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Husserl, the Absolute Flow, and Temporal Experience

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1. Introduction

Edmund Husserl's phenomenological analysis of internal time consciousness has a reputation for being complex, occasionally to the point of approaching impenetrability. The latter applies in particular to his remarks about what he calls the 'absolute time-constituting flow',¹ some of which Husserl himself describes as "shocking (when not initially even absurd)" (Husserl, 1991, p. 84).

Perhaps it is because many readers of Husserl have found the passages on the absolute flow off-puttingly difficult that they have had fairly little impact, outside the specific field of Husserl studies, on the literature on temporal experience at large—certainly much less so than is the case for Husserl's analysis of temporal experience in terms of the tripartite structure of *primal impression*, *retention* and *protention*. In a major recent study of temporal experience, for instance, Barry Dainton discusses in detail Husserl's early attempts to give an account of temporal experience in terms of that tripartite structure, but mentions only briefly later developments that also feature the notion of the absolute flow, commenting that he "find[s] the relevant Husserlian writings obscure" (Dainton, 2006, p. 160).

I believe this state of affairs is unfortunate for two reasons. First, there is actually a fairly straightforward way of making sense of the notion of the absolute flow with the help of some theoretical notions familiar from recent philosophical work on perception. Secondly,

¹ In what follows, I will speak more simply of the 'absolute flow'. However, I will come back to the theoretical significance of the adjective 'time-constituting' in section 5, below.

that way of making sense of the notion of the absolute flow connects directly to two sets of ideas that are still at the centre of current debates about temporal experience. Historically, Husserl is arguably the thinker who explored most thoroughly the possibilities of what is sometimes called an *intentionalist* approach to temporal experience.² And what I want to argue is that his remarks about the absolute flow show what happens if one tries to accommodate, within an intentionalist framework, the thought that *temporal experience itself necessarily unfolds over time*. More specifically, I want to suggest that many of Husserl's remarks about the absolute flow can be made intelligible, if we understand them as remarks in which he is trying to introduce what can be thought of as an *externalist* element into his intentionalist view of temporal experience—externalist because it makes how we experience things as being at one time constitutively dependent on how, at other times, we experience them as being.

My focus in what follows will be in particular on two recurrent themes in Husserl's remarks about the absolute flow. They are the two themes that offer perhaps the most obvious initial resistance to interpretation. But they can, I think, be made sense of if we understand Husserl along the lines just suggested. The following two quotations provide representative examples of them:

Time-constituting phenomena [. . .] are evidently objectivities fundamentally different from those constituted in time. They are neither individual objects nor individual processes, and the predicates of such objects or processes cannot be meaningfully ascribed to them. Hence it also can make no sense to say of them (and to say with the same signification) that they exist in the now and did exist previously, that they succeed one another in time or are simultaneous with one another, and so on. (Husserl, 1991, p. 79)

The flow of the consciousness that constitutes immanent time not only exists but is so remarkably and yet intelligibly fashioned that a self-appearance of the flow necessarily exists in it, and therefore the flow itself must necessarily be apprehensible in the flowing. The self-appearance of the flow does not require a second flow; on the

² Dainton (2010) also uses the term 'retentionalism' to capture this kind of approach. Contemporary intentionalists who cite Husserl as an inspiration include Horwich (1987), Kelly (2005), Grush (2006), Strawson (2009) and Kiverstein (2010). Whilst Husserl himself is clearly an intentionalist throughout his writings on temporal experience, he never settles on a definitive account. Rather, those writings contain numerous different attempts to work out the details of an intentionalist approach. Like other writers on Husserl, I will focus on one particular theoretical position Husserl can be seen to gravitate towards and ignore, to a large extent, some other positions he explores.

contrary, it constitutes itself as a phenomenon in itself. The constituting and the constituted coincide. (Husserl, 1991, p. 88)

I will call the claim at issue in the first of these quotes the *non-temporality claim*. According to it, there is a sense in which the absolute flow is to be thought of as something to which temporal categories such as succession or simultaneity don't apply. The claim at issue in the second quote I will call the *self-appearance claim*. The flow is what Husserl calls "*absolute subjectivity*" (Husserl, 1991, p. 79)—i.e., the form that my awareness of temporal phenomena ultimately takes—but there is also a sense in which it includes an awareness of itself. Or so the claim goes.

My plan for this paper is as follows. In the next two sections, I will present two existing accounts of the emergence of, and motivation behind, the idea of the absolute flow in Husserl's writings. The first is centred on the thought that Husserl's embracing the notion of the absolute flow marks the point at which he abandons a particular picture of perceptual consciousness developed in the *Logical Investigations*, which is often referred to as the schema of content and apprehension. The second takes at its starting point the thought that the idea of the absolute flow is meant to block a regress that threatens to ensue if we think of experience as itself a temporal phenomenon. I argue that a possible weakness of these arguments, as they stand, is that they suggest that Husserl arrives at the non-temporality claim and the self-appearance claim by quite different routes. By contrast, in section 4, I outline a reading of the idea of the absolute flow which fares better in this respect. In sections 5 and 6, I subject the idea of the absolute flow, thus understood, to critical scrutiny. In particular, I argue that it is not clear whether Husserl ultimately provides good grounds for favouring the analysis he ends up over a rival, *extensionalist*, approach to temporal experience.³ Indeed, as I will suggest, it ultimately seems to be the fact that he endorses a form of idealism about time that provides Husserl's principal motivation for adopting an intentionalist, rather than an extensionalist view.

2. The Schema Argument

The first of the extant arguments connected to the idea of the absolute flow that I want to consider might be called the *schema argument*.

³ The *locus classicus* for extensionalism is Stern (1897). Other extensionalists include Schumann (1898), Russell (1915), Foster (1979), and Dainton (2006). Some extensionalist elements can also be made out in James (1890).

To anticipate, according to the schema argument, the emergence of the notion of the absolute flow marks a general shift in Husserl's views about the nature of perceptual experience—as I will interpret it, its upshot is that Husserl comes to embrace (what would now be called) a version of representationalism about perceptual experience, after initially holding a version of a sense-data view often referred to as the 'apprehension–apprehension content schema', or simply 'the schema'. In other words, the schema argument has it that Husserl comes to realise that the schema does not provide an adequate model through which we can account for our awareness of time. Abandoning the schema, however, generates the need for an alternative account of perceptual experience—and it is against the background of this need that Husserl's remarks about the absolute flow have to be understood.⁴

The details of the schema are developed in Husserl's *Logical Investigations*. According to it, perceptual awareness of an ordinary physical object or event involves two 'immanent' aspects: an experiential 'content', and an 'apprehension' that 'animates' that content in a certain way. My being perceptually presented with the relevant object or event just is the upshot of this animation of the content by the apprehension.

It is important to emphasise at this point that Husserl's use of the term 'content' is to be sharply distinguished from the way in which that term figures in current discussions in the philosophy of mind. In the latter, the dominant way in which the term 'content' is used is to denote what is also more specifically referred to as 'representational content'. Put briefly, a content, in this sense, is a property of a representation, typically conceived of as the property of the representation having the veridicality or correctness conditions it has. For instance, a common view about perceptual experience at the moment is that it has a content in this sense, somewhat analogously to the way in which a

⁴ Versions of the schema argument can be found in Sokolowski (1964), Brough (1972) and Gallagher (1998, pp. 46ff.) Kortoos (2002) looks in some depth at textual evidence that the emergence of the notion of the absolute flow is connected to the disappearance of appeals to the schema in Husserl's writing. As Alweiss (2003) points out, Merleau-Ponty (1962, p. 135, fn.1) contains an early articulation of a version of the schema argument. He writes that "Husserl, for example, for a long time defined consciousness or the imposition of a significance in terms of the *Auffassung-Inhalt* framework, and as a *beseelende Auffassung*. He takes a decisive step forward in recognizing, from the time of his Lectures on Time, that this operation presupposes another deeper one whereby the content is itself made ready for this apprehension." However, see also Mensch (2010) for a critique of the idea that Husserl abandoned the schema altogether, and the theoretical difficulties that this idea poses in the context of the project of the reduction.

newspaper story, say, might be said to have a content, and that we can characterize the nature of the experience by giving the content it has. Undergoing perceptual experiences, on this *representational view of experience*, just is one way of representing the world as being certain ways.⁵

Husserl's understanding of the term 'content', within the context of the schema at least, is very different from the idea of 'representational content', as just outlined. Rather, what Husserl refers to as 'contents', within the context of the schema, are particular sensory occurrences to which the subject stands in a relation that is more basic than the relation of representation. Thus, the view of experience embodied in the schema diverges from, or at least goes beyond, the view sketched in the previous paragraph, in that it (also) involves an appeal to such sensory occurrences as a necessary part of perceptual experience. As such, the view is perhaps closer to the idea that perceptual experience involves an experience of sense-data, except that Husserl, in contrast to much of the Anglophone tradition using this term, does not conceive of our relation to such sense-data as one of acquaintance. They are experienced not in the sense of being objects, e.g., of acquaintance, but in the sense of being (aspects of) episodes we undergo (cf. Husserl, 2001a, p. 273). Thus, Husserl also articulates the idea behind the schema in passages such as the following:

[T]he inkpot confronts us in perception. [...] [T]his means no more phenomenologically than that we undergo a certain sequence of experiences of the class of sensations, sensuously unified in a peculiar serial pattern, and informed by a certain act-character of 'interpretation' (*Auffassung*), which endows it with an objective sense. This act-character is responsible for the fact that an *object*, i.e. this inkpot, is perceptually apparent to us. (Husserl, 2001b, p. 201)

The perceptual presentation arises in so far as an experienced complex of sensations gets informed by a certain act-character, one of

⁵ I adopt the newspaper analogy from Siegel (2010, sec. 2), who says: "When one speaks of the contents of a bucket, one is talking about what is spatially inside the bucket. An analogous use of "the contents of perception" would pick out what is 'in the mind' when one has a perceptual experience. In contrast, when one speaks of the contents of a newspaper, one is talking about what information the newspaper stories convey. Most contemporary uses of "the contents of perception" take such contents to be analogous to the contents of a newspaper story, rather than the contents of a bucket." Influential proponents of a representational view of experience are Peacocke, 1983; Harman, 1990; McDowell, 1994; Dretske, 1995; Brewer, 2000, Tye, 2000. For criticisms of this view see, e.g., Campbell, 2002; Travis, 2004; Brewer, 2011. See also section 6, below.

apprehending or meaning. To the extent that this happens, the perceived object appears. (Husserl, 2001a, p. 214)

As Brough (1972, p. 303) points out, we can think of the key idea at issue in these passages in terms of the combination of two theses. According to the *neutrality thesis*, perceptual experience involves sensory material, or what Husserl calls immanent sensory contents, which “considered in themselves, are neutral with respect to external reference as such, or reference to any particular object” (Brough, 1972, p. 303). The *animation thesis*, correspondingly, states that external reference or reference to a particular object depends on a second element: the apprehension that animates the content.⁶

For present purposes, it is the neutrality thesis, in particular, that is of relevance. For the schema argument, in essence, has it that Husserl came to see the neutrality thesis as incompatible with some of the commitments of his analysis of temporal consciousness, and that it was this that led to the emergence of the idea of the absolute flow.

One way of approaching the argument is by asking what it would take to bring experiences of temporally extended phenomena, such as a succession of tones, within the remit of the schema. A fundamental aspect of Husserl’s approach to temporal experience is expressed in the following quotation:

Temporal objects [. . .] spread their matter over an extent of time, and such objects can become constituted only in acts that constitute the very differences belonging to time. But time-constituting acts are—essentially—acts that constitute the present and the past. [. . .] Temporal objects must become constituted in this way. That implies: an act claiming to give a temporal object must contain in itself ‘apprehensions of the now,’ ‘apprehensions of the past,’ and so on . . . (Husserl, 1991, p. 41; cf. also p. 239f.)

I will call the general view expressed in this passage *intentionalism* about temporal experience. Put briefly, intentionalism about temporal experience has it that the fact that we can have perceptual experiences, e.g. as of movement or change, is to be explained in terms of the idea of a particular *intentional structure* that experience possesses. Husserl puts this in terms of the idea that temporal experience involves ‘acts that constitute the very differences belonging to time’.

⁶ ‘Neutrality thesis’ is Brough’s term, ‘animation thesis’ mine. Brough does not give a name to the second thesis.

This, of course, is where Husserl's famous tripartite distinction between *primal impression*, *retention* and *protention* comes in.⁷ Temporal experience reflects 'the very differences belonging to time', in the sense intended by Husserl, in so far as it involves an awareness not just of what is present, but also of what has just been, and—to some extent—of what is yet to come. Whilst listening to the three tones *do-re-mi* played in succession, for instance, my being aware of the *re* as present necessarily also involves my being aware of the *do* as just-past and, in some sense, of the *mi* as yet to come. This, for Husserl, is required for my perception to amount to a perception of the succession of tones, rather than just a succession of separate perceptions of each tone. And 'primal impression', 'retention' and 'protention' are the terms he uses to designate the forms of awareness of the present, the past and the future, that thus form aspects of any temporal experience.

We will have further occasion to examine the precise way in which primal impression, retention and protention figure in Husserl's account. For the moment, the basic point is that the schema, as articulated in the *Logical Investigations*, seems unable to account for the type of awareness involved, for instance, in retention. The way in which we are aware of the just-past in retention cannot be accounted for on the model of sensory material that is animated by an apprehension. For what could the relevant sensory material be? That, at any rate, is what Husserl comes to think:

The just-past tone, as far as it falls into the present time [...] is still intended, but not in the sense that it is actually being really and immanently 'sensed,' not in the sense that it is there in the manner of a now-tone [...] In short, there is a *radical alteration*, an alteration that can never be described in the way in which we describe the changes in sensations that lead again to sensations. According to its essence, sensation is consciousness of the now. (Husserl 1991, p. 336)

Husserl also summarizes the point here by saying that "the now cannot stand before me as not-now, the not-now cannot stand before me as now" (Husserl, 1991, pp. 334f.). Any account of how I come to be perceptually aware of the succession of the tones *do-re-mi*, for instance, has to acknowledge that, when the *re* is sensed, the *do* is no longer

⁷ Over the course of his writing, the terminology Husserl used to describe this tripartite structure changed several times. I will follow other writers in using the terms 'primal impression', 'retention' and 'protention' throughout—even when discussing passages in which Husserl himself uses a different terminology.

sensed, and the awareness of the *do* as just-past can also not be explained by there being something other that is sensed now.⁸

As mentioned above, it is the neutrality thesis, in particular, that means that the schema is incompatible with Husserl's analysis of temporal experience in terms of primal impression, retention and protention. As Sokolowski puts it:

the datum cannot be temporally neutral; it has to be a present datum if it is to be around for apprehension and interpretation... And if the datum is present, where do we get any direct awareness of pastness, of the falling into absence which characterizes temporal objects? Conscientiousness is glutted with the present; the datum is temporally indigestible. (Sokolowski, 1974, p. 146)

I have been assuming that the schema, as Husserl developed it in the *Logical Investigations*, can usefully be understood as a version of a sense-datum theory of perceptual experience, in particular with respect to the element Husserl calls the 'content'. I now want to suggest that his remarks about the inability of the schema to account for temporal experience can be seen as signalling a move away from a sense-datum theory of perceptual experience to a version of what would nowadays be called a representational view of experience.⁹ On this interpretation, when Husserl says that, as primal impression passes over into retention, "there is a *radical alteration*, an alteration that can never be described in the way in which we describe the changes in sensations that lead again to sensations", he means something like the following. The distinction between primal impression and retention cannot be captured in terms of the idea of a difference in the properties of something mediating my experience, along the lines of the sensory contents envisaged by the

⁸ Husserl's train of thought here is in some respects similar to Russell's argument for a type of memory that constitutes direct awareness of the past, except that Husserl locates our most immediate awareness of the past in perception, whereas Russell locates it in memory. As Russell puts his view, it "is obvious that we often remember what we have seen or heard or had otherwise present to our senses, and that in such cases we are still immediately aware of what we remember, in spite of the fact that it appears as past and not as present. This immediate knowledge by memory is the source of all our knowledge concerning the past: without it, there could be no knowledge of the past by inference, since we should never know that there was anything past to be inferred" (Russell, 1912, p. 26). As already mentioned, though, a crucial difference between Russell and Husserl is that the former conceived of sensation as acquaintance with a sense datum. By contrast, for Husserl, sensations are something we are aware of in so far as we undergo them; they are not objects of awareness. This contrast bears on idea that the schema can't account for temporal experiences, since the former view seems to allow that awareness of a sensation can be decoupled from the presence of that sensation (which is essentially the move Russell makes), in a way in which this is not the case on the latter view.

⁹ See above, p. 5.

schema. Rather, ‘primal impression’ and ‘retention’ simply stand for different, not further analysable, ways my experience is, in virtue of which it can be experience of the just-past as well as the present.

This, in essence, is a representational view of experience, associated with contemporary uses of the term ‘content’, which takes as fundamental the idea of experience as having properties that fix a content in the sense of veridicality or correctness conditions for the experience. More specifically, the upshot of the schema argument is to link Husserl’s reflections on temporal experience with such a representational view in two interconnected ways: on the one hand, the claim is that it is his reflections on temporal experience that lead Husserl to embrace the general idea of a representational view of experience, thus understood. Conversely, though, those reflections on temporal consciousness also lead him to add a more specific claim to the general idea of a representational view of experience—namely that, in order to account for temporal experience, the veridicality or correctness conditions of perceptual experience must involve conditions, not just regarding what is present, but also regarding what has just been, as well as (to some extent) what is about to be.¹⁰

If this reading is along the right lines, I believe that it can give us an initial handle on at least one of the ingredients in Husserl’s idea of the absolute flow, i.e., the thought that the absolute flow is not itself in time, as articulated in the non-temporality claim. Note that the schema presents an account of perceptual experience on which the basic categories needed to elucidate the nature of perceptual experience are themselves occurrences in time: acts of apprehension, and the sensory occurrences that they ‘animate’. This is precisely what generates the problem with the neutrality thesis. By contrast, on a representationalist view of perceptual experience, temporal properties apply (if at all) to the vehicle of the experience, whereas retention, primal impression and protention, understood along representationalist lines, are properties of the experience having certain sorts of representational content (in the sense of correctness or veridicality conditions). As such, they are not to be construed as datable occurrences, and the relation between them is not a temporal one.¹¹

¹⁰ Note that this does not mean that, on this view, sensations can’t also be involved in experience. The key point is just to deny that they play the particular explanatory role in accounting for perceptual intentionality that the schema assigns to them.

¹¹ Compare Dretske, 2003, p. 69: “I have no idea what the property of representing something to be moving [. . .] looks (smells, feels, sounds) like. I suspect it doesn’t look, sound, smell, or feel like anything and for roughly the same reason that *means dog* (a property of the word ‘dog’) does not look, sound, or feel like anything. Certainly not like a dog. Or the word ‘dog’.”

In section 5, below, I will suggest that there is an important respect in which the schema argument, as just sketched, perhaps does not go far enough, and that there is more that may be said about the non-temporality claim. But I think the principal idea behind the schema argument is correct, viz., that the non-temporality claim has to be seen within the context of Husserl coming to embrace a version of representationalism, after initially adopting a version of a sense-datum theory of experience. On this view, retention, primal impression and protention are to be understood as representational properties of experience that our perceptual awareness of temporal objects turns on. As such, they have to be distinguished from properties of the experience understood as the (concrete) vehicle of that awareness.

Let me now turn to an argument that attempts to make sense of the second type of claim that Husserl makes about the absolute flow, i.e. the self-appearance claim.

3. The Regress Argument

One theme that Husserl returns to again and again throughout his writings on time-consciousness is the threat of a certain type of infinite regress (cf. Kortooms, 2002, pp. 129ff.). The key thought behind what I will call the *regress argument* is that the idea of the absolute flow, and in particular the self-appearance claim, encapsulates Husserl's response to that threat. The kind of regress worry that Husserl has in mind is expressed in passages such as the following:

Every temporal appearance, after phenomenological reduction, dissolves into [...] a flow. But I cannot perceive in turn the consciousness itself into which all of this is dissolved. For this new percept would again be something temporal that points back to a constituting consciousness of a similar sort, and so *in infinitum*. Hence the question: How do I come to know about the constituting flow? (Husserl, 1991, p. 116)

The worry, as it is articulated here, takes as its starting point the idea that temporal experience is itself a temporal phenomenon.¹² When I hear the tones *do-re-mi* played in succession, my experience of hearing them is also an occurrence that itself unfolds over time (we will return to this idea, and how exactly it figures in Husserl's thought, in

¹² See also Husserl, 1991, p. 84: "[T]he flow of consciousness obviously becomes constituted in consciousness as a unity too. The unity of a tone-duration, for example, becomes constituted in the flow, but the flow itself becomes constituted in turn as the unity of the consciousness of the tone-duration. And must we then not also go on to say that this unity becomes constituted in an altogether analogous way and is every bit as much a constituted temporal series?"

the next section). But if I want to know what makes it possible for me to be aware of temporal phenomena such as the succession of tones, reflectively attending to my experience as it unfolds in time itself will not help. For such attention itself exploits the structures that make it possible for me to become aware of temporal phenomena, rather than making manifest what they consist in. Or so the thought behind the regress argument goes.

Dan Zahavi, who has perhaps done the most to promote the regress argument, puts the key idea as follows:

If the duration and unity of a tonal sequence is constituted by consciousness, and if our consciousness of the tonal sequence is itself given with duration and unity, are we then not forced to posit yet another consciousness to account for the givenness of this duration and unity, and so forth *ad infinitum*? (Zahavi, 1999, p. 68)

On Zahavi's reading, Husserl's remarks about the absolute flow have to be seen in the context of a wider concern with the nature of consciousness. The thought is that there must be a form of self-awareness inherent in conscious experience that is not itself a matter of such experience being given as an object of awareness. With any conscious experience, such as my experience of *do-re-mi* sounding in succession, I can, of course, become reflectively aware of my undergoing the experience as well as being aware of the succession of the three tones themselves. However, this reflective ability cannot explain what it is for the experience to be a conscious phenomenon in the first place, on pain of the regress sketched by Zahavi. Rather, there must be a feature of the experience itself that grounds my ability to reflect upon it. As Zahavi argues, this line of thought leads Husserl to the idea of a 'pre-reflective self-awareness' that the experience possesses. He writes:

When Husserl claims that the intentional act is constituted in inner time-consciousness, he is not saying that the act is brought to givenness by some other part of subjectivity. Inner time-consciousness is the pre-reflective self-awareness of the act, and to say that the act is constituted in inner time-consciousness simply means that it is brought to awareness thanks to itself. It is called *inner* time-consciousness because it belongs *intrinsically* to the *innermost* structure of the act itself. [...] This internal consciousness is not a particular intentional act, but a pervasive dimension of self-manifestation, and it is exactly this which precedes and founds reflective self-awareness. In short, Husserl would claim that to have an occurrent experience, e.g., a perception of a flowering apple-tree, is to be aware of the experience. But this self-awareness is not itself a separate experience in need of yet another awareness. The self-awareness of the experience is an internal,

nonreflective, irrelational feature of the experience itself, and thus the regress is stopped. (Zahavi, 2003, p. 168)

As expressed in this passage, the regress argument might be decomposed into two claims. One is the claim that accounts of the nature of consciousness quite generally have to recognize a level of pre-reflective self-awareness. The other is that Husserl's analysis of time-consciousness can provide an account of what such pre-reflective self-awareness consists in.¹³ This latter idea is spelled out in more detail in the following passage from Zahavi:

[E]ach retention preserves not only the preceding conscious tone, but also the preceding primal presentation. That is, the actual phase of the flow retains not only the tone, which has just been, but also the elapsing phase of the flow. In short, the retentive process not only permits us to experience an enduring temporal object—it does not merely enable the constitution of the identity of an object in a manifold of temporal phases; it also provides us with temporal self-awareness.

Whereas the flow's constitution of the duration of its object is called its *Querintentionalität*, the flow's awareness (of) its own streaming unity is called its *Längsintentionalität* [...]. Although the latter carries the name intentionality, it would be a decisive misunderstanding of Husserl's theory if one were to identify it with a type of object-intentionality, since Husserl's account of *Längsintentionalität* is, in fact, an analysis of the pre-reflective self-givenness of consciousness. (Zahavi, 2005, p. 68)

The particular feature of Husserl's analysis that Zahavi highlights in this passage is one that Husserl himself describes by saying that the absolute flow possesses a "double intentionality" (Husserl, 1991, pp. 84ff. & pp. 120ff.). On the one hand, it involves an awareness of a temporal object, such as the succession of tones. Husserl calls this dimension of the intentional structure of the absolute flow its *transverse intentionality*. Apart from transverse intentionality, however, Husserl also claims that the absolute flow exhibits *horizontal intentionality*. By this he means an intentional directedness, in retention, not just towards the just-past tone, say, but also towards the awareness of the tone in primal impression. More specifically, I am aware of the tone itself as just-past only because am aware of the primal impression of the tone as just-past, and it is in this sense that I am, as Gallagher and Zahavi (2010, sec. 3) put it, "co-aware of my ongoing experience" when I listen to the succession of tones.

¹³ "Husserl's description of the structure of inner time-consciousness (primal impression-retention-protection) is exactly an analysis of the structure of the pre-reflective self-manifestation of our acts and experiences" (Zahavi, 2003, p. 168).

Thus understood, the regress argument clearly provides for a reading of Husserl's remarks on the absolute flow that makes sense of what I have called the self-appearance claim. But it also comes at a price. For it situates the self-appearance claim within the wider context of a general approach to consciousness, and connects it with a commitment to the idea that consciousness is to be explained in terms of the notion of pre-reflective self-awareness.

There are at least two reasons why one might find the regress argument, thus understood, less than persuasive, given the role played in it by the notion of pre-reflective self-awareness. One problem lies with the notion of pre-reflective self-awareness itself. It has often been regarded as obscure, or the idea that it could explain our ability to become reflectively aware of elements of our conscious mental life has been thought to have an air of vacuousness or circularity about it. In the current context, one way in which this worry might perhaps be sharpened up is by asking what exactly the 'non-objectivising' intentionality involved in horizontal intentionality consists in. On the face of it, this notion seems to be in at least as much need of further elucidation as the idea of pre-reflective self-awareness. Thus, it is not clear how much further illumination we gain from trying to make sense of the latter in terms of the former.¹⁴

Secondly, however, I think there is also a worry as to how exactly the regress argument is meant to provide a motivation for the self-appearance claim. The trouble, more to the point, is that the regress argument threatens to divorce the motivation behind the idea that the absolute flow involves an awareness of itself from the role the absolute flow is meant to play in explaining our perceptual awareness of temporal phenomena. What has emerged as crucial in the above discussion is that the absolute flow, as described by Husserl, displays a feature that allows it to be seen as involving a type of self-awareness that does not involve conscious reflection. That feature is that the absolute flow, as thus described, involves both horizontal and transverse intentionality. In short, what the regress argument tells us is that the absolute flow must display this feature in order to serve as a suitable foundation for self-consciousness.

Understood in this way, though, there is crucial dimension of the question as to why the self-appearance claim holds that, intuitively, the regress argument fails to engage with. Specifically, the regress argument, thus understood, is silent on the grounds for thinking that, in

¹⁴ For a criticism of Zahavi along similar lines, see Shear, 2009. For another type of challenge to the picture of self-consciousness that generates the regress worry see Peacocke, 1999, ch. 6.

the case of temporal experience, transverse intentionality does indeed rest upon horizontal intentionality—i.e., that experience can only be intentionally directed towards temporally extended phenomena in so far as it is also intentionally directed toward one's own past (and, to some extent future) awareness of these phenomena as they have unfolded and will unfold. There is a sense in which the latter claim is simply taken for granted in the regress argument, in order to then provide the basis for identifying the absolute flow as the point at which the epistemic regress stops, and for giving substance to the idea of pre-reflective awareness.¹⁵

Obviously, as a matter of exegetical truth, it is possible that the regress argument has it right and that it is the idea of pre-reflective self-awareness that provides Husserl with the motivation behind the self-appearance claim. The non-temporality claim and the self-appearance claim would then reflect quite separate lines of thought in Husserl's development of the idea of the absolute flow. In what follows, however, I want to outline a possible alternative construal of Husserl's position that makes a much closer connection between the issues at stake in the two claims. In particular, the alternative construal I want to propose sees the self-appearance claim as directly premised on Husserl's commitment to intentionalism about temporal experience, just as, according to the schema argument, the non-temporality claim is.

¹⁵ At least some passages in Zahavi can definitely be read as endorsing the regress argument, understood along the lines I have sketched. However, I admit that there are also passages that run counter to such an interpretation. Consider the following from Gallagher and Zahavi (2010). “[T]he temporal (retentional-impressional-protentional) structure of consciousness not only allows for the experience of temporally extended objects or intentional contents, but also entails the self-manifestation of consciousness, that is, its pre-reflective self-awareness. The retention of past notes of the melody is accomplished, not by a “real” or literal re-presentation of the notes (as if I were hearing them a second time and simultaneously with the current note), but by an intentional retaining of my just past *experience* of the melody as just past. This means that there is a primary and simultaneous self-awareness (an awareness of my on-going experience in the ongoing flow of experience) that is implicit in my experience of the object.” The second sentence here suggests that Gallagher and Zahavi perhaps do not ultimately subscribe to the idea that it is the threat of a regress that motivates the self-appearance claim, but some more specific consideration about the phenomenology of temporal experience. At the same time, though, it is not clear what the line of thought in that sentence is meant to come to. In particular, one might think that the schema argument already accounts for the difference between the retention of a past note and seemingly hearing the note a second time. Why that difference has to involve the idea that retention is essentially retention of past experience is at least unclear at this stage (though see section 4, below, for other material that might bear on this issue).

4. An Alternative Reconstruction of Husserl's Account of the Absolute Flow

The alternative reading of Husserl's remarks about the absolute flow that I want to put forward in the following centres on a crucial further assumption that Husserl makes throughout his writings about temporal experience, the significance of which is, I believe, underplayed in the schema and regress arguments, as presented above. The assumption I have in mind comes out in passages such as the following:

It is certainly evident that the perception of a temporal object itself has temporality, that the perception of duration itself presupposes the duration of perception, that the perception of any temporal form itself has its temporal form.¹⁶ (Husserl, 1991, p. 24, see also p. 198)

That the perception of a temporal object itself, as a matter of fact, has a temporal form—i.e., is a temporally extended occurrence—is of course already acknowledged, at least to a certain extent, in the presentations of the schema and regress arguments above. Indeed, it may be seen as one of the key factors behind the regress argument.¹⁷ But I think it is plausible that what Husserl is ultimately after in passages such as the one just quoted is a stronger claim, viz., a *necessity claim*. My argument in this section will be that crediting Husserl with such a necessity claim, which I will also refer to as the *necessary extension claim*, can help make sense of his remarks on the absolute flow in a way that accounts for both the non-temporality claim and the self-appearance claim at the same time. (In the final two sections, I will then examine what, if any, reason Husserl might in fact have for holding the necessity claim.)

In his 1925 lectures published under the title *Phenomenological Psychology*, Husserl summarizes his (mature) view of temporal

¹⁶ Zahavi claims that the question as to whether the consciousness of a temporal process itself temporally extended “is a question that Husserl answered differently at different stages of his thinking” (Zahavi, 2007, p. 464; compare also Zahavi, 1999, p. 68). I am not convinced that this is true. I think it is more plausible to think that Husserl assumes throughout his writings that the consciousness of a temporal process is itself extended. However, over time, he comes to a more sophisticated understanding of how such a requirement might be reflected in his theory. See also the next section.

¹⁷ Compare also Kortooms, who situates Husserl's remarks about the threat of an infinite regress within the context of two claims that can already be found in his lecture course from WS '04/'05: “[O]n the one hand, he claims that a temporal succession of phases of consciousness is not a sufficient condition to arrive at the consciousness of temporal succession. On the other hand, Husserl also claims that consciousness of time does not occur in one non-temporal moment” (Kortooms, 2002, p. 132).

experience in a way that provides a helpful starting point for developing an understanding of the notion of the absolute flow along the lines I have in mind:

[C]oncrete perception as original consciousness (original givenness) of a temporally extended object is structured internally as itself a streaming system of momentary perceptions (so-called primal impressions). But each such momentary perception is the nuclear phase of a continuity, a continuity of momentary gradated retentions on the one side, and a horizon of what is coming on the other side: a horizon of ‘pro-
tention,’ which is disclosed to be characterized as a constantly gradated coming. (Husserl, 1977, p. 154)

I believe that key to understanding this passage, and to Husserl’s analysis of temporal experience as a whole, is the idea of two dimensions along which we can differentiate between aspects of temporal experience.¹⁸ One dimension is the one we have already encountered in connection with the schema argument: Temporal experience has a representational content that always encompasses not just what is the case at an instant, but a whole “temporal field” (Husserl, 1991, p. 32 n. 14). It takes in not just what is present, but also what is just-past and, to some extent, what it yet to come. For Husserl, this involves a differentiation between retentional and protentional aspects of that content, alongside the primal impression.

Husserl’s description of temporal experience in terms of the idea of a ‘streaming system’, however, indicates that there is a second dimension to it, and that characterising the structure of temporal experience is not merely a matter of specifying *a* representational content that the experience has. Corresponding to the necessary extension claim, Husserl speaks of the tripartite structure of primary impression, retention and protention as a structure that *phases* of experience possess, where these ultimately have to be seen as abstractions from, or cross-sections of, the experience (see also Brough, 1991, p. xxxiii). Thus, there is a sense in which the experience of hearing the succession *do-re-mi*, for instance, necessarily involves a multiplicity of contents. It will involve my having a primal impression of *re*, together with a retention of *do* as just-past. Yet, it will also involve, say, my

¹⁸ Elsewhere, Husserl also puts a related thought in terms of the idea that temporal experience takes the form of a “continuum of continua” (Husserl, 1991, p. 341). As I will argue below, though, this is potentially misleading, as it is not obvious whether the idea of continuity, at least as understood in the formal mathematical sense, plays any substantive role in Husserl’s account (though Husserl himself might not always have been clear about this).

having a primal impression of *mi*, together with a retention of *re* as just past. (I am just picking out some aspects of the structure here, obviously.) Moreover, the very possibility of my having any experience of the succession of notes turns on my experience involving such a multiplicity of contents.¹⁹

Overall, I am thus recommending the following way of understanding the theoretical position that Husserl is trying to get at: There is clearly a sense in which, on Husserl's view, my ability to hear the succession *do-re-mi* is meant to be accounted for in terms of the idea that, e.g., when *re* sounds, I am not just aware of *re* as present, but also of *do* as just past (and, to some extent, of *mi* as yet to come). In line with the schema argument, the idea here is that the structure of temporal experience ultimately has to be made sense of in representationalist terms. In particular, in representationalist terms, the correct level at which the analysis is to be pitched is that of content, rather than vehicle. Yet, there is also an important respect in which Husserl's account goes beyond the basic idea of representationalism about temporal experience, thus understood. This is because, as the necessary extension claim indicates, I could not have an isolated experience, for instance, just of *re* as present, *do* as just-past and (to some extent) of *mi* as yet to come (cf., e.g., Husserl, 1991, p. 78). Not only is it the *de facto* the case that, as time goes on, any such phase of my experience would of course immediately be succeeded by another, in which *mi* is experienced as present, *re* as just-past, and *do* as lying further in the past. For Husserl, it seems, the fact that my overall experience contains these different phases is a condition for the very possibility of my experiencing the three tones and the relation between them at all. Thus, whilst it is true that Husserl's analysis of temporal experience is pitched at the level of content, there is also a sense in which phases of experience can be said to have a particular content only derivatively, i.e., in virtue of there being other phases making up the experience as a whole.

How exactly should we conceive of the thought that individual phases of experience, characterized by a particular way the tripartite structure of retention, primal impression and protention is filled in, are mere abstractions, or that any such phase "is conceivable only as a phase" (1991, p. 35, see also p. 29)? Husserl himself, it has to be said, is not always very careful to distinguish between two ideas that might be captured using the notion of a phase of experience, and correspondingly

¹⁹ For a view that explicitly diverges from Husserl in this respect, see Pelczar (2010). Moreover, as I will discuss in section 6, most contemporary accounts of temporal experience that take their lead from Husserl in fact implicitly drop, or are at least silent on, this requirement.

two ways of reading the idea that such phases have to be seen as abstractions.²⁰ There are some passages in which Husserl makes a great deal of the idea that temporal experience is continuous, and in which he seems to assume that this idea can be made to do the work in explaining the relevant sense in which individual phases of experience are mere abstractions. The thought here seems to be that talk of such individual phases needs to be understood as talk about an ideal limit, akin to a mathematical point, of the process of considering ever smaller sections of a continuum.²¹ In fact, though, I am not convinced Husserl offers any strong reasons for thinking of temporal experience as continuous in this sense, and it is at least not immediately obvious whether that idea does indeed do any genuine work in Husserl's account.²²

I think there is an alternative understanding of the claim that individual phases of temporal experience are essentially abstractions, on which that claim relates much more directly to the kinds of concerns about the structure of the temporal experience sketched previously. That reading of the claim does not involve any obvious commitment to the idea of experience as being continuous (i.e., it allows that any finite section of experience may in fact contain a finite number of discrete phases). Rather, it turns on the thought that individual phases of experience are abstractions in so far as their content constitutively depends upon that of other phases.²³ In other words, there is (what would now be called) an *externalist* element in Husserl's account of temporal experience, in the following sense.²⁴ In so far as Husserl's analysis makes use of the idea of individual phases of experience, with a content to be spelled out in terms of a particular way of filling the retention-primal impression-protection structure, the content of each of these phases, in

²⁰ Compare also Brough, 1991, p. liii, and Kortooms, 2002, p. 62, on the idea that Husserl started to put forward (what I have called) the necessary extension claim some time before actually managing to make sense of it within his own theory. See e.g., Husserl's critical discussion of Meinong's theory in Husserl, 1991, pp. 223-35.

²¹ Something like this reading of the notion of a phase also seems to be behind Derrida's (1973, p. 103) view that Husserl's account, taken to its logical conclusion, implies that "there never was any 'perception'."

²² Empirical evidence that is sometimes taken to suggest that perceptual consciousness is in fact made up of temporally discrete pulses is presented in Purves, Paydarfar & Andrews (1996) and VanRullen & Koch (2003); though see also Kline, Holcombe & Eagleman (2004).

²³ See also Kortooms (2002, p. 132) on Husserl's remark that "only intentionality can be modified into intentionality" (Husserl, 1991, p. 394).

²⁴ Miller (1982), despite not remarking on this explicitly, provides a formal reconstruction of Husserl's account that in fact commits Husserl to the kind of externalism at issue here. Smith (2008) also argues for an externalist element in Husserl's account of perceptual experience, though on grounds that are less directly related to the specifics of Husserl's remarks about temporal experience.

fact, has to be seen as being constitutively dependent on that of other phases. Husserl can be seen to illustrate this constitutive dependence in particular in passages in which he describes the relationship between retention and primary impression. For instance, he says that there is an “*a priori* necessity that a corresponding perception, or a corresponding primal impression, precede the retention” (Husserl, 1991, p. 35). Thus, it is only because *do*, for instance, has been experienced in the form of a primary impression that it can subsequently figure as just-past in later phases of experience. Consider also the following remark:

[I]f we again take up the question whether a retentive consciousness is conceivable that would not be the continuation of an impressional consciousness, we must say: Such a consciousness is impossible, for every retention intrinsically refers back to an impression.²⁵ (Husserl, 1991, p. 36)

Thinking of Husserl’s account of temporal experience as containing an externalist element as understood along those lines can, I think, help isolate the key idea behind his insistence that phases of temporal experience are abstractions, in a way that, at the same time, makes intelligible why he nevertheless pitches much of his analysis at the level of such phases. If interpreted as expressing a form of externalism, moreover, passages such as the one just quoted may also bear on how exactly the notion of the absolute flow is to be interpreted. In particular, it may help provide a reading the self-appearance claim that connects the latter more closely with the issues at stake in the schema argument.

Recall that the upshot of the schema argument was that the development of the idea of the absolute flow has to be seen in the context of Husserl’s coming to adopt a form of representationalism about temporal experience. With the idea of the absolute flow, that is, Husserl comes to embrace the thought that an account of our ability to experience temporal objects such as a succession of tones ultimately has to be pitched at the level of content, involving the idea of a certain representational structure such experience has. Yet—and this is in effect the upshot of the present section—coming to think of temporal experience

²⁵ See Mensch (2010, p. 159) for discussion. Husserl sometimes also tries to cash this out in epistemological terms, saying that we can be certain that given retentions have been preceded by prior primary impressions (cf., e.g., Husserl, 1991, pp. 35f.). This would amount to yet a further claim, going beyond the kind of externalism I am ascribing to Husserl, and I think it is more charitable to read the passages in question as misleading attempts to articulate the externalist claim I am ascribing to him.

in representationalist terms can also provide Husserl with a means to make sense of the necessary extension claim. That temporal experience ultimately has to be understood as a phenomenon on the level of content, for Husserl, does not mean that temporal experience can be equated to a type of content. Rather, in line with the necessary extension claim, temporal experience must of necessity involve a multiplicity of different contents. How, though, can we give substance to the relevant type of necessity? On the reading of Husserl that I have suggested, we can do so by thinking of the relevant contents themselves as standing in relations of constitutive dependence to each other. The idea of the absolute flow, thus, is the idea of a multiplicity of such contents, interconnected by constitutive relations. Yet, if each individual content figuring in the absolute flow is constitutively dependent on other such contents in this way there is also a sense in which the flow itself is reflected in any one such content.²⁶ This gives us one way of understanding what the self-appearance claim, and the idea of the flow as possessing a “double intentionality” is trying to get at.

As explained above, Husserl claims that the absolute flow exhibits both transverse and horizontal intentionality: each phase of the flow is intentionally directed to experienced events unfolding over a stretch of time, but there is also a sense in which each such phase is, at the same time, intentionally directed to other phases of the flow itself. We saw how the regress argument attempted to connect this thought to the notion of pre-reflective self-awareness. On my alternative reading of Husserl’s remarks about the absolute flow, the sense in which the absolute flow involves an element of self-appearance is not to be explained,

²⁶ As an anonymous referee has pointed out, for this idea to have any plausibility, there has to be some restriction on how much of the flow is reflected in any given such content. There may be constitutive connections of the type described between the particular contents involved in my hearing the succession *do-re-mi*. But surely there aren’t the same sorts of constitutive connections between contents across much longer periods, such as hours or even days. Husserl can account for this point in so far as he thinks that there are limitations to the “original temporal field” (Husserl, 1991, p. 32), i.e. the period of time that, e.g., retention can span. Of this original temporal field, he writes “It moves, as it were, over the perceived and freshly remembered motion and its objective time in the same way as the visual field moves over objective space” (ibid.). If there is such a limit, Husserl can also acknowledge a limit to the range of other contents that each individual content in the absolute flow is in fact constitutively dependent on. Note also, though, that Husserl in fact thinks the limitation is a merely contingent one and that “*idealerweise* a consciousness is probably even possible in which everything remains preserved retentionally” (ibid., n. 14). As Miller (1984, p. 174) notes, this appears to be a key point of divergence between Husserl and authors such as Stern (1897) and James (1890), for whom the idea that there is a limited temporal interval experience can span (as encapsulated in the notion of the ‘specious present’) carries some explanatory weight in accounting for the very possibility of temporal experience.

as proponents of the regress argument have it, in terms of relatively general considerations about consciousness. Rather, it is the result of the combination of intentionalism about temporal experience and a form of externalism. More to the point, I have suggested that Husserl's claims about the self-appearance of the flow are bound up with the claim that temporal experience is itself necessarily a temporal phenomenon.²⁷ Within the context of his intentionalism, I have suggested, the import of this claim is that there is a constitutive dependence between phases of the flow, understood as the multiplicity of contents that make up my experience. Specifically, retention, as one aspect of the representational content of a phase of the absolute flow, depends constitutively on primal impression, as an aspect of the representational content of another phase.

5. The Status of the Necessary Extension Claim in Husserl

I have suggested that we can make sense of the passages in which Husserl develops the idea of the absolute flow if we see them as passages in which he moves towards an approach to temporal experience that combines intentionalism with an externalist element. This reading of Husserl's remarks about the absolute flow is premised on the assumption that Husserl subscribes to a necessary extension claim, according to which the perception of a temporal object such as a succession of tones itself has temporal form, i.e. is temporally extended. It is this claim that he tries to accommodate by introducing an externalist element into his general intentionalist approach to temporal experience.

The necessary extension claim comes out in when Husserl claims, for instance that “[i]t belongs to the essence of the perception of a temporal object that it is a temporal object itself” (Husserl, 1991, p. 239). It is also evident from similar remarks already quoted. What exactly, though, is the status of the necessary extension claim in Husserl? One reason one might have for thinking that there is a necessary connection, for instance, between the perception of duration and the duration

²⁷ Brough also links the two ideas: “With the emergence of the absolute flow and the double intentionality of consciousness [...] Husserl does have a way of accounting for the necessary and essential relation between the succession of consciousness and the consciousness of succession. It is only because each phase of the flow retains elapsed phases of the flow itself that consciousness is able to retain elapsed phases of the temporal object, whether immanent or transcendent. The explanation no longer relies as it did in the case of Brentano's original association or Husserl's own schematic interpretation on the fortuitous popping up in each phase of consciousness of just the right contents to ensure that awareness of past and future occurs. Here the succession of consciousness is at once the consciousness of itself as succeeding, and through that self-awareness, the consciousness of enduring and succeeding temporal objects.” (Brough, 1989, p. 284)

of perception is if one takes there to be an explanatory connection between the two, such that the duration of perception explains the perception of duration. I take it that this is the key assumption behind extensionalist views of temporal experience. It seems to be in play, for instance, when Dainton (2010, sec. 1.1) characterizes what he calls the ‘extensionalist model’ in terms of the idea that “our episodes of experiencing are themselves temporally extended, and are *thus* able to incorporate change and persistence in a quite straightforward way” (my emphasis).

Arguably, though, this particular way of motivating the necessary extension claim would not have been acceptable to Husserl. Extensionalism, as I have described it, and the kind of intentionalism about temporal experience that I have ascribed to Husserl are probably best seen as rival explanatory views.²⁸ In particular, it is typically held to be a virtue of extensionalism that it can dispense with the complex intentionalist apparatus of a nested structure of retentions, primal impressions and protentions.²⁹ Instead, what is meant to do the explaining in accounting for the possibility of temporal experience is the very fact that such experience is itself temporally extended.

But why exactly is Husserl opposed to extensionalism? I think a case can be made that the key theoretical assumption that forces Husserl to adopt his version of intentionalism about temporal experience, and to reject extensionalism, is in fact quite separate from any of the details of his analysis of temporal experience. It lies in the fact that, at least from the emergence of the idea of the absolute flow onwards, he also seems to be advocating a form of idealism about time. On this form of idealism, the thought that the absolute flow is ‘time-constituting’, as indicated by the full name Husserl uses for it, should be taken literally. The idea would be that, when I hear *do-re-mi*, for instance, *both* the succession of tones and my own experience of that succession actually exist as phenomena in time only in so far as I am (or can be) conscious of them as such in the manner provided for by the absolute flow.

I should flag up here that there are ways of reading Husserl that avoid ascribing an idealism of this kind to him, and I shall therefore also consider, in the next section, whether the substance of his intentionalist account of temporal experience can in fact be divorced from a

²⁸ However, see also the next section for an argument to the effect that there is a danger of Husserl’s account collapsing into a version of extensionalism.

²⁹ Compare, e.g., Dainton (2006, pp. 157ff.) on what he calls the ‘clogging problem’ that theories such as Husserl’s face. Cf. also Keller, 1999, p. 82.

commitment to idealism about time.³⁰ For present purposes, the point is that, *if* Husserl is read as advocating a form of idealism about time, this does provide for an understanding of what the necessary extension claim comes to that is quite different from that involved in extensionalist accounts. On the reading of Husserl that I have suggested in the preceding section, the experience of a succession of tones, for instance, involves of necessity a multiplicity of primary impressions of the different tones, each together with a retention of primary impressions of earlier stages of the succession. Yet, on an idealist construal, it is only thanks to the particular intentional structure of this multiplicity that the multiplicity itself becomes constituted as a temporal one—the intentional structure has metaphysical primacy over the existence of the experience as a phenomenon in time. Different phases of experience, for instance, are only temporally ordered in virtue of the intentional relationships between them, i.e., the fact that one phase (and its content) is retained by another, rather than vice versa. Thus, in as far as it is part of such a view that temporal experience is necessarily temporally extended, we also have to recognize that this necessity is in an important sense derived from, or a consequence of, the intentional structure that such experience possesses.

³⁰ The question as to the precise sense, if any, in which Husserl was an idealist, and how this might have changed over time, would deserve far more detailed discussion than I can provide in the context of this paper. The same goes for the question as to what it is, or would be, to be an idealist about time, in the sense relevant here. Brief remarks on each of these issues will have to suffice for the moment.

Regarding the first issue, it is interesting to note that the idea of the absolute flow emerges in Husserl's writings during roughly the same period in which Husserl also starts to describe himself as a transcendental idealist (see also Keller, 1999, p. 80), though the extent to which the 'transcendental turn' actually marks a substantive shift from Husserl's previous position is disputed (see, e.g., Philipse, 1994, for discussion). Both Philipse (1994) and Smith (2003, ch. 4) argue that Husserl's transcendental idealism is in fact a species of metaphysical idealism in the traditional sense, comparable with Berkeley's idealism. This contrasts with rival interpretative claims according to which transcendental idealism, in Husserl's sense, should be regarded as an epistemic or methodological doctrine that is in principle compatible with metaphysical realism (cf., e.g., Carr, 1999).

On the second issue, there are some philosophers for whom the question as to whether time is real turns on whether or not the distinction between past, present and future marks out a feature of mind-independent reality. To be an idealist about time in the sense at stake in this section, goes beyond denying the reality of time in this sense, which might allow for the mind-independent existence of before/after relations between events. As Keller (1999, p. 79) notes, Husserl's account of the absolute flow, if understood along idealist lines, in fact bears "striking similarities" to McTaggart's position (1927, ch. 33), according to which neither the A-series (i.e. the series of positions in time marked out as past, present and future, respectively), nor the B-series (i.e. the series of positions in time ordered by before/after relations) is real; rather, there is an atemporal C-series, which ultimately grounds the appearance of events as ordered into past, present and future, and, as such, also the appearance of events as standing in before/after relations to each other.

An idealism about time, thus understood, might also be seen to provide the context in which what I have called the non-temporality claim is ultimately to be understood. Above, I connected the non-temporality claim with the idea that Husserl comes to embrace a form of representationalism about experience, and that the relationship between retention, primal impression and protention is not to be seen as a temporal one, but as one between different aspects of the contents of experience. Yet, I subsequently also went on to point out that, in Husserl's analysis, the retention-primal impression-protention structure is one that applies at the level of phases of experience (and that such phases are ultimately to be seen as abstractions). What an idealism about time, in effect, adds in this context is the idea that, in as far as experience itself is made up of such phases, the relationship between them, at its most basic, is also not to be thought of as a temporal one. Rather, the order of such phases is constituted by relations between their contents as encapsulated in the idea of horizontal intentionality. Thus, again the thought here is that the absolute flow—i.e., the form that our awareness of temporal objects ultimately takes—has to be understood, at its most basic, as a particular type of representational structure, and that both the temporal unfolding of the contents of my experience, and the temporal unfolding of the experience itself, as a possible object of self-conscious reflection, have this (non-temporal) representational structure as their common source.

If this reading is along the right lines, it might help make intelligible passages such as the following:

We can say nothing other than the following: This flow is something we speak of *in conformity with what is constituted*, but it is not “something in objective time.” It is *absolute subjectivity* and has the absolute properties of something to be designated *metaphorically* as “flow”; of something that originates in a point of actuality, in a primal source-point, “the now,” and so on. (Husserl, 1991, p. 79)

The basic idea articulated in this passage, interpreted along the lines of the reading of Husserl I have offered, runs as follows. Whilst it is true that temporal experience is itself necessarily temporally extended and has a certain temporal structure, the temporal extendedness and structure of the experience itself, alongside the extendedness and structure of what the experience is of, is ultimately a *consequence* of its intentional structure.

6. Husserl and Contemporary Approaches to Temporal Experience

My aim up to this point has been exclusively exegetical, viz. to find an interpretation of Husserl's remarks on the absolute flow that can help

make sense of both the non-temporality claim and the self-appearance claim. I have suggested that we can make sense of both claims if we think of Husserl as putting forward an intentionalist theory of temporal experience that has an externalist ingredient. Indeed, Husserl's views of the absolute flow can be seen to take the intentionalist approach to its logical conclusion, if combined with the idea we also need to account in intentionalist terms for the idea that our experience of temporal phenomena itself necessarily unfolds over time.

In the last section, I also highlighted that Husserl's analysis of temporal experience is perhaps best seen within the context of the idea that he advocates a form of idealism about time. What I said in that section may have already gone some way towards showing that this idealism about time is not a mere optional add-on to the theory, but can be seen to play a central role in it. However, it is worth trying to make even more explicit the precise role it plays. In this final section, I will do so by considering the following question: To what extent is it possible to preserve Husserl's analysis whilst discarding idealism about time? Since many contemporary proponents of an intentionalist approach to temporal experience trace their views back to Husserl, yet, arguably, few of them share his apparent idealism about time, this question should also be of relevance to current debates about temporal experience.³¹

I have offered a reading of Husserl's account of temporal experience that places considerable weight on what I have called the necessary extension claim. If this reading is along the right lines, there is an

³¹ I think there is also a further question as to whether all of the claims Husserl makes about temporal experience are compatible with idealism about time. Consider the following: "If I direct my interest towards the tone, if I immerse myself attentively in the 'transverse intentionality' [...], then the enduring tone stands before me, constantly expanding in its duration. If I focus on the 'horizontal intentionality' and on what is becoming constituted in it, I turn my reflective regard away from the tone (which has endured for such and such a length of time) towards what is new in the way of primal sensation at one point in the retentional being-all-at-once and towards what is retained 'all at once' with this new primal sensation in a continuous series. What is retained is the past consciousness in its series of phases (first of all, its preceding phase). And then, in the continuous flowing-on of consciousness, I grasp the retained series of the elapsed consciousness together with the limit of the actual primal sensation and the continuous being-pushed-back of this series, along with the new addition of retentions and primal sensations" (Husserl, 1991, p. 87). I think it is at least arguable that Husserl is running together two issues here: What the model of transverse and horizontal intentionality accounts for is the idea that, at each phase in the flow, I am not just aware of the tone as having sounded for some time, but also of my having heard the tone sounding for some time. Yet, this falls short of explaining the continuous awareness of a flowing, in the sense of the final sentence. Here, Husserl does seem to view the way experience itself unfolds through time as explanatory, in a way that is not easy to make compatible with idealism.

interesting contrast between Husserl's view and contemporary versions of intentionalism about temporal experience, from which the necessary extension claim tends to be absent, even if it is rarely explicitly argued against (though Pelczar, 2010, might be seen to constitute an exception in this regard). This is so even though the defenders of contemporary intentionalist accounts often describe themselves as taking inspiration from Husserl.

This is not the place to engage in detailed speculation as to what exactly Husserl would have found wrong with simply dropping the necessary extension claim from his intentionalist account of temporal experience. But I take it the key problem with such a move, from the point of view of the reading of Husserl's views that I have offered, is that the resulting theory leaves a crucial question unanswered. Above, I quoted Husserl's claim that "[t]emporal objects [...] can become constituted only in acts that constitute the very differences belonging to time" (Husserl, 1991, p. 41), which I took to be an articulation of an intentionalist view. Two key explanatory questions arise in the context of such a view. One is the question as to what it is for an act of experience to 'constitute the very differences belonging to time'. This is the question to which representationalism can provide an answer, i.e. the view that temporal experience involves representations with veridicality conditions that concern not just what is the case now, but also what was the case a short while ago. The second question, though, is how it is possible for experience to involve such representations. Not all theories of mental content are necessarily such that they would allow for experience to involve representations with such contents.³² And I think Husserl would have seen the necessary extension claim, and the kind of externalist consequences it has for his account, as part of an answer to that second question.

One way of making this point more concrete is in terms of the thought that the necessary extension claim is what allows Husserl to avoid ending up with what is sometimes called a cinematic view of temporal experience (Dainton, 2010; Chuard, 2011). Consider, for

³² Clark (2006), for instance, has pointed out that O'Regan and Noë's sensory-motor model of perceptual experience (O'Regan and Noë 2001, Noë 2004) seems unable to account for experiences with such contents. Noë (2006) replies to Clark, but it is not obvious that his reply doesn't in fact involve acceptance of the claim that, strictly speaking, there are no such experiences. For instance, Noë (2006, p. 29) thinks that a subject listening to a succession of sounds should be described as follows: "You hear [the current sounds] as a continuation. This is to say, moving on to a better approximation, you hear them as having a certain trajectory or arc, as unfolding in accordance with a definite law or pattern. It is not the past that is present in the current experience; rather, it is the trajectory or arc that is present now." See also the comments on Le Poidevin's (2007) theory immediately below.

instance, Robin Le Poidevin's (2007) variant of such a cinematic view, which turns on the idea of 'sensations of pure succession'. Talking again about a case of hearing two notes played in succession, Le Poidevin puts forward the "phenomenological thesis that we perceive succession of notes in a way that can be distinguished from perceiving [*do*] being followed by [*re*]. What gives rise to the experience of pure succession [...] is the conjunction of the perception of [*re*] with the very recent memory of [*do*]" (Le Poidevin, 2007, p. 92). According to Le Poidevin there is, strictly speaking, no such thing as a perceptual experience as of *do* being followed by *re*, in the sense of an experience that encompasses both the *do* and the *re*, and the relation of precedence between them. Rather, we simply have a succession of individual experiences, each as of one particular present tone-quality. As part of each of these experiences, though, we also register that there is a succession of tones going on (similarly, Le Poidevin thinks that experience can register the presence of motion without registering the change of position by an object). This is due to a causal influence of very recent experiences on the present one. And of course alongside experiences that merely register succession in this sense, we also have conscious memories of preceding tones, allowing us to form the judgement that *do*, for instance, preceded *re*.³³

This kind of account amounts to an error theory of temporal experience. It implies that the phenomenological facts about temporal experience are not what we take them to be, in as far as we do ordinarily think that we can simply hear, for instance, *do* being followed by *re*. And I think Le Poidevin's theory, in particular, can serve to illustrate the idea that such an error theory is difficult to avoid as long as we

³³ Some philosophers have objected that this kind of view "appears to undergo a kind of logical implosion" (Pelczar, 2010, p. 58, see also Phillips, 2010). The argument has been that there must be ways in which we become aware of temporally extended phenomena that do not involve a combination of experience and memory, on pain of a regress. For any experience of a sound, for instance, has to be an experience of a sound-filled period. Thus, for sounds to ever enter into my experience in the first place, and then to be remembered, it must be possible for me to experience a sound-filled period in a way that does not already rely on memory. I think the analogy of the cinematic image can provide the proponent of the cinematic view with a response to this type of argument. Each individual frame that is projected onto the cinema screen can only depict what it does because it is the outcome of a process that has sampled information over a period of time (i.e. the exposure time). But it does not thereby come to contain any temporal information—the image itself is static. Similarly, it may be the case that, in order for me to have an experience of the pitch of a certain tone, that experience must be the outcome of a process that samples information over a period of time, but it is not obvious that this implies that the experience itself must carry any temporal information. See also Cohen, 2010, for some cautionary remarks about the very idea that there is something essentially temporal about sounds.

think that the only relations there can be in experience across time are causal ones. If the way I hear the *re* is at best causally influenced by the way I hear the *do*, then it does appear that we must be dealing with two separate experiences, and we do not directly perceive the *do* being followed by the *re* itself, even though the course of our experiences, combined with our capacity for conscious memory, can ground judgments to the effect that *do* is being followed by *re*.³⁴ Viewed from this perspective, then, the necessary extension claim, and the insistence on constitutive links between phases of experience that it introduces into Husserl's account, may be seen as a way for Husserl to avoid ending up with an error theory of the kind implied by the cinematic view. In other words, the idea that my experience of the succession of *do-re-mi* in fact consists in a manifold of interconnected contents is what makes it possible for Husserl to make sense, within his overall intentionalist framework of the intuition that we can have direct perceptual experiences as of the three tones succeeding each other.

Suppose, then, that we want to hold on to the necessary extension claim, in order to avoid ending up with an error theory of temporal experience, but we still want to jettison Husserl's apparent idealism about time. I think the key worry, at that point, becomes one as to whether, absent the assumption of idealism about time, Husserl's analysis can offer a persuasive alternative to an extensionalist view of temporal experience, or should actually be seen as collapsing into a version of the latter. Consider, for instance, Ian Phillips' recent

³⁴ Compare also Chuard's (2011) characterisation of the cinematic view in terms of the idea that it recognises only part-part dependencies between temporal parts of perceptual experience, whereas extensionalism is committed to the idea of part-whole dependencies. Chuard argues that the cinematic view, thus understood, accords better with two common assumptions about how experiences are to be individuated. I don't think his argument succeeds in either case. He first claims that "it's quite natural to individuate experiences by their representational content" and then invokes the following content principle: "if experience e_1 's representational content \neq e_2 's representational content, then $e_1 \neq e_2$." Yet, even if one thinks that experiences are to be individuated by their representational content, it seems to me that a much more plausible principle to adopt would be the following: if experience e_1 has the representational content p and e_2 has the representational content not- p , then $e_1 \neq e_2$. This would allow, for instance, for the thought that one experience can represent a falling apple as being at three different locations, as long as it also represents it as occupying each of those locations at a different time. A second principle invoked by Chuard is the following modal principle: "If it is possible to have experience e_1 without having experience e_2 (or vice versa), $e_1 \neq e_2$." Here it is simply unclear what the relevant intuitions are supposed to be. To be sure, there is a sense in which, rather than hearing the succession *do-re-mi*, for instance, I could have heard just *re*, on its own. But the most natural way of imagining such a case to be instantiated is by imagining hearing *re* as being preceded and followed by silence. Understood this way, the modal principle provides no specific support for the cinematic view.

characterisation of extensionalism in terms of the idea that “there are certain durations of experience which are metaphysically prior to their sub-temporal parts” (2011, p. 398). As Phillips goes on to explain, the idea here

“is not to deny that there are facts about instants during our stream of consciousness. It is, however, to insist that such facts are derivative. The most basic facts about our experiential lives are, in the first instance, facts about extended periods of the stream of consciousness. What is true at an instant is true only in virtue of that instant being an instant during a certain period of experience.” (ibid. pp. 28f.)

On this view there is, for instance, a sense in which I can be in a state of hearing the sequence *do-re-mi* at the time *re* is sounding, but I can be in that state only in virtue of what goes on throughout the whole interval in which I listen to the three sounds.

We have seen what looks like a very similar thought in play in Husserl’s analysis, when he emphasises that phases of experience, with a content corresponding to a particular way of filling in the retention-primordial impression-protection structure, are to be regarded as abstractions. Thus, both Husserl and the extensionalist described by Phillips can agree that, whilst there perhaps is a sense in which temporal experience can be described as involving states with a certain representational content, the analysis of temporal experience can’t stop at ascribing to the subject individual states with such contents (as the cinematic view would have it).

The key difference between the two views is that Husserl tries to accommodate this last thought within a framework that is still fundamentally representationalist. Thus, he requires us to make sense of the idea of the absolute flow as a manifold of interrelated contents, from which phases of experience, individuated by particular contents, are ultimately abstractions. The extensionalist, by contrast, has a more basic way of making sense of the way in which states that can be individuated by particular contents enjoy only a derivative existence in temporal experience. In line with what is sometimes referred to as a relational or naïve realist view of perception, he can argue that temporal experience is, at its most fundamental, not a matter of representation at all.³⁵ Crudely speaking, proponents of a relational or naïve realist view of perception insist that perceptual experience of

³⁵ Versions of this type of view, as an account of the general nature of perceptual experience, are defended, e.g., by Campbell, 2002; Travis, 2004; Martin, 2004; Brewer, 2011. It involves commitment to a form of disjunctivism about experience, which denies that we can give the same account of the nature of experience in cases of veridical perception and in cases of hallucination, respectively.

mind-independent items and their properties involves the presentation, rather than representation, of those items and their properties in experience, where the former is meant to indicate a direct relation to those items and their properties themselves, such that they partly constitute the character of one's experience. Similarly, the idea behind the type of extensionalist position I have in mind would be that, in as far as temporal experience does involve the subject being in states that can be individuated by particular contents, these only obtain because the subject stands in a non-representational relation of 'awareness of' to the relevant events as they unfold, and the nature of the relevant states has to be specified, at least in part, in terms of that relation.

The latter kind of view has recently been articulated in detail and argued for by Matthew Soteriou (2010, 2011). My aim here is not to try and add any further argument of my own for it. Rather, the point I want to make is that it emerges as an alternative way of accommodating key structural features of Husserl's position, including the necessary extension claim, if we abandon Husserl's idealism about time. Summarising the view just outlined, Soteriou writes as follows:

[I]t is the actual obtaining of some non-representational psychological relation between the subject and entities in the world that is doing some work in explaining the phenomenology [of temporal experience]. An aspect of the temporal phenomenology is determined by the obtaining of a non-representational psychological relation of awareness of, and not simply the temporal content of a state that represents it. This account need not deny that a subject is in perceptual states with representational content when he has such experience, but the claim is that one misses out some aspect of the phenomenology of the experience if one does not appeal to the obtaining of a non-representational psychological relation between subject and entities in the world when it comes to fully characterising the phenomenology of the experience undergone. (Soteriou, 2010, p. 237)

If we think that time itself is ultimately constituted by the nature of our conscious experience, as an idealist about time would have it, this type of view is clearly not available. It requires temporal phenomena such as succession or duration to have explanatory priority over our experiences of them in a way that is incompatible with such an idealism.³⁶

³⁶ Or, more precisely, with an idealism about time of the type I have ascribed to Husserl, according to which temporal relations between events are constituted by relations between the contents of different phases of the absolute flow. As Matthew Soteriou has pointed out to me, this may leave intact the possibility of a transcendental idealism about time along Kantian lines.

Once we set aside Husserl's apparent idealism about time, however, I think it becomes a legitimate question to ask how much of a substantive difference between his views and the kind of extensionalist position just sketched we are still left with. My attempt to make Husserl's remarks about the absolute flow intelligible has given particular weight to the role that the necessary extension claim can be seen to play in his theory—which is a claim shared by extensionalist views of temporal experience. Moreover, because he subscribes to the necessary extension claim, Husserl also has to admit that individual phases of experience are ultimately abstractions, as he puts it, even though it is only to such phases that his analysis can, strictly speaking, ascribe representational contents. This naturally raises the worry to what extent we are still left with an analysis of experience that takes the idea of representation as basic. Idealism about time provides an answer to that worry that is pitched at the level of metaphysics: The sense in which Husserl's analysis can be seen to take the idea of representation as basic is that, whilst temporal experiences can't be analysed in terms of a content that they possess, they are made up out of a manifold of interrelated contents which is metaphysically prior to the experienced temporal phenomena. But are there other ways of addressing the worry that do not presuppose idealism? At the very least, I hope to have shown that Husserl does not provide an entirely straightforward model for contemporary proponents of an intentionalist approach to temporal experience to adopt, unless they also share his apparent idealist commitments.

7. Conclusion

It has been popular to interpret the passages in which Husserl discusses the absolute flow as ones in which he is trying to articulate truths about the fundamental nature of experience that are ultimately beyond our powers of expression (see, e.g., Brough, 1987, p. 23; Grush, 2006, p. 421f.; Zahavi, 2003, p. 92). This is a perception Husserl himself occasionally encourages ("For all of this, we lack names." Husserl, 1991, p. 79).

One of the aims of this paper has been to show that some theoretical concepts used in contemporary philosophy of mind can be used to articulate a reading of Husserl's remarks about the absolute flow that makes sense of two central claims he makes, which I have called the non-temporality claim and the self-appearance claim. In short, Husserl's position can be seen to involve a form of representationalism about perceptual experience, which goes beyond the mere idea of experience as representation in two crucial respects: (1) Each phase of

experience does not just represent certain events as present, but also others as past, and yet others as yet to come. (2) The representational content of each phase of experience is constitutively dependent on that of other phases.

If what I have been arguing in the final section of the paper is along the right lines, however, it also allows for a reading of the passages on the absolute flow that is more 'diagnostic' in spirit. I have pointed out that the claims Husserl makes about the absolute flow ultimately have to be viewed within the context of the fact that he appears to endorse a form of idealism about time. And, on the diagnostic reading I have in mind, some of Husserl's more enigmatic remarks about the absolute flow can in fact be seen as an artefact of this idealism. That is, on this reading, it is his idealism that leads him to adopt a representationalist framework and to try to express, within this framework, ideas that are ultimately better accommodated by a framework that abandons representationalism altogether, i.e., an extensionalist model of temporal experience.³⁷

References

- Alweiss, L. (2003). *The world unclaimed: A challenge to Heidegger's critique of Husserl*. Ohio University Press.
- Brewer, B. (2000). *Perception and reason*. Oxford: Oxford University Press.
- (2011). *Perception and its objects*. Oxford: Oxford University Press.
- Brough, J. (1972). The emergence of an absolute consciousness in Husserl's early writings on time-consciousness. *Man and World* 5, pp. 298–326.
- (1987). Temporality and the presence of language: Reflections on Husserl's phenomenology of time-consciousness. In A. Schuwer (ed.). *Phenomenology of temporality: Time and language*. Pittsburgh, PA: Duquesne University Press, pp. 1–31.
- (1989). Husserl's phenomenology of time-consciousness. In: J. N. Mohanty and W. R. McKenna (eds.). *Husserl's Phenomenology: A Textbook*. Lanham MD: University Press of America, pp. 249–290.
- Campbell, J. (2002). *Reference and consciousness*. Oxford: Oxford University Press.
- Carr, D. (1999). *The paradox of subjectivity. The self in the transcendental tradition*. Oxford: Oxford University Press.

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- Chuard, P. (2011). Temporal experiences and their parts. *Philosophers' Imprint* '11.
- Clark, A. (2006). That lonesome whistle: a puzzle for the sensorimotor model of perceptual experience. *Analysis* 66, pp. 22–25.
- Cohen, J. (2010). Sounds and temporality. In: D. Zimmerman (ed.): *Oxford Studies in Metaphysics* 5.
- Dainton, B. (2006): *Stream of consciousness: Unity and continuity in conscious experience*, 2nd edition. London, UK: Routledge.
- (2010). Temporal consciousness. In E.N. Zalta (ed.). *The Stanford Encyclopedia of Philosophy (Fall 2010 Edition)*. URL = <http://plato.stanford.edu/archives/fall2010/entries/consciousness-temporal/>
- Derrida, J. (1973). *Speech and phenomena, and other essays on Husserl's theory of signs*; trans. D.B. Allison. Evanston : Northwestern University Press
- Dretske, F. (1995). *Naturalizing the mind*. Cambridge, MA: MIT Press.
- (2003). Experience as representation. *Philosophical Issues* 13, pp. 67–82.
- Foster, J. (1979). In self-defence. In: G. Macdonald (ed.): *Perception and identity*. London: Macmillan.
- Gallagher, S. (1998). *The inordinance of time*. Evanston, IL: Northwestern University Press.
- Gallagher, S. & Zahavi, D. (2010). Phenomenological approaches to self-consciousness. In E.D. Zalta (ed.). *The Stanford Encyclopedia of Philosophy (Winter 2010 Edition)*. URL = <http://plato.stanford.edu/archives/win2010/entries/self-consciousness-phenomenological/>
- Grush, R. (2006). How to, and how not to, bridge computational cognitive neuroscience and Husserlian phenomenology of time consciousness. *Synthese* 153, 417–450.
- Harman, G. (1990). The intrinsic quality of experience. *Philosophical Perspectives* 4, Action Theory and Philosophy of Mind, pp. 31–52.
- Horwich, P. (1987). *Asymmetries in time: Problems in the Philosophy of Science*. Cambridge, MA: MIT Press.
- Husserl, E. (1977). *Phenomenological psychology: lectures, summer semester, 1925*; trans. J. Scanlon. The Hague: Nijhoff
- (1991). *On the phenomenology of consciousness of internal time (1893-1917)*, translated by J.B. Brough. Dordrecht: Kluwer Academic Publishers.
- (2001a). *Logical investigations*, Vol. 1, trans. J.N. Finlay. London: Routledge.
- (2001b). *Logical investigations*, Vol. 2, trans. J.N. Finlay. London: Routledge.

- James, W. (1890). *The principles of psychology*, 2 Vols. London: Macmillan.
- Keller, P. (1999). *Husserl and Heidegger on human experience*. Cambridge: Cambridge University Press.
- Kelly, S. (2005). The puzzle of temporal experience, in A. Brook and K. Akins (eds.), *Cognition and the brain*. Cambridge, UK: Cambridge University Press.
- Kiverstein, J. (2010): Making sense of phenomenal unity: An intentionalist account of temporal experience. In: J. Kiverstein, P. Phemister & P. Basile (eds.): *The metaphysics of consciousness: Essays in honour of Timothy Sprigge*. *Royal Institute of Philosophy Supplement* 67, pp. 155–181.
- Kline, K.A., Holcombe, A.O. and Eagleman, D.M. (2004). Illusory motion reversal is caused by rivalry, not by perceptual snapshots of the visual field. *Vision Research* 44, pp. 2653–2658.
- Kortooms, T. (2002). *Phenomenology of time: Edmund Husserl's analysis of time-consciousness*. Dordrecht: Kluwer Academic Publishers.
- Le Poidevin, R. (2007). *The images of time: An essay on temporal representation*. Oxford, UK: Oxford University Press.
- McDowell, J. (1994). *Mind and world*. Cambridge, MA: Harvard University Press.
- McTaggart, J. McT. E. (1927). *The nature of existence*, Vol. II. Cambridge: Cambridge University Press.
- Martin, M.G.F. (2004). The limits of self-awareness. *Philosophical Studies* 120, pp. 37–89.
- Mensch, J.R. (2010). Retention and the schema. In: D. Lohmar & I. Yamaguchi (eds.). *On Time: New Contributions to the Husserlian Phenomenology of Time*. Heidelberg: Springer.
- Merleau-Ponty, M. (1962). *Phenomenology of perception*. London: Routledge & Kegan Paul.
- Miller, I. (1984). *Husserl, perception and temporal awareness*. Cambridge, MA: MIT Press.
- Noë, A. (2004). *Action in perception*. Cambridge, MA: MIT Press.
- (2006). Experience of the world in time. *Analysis* 66, 26–32.
- O'Regan, J. K. and A. Noë (2001). A sensorimotor approach to vision and visual consciousness. *Behavioral and Brain Sciences* 24, pp. 939–73.
- Peacocke, C. (1983). *Sense and content: Experience, thought and their relations*. Oxford: Oxford University Press.
- (1999). *Being known*. Oxford: Oxford University Press.
- Pelczar, M. (2010). Must an appearance of succession involve a succession of appearances? *Philosophy and Phenomenological Research* 81, pp. 49–63.

- Philipse, H. (1994). Transcendental idealism. In: B. Smith & D.W. Smith (eds.). *The Cambridge companion to Husserl*. Cambridge: Cambridge University Press.
- Phillips, I. (2010). Perceiving temporal properties. *European Journal of Philosophy* 18, pp. 176–202.
- (2011). Perception and iconic memory: What Sperling doesn't show. *Mind & Language* 26, pp. 381–411.
- Purves, D., Paydarfar, J.A. & Andrews, T.J. (1996). The wagon wheel illusion in movies and reality. *Proceedings of the National Academy of Sciences USA*, 93, pp. 3693–3697
- Russell, B. (1912). *The problems of philosophy*. Oxford University Press.
- (1915). On the experience of time. *Monist* 25, 212–33.
- Scheur, J.K. (2009). Experience and self-consciousness. *Philosophical Studies* 144, pp. 95–105.
- Schumann, F. (1898). Zur psychologie der zeitanschauung. *Zeitschrift für Psychologie und Physiologie der Sinnesorgane* 17, 106–148.
- Siegel, S. (2010). The contents of perception. In E.D. Zalta (ed.). *The Stanford Encyclopedia of Philosophy (Fall 2010 Edition)*. URL = <http://plato.stanford.edu/archives/fall2010/entries/perception-contents/>
- Smith, A.D. (2003). *Husserl and the Cartesian Meditations*. London: Routledge.
- (2008). Husserl and externalism. *Synthese* 160, pp. 313–333.
- Sokolowski, R. (1974). *Husserlian meditations; How words present things*. Evanston, Ill., Northwestern University Press
- Soteriou, M. (2010). Perceiving events. *Philosophical Explorations* 13, pp. 223–241.
- (2011). Occurrent perceptual knowledge. *Philosophical Issues* 21, pp. 485–504.
- Stern, L.W. (2005). Mental presence-time, trans. N. de Warren. In: B. Hopkins & S. Crowell (eds.): *The New Yearbook for Phenomenology and Phenomenological Research V*, pp. 325–351 (originally published 1897).
- Strawson, G. (2009). *Selves: An essay in revisionary metaphysics*. Oxford University Press.
- Travis, C. (2004). The silence of the senses. *Mind* 113, pp. 57–94.
- Tye, M. (2000). *Consciousness, color, and content*. Cambridge, MA: MIT Press
- VanRullen, R. & Koch, C. (2003). Is perception discrete or continuous? *Trends in Cognitive Science*, 7, pp. 207–213.
- Zahavi, D. (1999). *Self-awareness and alterity: A phenomenological investigation*. Northwestern University Press.

- (2003). Inner time-consciousness and pre-reflective self-awareness. In D. Welton (ed.). *The new Husserl: A critical reader*. Bloomington: Indiana University Press, pp. 157–80
- (2005). *Subjectivity and selfhood: Investigating the first-person perspective*, Cambridge, MA: The MIT Press.
- (2007). Perception of duration presupposes duration of perception - or does it? Husserl and Dainton on time. *International Journal of Philosophical Studies* 15, pp. 435–471.