not usually put this way, I think that perhaps the most promising way to think of the contrast between two key contemporary approaches to temporal experience is precisely in those terms. That is to say, we can understand each of them as embodying (or at least lining up with) one of two quite different sets of intuitions about the nature of perceptual experience in general. The two approaches to temporal experience I have in mind are sometimes referred to as *intentionalism* and *extensionalism*, respectively,[2] and a crude initial characterization of them might be as follows: for the intentionalist, temporal experience is to be explained in terms of the idea that perceptual experience can be intentionally directed not just towards the present, but also towards a small portion of the past (as well as, perhaps, a small portion of the future). For the extensionalist, by contrast, the explanation of why we can have, say, experiences of succession, is to be sought in the fact that episodes of perceptual experience themselves unfold over a period of clock time. To get beyond this initial characterization, however, and to see where the actual motivation behind these claims might come from, I think it helps to see the intentionalist and the extensionalist approach as being informed by two general views of the nature of perceptual experience sometimes called the *representational view* and the *relational view*, respectively.[3]

[2] I adopt the 'intentionalism/extensionalism' terminology from Kiverstein (2010), who in turn adopts the term 'extensionalism' from Dainton (2008a).

[3] My use of the terms 'representational view' and 'relational view' follows Campbell (2002, 2009); see also, for instance, Crane 2006. Contemporary intentionalists who clearly subscribe to a version of the representational view are Horwich (1987), Grush (2006), and Tye (2003, Ch. 4). Perhaps the most prominent contemporary extensionalists are Foster (1979) and Dainton (2006), each of whom can be seen to subscribe to a version of the relational view, as I will explain below (see n. 12). If one took the view that the initial characterizations I gave in the above paragraph in fact already provide sufficient definitions of intentionalism and extensionalism, it would come as a surprise to find intentionalism lining up with a

One particularly influential version of an intentionalist theory of temporal experience can be found in Edmund Husserl (1893–1917). Husserl frames his view in opposition to two other attempts to account for temporal experience that arguably fail. Consider hearing the three notes *do-re-mi* sounding in succession. One thought that philosophers have occasionally been tempted by is that we might account for the experience of hearing, say, *do* followed by *re*, by invoking the idea of an echo or reverberation of the *do* that can still be heard when we hear the *re*. Another thought has been that we might account for the experience of hearing the two notes sounding in succession by seeing it as arising from the combination of what Husserl would call 'acts of consciousness' of two different types — say, a perception, in the strict sense of the word, of the *re*, and a recollection or imagining of the *do*. Husserl, arguably correctly, rejects both of these suggestions as phenomenologically inadequate.[4] Instead, he argues that we need to think of the experience as involving just one act of consciousness, but one that instantiates several distinct intentional properties. In other words, my perceptual experience itself encompasses both the *do* and the *re*, but, within that perceptual experience, I experience (or 'apprehend', cf. Husserl 1893–1917, p. 41) each in a different way, so that the fact that they succeed each other gets preserved. More precisely, for Husserl, experiences of succession and other temporal experiences have to be analysed in terms of the idea of a variety of different 'modes of temporal orientation' (Husserl 1893–1917, p. 29) inherent in perceptual experience: individual acts of experience can encompass a succession of events, each of which is experienced under a different such 'mode', and is thus experienced to occupy a different temporal

representational view, and extensionalism with a relational view, in this manner in the literature. Yet note that going by those initial characterizations alone, it is not even clear why extensionalism and intentionalism should necessarily be seen as two distinct views of temporal experience, since an intentionalist might also maintain, as part of her theory, that episodes of perceptual experience must, as a matter of fact, be extended through a period of clock time. This is why I think that in order to get at the substance of the dispute between intentionalists and extensionalists, we have to go beyond those initial characterizations and think of intentionalism and extensionalism as being informed by two different views of perceptual experience in general — namely, the representational view and the relational view, respectively. See also my remarks, below, on why the extensionalist should reject a portrayal of his view as a version of a resemblance theory of experience — that is, a portrayal on which extensionalism is interpreted in representationalist terms.

[4] The first suggestion arguably falsifies the phenomenology of the experience by assimilating it to something like the hearing of a chord, rather than of two notes played in succession (see Husserl 1893–1917, p. 33). In the next section, I will examine in detail one reason why the second suggestion is also phenomenologically inadequate (for another, see Husserl 1893–1917, p. 37).

location.[5] The particular property or aspect of my experience in virtue of which it involves, say, experiencing the *do* as just-past is what Husserl calls *retention*; the property or aspect in virtue of which it involves, say, experiencing the *re* as present he calls *primal impression*. (Husserl also recognizes a property or aspect in virtue of which it might be said to involve experiencing, for instance, the *mi* as yet-to-come, which he calls *protention*. But, for the sake of simplicity, I will leave this aspect of Husserl's account to one side.)

The above provides only the barest sketch of Husserl's basic idea, of which he offers considerable refinement. But I think it is enough to get the contrast between intentionalist and extensionalist approaches to temporal experience, as I shall conceive of it, off the ground. The key point lies in the way in which the idea of a variety of different modes of temporal orientation inherent in experience figures in Husserl's analysis of experiences of succession and other temporal experiences. As I have explained, this idea is implicit in the thought of primal impression and retention as two aspects of perceptual experience, in virtue of which both what is present and what is just past can be experienced, but 'the manner in which [each] appears' is different (Husserl 1893–1917, p. 27).

How can we make the idea that there are different modes of temporal orientation inherent in perceptual experience more concrete? One way of doing so is by thinking of it as a special application of a general view of experience that is sometimes referred to as the *representational view*, associated with contemporary uses of the term 'content' (see, for instance, Siegel 2010 for discussion).[6] The

[5] See Miller 1984, pp. 137 f., for discussion. Although Husserl presents this aspect of his theory as one of the key points of divergence from Brentano, Kraus 1930 provides evidence that, by the time of Husserl's 1905 lectures, Brentano's views had in fact themselves undergone a 'transition to a doctrine of modes' (Kraus 1930, p. 224). Note that there are also different possible ways of thinking of the involvement of such modes. Husserl assumes that we are aware, in perceptual experience, of certain events *as past* and others *as present* (and yet others as yet to come). Some contemporary intentionalists diverge from this in thinking that all we are aware of in perceptual experience is events standing in earlier/later relations to each other. Grush (2006, p. 448) is explicit about this difference; Tye (2003) also seems to hold a version of the latter view.

[6] Below, I will consider whether there is also a way of giving substance to something like the idea of different modes of temporal orientation on a rival, relational, view of experience, and I will suggest that it is much less obvious that there is. The claim that Husserl himself, at least in the context of his writings on temporal experience, can be seen to adopt a form of representational view of experience (as understood here) is defended in more detail in Hoerl 2013. My argument in that paper expands on existing arguments that Husserl, in the course of developing his analysis of temporal experience in terms of the tripartite structure of retention, primal impression, and protention, came to abandon his earlier analysis of perceptual experience, in the *Logical Investigations*, in terms of a schema of 'apprehension' and 'apprehension content' (see, for instance, Sokolowski 1974, Brough 1972, and Kortooms 2002). The representational view, in the

representational view takes as basic the idea of perceptual experiences as having a content in the sense of veridicality or accuracy conditions. Experiences, on this view, possess an intrinsic structure — that is, a variety of intrinsic features — in virtue of which they are the experiences of certain types of items, and they are veridical or accurate to the extent that these experienced items actually exist and are as the experience has it. Seen against the background of this general type of view of experience, then, we could capture Husserl's specific insight in terms of the idea that the veridicality or accuracy conditions of experience always involve conditions regarding an interval of time — that is, they always range over what has just been as well as what is present (and, perhaps, what is about to be).[7] That, at any rate, is required if we are to make sense of the possibility of temporal experience within a view of this type.

The representational view of experience, understood along the lines just sketched, contrasts with another approach to experience sometimes referred to as the *relational view*. At a first approximation, we might say that the debate between the representational view and the relational view turns on whether the nature of perceptual experience is to be analysed in terms of the notion of a content in the sense of veridicality or accuracy conditions that experiences possess, or whether we need to take as central the idea that perceptual experience consists in a distinctive kind of psychological relation of awareness or acquaintance between a perceiver and particular items that serve as the objects of that awareness or acquaintance. This way of framing the issue, though, can make it difficult to see where precisely the difference lies. For one thing, the thought that (veridical) perceptual experience

sense intended here, has to be distinguished from the view that, in perception, we are directly aware only of representations. Husserl's own analysis of temporal experience can be seen to provide the materials for a critique of the latter view, in so far as he argues that the distinction between recollection and perception (including retention, as an aspect of perception) turns precisely on the fact that the former, but not the latter, involves an awareness of a representation. See, for instance, Husserl 1893–1917, §§19 ff.; see Kortooms 2002, Ch. 2, for discussion.

[7] Husserl himself does not, of course, cast his view in those terms. Indeed, as an anonymous reviewer has pointed out, he typically characterizes the nature of experience in terms of the idea of an 'intentional object' that experience has, which may sound similar to a relational view of experience, as characterized below. Yet a crucial aspect of Husserl's view is that such 'intentional objects' need not exist for our experience to be as it is. It is a consequence of this that he cannot assign objects of experience the type of explanatory role in accounting for the nature of our experience that the relationalist assigns to them. Instead, and in line with the representationalist view, experience is characterized in terms of the idea of an accuracy condition it has, namely that it is accurate to the extent that its 'intentional object' is one that actually exists and is as the experience has it.

constitutively involves the perceiver standing in a relation to the actual particulars that are experienced can also play a role in versions of the representational view of experience, namely those involving an externalist element. That is to say, a view of perceptual experience that takes as fundamental the idea of a content such experience has can allow that a relation to the particular object of experience plays a role in the individuation of that content. For instance, on one variant of this type of view, (veridical) perceptual experiences can only have a content in which particulars figure because there are in fact such particulars that the perceiving subject stands in a certain kind of relation (or certain kinds of relations) to.[8]

In light of the characterization I have given above of the representational view, the relational view, as I will understand it, can perhaps be better characterized by saying that there is a sense in which the latter denies that perceptual experiences have any intrinsic structure at all. That is to say, perceptual experiences do not have a variety of intrinsic features, in virtue of which they are the experiences of (or as of) certain types of items rather than others. Rather, all there is to experience, according to the relational view, are the actual items experienced and an entirely generic relation in which the subject stands to them. That is to say, there is a basic, binary, distinction to be drawn between standing, or not standing, in the required relation to items that can serve as the objects of awareness or acquaintance; but, beyond that, *which* such items figure in the experience is entirely a matter of which items the perceiver is actually perceptually confronted with.[9]

[8] Proponents of this kind of view include Brewer (2000) and Tye (2007). See also McDowell 1994 for a related view that combines a representational view of experience with an externalist element. For discussion, see Soteriou 2010.

[9] See, for instance, the metaphor Campbell (2002, p. 119) uses to characterize the relational view — a metaphor which is also intended to show that the existence of cognitive processing in perception is compatible with that view:

> Suppose we have a medium which, like glass, can be transparent. But suppose that, unlike glass, it is highly volatile and needs constant adjustment and recalibration if it is to remain transparent in different contexts. … The upshot of the adjustment, in each case, is … not the construction of a representation on the medium of the scene being viewed; the upshot of the adjustment is simply that the medium becomes transparent. You might think of visual processing as a bit like that. It is not that the brain is constructing a conscious inner representation whose intrinsic character is independent of the environment. It is, rather, that there is a kind of complex adjustment that the brain has to undergo, in each context, in order that you can be visually related to the things around you; so that you can see them, in other words.

See also Campbell 2009 and Soteriou 2010, Sects 3.3 ff., for further discussion. Variants of this type of view can also be found described, for instance, in Brewer 2004 and Martin 2002. See also the discussion of Travis's (2004) view in Sect. 5, below.

How might a relational view of experience seek to account for experiences of succession? I think it is at least not obvious how such a view could be made compatible with an intentionalist approach to temporal experience such as Husserl's. There is some scope for the relational view to accommodate the idea of different ways in which items may figure in experience, such as that I might see an object to the left or to the right, depending on its position relative to my own standpoint. However, it is difficult to see how the relationalist might bring in this idea to account for experiences of succession.[10] Going back to our example, when the *re* sounds, I may of course still be in a state with the content that, say, the *do* is just-past, as the representationalist might have it. But there is an intuitive sense in which the *do* itself, at that point, is simply no longer around to figure as a constituent of my experience in the way envisaged by the relational view.[11] 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, I have already stood in that relationship to the *do* by the time the *re* sounds, and I now stand in that relationship to the *re* instead.

Thus, once the basic thought of experience as a generic relation to objects of awareness is in place, it seems that, in a case in which we are dealing with successive objects of awareness, we also need to think of that relation as something in which we stand to each of those objects in turn, as they succeed one another. On this type of view, experiencing is itself conceived of as something that unfolds over time, and the reason why we can have experiences of succession and other temporal experiences must lie with the fact that it does so, just as the extensionalist has it.[12] In other words, the thought, which we found in

[10] Kelly (2005) criticizes at length what is in effect the position under consideration here — that is, a position that tries to combine intentionalism about temporal experience with a relational view of perceptual experience in general. Kelly refers to this position as the 'Specious Present Theory', which is perhaps somewhat misleading, since the notion of the specious present may also be invoked in the context of other approaches to temporal experience, as the next section will bring out. See also Hoerl 1998 and 2009 on related issues.

[11] Note that — as Kelly (2005) also remarks — the relevant sense in which the *do* is no longer around here has to be distinguished from another sense in which, say, a supernova in a far away galaxy may no longer be around when I observe it. The relational view can allow that, in the latter kind of case, I do now stand in the relevant relation of awareness to the supernova, even though the supernova itself is in the past. Indeed, given my position in space, it is *only* now that I can stand in this relation to the supernova. See also Langsam 1997 on the compatibility of a relational view of experience with cases of the latter kind.

[12] The proponents of a relational view of experience mentioned in n. 9, above, hold that the items to which the subject stands in the relevant relation are (or at least can include) mind-independent entities. On a more liberal understanding, though, the relational view might

Husserl, that perceptual experience instantiates a variety of modes of temporal orientation, which can explain how I can, for instance, experience both *do* and *re*, but, at the same time, experience them as happening in succession, is replaced by the thought that I am aware of the *do* and the *re* in exactly the same way, in so far as I simply hear each of them in turn as the melody unfolds. Yet, because I hear them in turn, I am also aware of them succeeding each other, rather than occurring at the same time. Because my perceptual experience is itself extended through time, the items that can figure in it include not just the individual tones that succeed each other, but the very instance of succession in which they partake. Or so the thought would go.

Thus, I am suggesting that the most plausible way to bring experiences of succession within the remit of a relational view of experience is by adopting an extensionalist approach to temporal experience. But it also seems to me that the extensionalist, conversely, is probably best seen as being motivated by a relational view of experience. Extensionalism is sometimes portrayed as a version of a resemblance theory of experience, according to which experience represents temporal features of the world by itself possessing those features.[13] As with resemblance theories of experience in general, such a view would face the obvious problem (amongst others) that it seems to presuppose what it is trying to explain. In assuming that a resemblance between temporal features of my own experience and temporal features of the world can be made to do explanatory work in accounting for my awareness of the latter, it seems to take my ability to become aware of the former for granted. And it is not at all clear that it is any easier to account for my awareness of temporal features of my own experiences than it is to account for my awareness of temporal features of the world presented in experience. So there is reason for the

actually be seen to be neutral between realism, thus understood, and views that hold that the only items to which we stand in the relevant relation of awareness of acquaintance are mental entities. It is interesting to note in this context that, of the most prominent recent advocates of extensionalism, one holds a type of idealism inspired by Berkeley (Foster 1979), and the other adopts a Lockean-type indirect realism which he calls 'projectivism' (Dainton 2006). Both of these approaches in fact also involve variants of a relational view, as characterized above, in so far as they analyse experience, most fundamentally, as a matter of awareness of or acquaintance with certain types of items — albeit, in this case, mental ones — rather than as a matter of representation. (The point that Berkeley and Locke can be seen as articulating versions of a relational view is also made at length in Brewer 2011.) Early representatives of extensionalism are Stern (1897) and Schumann (1898); Russell (1915) also endorses a version of extensionalism.

[13] I am grateful to an anonymous reviewer for pointing this out and prompting me to comment on it.

extensionalist to reject this particular portrayal of his position, which he will be in a position to do if he adopts a relational view of experience. He can then reject it as a caricature of his views precisely because it portrays the extensionalist as sharing the assumption that perceptual experience is fundamentally a matter of representation, and then interprets his claims about the temporal structure of temporal experience as signs of a commitment to the additional thought that the relevant mechanism of representation is resemblance.

I have introduced a distinction between two types of approaches to temporal experience, intentionalism and extensionalism, which I have suggested can usefully be seen as lining up with a dichotomy between two distinct ways of approaching the nature of perceptual experience in general. Let me now return to the idea that a succession of experiences (in and of itself) is not an experience of succession. Given the distinction between the intentionalist and the extensionalist approach to temporal experience, as I have drawn it, there are in fact two quite different argumentative purposes for which one may invoke this idea. Here it might help to note another set of nuances between some of the statements quoted at the beginning of this paper. Note, for instance, that both James and Sellars seem to qualify their claims somewhat, through the use of 'in and of itself' and 'mere', respectively. Strong and Paton, by contrast, seem to have a more categorical claim in mind. As I want to suggest, the qualified claim that a succession of experiences, *in and of itself*, is not an experience of succession, allows for a reading that both intentionalists and extensionalists could subscribe to. Without any qualification, however, the claim that a succession of experience is not an experience of succession is best seen as dividing intentionalists and extensionalists.

The reading of the qualified version of the claim that I have in mind, and of how it contrasts with the unqualified version, is as follows: the qualified claim denies that, whenever there is a succession of experiences, there is an experience of succession. The unqualified claim denies that, whenever there is an experience of succession, there is (that is, it takes the form of) a succession of experiences. Thus understood, extensionalism is, I think, best seen as agreeing with the qualified claim, but not with the unqualified one. For the extensionalist there is a sense in which experiences of succession do take the form of a succession of experiences, because they take up a duration during which different things are being experienced in succession — for instance, I hear *do* being followed by *re* in virtue of having a temporally extended experience in which I hear *do* and *re* in

turn. More to the point, for the extensionalist, there is an explanatory connection between the temporal structure of my overall experience, as an extended experience in which I hear *do* and *re* in turn, and its nature as an experience of *do* and *re* sounding in succession. Consistent with this, however, the extensionalist can deny that *every* succession of experiences amounts to an experience of succession — a point we will look at in more detail below.

In contrast to extensionalism, intentionalism about temporal experience is, I believe, best seen as entailing the unqualified claim that a succession of experiences is not an experience of succession, where that is to say that the explanation as to how we can have experiences of succession and other temporal experiences cannot lie with the idea that such experiences take up a duration during which we experience different things in turn. Indeed, in so far as the intentionalist's account is informed by a representational view of experience in general, as I have suggested, he will think of the type of explanatory claim that I have ascribed to the extensionalist as involving something like a category mistake. The intentionalist, in short, will insist on a distinction between *content* and *vehicle*, and will maintain that an account of temporal experience has to be pitched at the level of the former. This comes out, for instance, when Michael Tye (2003, p. 90) detects 'a serious confusion' in Barry Dainton's (2006, p. 134) claim that 'when I hear a sequence of notes C-D-E, my experiencing of the succession does seem to run concurrently with the [experienced] succession'. As the context makes clear, the confusion Tye charges Dainton with is precisely one between content and vehicle (see also Tye 2003, p. 101, and Grush 2006). Similarly, although Husserl's writings pre-date the content/vehicle terminology, he can be seen to express a related point when he says that '[t]he retention that exists "together" with the consciousness of the now is not "now", is *not simultaneous* with the now, and it would make no sense to say that it is' (Husserl 1893–1917, p. 345). In short, the particular type of structure of experience in terms of which the intentionalist accounts for temporal experience is not a structure to the elements of which temporal predicates like 'simultaneous' or 'successive' can be applied at all.[14]

[14] Intentionalist positions, including Husserl's, are sometimes characterized in terms of what Miller calls the *Principle of Simultaneous Awareness* (PSA). In Miller's (1984, p. 109) words, the idea behind PSA is that 'an awareness of succession derives from simultaneous features of the structure of that awareness'. As Gallagher (1998, pp. 60 ff.) rightly points out, Miller's own discussion of PSA sometimes runs together this claim with the (arguably separate) claim that there can be instantaneous acts of experience (see Miller 1984, p. 165). More to

We can also approach the same issue from a different direction, by asking how the intentionalist *does* think of the succession of experiences in time. Consider again the case of listening to the succession *do-re-mi*. The intentionalist may allow that I do in fact have a succession of experiences when doing so (though we will shortly look at one philosopher who denies this). However, if he does so, the only plausible model of a succession of experiences available to the intentionalist seems to be that of one experience *replacing* another. Thus, I might, for instance, have an experience in which *do* is experienced as just-past and *re* as present, which will be replaced by an experience in which *mi* is experienced as present, *re* as just-past, and *do* as a little bit further in the past. These have to be two distinct experiences, because they involve different ways of experiencing the same thing (that is, the *re* or the *do*).[15]

By contrast, the way in which the extensionalist thinks of my experience of the succession *do-re-mi* as involving a succession of experiences turns on thinking of the latter as the *parts* that make up the former. As I have already said, experiencing, on the extensionalist's view, is essentially of the nature of a process. More precisely, though, on the extensionalist's view, we can think of particular experiences, such as my hearing the succession *do-re-mi*, as what are sometimes called *accomplishments*. That is to say, we can view such an experience as a time-occupying particular that is composed of other such particulars (that is, the experiences of *do*, *re*, and *mi*), which form temporal parts of it.[16] In the next section, I will look in more detail at one

the point, though, if I am right, PSA, even as formulated in the above quote from Miller (1984), provides a misleading characterization of the intentionalist's position. See also de Warren (2005, p. 96) on Husserl's rejecting *both* what Stern (1897) had called the 'dogma of momentariness' of experience and Stern's own version of extensionalism based on the notion of 'presence-time'.

[15] The principle of individuation I am relying on here is that experience (save perhaps in the case of specific types of illusions such as the waterfall illusion; see Crane 1988) cannot have a content that is contradictory. And whilst the particular argument presented here does not affect Grush's version of intentionalism, which is not committed to the idea that experience presents events 'as present' or 'as past', Grush, too, conceives of successive experiences as replacing each other (see, for instance, Grush 2006, p. 448). The idea that they do so plays a key role in particular in Grush's (2007, 2008) account of temporal illusions. See Hoerl forthcoming for discussion.

[16] The distinction between processes and accomplishments is sometimes illustrated in terms of the idea that terms referring to processes behave more like mass nouns and terms referring to accomplishments more like count nouns. Thus, of accomplishments, we may ask how many of them of a given kind occurred within a given interval, whereas this type of question may not be appropriate in the case of processes (in contrast, for instance, to the question as to how much of a given kind of process went on in that interval). Crowther 2011 provides a helpful

specific motivation both the intentionalist and the extensionalist about temporal experience might have to focus on the nature of experiences as particulars.

3. The individuation argument

The main argument I want to examine in what follows is one that I call the *individuation argument*.[17] The individuation argument, I believe, captures an important part of what is right about the claim that a succession of experiences (in and of itself) is not an experience of succession. Crucially, though, (a) it gives support only to the qualified version of that claim, thus leaving it neutral between intentionalist and extensionalist approaches to temporal experience, and (b) once the import of the individuation argument has been fully recognized, a number of other arguments in favour of intentionalist approaches, and against extensionalist approaches, lose their force.

The basic shape of the individuation argument can be extracted from some remarks in C. D. Broad's *Scientific Thought* (Broad 1923; see also Russell 1927a, 1948). As articulated there, the argument can be divided up into two parts. The first part is presented in the following passage, in which Broad introduces an example that has subsequently been used by many other authors writing about temporal experience:

> [I]t is a notorious fact that we do not merely notice that something has moved or otherwise changed; we also often see something moving or changing. This happens if we look at the second-hand of a watch or look at a flickering flame. These are experiences of a quite unique kind; we could no more describe what we sense in them to a man who had never had such experiences than we could describe a red colour to a man born blind. It is also clear that to see a second-hand moving is a quite different thing from 'seeing' that an hour-hand has moved. (Broad 1923, p. 351)[18]

general discussion of the metaphysics of accomplishments, and of the distinction (and relation) between processes and accomplishments. Vendler 1957 and Kenny 1963, Ch. 8, are particularly influential earlier treatments of these topics.

[17] I call it this because, as will emerge, it explains a feature of the phenomenology of temporal experience in terms of considerations about the individuation of discrete perceptual experiences over time.

[18] As Kelly (2005) observes, Locke (1706, II. xiv. 11) already used the example of the hands of a clock to point out that sometimes we can tell of something 'that it hath moved, yet the Motion itself we perceive not'. Another version of the example is in Wertheimer 1912, p. 162. Stern (1897, p. 338) can also be seen to provide a precursor to Broad's argument using an auditory example. As I will discuss in more detail below, a version of what I call the individuation argument also plays a key role in Phillips 2011.

As Julian Kiverstein (2010) points out, Broad can here be seen to employ a version of what is sometimes called the *method of phenomenal contrast* (see Siegel 2007). The method of phenomenal contrast, in general, is a method for resolving disputes as to which kinds of things we can perceive, and a version of it is here being used to make the case for saying that we can perceive such things as objects moving or changing. Note that, like Broad, I have been assuming that there are such perceptual experiences. It is such experiences, I have claimed, that intentionalist and extensionalist approaches to temporal experience seek to give an account of. But one might question whether it is strictly speaking true that we can perceive movements and changes as such. Indeed, there are philosophers who deny this and hold that we are actually in error when we say that we can see movements, or hear a melody. Rather, they claim, we know about movements and changes only through perceiving things being one way whilst remembering them being another way.[19]

Understood as employing a version of the method of phenomenal contrast, the above passage from Broad provides an argument against this latter type of view. The final sentence of the passage presents a pair of cases that, intuitively, differ in their phenomenology — the case that obtains when you look at the hour-hand of a watch, and the case that obtains when you look at the second-hand of a watch. This is the phenomenal contrast at issue that calls for an explanation. Yet it is difficult to see how we can account for the contrast other than in terms of the idea that, in the case of the second-hand, you can see the hand moving just by looking at it, whereas you cannot do so in the case of the hour-hand. Above, I have said that those who deny that we can, strictly speaking, see movements and changes usually claim that, instead, we know about them through a combination of perception and memory. Yet, as this is arguably the correct description of how, in Broad's example, we know about the movement of the hour-hand, it leaves unexplained the respect in which the case of the second-hand is different.

The idea that we can just see the movement of the second-hand, whereas we cannot see the movement of the hour-hand, thus provides an answer to the question as to what the difference between the two cases consists in. But what explains why the movement of the second-

[19] Reid (1785, essay III) is one example of a philosopher who held an error-theory of this type; another is Strong (1896). Of more recent authors, Le Poidevin (2007) and Noë (2006) might be interpreted along similar lines.

hand is visible, whereas that of the hour-hand is invisible? Here we get to the second part of the individuation argument, and to the reason why I refer to it as the individuation argument. As presented in Broad 1923, this second part involves appeal to the notion of the *specious present*. He writes:

> If a change takes place slowly, this means that closely adjacent events are qualitatively very little different from each other. It may therefore happen that two events are not qualitatively distinguishable by us unless they are separated by more than the duration of a Specious Present. If this be so, these two qualitatively distinguishable sections of a single long event are too far separated to be sensed together. (Broad, 1923, p. 352)

A few years later, Russell, in *An Outline of Philosophy*, gives what I think amounts to essentially the same argument. Using an example very similar to that of Broad's contrast between the case of the hour-hand and that of the second-hand, Russell too connects the question as to which types of movements we can see with the notion of the specious present:

> If you see me quickly move my arm from left to right, you have an experience which is quite different from what you would have if you now saw it at the right and remembered that a little while ago you saw it at the left. The difference is that, in the quick movement, the whole falls within the specious present, so that the entire process is sensible. (Russell 1927a, p. 205)

It is perhaps tempting to think that the key to Broad's and Russell's arguments here must lie with the precise meaning each of them gives to the idea that, within the specious present, different events are 'sensed together' or certain processes are 'sensible' in their entirety. In fact, though, the more specific accounts Broad and Russell give of how these phrases are to be understood are deeply problematic, and each of them later rejected key elements of his earlier views on these matters. More to the point, I do not think the specifics, in that sense, of Broad's and Russell's accounts of the specious present are actually crucial to understanding the argument in the passages quoted above.

On the interpretation of Broad's and Russell's argument that I want to advocate, what does the real work in explaining the difference in phenomenology illustrated by the examples is simply the idea of the specious present as a fairly limited maximum period of time that individual experiences can span. The length of the specious present, thus understood, determines which temporal phenomena we can be aware of *within* experience, and which we are only aware of through

connections *across* discrete experiences, when we experience things being one way whilst recollecting them having been another way. In other words, Broad and Russell can be seen to argue that the fact that you can see the second-hand of the watch moving but you cannot see the hour-hand moving is to be explained by an appeal to the individuation of discrete perceptual experiences over time.[20] This is what I will refer to as the individuation argument.

According to the individuation argument, what explains why you can see the second-hand moving but not the hour-hand is just this: the period of time that individual perceptual experiences can span is limited, with the term 'the specious present' denoting the maximal interval that an individual experience can span. The second-hand traverses enough space within that maximal interval for you to be able to visually discriminate several of the positions it occupies within that interval. Thus, when you look at the second-hand, you see it moving. When you look at the hour-hand, by contrast, each individual experience you have falls short of making its movement manifest to you. Within the maximal interval that individual experiences can cover, the hour-hand does not travel far enough for its position at the beginning of that interval to be visually discriminable from its position at the end. And if you look at the hour-hand for longer, you simply have a succession of discrete such experiences. As it is only across such discrete experiences that the different positions traversed by the hour-hand become discriminable, you can only become aware that the hour-hand *has* moved, whereas you can see the second-hand moving. If the individuation argument is right, in other words, it is only in the case of the second-hand that you have an experience of succession, whereas in the case of the hour-hand you have a mere succession of discrete experiences of the hand first in one place and later in a discriminably different other place. It is in this way that the individuation argument might be seen to give substance to the claim that a succession of experiences, in and of itself, is not an experience of succession.

[20] This constitutes an important difference between Broad and Russell, on the one hand, and Husserl, on the other. In Husserl's (1893–1917, p. 32) terminology, the 'original temporal field' spanned by retention, primal impression, and protention is also limited, but it is not clear whether (and if so how) he thinks that this is of relevance to temporal phenomenology. Miller (1984, p. 174) goes as far as saying that '[t]he limitations on our retentional and protentional spans … have no significance for [Husserl's] epistemological account of our temporal awareness.' He therefore concludes that, whilst there is a sense in which Husserl, too, could be described as subscribing to the idea of a specious present, that idea in fact does no genuine explanatory work in his account.

4. The idea of a 'unit of experience' and psychophysics

In what sense can the individuation argument count as providing an *explanation* of temporal experience by invoking considerations about the individuation of discrete experiences over time? There are of course many things that the argument remains silent on. In particular, as I will argue, it is pitched at a level at which it is not possible to decide between what I have called an intentionalist or an extensionalist account of temporal experience — it is, at least on the face of it, neutral between the two. But it nevertheless goes at least some way towards providing an explanatory account of temporal experience. That it does some genuine explanatory work comes out, I believe, when we look at a recent discussion Ian Phillips (2011) has offered of an argument put forward by Delia Graff Fara (2001).

Fara's argument can be seen as something like the mirror-image of the individuation argument as presented in the passages from Broad and Russell quoted above. Whereas Broad and Russell *start* with the idea of a phenomenological difference between the case of the second-hand and the case of the hour-hand, and then try to explain why that difference obtains, Fara's argument aims to cast doubt on the very idea that there is such a phenomenological difference in the first place.

Her argument takes the form of a *reductio ad absurdum*. Suppose there is a phenomenological difference between the case of the second-hand and the case of the hour-hand in Broad's example (she calls the latter a case of 'slow motion'). Fara takes it that the standard form of explanation of how there can be such a phenomenological difference is in terms of the thought that 'if a moving object looks still during an interval, then it must be because we cannot visually distinguish any of the positions it is in during that interval' (Fara 2001, p. 926). Her argument then runs as follows:

> There is something very suspect about this explanation since it should leave us wondering why not every experience of motion is an experience of slow motion. If the reason that the hour-hand strikes us as still-looking for any twenty-second interval is that we cannot visually represent a change in position as small as, say, $1/6^{\circ}$ (on a normal-size clock), then the second-hand should look still for any $1/36$ second interval, for it changes its position only that amount during such an interval. But, when we watch the second-hand moving, it never looks still — it appears to be constantly moving. (Fara, 2001, p. 927)

Fara's line of thought here seems to be as follows. Suppose the reason why we cannot directly perceive the movement of the hour-hand was

indeed that it involves changes of position that are too small for us to perceive. Would we not then also have to say that the movement of the second-hand, too, involves — indeed is made up of — changes of position that are too small for us to perceive? Admittedly, in the case of the second-hand, these take place over shorter intervals. Yet if there is a sequence of such shorter intervals, over none of which we can see the movement of the second-hand, then how can we ever see it moving?

As Phillips's (2011) discussion makes clear, Fara's argument, thus understood, completely ignores the crucial role that the idea of the specious present plays in accounts like those of Broad and Russell, in making precise the idea of changes that are too small to be perceived. As I have interpreted them, the central thought that does the work in Broad and Russell is that, for us to see an object moving, the position of that object at the beginning *of the interval covered by one specious present* and its position at the end of that interval must be such that I can visually discriminate between them. Otherwise, because the specious present is the maximum interval any individual experience can span, I cannot become aware of the movement within experience, but can only do so across discrete perceptual experiences, by remembering the object being in one position while perceiving it in another. Thus, what counts for whether or not I can see the movement of the second-hand is specifically how much the second-hand moves over the duration of the specious present. If we assume the duration of the specious present to be around a second or so, it does not matter that I cannot discriminate the different positions that the second-hand covers within, say, 20 ms. I have the whole second to make out the movement of the hand in one experience, and, over that interval, the second-hand travels over large enough an area for me to see the movement.[21]

[21] For a somewhat macabre concrete illustration of the type of explanation at issue here, see Stern (1906, p. 215) on studies in which frogs failed to show any reaction to very gradual changes, for instance, in pressure exerted on one limb, even if the pressure ultimately ended up shattering the limb. Stern coins a law ('Gesetz der Veränderungserregbarkeit'), according to which the ability to react to changes diminishes as the speed of the change decreases. Admittedly, the latter idea allows for a reading on which it is merely to do with physiology, and does not necessarily tell us anything about experience (as a reviewer has pointed out). Stern's own view, however, is that the relevant explanation does ultimately lie on the level of experience. That is, whilst the frogs experience the pressure, they do not react because they do not notice any change in their experience. His discussion makes explicit the role that the specious present (or 'presence-time', in Stern's terminology) is meant to play in cashing out the latter thought. Russell (1927b, p. 281) also gives a concrete example in which the explanatory role of the specious present is made explicit: '[L]et us suppose we are watching a

To look at matters in slightly more detail, consider a case that we might describe as lying at the lowest end of the spectrum of perceivable movements. On a sufficiently large clock, for instance, I may just about be able to see the movement of the minute-hand, even though I would not be able to do so if the speed of the minute-hand was only fractionally slower.[22] In such a scenario, would the minute-hand 'appear to be constantly moving', to use Fara's words? I think the proponent of the individuation argument could respond to this question as follows. For the minute-hand *not* to appear to be constantly moving, despite the discernible difference in its position at the beginning and the end of the interval covered by the specious present, there would arguably have to be a difference in the way the hand appears over shorter sub-intervals. There would have to be a sub-interval over which I can make out the movement of the hand, as opposed to another sub-interval in which I cannot discern any movement. Yet a contrast of this type between two sub-intervals would require that, over the former, the hand moves sufficiently fast that I can discriminate between different positions it occupies already within that sub-interval. *Ex hypothesi*, though, the speed of the hand is such that it is only over the full interval covered by the specious present that I can discriminate between different positions it occupies.[23]

One key aspect of the type of view of temporal experience illustrated by this example is that, as Phillips (2011) notes, it treats temporal experience as in important respects determinable, rather than determinate. That is to say, it allows for movement to be perceived over a certain interval, without the determinate nature of that movement being perceived. However, some care is needed to locate where exactly the connection might lie between this aspect of the view and the idea of the specious present.

One plausible reason for thinking that temporal experience is determinable, rather than determinate, is to do with the idea that there

chameleon gradually changing. We may be quite unable to "see" a process of change, and yet be able to know that, after a time, a change has taken place. This will occur if, supposing *A* and *B* to be the shades at the beginning and end of a specious present, *A* and *B* are indistinguishable, while *A* recollected is distinguishable from *C* when *C* occurs.'

[22] The point of making the clock bigger is that it increases the amount of space the minute-hand traverses over a given interval. Thus, on a larger clock, the spatial positions occupied by the hand at the beginning and the end of an interval corresponding to the length of the specious present may be discriminable, even if they are not thus discriminable on a smaller clock.

[23] See also Russell 1927b, p. 280 on related issues.

are certain lower bounds to temporal experience. As we saw, even in the case of the second-hand there will be intervals such that no movement of the hand can be discerned at those intervals, because, during any such interval, the hand does not travel far enough for the positions it occupies at the beginning and the end of the interval to be discernable.[24] One way to put the point here might be by saying that, just as there is an upper temporal limit to the individuation of temporal experiences, there are also lower such limits. Within an experience of the second-hand traversing a section of the clock face over the interval corresponding to the specious present, we may be able to individuate experiences of the hand traversing smaller sections of the clock face over shorter periods of time. But we cannot make the relevant periods of time arbitrarily small. Beyond a certain level of temporal resolution, we can simply no longer experience the determinate movement of the hand.

In the above example of the minute-hand, though, my experience is determinable to an extent not yet fully accounted for by the idea of lower limits to temporal experience in the sense just mentioned.[25] In the second-hand case, there are some more fine-grained features of the movement I can make out — for instance, I can make out that the movement of the second-hand on the watch that I am wearing right now is not entirely uniform. And this is so because the second-hand does undergo visually discernible changes in position already at intervals that are shorter than the specious present. Moreover, because it does so, my experience would have that level of fine-grainedness even if the second-hand in fact appeared to be moving uniformly — the experience would make it apparent to me that the movement was uniform down to a certain time scale. The imagined case of the minute-hand, by contrast, was meant to constitute a limiting case of movement perception precisely because, whilst I can perceive the movement, there is no sense in which this also involves perceiving

[24] Apart from the question of the discernibility of, say, spatial change over the relevant interval, it is also plausible to think that there are psychological factors that make it the case that some intervals are simply too short for us to experience any change over them as such. Psychologists speak of a 'fusion threshold' below which subjects cannot tell whether two in fact temporally separated stimuli are presented simultaneously or in succession — even if the stimuli are otherwise discriminable from each other by some other quality. Experimental work on this threshold, and its value for different modalities and different task conditions, goes back at least to Exner 1875; see also Hirsh and Sherrick 1961.

[25] Also note that, if we only acknowledged such lower limits, even the case of the hour-hand would have to count as one in which we see movement, but in which our experience of that movement is determinable.

more fine-grained features of that movement. Putting the point again in terms of the idea of lower limits on the individuation of experiences of certain kinds, this is a case in which there are no experiences *of the movement* of the hand over intervals shorter than the specious present that my experience over the interval corresponding to the full specious present could be seen to be composed of. Rather, in so far as we can individuate experiences at a finer grain of resolution even in this case, these are simply experiences of the hand that fail to make its movement manifest. They only do so if combined to yield an experience, over the interval of the specious present, in which that position is discriminably different at the beginning and end.

If these reflections are at least roughly along the right lines, they might help to shed interesting new light on some historical discussions of the notion of the specious present. Perhaps misled by a particular way of understanding the idea that the specious present is '[t]he unit of composition of our perception of time' (James 1890, Vol. I, p. 609), defenders of the doctrine of the specious present have often thought that an empirical vindication of that doctrine would have to take the form of finding certain patterns *within* temporal experience. This, in turn, has led to the idea that the length of the specious present could be determined in psychophysical experiments measuring, for instance, subject's propensity to organize identical successive auditory stimuli into groups of a certain length by subjectively accentuating some of them, or experiments measuring the reversal time of bistable figures such as the Necker cube.[26] James's own account is particularly easy to ridicule in this regard (as Mabbott 1951, does). Seemingly unable to decide between two quite separate such psychophysical measures, James in effect plumps for both of them, with the consequence that he estimates the duration of the specious present to vary all the way 'from a few seconds to probably not more than a minute' (James 1890, p. 642).[27] But James's wavering over which measure to choose can also be seen as a symptom of a more general defect, which is shared by

[26] Ernst Pöppel (2009) cites both of these measures as evidence that what he calls the 'subjective present' is in the region of 2–3s. For critical discussion, see Dainton 2010, supplement 'The Specious Present: Further Issues'. Ethological studies of cross-cultural patterns in behaviours such as shaking hands are also sometimes cited in support of a 2–3s constant. See, for instance, Schleidt 1988, Nagy 2011.

[27] As Mabbott (1951, pp. 156) reads him, James had in mind both experiments on the so-called indifference interval (Wundt 1911), which is the interval of time that is least likely to be over- or under-estimated in memory — which would explain the lower figure — and experiments on the maximum duration of a group of sounds that could be remembered accurately — which could explain the higher figure.

attempts to try to link the length of the specious present with other psychophysical findings.

The basic defect with most of the existing attempts to link the question of the length of the specious present with a particular psychophysical measure (or a combination of such measures) is that the notion of the specious present, as introduced by James, and subsequently understood by others, is supposed to be a notion that plays a fundamental explanatory role in accounting for our very ability to perceive movement and change. Yet it is far from clear how any of the psychophysical measures typically invoked to assign a particular length to the specious present are meant to be related to that role.

If correct, the individuation argument can perhaps help to show what exactly is wrong with these attempts to connect phenomenology with psychophysics. Instead of intelligibly linking the question of the length of the specious present with the question as to how it is possible for us to perceive movements and changes, they, in effect, take our ability to perceive movements and changes for granted, and then try to find patterns within such experiences that reflect the length of the specious present, or assume that, with such experiences, their temporal extent is introspectively given.[28]

The individuation argument, by contrast, suggests that the way to give empirical substance to the notion of the specious present is to show how it is linked to the fact that we can perceive movements and changes at all. According to the individuation argument, the right way to approach questions about the length of the specious present empirically is by investigating limits to our capacity to perceive movement and change such as those at issue in Broad's distinction between the case of the second-hand and the case of the hour-hand of a clock.[29]

[28] A very perceptive discussion of related issues can already be found in Stern 1897, p. 332. One philosopher who does seem to think that the length of the specious present can be introspected is Dainton: 'Tap a table with your fingers, at regular intervals of about a second; after each new tap, ask yourself if you can still hear its immediate predecessors. If the span of your auditory specious present is anything like mine, the answer will be "no". Similar experiments with other modalities deliver similar results: the span of the specious present (for any modality) is quite small, probably not more than a second, perhaps a good deal less' (Dainton 2008b, p. 367). I will say more about introspection and the individuation argument in the next section.

[29] Thus, both Kiverstein (2010) and Phillips (2011) make the point that a change in the length of the specious present could have the consequence of eliminating the phenomenological difference between the second-hand case and the hour-hand case, either by making our experience of the former like that of the latter (if the specious present becomes sufficiently short) or vice versa (if it becomes sufficiently long). This might make it look as though it should be a relatively straightforward matter to measure the actual length of the specious present by presenting subjects, say, with hands that rotate at different speeds around a clock

The individuation argument takes these phenomenological differences, which manifest themselves empirically, to be connected to the notion of the specious present because it takes the latter notion to denote the maximum length of time experience can span, and it explains the phenomenological difference in terms of the individuation of discrete experiences. The vindication of the notion of the specious present, as conceived by the individuation argument, is thus inextricably linked to the thought of a phenomenal contrast as exemplified, for instance, in Broad's example.

5. The one-experience view and experience as 'a far from innocent count noun'

Individual perceptual experiences, according to the individuation argument, turn out to be able to cover an interval of time in which several distinct events can happen; at the same time, the maximum interval they can cover is fairly short (at least for those like us who cannot, for instance, see the hour-hand of a watch move) — perhaps of the order of seconds, if not less. With this in mind, let us now return to the distinction I have drawn above between intentionalist and extensionalist approaches to temporal experience. Is there a reason for thinking that the individuation argument is incompatible with either intentionalism or extensionalism?

As I have presented them, intentionalism and extensionalism can each be seen to be aligned with a different view of the nature of perceptual experience in general — that is, with a representational and a relational view of experience, respectively. Now, as it turns

face and determining which is the lowest speed at which they still see the movement. However, note that doing so will only give us a measure of the length of the specious present if we also know what the minimum distance is by which two different positions of the hand must be separated in order to be visually discriminable from one another — the specious present being the longest interval in which the hand moves through no more than this distance and can still be seen to be moving (compare the example of the large minute-hand above). The difficulty this raises is how we determine the relevant minimum distance. One difficulty in particular is that it is not unlikely that time is itself a factor in whether or not two successive positions occupied by the hand are discriminable or not, so that a subject's ability to discriminate them when they are presented in very quick succession, say, does not guarantee that the same subject can still discriminate them when the interval between the hand occupying each of them is longer, even if that interval is still shorter than the specious present. In this case, there would be two different ways in which our ability to perceive movement and change is time-dependent, and it may not be very easy to disentangle them empirically. As Gallagher (1998, p. 55) points out, there may also be no sharp boundaries to the specious present, and its length may vary with a number contextual psychological factors (see also James 1890, Vol. I, p. 640), creating additional problems for attempts to measure its length precisely.

out, the view of the individuation of experiences that emerges from the individuation argument is at odds both with claims recently made by an advocate of representationalism, and with claims made by a critic of representationalism, who instead holds a variant of the relational view. I will discuss their arguments in turn.

Michael Tye, who is an advocate of what I have called an intentionalist view of temporal experience in particular and a representational view of experience in general, argues for a view of the individuation of experiences that he calls the 'one-experience view'. On the one-experience view, the correct way of individuating experiences is in terms of the idea that only unconsciousness can bring an experience to a stop. Thus, when we wake from dreamless sleep, an experience begins that lasts throughout the day until we fall into dreamless sleep again.

As far as I can see, Tye's main reason for putting forward the one-experience view is that he thinks that no particular way of individuating experiences more finely than does the one-experience view receives introspective support.[30] As he puts it,

> The simplest hypothesis compatible with what is revealed by introspection is that, for each period of consciousness, there is only a single experience — an experience that represents everything experienced within the period of consciousness as a whole. (Tye 2003, p. 97)

A key role in this argument is played by the idea that perceptual experience is, as it is sometimes put, transparent.[31] As it is usually understood, the idea here is that introspection reveals only which objects are being perceived, their qualities and their relations to each other. As Tye puts it,

> Via introspection, I am not aware of any inner particulars at all. I am aware that I am having an experience of a red flash followed by a green one, but I am not aware of two different particular experiences, one of a red flash and one of a green one. (Tye 2003, p. 96)

In this passage, Tye uses the transparency of experience to cast doubt on the specific idea that, when I see a red flash followed by a green one, we must recognize two distinct experiences, or 'inner particulars',

[30] Tye also offers an argument regarding the individuation of experiences that turns on considerations about the 'unity of consciousness'. I think it is arguable, though, that the 'unity argument', as I will call it, is in fact neutral between the one-experience view and the view of the individuation of experiences that emerges from the individuation argument. I will say more on these matters in the next section.

[31] Tye thinks that considerations about the transparency of experience can provide an important motivation for a representational view of experience in general. See Martin 2002 for critical discussion.

involved in my doing so: an experience of a red flash and one of a green one. However, he also thinks that considerations about the transparency of experience speak against other ways in which one might try to individuate experiences. Thus, he speaks of a 'general difficulty we face in individuating experiences through time. Consider an ordinary visual experience and suppose that it is exclusively visual. When did it begin? When will it end?' (Tye 2003, p. 98). With any continuous section of experience, it seems, introspection on it will again only reveal aspects of the perceived world and how they unfold over time. Thus, there is no principled way of individuating experiences other than the one suggested by the one-experience view.

When Tye's one-experience view is discussed critically, this last claim is often not disputed. Rather, the criticism is typically that a more natural conclusion to draw from it is that there are in fact many legitimate ways in which one might individuate experiences, and no real fact of the matter as to what should count as the 'right' way (see Bayne 2005, Dainton 2008c, and also Mabbott 1951 for a historical precursor of this view). From the point of view of the defender of the individuation argument, however, this reaction already concedes too much to Tye.[32] For what she will argue is that there is in fact a feature of the phenomenology of experience (and indeed an introspectible feature) that we can point to in support of a particular way of individuating experiences (or at least the maximum length that any one experience can span) that is very different from that envisaged by the one-experience view.[33] That feature is that we can directly perceive some instances of movement or change, but not others. I cannot see the movement of the hour-hand, for instance, because there is no experience that I can have of it, say, moving through 30 degrees, even if I stare at it for an hour (over which it in fact moves through 30 degrees) and, in doing so, can always see where it is.

Part of the point here is that introspection need not take the form of an acquaintance with inner particulars in order to provide support for

[32] This also goes for Byrne's (2009) 'no experience view'.

[33] Strictly speaking, the one-experience view combines two ideas: first, and put crudely, that what happens between waking up and falling asleep is one single experience; second, that individual experiences do not have other experiences as parts. It is the first of these ideas, specifically, that the defender of the individuation argument will reject, arguing that the specious present (which is maximally of the order of seconds) sets the limit as to how long individual experiences can last. This leaves open whether or not she also rejects the second idea. The extensionalist, as I have portrayed her, will do so; the intentionalist may or may not. On the latter issue, see Bayne 2010, Ch. 2.

a view of the individuation of discrete experiences that slices more finely than the one-experience view.[34] What introspection might reveal, instead, are limits to the kinds of things we can and do experience, which in turn might be best accounted for by adopting a particular view of the individuation of discrete experiences. It is interesting to note, in this context, that Tye himself in fact appears to make use of a variant of the individuation argument when explaining why it is not a consequence of his view that there are no such things as token experiences in the first place — that is, why periods of sleep, at any rate, manage to cut experience up into such token experiences. Consider the following passage:

> Suppose again that I am listening to the scale, *do-re-mi*, as I fall asleep. The last thing that I hear is the note, *re*. On awakening, after a period of unconsciousness, the first thing I hear is the note, *mi*. I remember hearing the note, *re*, as I hear *mi*, but I do not experience the transition between *re* and *mi*. I do not experience the *succession* of *re* by *mi*. Here there are clearly … two different token experiences with a time gap between them. (Tye 2003, p. 106)

Comparing this passage with the passages from Broad cited earlier, the structural parallels between Tye's example and that used in Broad's version of the individuation argument are striking. In particular the last three sentences of the passage just quoted, taken on their own, could come straight from Broad. In other words, what Tye actually seems to be relying on, as his reason for thinking that we must recognize the existence of two separate token experiences here, is the thought expressed by the sentence 'I remember hearing the note, *re*, as I hear *mi*, but I do not experience the transition between *re* and *mi*'. Yet, as we have seen from the example of the hour-hand, we can find instances of the type of situation described in this sentence also within stretches of waking experience uninterrupted by sleep. Even if I stay fully alert and give the matter my full attention, I will not experience the hour-hand's transition from one position to another, although I may, over time, come to be able to remember seeing the hand at one location, as I see it at another.[35] Thus, we should see this latter case, too, as involving me having separate token experiences over time.

[34] Dainton (2006, p. 254) criticizes Tye on somewhat similar grounds, but within the context of a defence of the idea of a 'phenomenal unity relation' between experiences. I will discuss this idea in the next section.

[35] If you want an example that is even closer to that used by Tye, think of a very slow gradual change in tone from *re* to *mi*. Again, this may be so slow that I do not hear the tone changing no matter how closely I attend to it, though I can tell, over time, that it has changed.

In other words, the defender of the individuation argument will argue that, in Tye's example, the fact that I have been asleep between hearing the *re* and hearing the *mi* may *causally explain* why, in this situation, I can only remember the *re* as I hear the *mi*, but not experience the transition between the *re* and the *mi*. But it is only because it makes this latter difference that we need to recognize the existence of two separate token experiences. And it seems that the mere passage of time itself can have exactly the same type of effect,[36] even if I stay awake throughout, in which case the one-experience view does not individuate finely enough.

If the above is along the right lines, it might also help to see how the advocate of the individuation argument might respond to the arguments behind Charles Travis's (2004, p. 57) remark that 'experience' is a 'far from innocent count noun'. In sharp contrast to Tye's claims about the one-experience view, Travis's remark is set within a general critique of a representational view of experience, and Travis can be seen to advocate a version of what I have called a relational view.

Travis does not spell out what exactly the problem might be with regarding 'experience' as a count noun, but the following passage (in which he describes J. L. Austin's view) can perhaps give us a lead on what he is concerned about.

> [*P*]*erception*, as such, simply places our surroundings in view; affords us awareness of them. There is no commitment to their *being* one way or another. It confronts us with what is there, so that, by attending, noting, recognizing, and otherwise exercising what capacities we have, *we* may, in some respect or the other, make out what is there for what it is — or again fail to. It makes us aware, to some extent, of things (around us) being as they are. It is then up to us to make out, or try to, which particular way that is. … [I]n perception things are *not* presented, or represented, to us as being thus and so. They are just presented to us, full stop. It is in making out, or trying to, what it is that we confront that we *take* things, rightly or wrongly, to be thus and so. (Travis 2004, p. 65)

The view of perception that Travis wants to distance Austin (and himself) from in this passage is what I have been calling the representational view. In Travis's words, the representational view of experience claims that experience itself 'make[s] out what is there for what it is' (or fails to do so). Above, I have described this feature of the representational view in terms of the idea that, according to that view, things can be said to appear one way or another to us in perceptual

[36] Given certain contingent truths about our psychology, of course. See Sect. 7, below.

experience in virtue of experiences having contents in the sense of veridicality or accuracy conditions.

It is this particular construal that the representationalist gives of the idea of a way in which things appear in experience that can be seen to be the target of Travis's remark that experience is a 'far from innocent count noun'. As he puts it, the representationalist operates with a 'sense of "looks" or "appears" [according to which], if things look or appear as they do on a given occasion, that should leave exactly one representational content for that particular experience to have' (Travis 2004, p. 63). Yet this does not account for the more basic sense in which, according to Travis, perceptual experience 'simply places our surroundings in view'.

If this is the right way to interpret Travis, though, his opposition to a count-noun conception of experience is probably best understood, more narrowly, as an opposition to one particular count noun conception of experience, and an associated understanding of how experiences are to be individuated — namely that implied by representationalism. His general position does not need to be seen to be in conflict with the individuation argument as such, as I have presented it. Above, I have suggested that a natural way of developing an account of temporal experience in line with a relational view of experience of the type favoured by Travis is in extensionalist terms — that is, by conceiving of the perceptual relation as something that itself unfolds over time. The upshot of the individuation argument for such a view is simply that there is something like a limit to the period of time through which a perceptual relation with one's surroundings can be sustained, yielding individual experiences of movement or change within which we can individuate a succession of shorter experiences as parts, but which themselves are ultimately also fairly short-lived. At least on the face of it, nothing in this needs to contradict Travis's contention that perception simply 'makes us aware, to some extent, of things (around us) being as they are' and that, as such, it should be contrasted with us *taking* things to be that way.

Indeed, one or other form of individuating experiences, the advocate of the individuation argument will argue, is necessary to accommodate Travis's insight that perception 'makes us aware, *to some extent*, of things (around us) being as they are' (2004, p. 65, my emphasis). Any theory of temporal experience needs to acknowledge that the features of our surroundings 'placed in view' by perceptual experience include only certain types of movement and change. We cannot see the movement of the hour-hand, even though it is moving as we look at it;

but we can see the movement of the second-hand. To explain this, we need to make sense of the idea of a certain kind of limit to visual acuity — that is, of movements too slow to be perceived. And, as we saw in the last section, the advocate of the individuation argument will argue that, in order to make sense of this idea, we need to invoke the idea of a limited period of time that individual experiences can span.[37]

I have presented an argument, which I have called the individuation argument, that may be seen to capture at least some of the truth behind the idea that a succession of experiences, in and of itself, is not an experience of succession. I have argued that the individuation argument can make sense of a distinction between a mere succession of experiences and an experience of succession in terms of the idea that whilst there are token experiences that encompass a succession of events, these can at best only cover a relatively short interval. I have also argued that the individuation argument, thus understood, seems compatible with both intentionalism and extensionalism about temporal experience.

In what follows, I want to turn to some other ways in which one might understand the idea that a succession of experiences (in and of itself) is not an experience of succession. In particular, I want to look at two arguments that might also be couched in those terms, which are often invoked specifically in favour of an intentionalist (and against an extensionalist) view of temporal experience. In each case, I want to suggest that the view of the individuation of experiences yielded by the individuation argument gives us a way of avoiding the alleged conclusion.

[37] I hope these remarks can also help to bring out how the advocate of a relational view of experience can respond to the following challenge. It might be thought that, in order to get right the nature of the type of phenomenal contrast highlighted by Broad and Russell, we need to invoke the idea that only some movements are experienced 'as movements', whereas others are not. And this, in turn, it might be thought, requires taking a representational view of experience. As far as I can see, though, the only thing that could motivate this line of thought is the implicit assumption that we need to describe those cases in which we cannot see the movement, even though there is movement, as involving misrepresentation — that the hour-hand, for instance, is experienced 'as standing still'. As against this, the relationalist will insist that to say that the movement of the hour-hand is too slow to be perceived is to say that it simply does not figure in my experience at all. My experience does not represent it 'as movement', but neither does it represent it 'as non-movement' — the absence of it from my experience is not explained in representational terms at all, but in terms of the idea that it is simply not the kind of movement that can serve as an object of my perceptual awareness. In the case of the second-hand, by contrast, we do have a kind of movement that can serve as an object of my awareness, and that is why I see the movement when I look at the second-hand. (I am grateful to Thomas Baldwin for prompting me to be more explicit on these matters.)

6. The unity argument

A number of philosophers have taken it as obvious that the central problem of explaining experiences of succession and other temporal experiences is to account for the sense in which, when I hear *do* followed by *re*, for instance, my hearing of *do* is *unified* with my hearing of *re*.[38] Thus, the basic claim behind what I will call the *unity argument* is that experiences of succession possess a characteristic kind of unity, which is missing from a mere succession of experiences. Typically, this claim is then invoked to argue for a version of what I have called an intentionalist approach to temporal experience.[39] However, I will argue that (especially in light of the individuation argument) it is ultimately not clear what exactly it is in the unity argument that is supposed to spell trouble for the extensionalist, as opposed to the intentionalist.

For one version of the unity argument, we can again look to Tye. Indeed, in addition to the considerations discussed in the previous section, it is also the unity argument that is supposed to provide support for his one-experience view (though I think it can be looked at independently of the latter). In setting out his version of the unity argument, Tye himself alludes to James's slogan that a succession of feelings, in and of itself, is not a feeling of succession, and responds to it as follows:

> A succession of feelings is indeed not a feeling of succession. But a feeling of succession is not a feeling of the succession of *feelings* either. Where consciousness is unified, there is only a single feeling, a feeling that can be described in multiple ways as a feeling of succession, as a feeling of *A* succeeding *B*, as a feeling of *A*, as a feeling of *B*, as a feeling of *A* and *B* and so on. (Tye 2003, p. 102)

Tye's target in this passage is the specific way in which James develops the thought that a succession of feelings, in and of itself, is not a feeling of succession. According to James, when we have a feeling of succession, and not just a mere succession of feelings, it is because 'to our successive feelings, a feeling of their own succession is added'

[38] See, for instance, Husserl 1893–1917, p. 16: 'The unity of the consciousness that encompasses in an intentional manner what is present and what is past is a phenomenological datum'.

[39] In particular, the unity argument is often invoked in favour of what Miller (1984) calls the *Principle of Simultaneous Awareness* (PSA). That is, it is often argued that, in order to make sense of the unity at issue, we have to think of experience as being unified *at a time*. As mentioned above (n. 14), it is not obvious how an intentionalist approach to temporal experience and PSA go together, even though they are often being run together.

(James 1890, Vol. I, p. 629). Tye frames the issue as to whether this account of temporal experience is correct in terms of the idea that consciousness possesses a characteristic form of unity, which he calls *phenomenal unity* — the question, for him, is whether James's suggestion provides a satisfactory account of phenomenal unity.

Tye's response that it does not can be seen to involve two key claims. The first is that, if we think of phenomenal unity as consisting in a relation between individual experiences, we are forced to construe it along the lines suggested by James — that is, as involving a higher-order experience unifying those individual experiences. The second is that the idea of accounting for the unity of consciousness in terms of such a higher-order experience is hopeless.[40] The conclusion he draws is that it is wrong to think of phenomenal unity in terms of a relation between individual experiences in the first place. The characteristic way in which my hearing of *do* must be unified with my hearing of *re*, if I am to have an experience of *do* followed by *re*, can only be accounted for if we think of the latter in the way suggested by the intentionalist: namely as one experience, in which I am intentionally directed to, or represent, *do* and *re* in different ways. Tye's one-experience view then applies this lesson to the unity of consciousness in general.

Viewed from an extensionalist point of view, an obvious worry about the argument just sketched is that it appears circular, if it is to be regarded as an argument for intentionalism rather than extensionalism. Note that it is not obvious why an extensionalist about temporal experience should accept Tye's first claim that, if we think of phenomenal unity as consisting in a relation between individual experiences, the only way of doing so is by postulating a higher-order experience. That claim only becomes compelling (in so far as it does) if we already think of experience along the kinds of representationalist lines implied by intentionalism about temporal experience. As I have suggested, though, extensionalism is best seen as aligning with a rival, relational view of experience. On such a view, experiences of movement or succession are to be analysed in terms of the idea of a distinctive kind of psychological relation of awareness or acquaintance in which the perceiver stands, for a period of time, to events or processes that unfold over that period of time. Thus, on this view, we can conceive of the phenomenal unity between my hearing *do* and my hearing

[40] Tye offers various kinds of argument to this effect: for instance, that such an account would lead to an infinite regress (Tye 2003, pp. 21 f.), and that it lacks introspective evidence. Tye's position here can be seen to echo concerns that are also present in Husserl. See in particular Husserl's (1893–1917, pp. 233 ff.) discussion of Meinong, also discussed in Brough 1991, p. xxxiv.

re as simply being a matter of them forming successive *parts* of my overall experience of *do* followed by *re*—that is, as two experiences that can *make up* the latter in so far as the tones they are experiences of fall into the scope of one specious present.

To see more precisely how the extensionalist should respond to Tye, though, I think it is also important to take account of the individuation argument, and of the sharp distinction it in effect introduces between two types of questions. One striking feature of Tye's account is that he in fact employs the notion of phenomenal unity both to explain how temporal experiences, such as the experience of hearing *do* being followed by *re*, are possible, as well as for explaining what is involved in the unity of the stream of consciousness over longer periods of time. From the point of view of the individuation argument, however, these are two quite separate issues (at least on the face of it). If the individuation argument is correct, I in fact have a multitude of discrete experiences of the former kind over the course of a waking day. One experience may encompass both the *do* and the *re*, or several visually distinct positions occupied by the second-hand on its journey around the clock face, but the maximum interval any individual experience can cover is in fact quite limited, as becomes evident when we consider movements or changes that are too slow to be perceived. Yet my overall stream of consciousness is clearly still unified across discrete such experiences in the sense that I do not experience any discontinuity in the way they succeed each other.[41]

However, Tye is not the only philosopher who runs together what, from the point of view of the individuation argument, are separate questions about the possibility of temporal experience and about the unity of consciousness across discrete experiences. There is at least a tendency to do so also in Dainton's (2006) 'overlap theory' of the unity of consciousness, even though Dainton, in sharp contrast to Tye, is an extensionalist about temporal experience. On his view, the apparent continuity of our stream of consciousness is to be explained in terms of the idea of overlapping specious presents. Within each specious present, according to Dainton, experiences are, as he puts it, diachronically co-conscious. When I hear *do* followed by *re*, my experience of *do* and my experience of *re* are diachronically co-conscious. Similarly, I might also hear *re* followed by *mi*—again, in virtue of my experiences of these two notes being diachronically co-conscious. If my hearing *do*

[41] See also Rashbrook forthcoming on the distinction between the claim that consciousness appears to be continuous, and the claim that it does not appear to be discontinuous.

and *re*, and my hearing *re* and *mi* fall within two separate specious presents, though, my hearing *do* will not also be co-conscious with my hearing *mi*— co-consciousness, in this sense, is not a transitive relation. Nevertheless, there will be a unity between my successive experiences of *do-re* and *re-mi*, in virtue of the fact that they overlap: the experience of *re* is a constituent of each of them. In that way, the unity of consciousness over time can be seen as the ancestral of the relation of co-consciousness, which in turn is the relation involved in making experiences of succession possible.

Dainton, when compared with Tye, is clearly more alive to the need to distinguish between the question as to what is involved in having experiences of succession, and the question as to what explains the unity of the stream of consciousness (see, for instance, Dainton 2006, p. 254, and 2008b, pp. 369 f.). Yet I want to suggest that there is still a sense in which he does not go far enough in recognizing the significance of the distinction. This shows up in the role Dainton assigns to the notion of co-consciousness, which a number of his commentators have found puzzling. Writing about the kind of relation Dainton terms 'co-consciousness', Tye, for instance, writes:

> Begin with the assumption that [temporal experiences consist in] individual experiences somehow bundled together by a phenomenal unity relation and you will find yourself either supposing that phenomenal unity is something unique and basic about which you can say nothing except that it bundles experiences together to form a unified consciousness, or you will join Hume in confessing that the problem of the unifying principle is too hard to be solved. The latter course of action at least has the virtue of candor, but the best strategy, it seems to me, is simply to give up the assumption. (Tye 2003, p. 107)

I think the individuation argument might provide us with one way of understanding (part of) what Tye is getting at in this passage, if we take him to be concerned with the idea that the notion of co-consciousness plays a substantive role in explaining what makes temporal experience possible. His basic point, it seems, is that it is hard to see what, if anything, Dainton's appeal to the idea of a relation of co-consciousness actually adds to the basic thought, shared by both Tye and Dainton, that when I hear *do* followed by *re*, for instance, it is because I have one experience in which both *do* and *re* figure. To this it might perhaps be objected that we can see the work that co-consciousness does from the fact that not all of the successive elements of our stream of consciousness are co-conscious, because co-consciousness is non-transitive. Yet that latter claim, in turn, might also be seen to add

nothing substantive to the idea of co-consciousness, because it simply amounts to another way of stating the intuition behind the individuation argument that the maximum duration that individual temporal experiences can span is limited.[42]

Where exactly does that leave the dialectic between the extensionalist and the intentionalist? I believe the right way for the extensionalist to respond to Tye, contrary to what Dainton seems to think, is in fact to deny that, when it comes to explaining our ability to perceive movement and change, extensionalism needs to be seen to involve any more of a substantive explanatory commitment to the idea of a phenomenal unity relation than intentionalism does. Consider again how Tye means to give up the assumption that temporal experiences involve 'individual experiences somehow bundled together by a phenomenal unity relation': by instead explaining phenomenal unity in terms of the intentionalist idea that having an experience of *do* followed by *re*, for instance, is simply a matter of having one experience, in which I am intentionally directed to, or represent, *do* and *re* in different ways. In effect, the account of phenomenal unity offered by Tye is a deflationist one. On his account, the notion of phenomenal unity carries no genuinely independent explanatory weight; it adds nothing of substance to the basic intentionalist account of temporal experience offered. Correspondingly, Tye's argument looks damaging to the extensionalist only because of the implication that the extensionalist, in contrast to the intentionalist exemplified by Tye, is committed to giving the notion of phenomenal unity a more substantive explanatory role in accounting for experiences of movement and change, without being able to provide much by way of an elucidation of that notion. As we have just seen, though, it is not obvious that this is actually true, for instance, of Dainton's account (perhaps contrary to what Dainton himself thinks). Neither in Tye's case, nor in Dainton's, does the appeal to the idea of phenomenal unity actually seem to add anything of substance to the basic proposal about the nature of temporal experience each of them subscribes to — intentionalist in one case and extensionalist in the other.

[42] Note that my remarks here are targeted specifically at Dainton's understanding of the notion of co-consciousness, and any role it might be seen to play in his account of temporal experience understood as perceptual experience of, for instance, succession or movement. The notion of an overlap between different experiences might still play an important role in accounting for the unity across experiences of the stream of consciousness, although it is also possible that there might be no one thing that accounts for our sense that our stream of consciousness is unified across time (and indeed across different types of mental occurrences).

What this suggests is that the assumption we should actually give up is that accounting for temporal experience is a matter of providing an account of phenomenal unity, where that has to be seen as something that needs to be done in addition to the basic account of the nature of perceptual experience we give. At any rate, this seems to be the right suggestion from the point of view of the individuation argument. Consider once again the difference between seeing the hour-hand in different positions on its journey around the clock face, but never seeing it moving, versus seeing the movement of the second-hand. As I said, if the individuation argument is correct, we need to be careful not to conflate two quite different explanatory tasks — that of giving an account of the nature of individual token experiences that can explain, for instance, why we can see the second-hand moving but not the hour-hand, and that of giving an account of connections that can obtain between discrete such token experiences. In the case of the second type of task, there is clearly scope for bringing in a substantive explanatory notion of unity that is separate from the account we give of the nature of individual token experiences. But arguably this is precisely because the question is concerned with connections between discrete such token experiences to start off with. Thus, we may ask, for instance: Given that I *cannot perceive* the movement of the hour-hand, because no token experience I have makes its movement manifest to me, how are the discrete token experiences I have of it in different positions at different times nevertheless unified, so that I am, for instance, not aware of any discontinuities in my experience of the hour-hand? But obviously the key to an account of temporal experience, understood specifically as a capacity to *perceive* such things as instances of movement or succession, cannot lie with the kind of unity at issue here.[43] Rather, the extensionalist will claim that the reason why I can, for instance, see the second-hand

[43] A conflation between these two issues appears to be at work in the following criticism Kelly has offered (2005, p. 222) of what he calls the Specious Present Theory:

> To see that the perception of motion remains unexplained [on the Specious Present Theory], we need only to notice that the specious present, by nearly all accounts, lasts only a relatively limited time … in the area of three seconds or so. But [if] you watch an airplane taking off from the runway you can follow its continuous motion for several minutes before it disappears. Even on the Specious Present Theory, therefore, we must keep track of the earlier phases of long movements in some way other than by perceiving them directly.

I think a natural line for an advocate of the individuation argument to take in response to this passage is to point out what looks to be a contradiction between its final sentence and the claim, in the first sentence, that 'the perception of motion remains unexplained' on the Specious Present Theory.

moving is simply that it occupies discriminably different positions already within an interval of the length of the specious present — thus there can be token experiences that do make its movement manifest to me, which are made up of a succession of experiences of the hand at those different positions.

7. The causal argument

Let me finally turn to a third type of argument that can be found in the literature on temporal experience, which I will call the *causal argument*. The basic idea behind the causal argument is that, when I hear *do* and *re* sounding in succession, my hearing *do* must make a causal difference (of a certain kind) to my subsequent experience, or otherwise I will not hear *do* followed by *re*. Thus, the distinction between a (mere) succession of experiences and an experience of succession is to be explained, at least in part, by appeal to the idea that the latter involves a (particular sort of) causal integration of experience over time.

The causal argument is typically put forward as an argument in favour of intentionalism about temporal experience.[44] One line of thought, for instance, is that my hearing *do* making the required causal difference to my subsequent experience is a matter of it making a difference to the *way* in which the following *re* is experienced. The latter, the line of thought continues, must be spelled out in terms of the idea that my experience of the *re* has an intentional property which it would not have had, had it not been affected by the previous hearing of the *do*. (Perhaps the idea that cause and effect must be distinct particulars could also be invoked in constructing another version of the causal argument in favour of intentionalism.)

The causal argument, thus understood, is often made vivid by saying that, for any situation in which I do experience a succession or movement, we can imagine a possible counterfactual situation in which I fail to do so, because the required causal integration of experience over time is absent or at least compromised.[45] Sometimes it is also suggested that cases of akinetopsia, in which patients become

[44] Variants of the causal argument, understood along those lines, seem to be in play, for instance, in Mellor (1998, p. 115), Stevenson (2000, p. 303), Sacks (2000, pp. 34 f.). See also Dainton (2006, p. 132) for discussion.

[45] For instance, Husserl 1893–1917, p. 13, might be read in this way.

unable to perceive (certain kinds of) motion after brain damage,[46] provide actual illustrations of such a possibility.

On closer inspection, however, it is not clear why an extensionalist should not also be in a position to accommodate these latter observations. The basic intuition at issue in them, I take it, is that, for any case in which I do hear *do* followed by *re*, for instance, something could have happened to me that would have prevented me from hearing *do* being followed by *re*, even though I heard both *do* and *re*. Put this way, though, one obvious problem with the causal argument, as described so far, is that it seems to provide a purely negative characterization of the contrast case. In other words, to assess the theoretical significance of the causal argument properly, we already need to have some understanding of what the difference comes to between hearing the succession between *do* and *re*, on the one hand, and not hearing it, on the other.

Now, if what I have been saying above is along the right lines, one way of understanding what the difference at issue here comes to is, of course, supplied by the individuation argument. In other words, the individuation argument, if correct, provides one plausible way of unpacking the causal argument and giving a more positive characterization of the effects that a disruption of certain causal connections involved in normal temporal experience might have. However, because the individuation argument is itself neutral between intentionalist and extensionalist views of temporal experience, it provides a way of unpacking and responding to the causal argument that both intentionalists and extensionalists about temporal experience can help themselves to. Or so I will argue.

Recall that, according to the individuation argument, when I hear both *do* and *re*, but do not hear *do* followed by *re*, it must be because there is no one token experience that encompasses both the *do* and the *re*. In terms of the phenomenology of the resulting overall experience, what this comes to can be made particularly vivid by envisaging the change from *do* to *re* as a gradual change in pitch, akin to the gradual change of position in the movement of the hands of a clock. If there is no one experience encompassing both the *do* and the *re*, the best I can be said to become aware of is that the pitch *has changed*, because I remember *do* while hearing *re*. In other words, the effect on my experience could be described as a 'shrinking' of the period of time that my specious present encompasses. The shorter the specious present,

[46] For an account of akinetopsia, see Heywood and Zihl 1999.

though, the fewer types of movement or change I can be directly perceptually aware of.

It seems to me that this way of unpacking the causal argument, and of making sense of the consequences that the disruption of the causal connection at issue would have, is compatible not only with an intentionalist, but also with an extensionalist approach to temporal experience. Recall that, for the extensionalist, my hearing *do* followed by *re* is a matter of me having one temporally extended experience in which I hear *do* and *re* in turn. The extensionalist can thus give the following interpretation of the thought that, for me to hear *do* followed by *re*, my hearing *do* must make a causal difference (of a certain kind) to my subsequent experience. Making the required difference, here, is simply a matter of whether or not my hearing *do* and my hearing *re* are part of the same extended experience or whether, by the time the *re* is heard, a new, discrete, experience has already commenced.

At the heart of the causal argument, as I have interpreted it, is an insight into the contingent nature of our ability to perceive movements and changes. Put briefly, what I have just tried to show is that this contingency is already acknowledged by both intentionalists and extensionalists in as far as they subscribe to the individuation argument. The central contingent feature of temporal experience identified in the individuation argument is the maximal length of time that individual experiences can span. Thus, if we construe the causal argument along the lines suggested by the individuation argument, the causal facts at stake in the question as to whether we have an experience of succession or a mere succession of experiences are those that determine the maximal length of time that individual experiences can span. Thus understood, the causal argument, at least on the face of it, seems compatible with both intentionalism and extensionalism about temporal experience.

8. Conclusion

I have presented three different arguments that might inform versions of the claim that a succession of experiences (in and of itself) is not an experience of succession: the individuation argument, the unity argument, and the causal argument. My main aim has been to show that (a) the individuation argument is, at least prima facie, neutral between what I have called intentionalist and extensionalist views of temporal experience, respectively, and that (b) once the individuation argument

is in place, the unity and causal argument lose at least some of the force that they are often thought to have against extensionalist views.[47]

The overall argument I have presented reveals, I believe, a common structure to attempts to put the unity argument or the causal argument to work as arguments against extensionalism. Both arguments might be seen to reveal a missing ingredient in the extensionalist's account of temporal experiences as time-occupying particulars that are made up of further time-occupying particulars as parts — that is, a missing unity relation, or a missing causal relation, respectively, *between the relevant parts*.[48] In each case, the correct response on behalf of the extensionalist, I believe, does not lie in trying to provide the alleged missing ingredient. Rather, it lies in pointing out that the idea of a missing ingredient of this type already presupposes a picture of experience that is at variance with that suggested by the extensionalist.

We can distinguish between two (interconnected) thoughts behind the claim that the basic extensionalist picture requires supplementation with the idea of a further ingredient: one is that we need to appeal to such an ingredient in order to explain what 'holds together' the succession of experiences that, according to the extensionalist, constitute the parts of an experience of succession. The other is that we need to appeal to such relations to explain why not all successions of experiences constitute an experience of succession. Neither thought, however, is ultimately compelling. Going back once more to one of our examples, the extensionalist will think of a case in which the tones

[47] It should be fairly obvious where my own sympathies lie in the debate between intentionalists and extensionalists about temporal experience, but note that I have not argued against intentionalism in this paper. An anonymous reviewer therefore raises the worry that, going by the arguments I have offered, it might seem that I am claiming that there is in fact nothing in temporal experience that can decide between intentionalism and extensionalism. Remember, though, my suggestion, in Sect. 2, that intentionalism and extensionalism are each best seen as lining up with one of two approaches to perceptual experience in general — that is, the representational view and the relational view, respectively. Consistent with this view, it might be that the only things that can ultimately decide between intentionalism and extensionalism are in fact the broader phenomenological and epistemological considerations at issue in the debate between representationalists and relationalists (see, for instance, the discussion of Travis 2004 in Sect. 5, above).

[48] Van Cleve (1999, p. 57) gives what I think is the correct response to this idea of a 'missing ingredient' in the form of a rhetorical question: 'Is it possible that what must be added is not a mere ingredient in the total phenomenon, but rather the phenomenon itself?' However, I hope to have shown that, in contrast to what Van Cleve seems to think, this response need not be read as favouring an intentionalist approach to temporal experience over an extensionalist one.

do-re-mi sound in succession and I can actually hear them succeeding each other as one in which I experience each of the three tones in turn, and these experiences can make up one overall experience simply because the three tones fall within the scope of one specious present. As we have seen in the preceding section, we can, of course, conceive of an alternative situation in which we have exactly the same succession of tones, but I only hear each of them in isolation, rather than hearing them succeed each other. But doing so would involve conceiving of a situation in which my specious present is shorter than it actually is. Conversely, given the actual length of my specious present, the only way in which I could hear each of the three tones in isolation would be if I had three successive experiences, each of specious-present length, in which I heard one of the tones, but in which the rest of the specious present is filled with silence. And these, of course, are not the experiences that, according to the extensionalist, make up my actual experience when I do hear the three tones succeed each other. The reason why, in this case, I would instead just have a succession of experiences, rather than an experience of succession, is that, taken together, the three experiences cover an interval of time that far exceeds the maximum interval any individual experience can cover.[49]

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