

The Paradox of Temporal Consciousness

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Abstract

Temporal consciousness seems so common that if we want to understand what philosophers find puzzling about it we must first look into the ways in which we would naively account for it. My initial worry will thus be that of making clear how puzzlement regarding temporal experience arises in the first place. In the first section, I will focus on a certain family of solutions, sometimes referred to as Specious Present theories, and analyse two main subsets of this family: extentionalism and retentionalism. In section two I will detect the point of contact between these views and formalise it in terms of the individuation argument, following Hoerl's proposal. Then, I will advance some objections against this argument, leaving thus space, in the last section, to weigh up the validity of the solutions we met. This should allow us to better understand the conceptual knot that originated the puzzle, and contribute to individuate the space for a possible novel position. The aim of this work is to give a clear picture of the main solutions to the paradox of temporal consciousness and some of their deficiency, so to individuate the area where a possible new solution can be developed.

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Introduction

Imagine you are driving home; in your visual field a succession of “now” continuously follows one after another in what appears to be a continuous stream of consciousness; each scene merges into the next and constitutes a homogeneous flow. In front of you, you seem to see the traffic light changing from red to green and your hands standing still on the steering wheel. Change – as well as duration – is what happens from one instant to the other; in this sense, it seems that both change and duration are predicated of groups of ‘presents’, and that, somehow, they hold them together in a unitary awareness. But how can a single act of awareness, if it captures only one instant at a time, contain more than a single event? It seems as though our temporal experience is caught in between the instantaneity of our present, of which we are directly aware, and the extended form of temporal events. In other words, we may ask: how is it possible that we can experience temporal duration if we are solely aware of static snapshots that lack temporal extension? In what follows, I will propose to analyse this puzzle in terms of three apparently true propositions that jointly constitute an inconsistent triad.

Phenomeno-temporal realism: we can be directly aware of temporal duration.

This proposition’s aim is to do justice to the idea that we seem to experience change, duration and succession *directly*. Hence, the adverb ‘directly’ plays an important role here, in that it specifies that temporal properties, such as duration, succession, change or movement, are not inferred, remembered or imagined, but *perceived*.

Momentariness thesis: we are directly aware only of the present moment.

The second proposition captures two characteristics of our experience: that we are directly aware only of the present, and that the present is momentary. As for the first, it is important to notice that the word ‘present’ (here and throughout this work) refers to the phenomenal time at which events are experienced rather than the objective time at which they occur. The second claim regards the extension of such present, and it complies with the idea that we conceive the present of our awareness as lacking any significant temporal extension.

Incommensurability thesis: Awareness of the present moment does not include awareness of duration

This proposition seeks to capture the apparent incommensurability between the awareness of the temporal extension of events and that of the present. Proposition (3) holds that there is no viable solution: if the present is momentary, then – by definition – our awareness of it cannot include any property that extends over time.

In light of these preliminary considerations, then, we may note that the intuitive certainty of temporal experience is not, at least *prima facie*, a good reason to believe that such experience is not problematic. Once the problem of temporal consciousness and its constitutive elements is identified, our next concern will be to explore its solutions and locate them in the space determined by these propositions. In the following section I will map two Specious Present theories, giving reasons in their support and pointing to some of the difficulties they may raise.

1. The Specious Present theories

Extensionalism

How is it possible that we perceive temporal passage, given that our awareness is confined to temporally unextended acts, and what is true for the experience as a whole is true for its constitutive parts? An intuitive way to answer this worry is to deny the momentariness thesis. In the first part of this section, I will present a general outline of the position occupied by those who follow this intuition, which is commonly addressed to as extensionalism.

Extensionalism takes a stance on the refusal of the second proposition: it holds that our stream of consciousness results from the composition of temporally extended *chunks* of experience that incorporate the temporal properties of the phenomena. Thus, the present experience needs to be thought of as temporally extended, with such extension stretching extending through clock time and including a multiplicity of events. What is called present, in this sense, is not the fraction of time identified by the word “now”, but an enlarged interval within which events share a common *phenomenal presence*. Elements that fall within such extended ‘present’ appear clear and distinct in one’s mind, and they are all ‘present to one’ with the same vividness.

The present experience corresponds to one of these chunks, which in turn corresponds to what we are directly aware of. In conscious experience, then, we are directly aware only of those events that fall within such extended acts, and we experience them unitarily. Experience of succession (as well as of movement, change, duration or any other temporal property of events) obtains in virtue of the elements of that succession being *close enough* to fall within a same act of awareness. This principle, at the heart of the extensionalist’s proposal, is the Diachronic Unity thesis. DUT affirms that events spread through

positive time intervals can be experienced as united as long as they are also apprehended by means of extended acts of awareness. In other words, this means that one can be *directly* aware of a multitude of events occupying positive time intervals.

Among the possible objections to extensionalism, one in particular plays an important role in our enquiry. Indeed, it may be thought that the mere fact that events – granted they fall within an extended present – are experienced *together* seems insufficient to experience a succession. According to extensionalism, though, a mere succession of events is experienced as a succession not only when events are experienced together, but also because their temporal properties are *inherited* by our experience. According to Phillips (2014, 144), we can see this by considering a simple case: “[n]ext time you see the traffic lights change from amber to red, stop and consider: which experience came first, your experience of the red light, or your experience of the amber light?”. Insofar as it makes sense to ask this question, it seems reasonable to claim that temporal properties of events – unlike other properties (like colours, shapes, or spatial properties) – can also be shared by our experience. The ‘specious present’ names the fundamental unit within which inheritance takes place, and such a unit is conceived as conceptually *prior* to its subparts.

I believe there is a sense in which the answer offered by the extensionalist underestimates the worry expressed in the objection. To better understand this, let us turn to our experience again. Imagine you are walking down a familiar street. The repetitive ‘clangs’ produced by a construction worker’s hammer constitutes the background of your stream of thoughts; suddenly, a bird’s chirping makes its way into your auditory experience. You hear both sounds, and yet your attention is not specifically directed to either of them. Clangs and chirps enter your ear in rapid succession and you hear sounds that constitute a succession. The distance between the sounds is such that they fit in the extended present. However, my claim is that the succession of sounds that is present in your auditory field does not result in an experience of succession. In fact, you hear a succession of sounds: the succession you hear, though, is not yet heard as a succession – or so it may seem.

This objection draws an important distinction within our experience. Think of a spatial analogy: while you are reading these words, your visual field includes much more than what you are currently focusing your attention on; and although it is not seen with the same vividness, your visual background is nonetheless *seen*¹. A similar observation can be made with temporal phenomena. Think of your experience of the sound of a clock while you are working in your office. This sound is present to your experience, but not always in the same way. When you concentrate on it, the succession of ‘ticks’ and ‘tocks’ become preponderant and it seems as though you cannot avoid hearing them. But as your attention goes to your book, those same sounds, that one moment ago were experienced as a succession,

¹ I will return on this point more in detail in the last chapter. For now, I am only interested in the phenomenal relevance of this consideration with reference to extensionalism.

slowly fade away. Although they still combine to form a succession that is experienced, they are not yet experienced as such. Something similar occurs, for instance, when you hear someone utter the word ‘sentences’. In the brief time spanned by the word (less than a second), a succession of three ‘es’ enter your ear, but even if the es are successive, you may still not experience them as a succession. In another context (say, when someone reads a poem) when you hear the word uttered again you may direct your attention to the sounds of the letter ‘e’. In this case, the space that divides the es appears to be neglected, and they are not just a mere succession of experiences, but they combine in your experience to form a clear and distinct succession.

These examples aim to show that our attention seems to play an important role in our experience, drawing distinctions, within the observable and unobservable, between things that are noticed or unnoticed. We may fail to notice the presence in time of something that stands right in front of our eyes, whose duration, although experienced, is not yet experienced as such. In other words, the simple fact that something is present to our experience does not suggest that it is thus noticed. For this reason, then, one may doubt whether the mere fact that a succession of sounds is inherited by our experience, even if these sounds are close enough to be experienced together, does in itself suffice to claim that we have an experience of succession.

Although the extensionalist’s answer is licit, then, we may wonder whether it is satisfactory. Even granted the validity of the extensionalist’s proposal, still, it seems it does not fully grasp the peculiarity of our temporal experience since, as we observed, temporal consciousness may fail to obtain even though a succession of sounds is close enough to be experienced together, and their properties are inherited by our experience. If this is the case, and we agree with the interpretation of the examples offered, it seems that the extensionalist owes us a clarification regarding how the succession incorporated in our experience is also experienced as such.

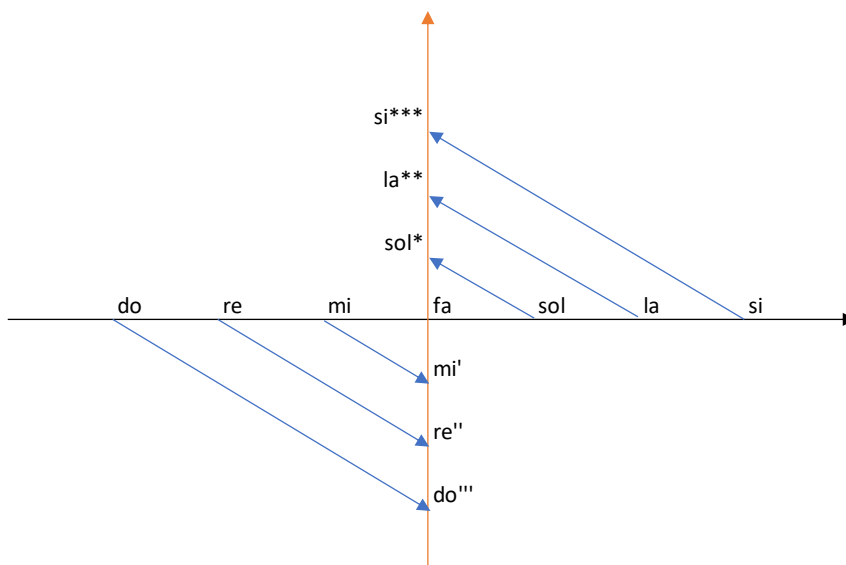
Retentionalism

An answer to this problem is offered by retentionalism. Indeed, (although it encompasses a number of different views) retentionalism is generally construed as claiming that consciousness of temporally extended intervals occurs by means of *momentary* acts of awareness. Whereas the extended consciousness, according to which experience mirrors the sequence of worldly states, suffice to have temporal consciousness in the extensionalist’s view, the retentionalist claims that it is the *mode* of our awareness that orders packets of events *simultaneously* apprehended to represent extended intervals.

When we listen to a melody, for instance, at every instant past and future states are apprehended together with the present event, although in different ways. At the point of the eight-note scale when we hear *fa* (fig.1), our present experience includes the note we are currently hearing, *mi* that is just passed, *re* and

do progressively receding into a farther past, and a certain perceptive degree of expectations toward *sol*, *la* and *si*. However, none of these notes is experienced with the same mode of presentation. *Fa* is intended as present (it is the only note that is phenomenally present to us), while *mi*, *re* and *sol* are *retained* in the background, each at its own degree of pastness (in fig. 1, this is rendered with the modifier '). Finally, we are aware of *fa*, *sol* and *la* in the form of *expectations* (*) – that is, we don't hear them *as* present, but *as* approaching. At every instant, the present of our awareness combined with protentions towards the future and past retentions constitutes a perceptive horizon (in orange), where the latter progressively fades away while the former constantly receives confirmation or disconfirmation. If this is not verified, we do not have temporal experience.

figure 1. Husserl's time diagram



Retentionalism denies the incommensurability thesis: awareness of duration *does* fit into the present moment. But how can a series of events fit into an instantaneous act? According to the retentionalist, the worry that inspires such doubt is rooted in a fundamentally extensionalist conception of temporal consciousness. For the extensionalist, who conceives temporal consciousness as the footprint of time on our experience, the idea of an extended stretch of time that fits into an unextended awareness, to the extent that it breaks the parallelism between experience and ordinary time, may at first sound problematic. But, according to the retentionalist, experience does not extend parallel to the arrow of time in the first place. Instead, experience is two dimensional; the continuous stream is cut by a parallel line at every point that, instant after instant, constitutes the present of its dense, ordered set of instants.

This perpendicular line hosts the events apprehended simultaneously, each of which is perceived in the modality described – just passed, imminent, yet to come....

But we may ask again – does this suffice to account for what is peculiar of our temporal experience? That is, is it always the case that if our experience has the characteristics just presented, we experience the temporal properties of events? I believe the answer to this question must be negative and, to this scope, I will introduce two examples in which it seems that temporal consciousness fails to obtain even if the retentionalist’s requirements on our experience are in place.



figure 2. Dog in a bubble, Image from Twitter account WeRateDog

The above photograph shows a dog caught with perfect timing at the right distance from the camera and the bubble that floats between the camera and the dog, so that one is given the impression that the dog itself is floating in mid-air *inside* the bubble. We are however perceptively aware that dog and bubble are not one contained in the other; rather, we *see* the moment captured by the picture as *a* moment of a wider perceptible progress – a progress in which the dog is running in a certain direction, and the bubble is floating around before popping or being popped. When we see the picture, there is a certain *perceptual expectation* that, in the next frame, the dog will accomplish another bit of its run, and the bubble will float another inch in some direction, and also that the illusion will be broken. A similar perceptual character is also directed to the past: we *see* the position occupied by the dog and the bubble in that instant as following from the position they occupied the moment before. This dynamicity of image perception, or more precisely its tension toward the past and the future, is even more evident in Myron's sculpture showed below.



This sculpture seems to suggest a movement – yet to occur – that is not perceived, but represented. By observing the tension of his muscles and the shape of his silhouette, we have the perceptual expectation that the throw will occur right in the next moment, in the sense that we *see* that moment *as* the moment before the throw. We are given the impression that the instant captured belongs to the sequence of movements carried out by a discobolus, and that that instant occupies the moment right before the execution of the act. We seem to see (in the form of an intention that is directed to the future) the events that follow in the imminent future.

This analogy may constitute a problem insofar as it helps us notice that retentionalism individuates the peculiar features of temporal experience at one moment. Although this may constitute a vantage of this view (in that it individuates a structure that applies also to other kinds of experiences), it is also problematic, because it only provides a notion of temporal consciousness *at an instant*, rather than *over time*. The retentionalist could argue that the latter can be derived from the former, and that an experience of succession can be described as an experience where the structure of protentions and retention is present, over time, in every phase of the succession. However, although this may explain how an experience of succession differs from a succession of experiences, the retentionalist has failed to explain why such difference would mark a distinction between temporal and non-temporal experiences². What seems to emerge from these considerations, then, is that, in attempting to define the specious present as a simultaneous awareness of a series of events apprehended in different modalities, the retentionalist has gone as far as to propose a description of an experience of succession that cannot be distinguished from a mere succession of image experiences.

In conclusion, then, if we agree with the interpretation of the examples proposed, it seems that neither extensionalism or retentionalism offer an interpretation of temporal experience that is ultimately convincing. As for extensionalism, we noted that one may experience events that are close enough to be experienced together without thereby being aware of their properties, although they were inherited by our experience. Similarly, we argued against retentionalism that the proposed structure of the specious present is not unique to temporal experience.

The aim of these reflections was to shed some doubts on the intuition that, for temporal consciousness to obtain, we ought to appeal to the individuation of *extended* discrete perceptual experiences where

² It could be argued that perception of static objects is itself a kind of temporal experience, in that stativity is a form of temporal duration; thus the structure is shared by image perception precisely because image perception is a form of temporal experience. However, this objection mistakenly attributes the structure of protentions and retention to the image as a *physical object* rather than to the image *qua* image. And while the former, like all objects, has a temporal structure, the latter does not.

events are experienced *together*. As we shall see more in detail in the next section, it is precisely thanks to this point of contact that we can individuate a premise that is shared by both views. This will allow us to propose a more comprehensive critical assessment of the positions we have met so far, and move forward with our survey.

2. The individuation argument

As noted in the last section, although their proposals conflict when it comes to defining in what sense we need to understand an act of experiencing as *extended*, both extensionalism and retentionalism seem to agree on a fundamental point – that our experience is made up of units of awareness within which events are perceived together. In virtue of this common ground, we can identify a neutral position between extensionalists and retentionalists, which I will refer to as Specious Present theory, according to which a necessary condition for temporal consciousness is simply that events are experienced together. Before proceeding to a critical assessment of this claim, I will first outline the reasons that commit the SP theorist to it, and state it more exhaustively. I will identify these reasons with those given by Hoerl (2013) in what he calls the Individuation Argument. This argument appeals to the phenomenal distinction between our experience of the movement of a watch hands, and draws a more general conclusion on the nature of our experience. More specifically, the advocated phenomenal difference concerns the fact that one seems to be able to *see* only the movement of the second-hand of the watch. In the hour-hand case, in effect, even though one may *verify* that its position has changed, it seems as though the occurrence of the change is not noticed. From these observations, Hoerl proceeds by asking two questions: *how* we can account for this difference, and *why* there is such difference. According to Hoerl, the answer to the first question is pretty straightforward: “it is difficult to see how we can account for the contrast other than in terms of the idea that, in the case of the second-hand, you can see the hand moving just by looking at it, whereas you cannot do so in the case of the hour-hand” (Hoerl, 2013, 380).

However, this answer – although accounts for the phenomenal difference – does not explain *why* there is such a difference. Hoerl does not provide such reason explicitly, but maintains that, in order to account for this difference, it appears reasonable to individuate an ‘interval of perceptibility’ within which we can directly observe the temporal properties of phenomena. This span of time, he argues, needs to be limited, given that only events that are close enough can fall within it, as in the second-hand case. On the basis of such considerations, though, we can deduce the implicit assumptions that successive events *can* be experienced together, and that the salient difference between the two cases amounts to the temporal distance between two successive observable positions of the hand. If this is the case, the reason why we experience motion in the second-hand is because the distance between two adjacent observable positions is small enough; when the distance is too big, like in the case of the hour-

hand, motion cannot be seen. This is what ultimately justifies his conclusion that “the period of time that individual perceptual experiences can span is limited, with the term ‘the specious present’ denoting the maximal interval that an individual experience can span” (Hoerl 2013, 388).

Given the particular structure of the argument, in order to refute it we can appeal to two different strategies: either we reject that we can experience temporal properties – which would require us to provide phenomenal evidence against the one presented by the argument – or we question the cogency of the explanation. Although I will concentrate my attention on the latter, it is worth mentioning that many philosophers choose the former. Their view is usually referred to as the Cinematic theory³, in that its proponents conceive that our experience is made up of static snap-shots, and that it is constituted by them analogously to how the sequence of frames, succeeding in a rapid succession, gives the impression of movement. With respect to the triad, this position corresponds to the denial of phenomeno-temporal realism. Indeed, this position can be broadly rendered as resulting from this argument: if a single act of awareness is instantaneous, and if an instantaneous awareness cannot include awareness of time, it follows that we do not experience time *directly*; from their perspective, instead, it is the intervention of a mechanism other than perception (e.g. memory) that gives us the *impression* that we experience temporal properties such as duration, movement or change.

As I said, though, let us now leave these considerations behind and concentrate on the inference to the conclusion. What we are questioning now, is how the proposed answer gives a satisfactory explanation of the phenomenology also in other cases. To this scope, I will introduce a new example in which the implications of this explanation seem to give an unfamiliar description of our experience.

Imagine you hear a loud and clear ‘beep’ that lasts a few seconds. Twenty days later you hear the same sound, and again after ten days, and so on the interval between two occurrences of the sound decreasing by half after each occurrence. The sounds get progressively closer, until only hours and then minutes separates them. In the last minutes, the sounds succeed one after the other faster and faster until they fuse together in an extended ‘beep’. I believe this experience has *prima facie* some characters that cannot be satisfactorily accounted for by the specious present theory. In fact, we can agree that we would generally interpret such experience as phenomenologically *uniform*, in the sense that the change the succession goes through is quantitative rather than qualitative. In other words, this is to say that the experience we undergo, when we hear that these sounds succeed each other, only seems to increase in frequency throughout the duration of the experience.

SP theorists, indeed, must account for such example as a case in which events initially apprehended in successive experiences, as time passes by, get close enough to each other to be experienced together, thus resulting in a genuine experience of succession. In this view, at one point in the succession (located

³ I follow here the label proposed by Dainton (2017). Variants of this theory have been defended most famously by Reid, Dennet, Le Poidevin.

in the very last part of the succession, few instants before its climax), a *phenomenal change* must occur that resembles the phenomenal difference we noted between our experience of a second-hand and an hour-hand. The reason why, *prima facie*, we may have overlooked this qualitative change, it could be argued, is that, unlike the case of the hands of the watch, here the passage is gradual. If we imagine, in what we may call the ‘accelerated hour-hand’ case, that the continuous movement of the hour-hand steadily increases its speed until it reaches the speed of the second-hand, then it appears reasonable to argue that we would probably fail to notice the occurrence of this change, even though at some point motion would make its way into our experience.

Although appealing, the validity of this analogy lies on whether, in the present example, we actually experience that phenomenal change between the succession of experiences and the experience of succession. However, given that, at first glance, it is not so introspectively clear what interpretation may better describe the experience we have in this case, I believe it would be appropriate to see what features characterises such phenomenal change in the accelerated hand case, and to assess whether they are shared by the experience under analysis. SP theorists agree that in the accelerated hand case we become aware of the temporal property (namely, the succession) only after a certain point. The phenomenal change we experience, then, concerns the becoming visible of a property that was unobservable, and one typical feature of this is, first of all, that there is an interval of time after which one can truly say of that property that one sees it, while before that interval one could not. The fact that this interval of time, due to the gradualness of the process, cannot be clearly identified, may explain why we could fail to notice when the change has occurred, and also why sometimes we may also fail to notice that a change has occurred. But it does not explain why in the other example the conditions for one to notice a change (or to fail to do so) do not seem to apply in the first place. When staring at the accelerated hour-hand, once motion become visible, it seems it would be plausible for one to say: “now I finally see it moving!” since something that was unobserved became observed. But this seems not to be the case in our example – that is, it does not seem that, once the temporal distance between the occurrence of the events decreases, and only then, it would make sense for one to say: “now I finally hear the succession!”. Moreover, the fact that the *acceleration* of the hand is gradual does not mean that the *change* itself occurs gradually. Indeed, given that the temporal property of an object is considered as a property of which we are (or we are not) aware (that is, that does not admit of grades of awareness), there should be a more or less determined moment in which we *can* become aware of it. But, as it seems not to make sense to attribute a temporal property only to some part of the succession, it seems equally questionable whether it is possible to individuate any more or less determined time *t* at which we begin hearing a succession within the succession itself.

Finally, in addition to these remarks, it can also be noted, more in general, that the plausibility of appealing to the temporal distance between two successive observable states to explain phenomenal differences like the one we observe between the hands of a watch, once this claim is used to justify the

individuation of a specious present, and is thus applied to a number of other cases, ceases to be convincing. In the example proposed, for instance, according to the SP theorist, the increasing intensity of the succession would begin to be heard only in the *last second* of the succession. As Prosser comments (Prosser, 2016, 133), then, “[c]onsider listening to two musical notes: one very short note that lasts, say, one quarter of a second, and one longer note that lasts, say, two seconds. Is there any phenomenological difference between these experiences apart from their durations? I have to say that I am not aware of any”.

These observations, although they do not constitute an objection to the *necessity* of adopting this explication, by showing to what extent it seems to go against the intuitive description we would naively give of the kind of experience we undergo in ordinary cases, may eventually contribute to raise some doubts on whether the specious present is the most convincing way to account for these phenomenal differences. What convinced us of the necessity to individuate such episodes in the first place, though, was the example of the hands of the clock: its intuitiveness seemed to push us to accept that temporal consciousness must rely on the existence of (somehow) extended acts of awareness. If we abstract from the reasons that move a proponent of the individuation argument, though, we realise that the acceptance of its conclusion (that we need to individuate discrete episodes of experiencing) does not follow from the acceptance of its premises (that we perceive time, there is a phenomenal difference between our experience of the second-hand compared to that of the hour-hand of a clock). Following this intuition, then, in the next section I will try to get rid of the idea that temporal perception can occur only in correlation with an extended form of awareness. After doing so, I will first differentiate my proposal from Prosser’s Dynamic Snapshot theory, and then proceed to respond as exhaustively as possible to those problems that were easily dodged by the SP theorists but that may at first appear insurmountable without recourse to the concept of specious present.

3. Temporal consciousness as a process

In the first two sections, we focused our attention on the reasons that one may propose in favour of the idea of the individuation of an extended present as a solution to the paradox of temporal consciousness, and we advanced some considerations that may shed some doubts both on the sufficiency and the necessity of this theoretical move. In this section, I shall sketch a proposal whose aim is to bring together the phenomeno-temporal realist conviction that temporal properties can be experienced directly, and the denial of the existence of the specious present. Such proposal can be identified with the claim that our awareness of the temporal properties of an object is a process that unfolds over time. I will refer to this position as processualism. According to processualism, we can visualise what it means to experience the temporal properties of an event by means of an analogy with a process such as writing

an essay or running. Running consists in an ordinate succession of acts – raising your left leg in coordination with your right arm; pushing on your foot to perform a little jump, etc. No one of these acts does by itself correspond to the act of running, even though the act of running depends on the ordered fulfilment of each of them. Similarly, I will argue, the temporal properties of events make their way into our experience in a processual way.

As noted in the last section, the individuation argument argues for the explicative necessity of the specious present to account for temporal consciousness and to dissolve the paradox mentioned at the outset. In refusing this argument, then, we expose ourselves again to such paradox, whose threat is now even more compelling: if we deny that that conscious acts of perception are temporally extended, how is it possible that we are aware of the temporal properties of phenomena?

A possible way to meet this worry has been advanced by Prosser in *Experiencing Time*. In a section dedicated to Specious Present theories (2016, 119), he advances a proposal, to which he does not eventually subscribe, named ‘Dynamic Snapshot’ theory. According to its advocate, the problem of the individuation of extended individual perceptual experiences is that it wrongly assumes that temporal consciousness requires the awareness of different states of the event experienced at different times. To prove this point, he provides examples wherein experience of motion seems not to require more than the experience of a single (dynamic) state. Such is the case, for instance, when we look at the needle of a speedometer, or in motion after-effects. In the first case, given that velocity is a quantity in which space and time are included unitarily, and can be thus represented in a single vector, it is argued that, simply by observing the needle, one would be aware of the occurrence of movement at an instant. Similarly, in motion after-effects or in illusory motion cases (picture below), the impression of motion is conveyed even though the object does not seem to change its position over time.

With respect to the triad, then, this view denies the incommensurability thesis. Differently from retentionalism, though, the core intuition behind Prosser’s proposal is that, in order to accommodate the positive time interval necessary for the detection of temporal events, rather than extending the act of awareness (in the way envisaged by the retentionalist’s account we provided) we may as well reduce the number of states one must be aware of in order to experience change, movement, succession and other temporal properties.



figure 4. Illusory motion case. Animal collective (2009), *Merriveather Post Pavilion*, album cover

If we consider the triad once again, though, it may be possible to find another solution to this problem. First, we may notice that a common trait that associate both Prosser's proposal and the SP theories is that they all subscribe to the phenomeno-temporal realist's claim that we directly experience temporal properties of events. What is more interesting, though, is that they all interpret this claim in the same way – that is, they all interpret the word 'direct' to mean that temporal properties must be experienced *at once*, in that according to each of them it is in a single act of awareness that we become aware of these properties. However, this does not seem to be the only way we can interpret the word directly. Think for example of our object experience: to claim that an apple is experienced directly does not seem to imply that one must experience all its aspects – nor only some of them – at once. Likewise, we could argue that experiencing a succession *directly* does not itself suggests that we must be aware of all its

states (or some) at any one time. A view that opposes these proposals, then, is a view according to which awareness of time does not happen *at* any individual time, but results from the awareness of a succession of momentary acts of consciousness. Processualism can thus be understood as claiming that we can be *directly* aware of a succession *one (momentary) act of awareness after the other*.

Think again about the running analogy. At each instant of you run, you do not *run*, in the sense that you do not *move* (given that you are within a temporal section so small that does not admit of temporal extension). But at the same time at each instant you *are running*, in the sense that you occupy one of the positions that, one after the other, constitute your run. The same ambivalence applies with respect to the realist's claim: the fact that we *directly* perceive a succession does not necessarily mean that we must be aware of succession in a *single* act of awareness. This implies that each momentary episode of experiencing is necessary but not sufficient to the perception of the whole process, and that our awareness of a succession *takes* time to occur. In other words, then, this view maintains that temporal consciousness is a *process*. The process view needs not to deny any of the propositions in the triad, given that it understands the paradox of temporal consciousness as arising from what may be called a 'category mistake': the incommensurability between the extension of a single act of awareness and the temporal properties of its object reflects the incommensurability between a stative conception of temporal consciousness and the processual nature of temporal properties, which can be overcome if we recognise that temporal experience is itself processual.

Although this may look plausible, there are some considerations that we still need to confront to give more credibility to this proposal. In what follows, I will present what I believe are the most compelling objections to this view, and sketch a possible way in which processualism can begin to address them. The first difficulty is the very definition of experience as a process. In *Verbs and times*, Vendler (1957, 155) notes that "seeing in "I saw him running (or crossing the street)" must have a sense that admits a period of time: a process or a state". But, he adds, seeing *cannot* be a process. Indeed, he argues, processes present peculiar features that are not shared by verbs of perception such as seeing: for example, processes can be carried out in different ways, whereas we cannot see deliberately nor carefully; also, processes includes activities⁴, but questions of the form "what are you doing?" do not admit "I am seeing..." as a possible answer; moreover, the fact that being able to see, given certain conditions, is itself seeing, seems to suggest that, like other stative or achievement verbs, 'see' is something spontaneous rather than a deliberate action.

A possible way to reply to this objection may be to argue that the sense of 'seeing' that does not admit of a process use (for instance, when seeing is used to mean 'spotting', as in Vendler's examples), is not the sense in which it is used with reference to temporal properties. In this case, in fact, it seems that to see is not merely a spontaneous act, but something that can be done or avoided with a certain degree of

⁴ According to Vendler, processes can be distinguished into two categories: activities and accomplishments.

autonomy. In *Wahrnehmung und Aufmerksamkeit* (1912)⁵, Husserl notes that in our visual field the distinction between ‘observed’ and ‘not observed’ can be further refined to accommodate what he calls the ‘unobserved’. The importance of this distinction to our analysis is that it introduces the concept of activity within our experience: in fact, while the not observed is a mere negative of the observed, passively determined as a function of what does not fall in one’s visual field at one moment, the unobserved instead corresponds to what is actively neglected, or ignored, despite visible here and now. Our gaze wanders more or less deliberately within the realm of the observable – I ignore this and that, or linger here and there; I calculate what to expect and correct the calculations; I manage to focus on something, neglecting something else at the same time. Although nobody could be charged for doing it, we do decide (despite not always consciously) to what event we give *perceptual* consent, with a voluntariness that resembles the one of physical movement. As we saw in the first chapter, this occurs with the sound of a clock’s hands – it seems that we can decide whether to pay attention to it. This does not necessarily mean that we do not *hear* it anymore – given that the sound still remains perceptively available – but that it is only unobserved.

Also, in “I saw a man fall from the balcony at 10.01 a.m.”, there is a sense in which the verb ‘saw’ is not processual: indeed, if I were asked what I was doing at 10.01 a.m., I may reply, “I was going to work”. This answer gives us a reason to interpret the verb ‘see’ as something that spontaneously happened, but a different answer could suggest a different use. In the reply: “I was watching this poor man!”, ‘watch’ is a process verb and it can be used to refer to activities. Indeed, although spotting a man falling from the balcony is a spontaneous achievement that does not require deliberate action, the same cannot be said when we see a man fall from the balcony, in which case it seems that one undertakes a certain form of deliberate act, that can be performed with different modalities (listlessly, attentively, carefully). According to this interpretation, then, it seems that there is a sense according to which to be able to see something is not yet to see, and precisely in the sense that what falls within my visual field may hereby be observed, but may as well be deliberately neglected. To conclude, then, if we agree that (say) to hear a succession could be a form of activity, then it may be plausible to argue that to hear is to undertake a process where the temporal properties of events, given that this process is perceptual, are not hereby merely inferred, deducted or remembered, but seen.

If this is the case, then, the processualist may also be able to account for the difference between an experience of succession and a succession of experiences. In the light of these considerations, in effect, one may propose that to experience a succession is to undertake some sort of activity, whereas being aware that sounds are successive is not. Think again of the word ‘sentences’: when it is uttered, a succession of three ‘es’ may well enter our auditory experience. To be heard as a succession, though, our attention needs to be directed towards the sounds of the ‘es’ and exclude all other sounds; as soon

⁵ In bibliography, *Percezione e Attenzione*, it. tr. A. Scanziani

as the first one is heard, our perception (aware of the average length of words) attends the next one to come shortly and another after this, until something that satisfies the expectations is heard, while the intermediate letters keep silent. When the succession is heard, then, there is something we are doing, and we can do it in different ways. Our experience has a scope, it can be interrupted, it requires an effort and it can fail. Given the peculiarity of the concept of process, in fact, there are different ways in which an experience of succession can differ from a succession of experience. First, it may be that, in hearing a succession of sounds, we simply do not undertake such process. This case can be represented in opposition to the one just described: imagine that the succession of three 'es' enters our auditory experience, but that we are aware of it in a similar way in which we are aware of our auditory background. In this case, we are not doing anything in particular to be in this state of awareness, nor would it make sense to say that we can hear the succession in any particular way; rather, it seems that to have a pair of ears would suffice – in effect, it seems that to be able to hear the succession is by itself to be aware of it in this sense. But I could be merely aware that sounds are successive also when I fail to hear the succession: in the hour-hand case, for instance, we fail to see a succession because the second observed position occupied by the hand is not where we expected it to be. Also, the succession may be interrupted: if we are listening to a succession of sounds $S_1 \dots S_{10}$, and this experience is interrupted between S_4 to S_7 , despite the experiences of these two sounds is successive, they are not experienced as such.

The last objection I want to address here comes from a phenomenological consideration. In fact, even if we clarified why experience of succession and succession of experiences may differ from each other, one may argue, along the line of retentionalism, that we still owe a clarification of their phenomenal difference. In effect, in our example of the word 'sentences', it seems that no reason is given how the sound of the first 'e' differs from the same sound in a mere succession of experiences.

According to the process view, though, no such difference need be found in a single act of awareness. This distinction is crucial within a retentionalist's view, given that a stative succession of experiences is experienced as a succession only if each element of such succession presents a system of protentions and retentions that binds them together, similarly to how the shape and colour of a piece of a puzzle rules its possible combinations. According to processualism, instead, it is the active operation of experience that interweaves such elements together. At any time t the phenomenal difference between the experience of 'e' in a succession of experiences and in an experience of succession is that, in the latter, the 'e' is experienced as a part of a process that is phenomenologically prior⁶ to any single experience at time t . But if this is the case, then, the phenomenal difference between a succession of experience and an experience of succession cannot be found *at* any single act of awareness considered in isolation. If we think again of the analogy with the act of running, the fact that there is no phenomenal

⁶ But not metaphysically, since it is accomplished one act of awareness at a time

difference between a single moment of the run and, say, a realistic painting that represents that very moment, seems not to constitute a problem, in that the difference between them is that, in the run, that moment is preceded and followed by a series of other acts, while this is not the case for the painting. Similarly, to address this worry, the processualist can argue that the phenomenology of any single phase of the process is a mere abstraction that depends on the phenomenology of the process to which they belong.

Conclusion

In the first section, I presented extensionalism and retentionalism as two ways of treating the paradox of temporal consciousness introduced at the outset, and advanced critical considerations against their individual solutions, noting their insufficiency in capturing what is special about the experience of time. In section two, I identified the individuation argument as the necessary condition shared by both theories to account for temporal consciousness, but found that this raise phenomenological objections. I took a step back in section three, and noticed that all the views encountered, although they solve the paradox in different ways (each of them denying a different proposition of the triad) all share a common interpretation of phenomeno-temporal realism. This consideration opened the space for a new proposal that preserves the validity of all propositions in the triad, and whose structure I began to outline in the section's conclusion. Finally, I presented two of the most relevant objections that could be moved against this view, and I sketched a possible way they could be addressed. To conclude, then, although the viability of this position needs to be investigated further, I believe this work provides sufficient reasons in favour of the possibility of developing, along the lines of this proposal, an original position based on a novel solution of the paradox of temporal consciousness.

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