INSTANTANEOUS CONSCIOUSNESS OF TIME: RECONSIDERING DAINTON'S MODEL OF THE SPECIOUS PRESENT IN THE CONTEXT OF HUSSERL'S AND BROAD'S MODELS

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ABSTRACT

In his book The Stream of Consciousness*, Barry Dainton proposes his "overlap model" to explain the phenomenon of continuous time without succumbing to the problems of previous models, such as the ones by Edmund Husserl and C.D. Broad. Dainton rejects models with instantaneous phenomenal presents, because he favors ones with a durationally extensive "specious present." Yet, his portrayal of present perceptual awareness as spanning an extent of time could become problematic if we try to square it with a view of the physical world's present temporality as being composed of moment-by-moment instantaneous variations that we might be detecting in our perceptual experience. So, in accordance with Dainton's aim of providing realist models of phenomenal time, I will make use of the concept of instantaneous velocity that is used in physics, along with the notion of sensory memory from perception studies, to provide a model of the specious present in which the present moment of consciousness involves a direct awareness of instantaneous change.*

Keywords: *phenomenology; time consciousness; specious present; instantaneous variation; Barry Dainton; Edmund Husserl; C.D. Broad*

ZAMANIN ANLIK BİLİNCİ: HUSSERL VE BROAD MODELLERİ BAĞLAMINDA DAİNTON'UN ALDATICI ŞİMDİKİ AN MODELİNİ YENİDEN DÜŞÜNMEK

ÖZET

Bilinç Akışı *kitabında, Barry Dainton; Edmond Husserl ve C.D. Broad'ın modelleri gibi önceki modellerin problemlerine düşmeksizin, sürüp-giden-zaman fenomenini açıklamak üzere "üst üste gelme modelini" önerir. Dainton, sürüp-giden fenomenal mevcut anlara dair modelleri reddeder, zira; sürekli genişleyen, aldatıcı mevcut anları tutar. Yine de onun şimdinin algısal farkındalığı tasviri, duyumsadığımız fiziksel dünyada onu an-be-an sınırlandırmayı denediğimizde problematik bir hal alır. Bu sebeple Dainton'ın gerçekçi bir fenomenal zaman modelini ilerletme amacını sağlamak adına; fizikte kullanılan anlık hız kavramını, ani değişimin dolaysız bir farkındalığını içeren bilincin-mevcut-anı içindeki aldatıcı-mevcut-an modelini sağlamak adına; algı çalışmalarında kullanılan duyusal bellek kavramı ile birlikte kullanacağım.*

Anahtar Kavramlar: *Fenomenoloji, Zaman Bilinci, Aldatıcı-an, Ani Değişim, Barry Dainton, Edmund Husserl, C.D. Broad.*

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Instantaneous Consciousness Of Time: Reconsidering Dainton's Model Of The Specious Present In The Context Of Husserl's And Broad's Models
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Introduction

In his book *The Stream of Consciousness*, Barry Dainton proposes his "overlap model" to explain the phenomena of time's flowing passage along with the so-called "specious present." This model is an improvement upon C.D. Broad's and Edmund Husserl's earlier and later models of time consciousness, Dainton argues, because it avoids the problems these other models were unable to resolve. Dainton considers the overlap model to be a realist account of phenomenal time, because in it our present consciousness is directly aware of a small field of passing time, rather than being a momentary act that is aware of representations of recently past phenomena. I will first describe Dainton's model in its contrast to the later Broad model to highlight its important features. The concern I raise is that the concept of the instant that Dainton uses seems to involve a static state of affairs, rather than being something with its own intrinsic temporal character. By examining the instant as understood in physics' analysis of instantaneous velocities, we could define it in general as the smallest possible unit of transition or passage. In the context of the phenomenology of time, I consider the possibility that the present experience of such an instantaneous change carries with it the impression of temporal variation under the form of a mild shock, which, when connected to other such temporal impressions in our recent retentional consciousness that are still relatively vibrant and fresh, together provide the additional temporal impression of the specious present.

Phenomenal Time and Co-consciousness

For his analysis of the phenomenal character of our experience of time's continuous flow, Dainton offers these definitions: "by 'experiences' I mean states or items with a phenomenal character. The 'phenomenal character' of an experience refers to the distinctive *feel* the experience has. A state has a phenomenal character when there is something that it is like to have or undergo that state."[1] One phenomenal character of the present is its continuous flow: "Consciousness is not a static but a flowing thing, it is never still but always on the move."[2]

If the moments or phases of the passing present are continuous, that means they are linked together somehow. Dainton describes this bond as being

[1] Barry Dainton, *Stream of Consciousness: Unity and Continuity in Conscious Experience* (London: Routledge, 2000), 2.
[2] Ibid., 113.

one of "co-consciousness," which means that we are jointly aware of different phenomenal contents or moments in the same act of consciousness.[3] We are *synchronically* co-conscious of all the phenomenal contents given simultaneously in the present, including all the visual elements we see together, along with phenomena from the other senses and from memory, imagination, and so on.[4] Some of these phenomena are in the forefront of our awareness, and other parts are at the fringe, but we are synchronically co-conscious of all of them together. Likewise, any one phase of the present is *diachronically* co-conscious with its immediately neighboring phases of awareness. This makes us directly aware of the continuity of the flow of temporal phases.[5]

The Specious Present, the Instant, and Realism vs. Anti-Realism

The present phase of awareness can be either durationally extended or not extended. If it is not extended, then it is instantaneous. But if it is extended, then the phenomenal present has a short umbrella of duration. We use the term "specious present" for this short period during which phenomenal contents appear to our awareness as being present; it is also sometimes called the "the living, sensible or phenomenal present."[6] By taking into account empirical studies and his own phenomenological introspection, Dainton approximates the specious present's duration as lasting about a second or so.

As I will keep his assessment of the specious present's duration, let us consider here how he arrives upon it. He writes that there are no scientific studies which directly address the question of how long the specious present lasts. There are ones which say that, in order to hear sound stimuli as not being simultaneous, there needs to be at least 2-3 milliseconds between them, and for all senses there needs to be at least 30 milliseconds or so between stimuli before we can discern their order. He cites other studies which indicate that the contents of our experience hold together in units of about three seconds long. Yet, these studies do not determine whether or not all those contents are perceived as present or if they also include memorial content. Without

[3] Ibid., 3.
[4] Ibid., 71.
[5] Ibid., 26, 113. "The fact that we directly experience both change and continuity suggests that contents spread over a brief interval of time can be co-conscious; the fact that our experience consists of a continuously renewed flow of content, a flow within experience itself, suggests that diachronic co-consciousness plays a key role in the generation of streams of consciousness." Ibid., 114.
[6] Ibid., 116.

adequate scientific data to determine the length of the specious present, Dainton says we must use our own introspection. He reports that his specious present seems to last for a half of a second or so, but he generally uses the approximation of around one second.[7]

Dainton then provides his own characterization of the specious present:

> We have an immediate experience only of what is present, a present that is surrounded by the comparative darkness of the remembered past and the anticipated future; the experienced present is not momentary, we seem to be directly aware of intervals of time as wholes; within these wholes there is a continual flow of content, and each experienced whole seamlessly gives way to the next.[8]

The other conception of the present, as was noted, is as an instant or moment. The important feature of the instant is that it is durationless: it does not expand through an extent of time. In Dainton's portrayal of the present instant, it can be characterized as being a cut or "dividing line" in the flow of time, which serves as the shared boundary between past and future.[9] Husserl makes this distinction, too. For him, the *now* is not a "fictitious mathematical time-point;" rather

> Each now […] has its perceptible extension which is something that can be confirmed. (It would be possible, of course, for the extensions of the objects in their temporal locations to appear as nonextended, namely, without sufficient breadth to permit of further division. The indivisible in this instance is an ideal limit, however, just as the indivisible spatial point is.)[10]

Dainton argues that the phenomenal present cannot be such a durationless mathematical limit, and he determines this by finding problems with models of time that use this notion of the momentary present. One basic problem with this conception is that our own experiences tell us we can be

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[7] Ibid., 113, 170–1.
[8] Ibid., 117.
[9] Barry Dainton, "Time in Experience: Reply to Gallagher," *Psyche* 9, no. 10 (2003): 3.
[10] Edmund Husserl, *On the Phenomenology of the Consciousness of Internal Time (1893–1917)*, ed. Rudolf Bernet, trans. John Brough, vol. 4, Collected Works (Dordrecht: Kluwer, 1991), 172.

presently aware of motion and change, which requires a direct awareness of a spread of moments. We cannot for example see a moving object change location if we only view it at one point in time. Thus, the present must have some temporal "breadth" in order for us to perceive alteration or temporal passage *directly*.

This direct awareness of temporally extended phenomena is for Dainton the primary criterion for a model of time to be realist. If, however, we are only indirectly aware of recently past moments, normally by means of representations like memories, then it is an anti-realist model, or more specifically a "representational anti-realist" model.[11] One of Dainton's primary arguments is that models portraying the present as momentary are anti-realist because in them the immediate past is given mediately through representations that are presented simultaneously with the present instant of awareness.

We should take note of one other distinction Dainton makes for time consciousness models. On the one hand, they might subscribe to what Izchak Miller calls the Principle of Simultaneous Awareness, which says that a present durationless act can be aware of moments from various different successive times.[12] Or, on the other hand, they might subscribe to the Principle of Presentational Concurrence, which says that "the duration of a *content* being presented is *concurrent* with the duration of the *act* of presenting it. That is, the time interval occupied by a content which is before the mind is the very same time interval which is occupied by the act of presenting that very content before the mind."[13] Dainton's overlap model, as we will see, has this feature of the Principle of Presentational Concurrence.

Broad's Later Model

Dainton discusses the earlier and later Broad and Husserl models, examining their capacities to account for the phenomena of continuous time and the specious present, as well as assessing the problems they are unable to resolve. We will look at the problems in particular with Broad's later model, because it will illustrate Dainton's conception of the instant along with the problems he thinks it brings about.

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11 Dainton, "Time in Experience," 4.
12 Dainton, *Stream of Consciousness*, 133, citing Izchak Miller, *Husserl, Perception, and Temporal Awareness* (Cambridge, Mass.: MIT, 1984), 107.
13 Miller, *Husserl, Perception*, 107. See Dainton, *Stream of Consciousness*, 134.

Broad's later account begins with two basic assumptions: {1} the present is a durationless instant, and {2} we are "directly aware of things changing and remaining unchanged."[14] But, as was noted, Dainton does not think these two assumptions are compatible. A momentary awareness is aware of singular moments and thus not of changes. Broad explains our consciousness of change as resulting from our present momentary awareness taking in contents from a finite duration extending "a short way into the past."[15] Broad then introduces another idea, presentedness, "a psychological characteristic which comes in varying degrees from zero up to a maximum."[16] If a content *C* is spread through time, then it as a whole cannot all be present, as the present is a durationless instant in this model. So, at one moment of *C*, we are directly aware of the single current instant of its presentation, and this part has the most presentedness. Moving away from that center-point, the moments diminish in presentedness, with each successive step of the chain extending into the recent past. It tapers off to the point "where *C* no longer falls within the span of immediate awareness;" so, "As contents slip into the past, we sense them fading away, they appear less vivid, less intense; or perhaps it is because we are aware of contents losing their intensity that they seem to slip away into the past."[17] Dainton's modified Broad diagram shows this with continuously diminishing bands (figure 1).

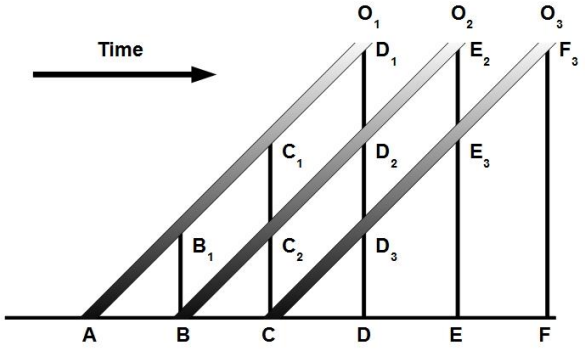

Fig. 1 A recreation of Dainton's modified later Broad model

[14] Dainton, *Stream of Consciousness*, 143.
[15] Ibid.
[16] Ibid.
[17] Ibid.

At instant O_1, content D is most presented and thus is the brightest, but content A from three moments ago has receded far into the "darkness" of our awareness. Broad also claims that there are no intervals between specious presents, and thus from moment to moment in one single stream of consciousness, there are no sudden changes in presentedness. Dainton understands this to mean that the continuity is dense: no present has an immediate successor, because between any two there is always another.[18]

Dainton notes a number of problems with this model. One is that it implies there are an infinity of nested representations of past moments. So, at moment O_1, D is apprehended as now present, C is given as having lesser presentedness, B as less than C, and A less than B. But since between each division there are infinitely more, we will have infinitely many such nested representations. However, when we examine our own consciousness, Dainton thinks, we do not notice this much complexity.[19] And in Husserl's own model, which has a very complex nested structure, this will lead to the problem of clogging, Dainton argues. Consider Husserl's sort of diagram of retentional time consciousness (figure 2). Suppose we are at present moment D, and we are retentionally aware of the prior moments of consciousness: C, B, and A. Yet, as each of these moments occurred successively into the past, they are temporally modified in our present awareness as C', B'', and A''' (with A''' being the least "fresh," going three moments into the past. Figure 2, top left.)

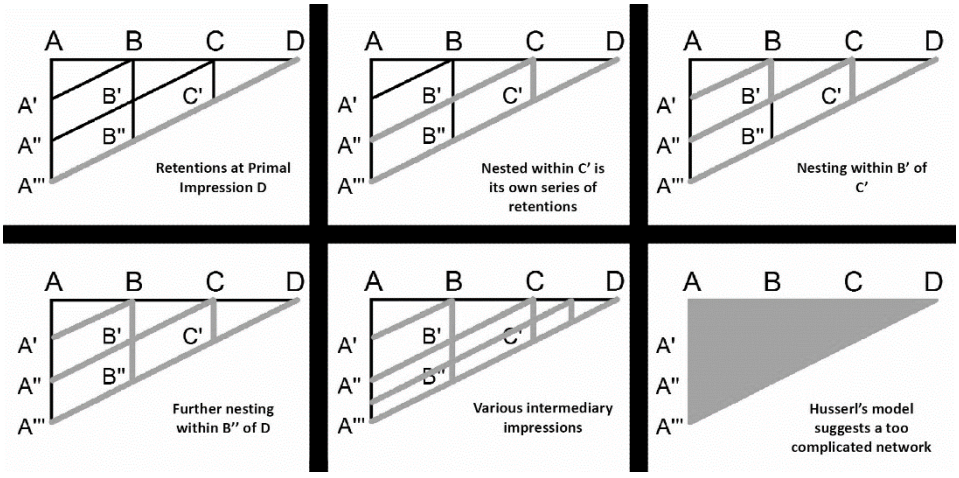

Fig. 2 Husserl's clogged retentional consciousness

[18] Ibid., 143–4.
[19] Ibid., 127, 147.

Nevertheless, our retentional awareness of the just prior moment *C*′ is not so simple in this model. Back when *C* was happening, we were at that time retentionally aware of *C*'s *own* particular prior modifications of moments *B* and *A*, as *B*′ and *A*″ (figure 2, top middle). This means that right now, we are not just aware of the past moment *B* from our current perspective at *D* (that is, as *B*″, being slightly less "fresh" than *C*′). We *also* retain the way we were aware of *B* from the perspective of prior moment *C* (with *B* being modified as *B*′ at that time), back when it was "fresher" in our time-consciousness (figure 2, top right). For, by being retentionally aware of *C*, we are aware of an act of consciousness, and this retended act contains its own unique sequence of retentional modifications (its own unique perspective on the past moments). This nesting holds for all the retended moments (figure 2, bottom left). And, if we consider time's continuous flow and its myriad array of intermediary phases (figure 2, bottom middle), we would conclude that our retentional consciousness at any moment is infinitely complicated (figure 2, bottom right). Yet, Dainton argues, our own examination of our retentional consciousness shows it not to involve such astounding complexity.[20]

Another problem is that our phenomenological observations tell us that we are directly aware of change, but Broad's model indicates that we are only indirectly aware, as past moments are given as memorial representations rather than as present actualities. And also, there is no explanation for the continuous connection between moments, so this model does not account for the continuous flow of time's passage.

> Neighbouring phenomenal presents may have similar representational contents, but there is no real experiential connection between them, each consists of a discrete experience in its own right. This is profoundly unrealistic: are we not aware — directly aware — of the transitions between the successive phases of our streams of consciousness?[21]

A third problem concerns the concept of presentedness, by which "contents appear to be sliding pastwards *because* they are being apprehended as possessing ever-diminishing degrees of presentedness in successive specious presents."[22] Dainton considers certain ways that this presentedness

[20] Ibid., 157–9.
[21] Dainton, "Time in Experience," 7.
[22] Dainton, *Stream of Consciousness*, 149.

can be understood. One is that it is the same as phenomenal vibrancy: the less vibrant a phenomenon is, the more it appears to be in the past. But Dainton challenges this view. Consider if we see a color chart showing blue diminish in intensity. The dimmer side does not seem more "past" than the brighter side. Thus, Dainton thinks we cannot assume that diminished intensity is indicative of temporal pastness.[23] And yet, he sees no other alternative conception of presentedness than that it is "a *sui generis* phenomenal property."[24] However, Dainton does not think that phenomena from two different senses have both their own phenomenal characteristics in addition to another more general sort that both of them share.[25]

A fourth problem is lingering contents. Dainton thinks that present experiences do not linger in our consciousness after they are over. So for example, if we snap our fingers, the only lingering impression would be from echoes in the room and thus not in our minds. He also says that when he waves his hand in front of his page, the words disappear from view rather than remain there once his hand blocks them.[26] The problem is more evident when there are sudden qualitative transitions. He has us look around our room and in the middle of that action close our eyes. We "immediately" stop seeing our surroundings. He admits we might see an afterimage, "a pattern of colour corresponding approximately with what you last saw."[27] But an "afterimage only represents its preceding experience in the vaguest of ways and is itself directly experienced."[28] So, in Broad's model, we have momentary experiences in the present, and then they immediately slip away, becoming less and less present until fading away altogether. However, according to Dainton, "Contents depart from immediate experience cleanly, leaving no residue."[29] (Later I call this claim into question when examining sensory memory.)

Dainton's Overlap Model

After determining how the structural features of Broad's and Husserl's models lead to unresolved problems, Dainton offers his overlap model as a

[23] Ibid., 150.
[24] Ibid.
[25] Ibid.
[26] Ibid., 156.
[27] Ibid., 156–7.
[28] Ibid., 157.
[29] Ibid.

solution. There are two main features of his model that concern us here: {1} The specious present is durationally extensive, and {2} co-consciousness makes neighboring specious presents overlap at their extremities, and in that way they continue into one another.

We should first note that the "overlap" in the model is not itself something that enters our explicit awareness. What we do experience directly is the phenomenon of time's flowing passage. Present moments of our awareness do not normally appear as though they were frozen still in time. Rather, we experience the continual motion of new contents passing into our explicit awareness all while older contents pass away. The overlap structure in Dainton's model accounts for the phenomenon of time's continuous flow by making the future-ward portion of each specious present be nothing other than the past-ward part of a following present. This structure is meant to account for why each moment feels as though it were partly a carry-over or continuation of prior moments, all while presenting us with new phenomenal content.

In *The Stream of Consciousness*, Dainton explains the overlapping of specious presents by building from John Foster's model (figure 3).

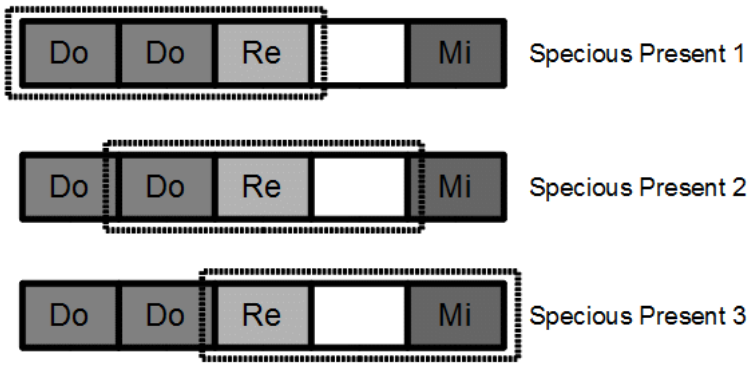

Fig. 3 Dainton's overlap structure, built from Foster's model. The notes depicted here should not be understood as repeating in each present but instead as remaining within the span of the continually moving specious present.

Consider if we hear a melody *Do-Re-Mi*. The *Do* takes two moments, then *Re* comes immediately after, and let us also suppose that there is a pause before *Mi* begins. We assume that our specious present is three "moments" long, but here Dainton is using the term "moment" to mean "some brief interval that is shorter than the specious present."[30] Yet, the movement is not really so crudely segmentary but is somewhat more gradual, so we should imagine many smaller intervening steps, all of which are likewise overlapping. What we experience, Dainton says, is not just *Do*, *Re*, silence, and *Mi*, but, just as importantly, we experience *Re* flowing into *Do*, the pause flowing into *Re*, and so on. So, it is not that we perceive *Re* three times. Rather, we are aware of the one moment of *Re* flowing in and out of the specious present. In other words, it is not just the sounds themselves that are phenomena; their passage through time is a phenomenon, too. By depicting the successive moments overlapping across successive presents, Dainton's model can account for the specious present and for how we are directly aware of the continuous flow of time without the need of retentional awareness.[31] Consider when we view motion, as for example a ball flying through the air. In one specious present, we perceive it move from positions P_1 to P_2, and in the next present from P_2 to P_3. We do not, however, perceive the motion as having two distinct segments. Rather, we see it flowing continuously from the beginning to the end of its motion, and the overlap model would account for this continuity between the moments by having them share the same awareness of P_2.[32]

So, as we can see, Dainton's overlap model does not have the problem of repeating contents. They flow instead of recur. But, this flow is not a dense continuity because Dainton finds it inconceivable that there could be infinitely many experiences of just one note, and in fact, we seemingly cannot find any introspective evidence "that we can distinguish even a hundred."[33] Nonetheless, there is also another potential problem. If all the moments in the specious present are equally present, then how do we know their order? Dainton says that the order is discerned from the fact that the moments only overlap with their neighbors. The order is apparent because only *Re* flows into *Do*, and only the silence flows into *Re*. We do not perceive the silence also flowing into *Do*, and thus their order of succession is maintained even though they are co-present.

30 Ibid., 172.
31 Ibid., 167–8, 173.
32 Ibid., 176.
33 Ibid., 170.

Presence and Instants

Yet, there is a difficulty with regard to Dainton's extensional model that we should address. He says that the term presence denotes "the property of being an immediate object or content of consciousness."[34] We are directly aware of the moments of the specious present, but they do not appear simultaneously. Thus, separate moments in a succession can be phenomenally present together even if there are moments intervening between them. Now, Dainton subscribes to what he calls *moderate naturalism* or *moderate realism*, which says that "experience is itself an ingredient of concrete reality;" thus, "it is clearly a mistake to think phenomenal truths are anything other than truths about concrete reality."[35] But, our perceptions are phenomenally aware of the physical world around us, which is affecting our sense organs and thereby presumably modifying the structures or the dynamics of our nervous systems.[36] Dainton notes that the extensionalist models of the specious present are not compatible with conceptions of the physical world where the present is thought to be instantaneous (whether it be a "presentist" or a "moving spotlight" model with an instantaneous present moment), although retentional models are compatible with such a notion of an instantaneous physical present.[37] There also seems to be the assumption that were the actual present of consciousness just an instant, we would only be able to perceive static states of affairs, like simple snapshots, rather than changes. In the following, I will propose a sort of model that {1} regards the temporal phenomenal present to be an instant, while still {2} involving the direct apprehension of change and yet {3} remaining able to account for the specious present.

The first conception that we will need to form is of the apprehension of change presented within a durationless instant. In a forthcoming step, I will appeal to phenomenal data. But first, I would like to illustrate some of the features of the conception I am trying to form by appealing to a way that physical change can be understood as instantaneous, by means of a textbook mathematical procedure used in elementary physics. The purpose here is not to

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[34] Ibid., 122.
[35] Ibid., 22.
[36] When discussing the possibility of sentient plants, Dainton explains their perceptions on the basis of nervous activity, so perhaps he has nervous activity also in mind when describing human perception. Ibid., 79.
[37] Barry Dainton, "Time and Temporal Experience," in *The Future of the Philosophy of Time*, ed. Adrian Bardon (New York: Routledge, 2012), 140.

make any concrete claims about physical reality or consciousness but rather to provide us with a convenient step toward a conception of instantaneous time consciousness.[38]

For this illustration of the instant, consider for example a curve that graphically represents the function $y = x^2$. Let us suppose it is describing the linear motion of an object, with the *x-axis* representing the forward progression of time and the *y-axis* representing the ever increasing distances of the object's motion.

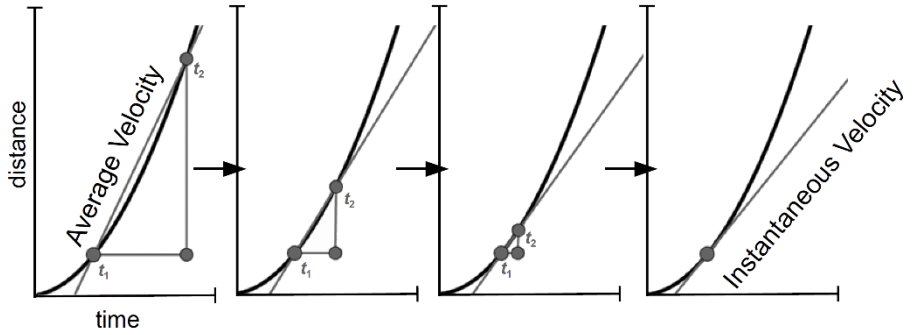

Fig. 4 Average velocity as motional variation within a duration of time; instantaneous velocity as motional variation without temporal duration.

Average velocity can be found by finding the ratio of distance over time for a given extent of the motion (figure 4, left panel). We find the object's distance traveled at distinct time-points t_1 and t_2. In this way, we pinpoint exact locations of the motion in time and space, with the variation in between those boundaries representing the alteration of the object's position through the continuous passage of time. But, in addition to average velocity, we may also calculate instantaneous velocity. To do this, we can perform a mathematical procedure which brings the further x time variable closer to the time-point in question, until these two temporal boundaries are right up against each other (figure 4, panels 2–4). Geometrically, this moves the sliding secant line

[38] Dainton in fact examines this notion of the instant in his book *Time and Space*, and also in this book, he describes the overlap model of phenomenal time. Dainton, *Time and Space*, 112–6, 289–90. However, he does not seem to apply this concept of the instant in his evaluation of phenomenal time models, at least not in the way we propose to do so here.

representing the ratio for average velocity to the position of the tangent line, which indicates the instantaneous velocity. To illustrate this operation for finding instantaneous rates of change, David Jerison of MIT uses the example of the institute's yearly "pumpkin drop" where a pumpkin is released at the top of an 80 meter tall faculty building. Using this calculus procedure, he determines that right as the pumpkin meets the surface of the ground, it is traveling 40 meters per second.[39] Yet, we could not possibly be examining the pumpkin's motion after it stopped falling, that is, after it has come to rest, because we are measuring its velocity; however, the pumpkin is not technically moving, because it is already right at the surface of the ground. It has nowhere else to go and thus cannot actually be in motion. The instantaneous velocity here tells us how fast it was *tending* to go as it made the transition from motion to rest.

The notion I would like to arrive upon is that our present time consciousness could be in certain respects similar to this durationless, temporal interval within which a change of state can be found. Regardless of whether we are using the extentional model or the retentional (instantaneous) model of the specious present, in both cases, we can turn our attention to the part (or boundary) of the specious present that is most future-ward. If we wish, we might think of that most future-ward present moment as being something like the *limit* of the specious present, an instant where successive states of affairs are given immediately and without the passage of time, as with the moment when the pumpkin both has a velocity (a rate of changing its place, and is in that sense still in motion) and yet goes no further (does not in fact change its place, and in that sense has ceased its motion).

Conclusion: The Instantaneous Awareness of Temporal Passage

Let me now specify the features of this alternate model of the specious present. To do so, we will need to keep our attention trained to this most future-ward boundary of our specious present consciousness. The question is, what (if anything) do we experience at this limit? To answer this, I will need to discuss what we might call "temporal impressions." While we do have sensory impressions of physical change, like viewing a ball flying through the air, we also have, in addition to them, the impression that this particular change is currently transpiring within a present that has a second-long duration, as we

[39] David Jerison, "Limits, Continuity, and Trigonometric Limits (Single Variable Calculus, Session 2)" (Class Lecture, MIT, 2007), https://ocw.mit.edu/courses/mathematics/18-01-single-variable-calculus-fall-2006/video-lectures/lecture-2-limits/.

have noted numerous times.[40] In fact, we have such an impression of the durability of the present regardless of what changes we are viewing. And even when we perceive unchanging things, like a musical note that is sustaining for some time, we still have the impression that the present phase of the event possesses a brief duration.[41] Thus, we need to distinguish such *temporal* impressions from all other kinds, especially since the issue in question is time consciousness and not just the perception of things and events in the world. The model I propose draws upon this distinction, because if the specious present is a temporal impression (and not a perceptual impression, an imaginative act, etc.), then it could also be that that it is based on other temporal impressions, which we might seek for phenomenologically.

This brings us to the next aspect of this model, namely, the impressions that we obtain at the most future-ward part of the specious present (which in this model is thought to be the real, instantaneous present). This moment would be too brief to provide very much perceptual data. Yet, perhaps it is still entirely sufficient for endowing us with a substantial *temporal* impression. While we normally are not so explicitly aware of the most future-ward limit of the specious present, it would seem to come to the forefront of our awareness when we are abruptly surprised by something that frightens us. Imagine, for instance, that you are walking down the street, and a car behind you suddenly backfires quite loudly, causing you to jump in alarm. There is a singular moment when that startling sound is at the most future-ward limit of that specious present (that is, when it is most initially "entering the scene" of your present experience). And at this instant, you do not have sufficient time to register very much other than the shocking feeling that the situation you find yourself in is somehow quite different than what it just was. (Previously you felt yourself to be in a relative safe environment. Now it seems to be potentially very dangerous for you.)

It is this being shocked by change and newness that could be the temporal impression that we obtain at the absolute most future-ward limit of every specious present (that is, of the present instant, in this model). We might think of it as our constant awareness of the difference or distinctness that the given present moment bears.[42] Now, in the backfiring car illustration, we

[40] Dainton, "Time and Temporal Experience," 125–7.
[41] Dainton mentions an example like this, but to make a slightly different point. See ibid., 130.
[42] I thank Roland Breeur of the University of Leuven for generously teaching me this philosophical conception of time, namely, that it is constituted by pure difference.

observe an extreme case of a great "shock" from a supposed instantaneous variation. Nonetheless, this model assumes that for every specious present, we, at the most future-ward limit (the present instant), experience a shock at some level of intensity or another, although normally it is quite small and difficult to detect. So, under this conception, this constant "shock of the new" that we experience would constitute the temporal sense that every present moment has something "fresh" and original about it, even if it is hard to discern exactly what it is about it that is alerting us to its distinctness.

As we can see so far, such a model would allow for an immediate grasp of change and of present temporality, while still being based on the present as an instant (and also while possibly being a realist model, supposing that the physical present is instantaneous and thus does not have a second-long duration during which a number of successive physical events are somehow all equally present, despite being temporally exclusive in their sequence.)

The next issue is seeing how this model would explain the way that the really present moment of time consciousness, even though it is of just an instantaneous change, can provide us with the additional temporal impression of the present lasting a second or so. What I propose for this will involve us reconsidering Dainton's claim that we do not perceive a fading of impressions (or afterimages) within the specious present. Think of what it is like to view an object traveling very quickly, as for instance a ball moving rapidly through the air at a sporting event. As it is traveling at its great speed, do you simply see the ball at some place in the air; or, rather, do you perhaps see something more like a round object with a tapering streak trailing behind it and with that whole fading trace being perceived as moving along with the ball? When I conduct such a phenomenological study, I see the latter. Of course, there are other possible explanations to account for such a visual image; for instance, it could have something to do with the focal activities of one's eyes. Nonetheless, we do seem to have possible candidates for everyday cases where fading afterimages are directly apparent. In fact, such a feature of our perception has been studied empirically, and it is sometimes called *sensory memory*. For vision specifically, it is called *iconic memory*: "Visible persistence gives rise to the phenomenological experience of a fading visual image, and it reflects the persisting activity of photoreceptors and neurons in the early stages of the visual system."[43] Such

[43] Steven Luck and Andrew Hollingworth, "Visual Memory Systems," in *Visual Memory*, ed. Steven Luck and Andrew Hollingworth (Oxford: Oxford University, 2008), 5–6. Studies of sensory memory can be traced back to the work of George Sperling, who finds that "the subjective image or sensation […] outlasts the physical stimulus […]. The

studies of sensory memory find that there is a record of sensory data from the last second or so that is actively retained and directly perceived in the present moment, with these impressions tapering off in vibrancy, the older they happen to be. I wonder, then, might we not also have a similar sort of tapering trail of retended impressions of instantaneous change? We already have reason to claim that this occurs with sensory data, so why not for *temporal* impressions? Consider, for instance, how we sometimes say that a shock is "wearing off." Such a supposed diminishment of the shock of the new seems to be consistent with my own temporal experience, but for now I can only propose it as a feature of this model for your consideration.

We should note that Dainton discusses a conception that is relatively similar to a notion that we are working with, namely, that the most future-ward part of the specious present is the real present instant of consciousness. He addresses Michael Pelczar's argument that we can have an experience of a succession without it involving a succession of appearances, as could be the case for our very first moment of consciousness in our infancy.[44] Yet, we do not have memorial access to this occurrence, and Dainton offers another useful example: our first moment of consciousness when we are awoken by an alarm clock.[45] Although this discussion is not about the specious present specifically,

stimulus information is thus 'stored' for a fraction of a second as a persisting image of the objective stimulus." George Sperling, "The Information Available in Brief Visual Presentations," *Psychological Monographs: General and Applied* 74, no. 11 (1960): 20. And thus, as he and Weichselgartner note, "A brief visual stimulus presented to a subject is not perceived to end abruptly but to fade out gradually." Erich Weichselgartner and George Sperling, "Continuous Measurement of Visible Persistence," *Journal of Experimental Psychology: Human Perception and Performance* 11, no. 6 (1985): 711. Sensory memory holds for other senses, including hearing and touch. See Christopher Darwin, Michael Turvey, and Robert Crowder, "An Auditory Analogue of the Sperling Partial Report Procedure: Evidence for Brief Auditory Storage," *Cognitive Psychology* 3, no. 2 (1972): 255–67 and Rebecca Lawson et al., "Remembering Touch: Using Interference Tasks to Study Tactile and Haptic Memory," in *Mechanisms of Sensory Working Memory: Attention and Performance XXV*, ed. Pierre Jolicoeur, Christine Lefebvre, and Julio Martinez-Trujillo (London: Academic Press, 2015), 239–59. For more on the relation between sensory memory, short-term memory, and working memory, see Nelson Cowan, "Sensational Memorability: Working Memory for Things We See, Hear, Feel, or Somehow Sense," in *Mechanisms of Sensory Working Memory: Attention and Performance XXV*, ed. Pierre Jolicoeur, Christine Lefebvre, and Julio Martinez-Trujillo (London: Academic Press, 2015), 5–22.

[44] Michael Pelczar, "Must an Appearance of Succession Involve a Succession of Appearances?" *Philosophy and Phenomenological Research* 81, no. 1 (2010): 49–63.

[45] Barry Dainton, "The Phenomenal Continuum," in *Subjective Time: The Philosophy, Psychology, and Neuroscience of Temporality*, ed. Valtteri Arstila and Dan Lloyd (Cambridge, Mass.: MIT, 2014), 120.

we might still, for our own purposes, regard that moment when we experience the alarm as a shocking, instantaneous experience of *wakefulness taking the place of somnolence*. We might then clarify that the alternate model that we are considering implements a conception that is similar to this, but it treats every present whatsoever as being such an "initial" moment at which we are alarmed more or less by the newness of the present.

Dainton later provides one reason why he thinks Pelczar is wrong to assume that there ever is such an initial experience in a stream of consciousness. Dainton has us consider the first complete specious present in a stream of consciousness and then continually divide the past-ward parts in half, moving closer and closer to the past-side boundary, in a Zeno-like sort of procedure. Yet, Dainton concludes that "Since this succession has no first member, there is no such thing as the *initial* experience in the stream […]. Evidently, for streams structured in this way, there is no *first experience* at all, and so Pelczar's argument does not get off the ground."[46] This is worth noting, given its resemblance to the conception of the present instant that we are considering here for the alternate model. But in our case, we are not trying to locate the most past-ward moment of a specious present but rather the most future-ward; nonetheless, we could conceivably apply the same procedure, except instead by making our divisions go in the future-ward direction. In that case, we might be inclined to conclude that there is no most future-ward instant that contains no past-ward half (as every future-ward interval division can be divided once again into a new pair of past-ward and future-ward intervals). And thus, there is no durationless present moment located at the future-ward boundary of the specious present.

Yet, even with this adjustment, there are some reasons why this sort of a mathematical procedure does not apply to our model, despite its similarity to the method we examined for finding instantaneous velocity. This physics illustration was not intended to show how in fact the present instant of time consciousness is obtainable by proceeding through successive, quantitative divisions of a specious present. It rather served more simply to provide a way for us to conceive how change can be understood as happening in a durationless instant (that is, as involving a transition of states without a passage of time). There is another reason why Dainton's criticism might not apply to our model. The inverted form of his procedure would seem to assume that the most future-ward instant in a specious present is part of a larger

[46] Ibid., 123.

interval of presence, with the question being: which subsection of it is the most "present" (or: which future-ward present part is simple and contains no past-ward component)? The alternate model we are considering holds that there is only one real present instant and not an extension of real presence that can be divided. So, under its assumptions, there could be no such mathematical procedure of reduction to arrive upon the actually present instant: it is assumed to be given already in its simplicity and uniqueness. In other words, in this model, there is no room for there to be a most initial or most *real* present instant within a continuum of other candidates, because there is only ever just one to begin with. (However, supposing that our time consciousness does in fact operate similarly to what this model describes, then perhaps one might be able to attend primarily to the instantaneous present's temporal impression, were there a way to divert attention away from all retentional temporal impressions.)

To conclude, let us restate and evaluate this alternate model of the specious present. According to it, {1} our present temporal awareness is most basically an immediate temporal impression of difference or otherness that is first presenting itself just right now, and it takes the form of a greater or lesser "shock of the new;" {2} in addition to that present shock, we also have, still within this present, retentional modifications to our present instant of temporal awareness, which form something like a tapering "trail" of retentions of previous such shocks of the new. In other words, along with our present temporal impression *that* things are right now changing instantaneously, we also have a quite vibrant impression *that* things changed just a moment ago, and a slightly less vibrant impression *that* things changed a couple moments ago, and so on, all with diminishing vivacity, in a manner similar to the operations of sensory memory. It is this trail of fading retentions of temporal impressions, then, that {3} gives us the "specious" sense that the present has a second-long duration. As we can see, this model carries the same basic structure as Broad's retentional model, except here, rather than the fading contents being sensory ones (or other sorts of contents of consciousness), they are instead a retended series of *temporal* impressions from instantaneous *transitions*.

Thus, this model of the specious present that is based on a persistent awareness of instantaneous change (as understood in roughly similar terms to the physics conception of the instantaneous velocity) would account both for our direct and immediate temporal impression that things are changing most presently while also accounting for our other temporal impression that things

have been changing in the very recent past. Supposing that in fact present physical reality is made of such instants of change as they are studied in physics, a model like this would at least conform better to this conception of physical, temporal reality. However, to be realist in Dainton's sense, it would need to be specified that only the most recent moment of consciousness happens in the real physical present, and our impression of a currently lingering extent of time is to be regarded as a conscious *record* of the immediate past that was once in fact really present.

REFERENCES

Cowan, Nelson. "Sensational Memorability: Working Memory for Things We See, Hear, Feel, or Somehow Sense." In *Mechanisms of Sensory Working Memory: Attention and Performance XXV*, edited by Pierre Jolicoeur, Christine Lefebvre, and Julio Martinez-Trujillo, 5–22. London: Academic Press, 2015.

Dainton, Barry. "The Phenomenal Continuum." In *Subjective Time: The Philosophy, Psychology, and Neuroscience of Temporality*, edited by Valtteri Arstila and Dan Lloyd, 101–37. Cambridge, Mass.: MIT, 2014.

———. *Stream of Consciousness: Unity and Continuity in Conscious Experience*. London: Routledge, 2000.

———. *Time and Space*. 2nd ed. Durham: Acumen, 2010.

———. "Time and Temporal Experience." In *The Future of the Philosophy of Time*, edited by Adrian Bardon, 123–48. New York: Routledge, 2012.

———. "Time in Experience: Reply to Gallagher." *Psyche* 9, no. 10 (2003).

Darwin, Christopher, Michael Turvey, and Robert Crowder. "An Auditory Analogue of the Sperling Partial Report Procedure: Evidence for Brief Auditory Storage." *Cognitive Psychology* 3, no. 2 (1972): 255–67.

Husserl, Edmund. *On the Phenomenology of the Consciousness of Internal Time (1893–1917)*. Edited by Rudolf Bernet. Translated by John Brough. Vol. 4. Collected Works. Dordrecht: Kluwer, 1991.

Lawson, Rebecca, Alexandra Fernandes, Pedro Albuquerque, and Simon Lacey. "Remembering Touch: Using Interference Tasks to Study Tactile and Haptic Memory." In *Mechanisms of Sensory Working Memory: Attention and Performance XXV*, edited by Pierre Jolicoeur, Christine Lefebvre, and Julio Martinez-Trujillo, 239–59. London: Academic Press, 2015.

Luck, Steven, and Andrew Hollingworth. "Visual Memory Systems." In *Visual Memory*, edited by Steven Luck and Andrew Hollingworth, 3–8. Oxford: Oxford University, 2008.

Miller, Izchak. *Husserl, Perception, and Temporal Awareness*. Cambridge, Mass.: MIT, 1984.

Pelczar, Michael. "Must an Appearance of Succession Involve a Succession of Appearances?" *Philosophy and Phenomenological Research* 81, no. 1 (2010): 49–63.

Sperling, George. "The Information Available in Brief Visual Presentations." *Psychological Monographs: General and Applied* 74, no. 11 (1960): 1–29.

Weichselgartner, Erich, and George Sperling. "Continuous Measurement of Visible Persistence." Journal of Experimental Psychology: Human Perception and Performance 11, no. 6 (1985): 711–25.

INTERNET RESOURCES

Jerison, David. "Limits, Continuity, and Trigonometric Limits (Single Variable Calculus, Session 2)." Class Lecture, MIT, 2007. https://ocw.mit.edu/courses/mathematics/18-01-single-variable-calculus-fall-2006/video-lectures/lecture-2-limits/. Accessed 3-Dec-2020.