

# How Thick is Now? The Prospects of Thick Presentism.\*

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\*Credit where credit is due: this title was partly preempted by a paper by Susan Pockett, which I came across while researching this article. (Pockett (2003))

# 1 Introduction

Dynamic theories of time that feature an absolute and progressing present face a unique problem. On the one hand, these views seem to give an intuitively much more appealing notion of change than their rival static views on time: in these views, change consists of more than just of having a property at time  $t_1$  and having a different property at some equally real future instant  $t_2$ . Very roughly, we can say that in dynamic views of time, change consists in the becoming present, and passing along into the past, of different states: my ice cone's melting consists of a molten state becoming present, and its more solid state passing into the past. However, as we will discuss below, it has been argued that it is actually rather problematic to analyse this supposedly intuitive notion of change – or related notions such as causation, or even motion – in dynamic views of time, if the present is thought to be temporally unextended, if it has no duration. Moreover, it seems that our experience of the present is not one of a temporally unextended instant, but rather of a temporal interval. As a remedy, some authors have proposed that the present is not temporally unextended, but rather has a duration, albeit a very short one, which could encompass change, motion, or causal relations. This view has been called “thick presentism” by one of its proponents, H. Scott Hestevold.<sup>1</sup>

In this paper, I will first review the arguments that have been given for the view that the present has a temporal extension. Following this, I will briefly recapitulate two of the most elaborate accounts of thick presentism by H. Scott Hestevold and Sam Baron,<sup>2</sup> and argue that they both come with grave problems. It will turn out that while Baron's account of thick presentism can solve a lot of issues Hestevold's view generates, it introduces new problems.

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<sup>1</sup>See Hestevold (2008).

<sup>2</sup>See Hestevold (2008) and Baron (2012)

## 2 Reasons to Think the Present is Temporally Extended

There are forceful arguments for the notion that the present has a temporal duration. In this section, I will briefly review these arguments, starting with Zeno's paradox of the arrow, which has been identified as a particularly resilient problem for presentism, before I turn to the more specific arguments regarding change and causation.<sup>3</sup> Some of these arguments, like Zeno's arrow, are well established in the literature, while some, like the argument from causation, are a consequence of the respective thick presentist's views on notions such as causation. All in all these arguments motivate a thorough discussion of thick presentism, even if one might not follow every one of them.

At the heart of Zeno's arrow paradox is the issue whether the supposed movement of the arrow ontologically consists of a series of durationless instants. If that were the case, then the arrow would only ever be able to occupy one particular spatial location in any such instant, and would at any time be perfectly still. The proponents of the view that time consists of durationless instants are thus charged with explaining how motion can be possible. Robin Le Poidevin reconstructs Zeno's arrow as a problem specifically for the presentist. Le Poidevin argues that motion, which we will treat here as a special case of change, is at odds with presentism. He argues that there are two possible analyses of motion: the static and the dynamic analysis of motion. According to the static analysis of motion, an object is in motion in virtue of it being in one position at one time, and in another position at other times. According to the dynamic analysis of motion, an object is in motion in virtue of it having an irreducible property of being in motion at that instant. Le Poidevin argues that presentism, if taken to entail the view that the present is extensionless, is inconsistent

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<sup>3</sup>Presentism with an unextended present seems to be at odds with temporal experience too: our experience of the present seems to be of an extended duration, not a point-like instant. If thin presentism were true, this experience would be specious. See e.g. Pockett (2003) for an overview of the debate, and James (1890), 606-610, and Russell (1948), 226 for arguments that we experience the now as having a duration.

with either analysis. Presentism is inconsistent with the static notion since it would entail references to times that are not real, and it is inconsistent with the dynamic analysis of motion since an object cannot be moving in a durationless instant: if the present is temporally thin, no thing can be in motion during that instant, since a moving object can only be at an exact spatial location during such an unextended moment.<sup>4</sup>

A similar issue faces the presentist concerning change in general. The issue is that change happens over a temporal interval. Like with motion, change can be analysed as either being reducible to be happening at an unextended instant, or, e.g. as an object having a property at one time and a different one at another, subsequent, time. This latter analysis is problematic for the presentist, since they cannot as easily refer to other times than the present to analyse change, since these times are not taken to be real. *Prima facie*, a presentist then has to either introduce *ersatz* times to which to refer, or give a notion of change that is compatible with it happening at an unextended instant. Presentists sceptical of either proposal are understandably drawn to thick presentism, where we can give an account of change happening both over a temporal interval and still being entirely present.

Very much related to this issue is the worry that presentism might not be compatible with irreducibly modally rich notions of causation, in which the cause brings about, necessitates, or produces the effect. The worry, which Sam Baron discusses as a motivation for his own account of thick presentism, is that for such notions of causation, the causal relata need both be real: if the cause necessitates the effect, or is in any sort of necessitation relation with the effect, such as in the Armstrong-Dretske-Tooley view of laws on nature, the two relata need to be equally real. In presentism, however, the effect, insofar as it lies in the future, is not as real as the cause. Sam Baron motivates his own account of a thick presentism with the need to find a way in which the cause and the effect can at least partially overlap in the present, for which the present cannot be unextended.<sup>5</sup>

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<sup>4</sup>See Poidevin (2002), esp. p. 70.

<sup>5</sup>See Baron (2012), 2–3.

Now we have seen why one might even propose the view that the present is extended, let us turn to discussing the two most prominent extant views by Hestevold and Baron.

### **3 Against Thick Presentism**

The most prominent accounts of thick presentism can be divided along whether they feature times as real or rather as abstractions at best, and according to how the occurring thick present is replaced with the “new” present as time progresses. Either the thick present goes entirely out of existence before the new present is occurring, or subsequent thick presents are allowed to partially overlap. Of the range of possible views, two have been popular in the debate, which we will debate in turn. First, there is H. Scott Hestevold’s limited time-free thick presentism [LTFTP], which treats times as unreal, and favours a skipping account of temporal progression: subsequent presents overlap. Sam Baron proposes a similar view, which agrees with LTFTP concerning the step-wise model of temporal progression, but which, contrary to Hestevold’s view, does include real times. Beginning with a brief exposition of Hestevold’s view and its problems, we will then go on to discuss Baron’s view. I will argue that while Baron’s view solves some of the problems Hestevold’s view has, it thereby introduces new problems.

#### **3.1 Limited Time-Free Thick Presentism**

Hestevold’s view lays the groundwork for our present discussion of contemporary versions of thick presentism. Motivated by the various problems classical thin presentism has with change, motion, and the like as discussed above, he proposes his view, which contains the following core tenets: the present is temporally extended, but limited to the length of a temporal atom. Subsequent thick presents overlap, and times are unreal. Let us briefly unpack these core tenets before we go on with our critique of this view. Hestevold argues that while the present needs to be extended in order to allow for change, the length of the present needs to be limited to the

length of a minimal duration, a temporal atom. Were it not, it could, in principle, be expanded to contain millennia worth of events and objects, all equally present. So if the present were allowed to be extended without limit, Caesar and you, the reader, could both be compresent, although the former is long gone when you come around to wander the earth. Caesar's crossing the rubicon, and you, or any other reader in the future (as long as we include the future in our in principle unlimited present), are not only coexistent in the sense that they are both real, but *compresent*. Obviously, this is absurd. One of the core commitments of presentism is that only the present things and events are real, and that while you, reading the paper *now*, are real, Caesar's crossing the rubicon isn't. So we would have to restrict the present to a very short temporal atom. How long this temporal atom is supposed to be, Hestevold doesn't tell us, only that it is "[...] 'exceptionally brief' [...], e.g. *a butterfly flapping its wings exactly twice*".<sup>6</sup>

Hestevold rejects times as irreducible temporal locations. Apart from the obvious worry that temporally unextended times and a temporally extended present might be incompatible if, e.g., we would want to define the present as the present *time*, he also argues that for the presentist, times would not offer anything useful for our analysis or being present, temporal order, and progression. If we take a thing or an event being present as a measure of that thing's or that event's temporal status, what new information over and above their being compresent would we gather that if we were to learn that these compresent things exist at the same time? At this stage, I will not discuss Hestevold's reasons to reject times any further and rather focus on the problems this move generates. His rejection of timed presentism will, however, become relevant later when we discuss step-wise thick presentism.

Hestevold's view raises some obvious problems, some of which he addresses himself. A first issue regards the length of the extended present. The exact length of the temporal atom remains unspecified, apart from being 'exceptionally brief'.<sup>7</sup> One charitable interpretation would be that a temporal atom is exactly the length of the shortest possible change: the quickest los-

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<sup>6</sup>Hestevold (2008), 334.

<sup>7</sup>for a discussion on the plausibility and length of temporal atoms, see Craig (2000).

ing or gaining of a property that an object can have in this world.<sup>8</sup> However, merely restricting the length of the present does not exclude the problem Hestevold discussed for unlimited thick presentism. Remember that unlimited thick presentism was supposed to be implausible because it would entail that events or objects that are clearly not compresent in the sense that the one may have gone out of existence long before the other one came about turn out to be compresent after all, like Caesar's crossing the Rubicon and you reading this paper. But is that really any different in limited thick presentism?

Let's come back to Hestevold's own, probably not entirely serious suggestion of a butterfly's flapping its wings exactly twice. This includes the wings going twice, say, from a downward position to an upward position. But when the butterfly raises its wings the second time, it's having raised its wings the first time is long gone, though not quite as long as Caesar's crossing the rubicon is from our perspective. And yet, the proponent of LTFTP would have to admit that the first and second raising of the butterfly's wings are compresent, just as Caesar's crossing the Rubicon and your reading this paper would be in unlimited thick presentism. To this effect, Francesco Orilia argues that if we take Hestevold's example of the present being as long as a butterfly's flapping its wings twice, we could imagine a radioactive particle decaying during the first flapping, such that it is not present anymore during the second flapping. *Prima facie*, the radioactive particle is not real anymore during the second flapping, but we would have to accept that it is present, because it exists in the present temporal atom.

Orilia thus argues that thick presentism is incompatible with at least one of two equally initially plausible principles, the precedent principle or McTaggart's principle. The precedence principle states that an event  $e$  that precedes, or is before, another (present) event  $e$  is past. McTaggart's principle holds that being past and being present are incompatible properties.<sup>9</sup> Applied to our butterfly example, there is a tension resulting from the first

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<sup>8</sup>I will ignore the issue that the duration of the present might fluctuate in our world as time progresses, or across possible worlds. See Hestevold (2008), 336-338.

<sup>9</sup>See Orilia (2012), 410-411.

flapping of the wings being both compresent and before the second flapping of its wings. In order to resolve this tension, we would have to either concede that the first flapping can be both before second flapping, and hence past, and can yet still be present together with the second flapping; or the first flapping is both past *and* present at the time of the second flapping.

While I agree with Orilia's analysis that thick presentism of this sort has to violate one of these two principles, the thick presentist might just bite the bullet and do just that. But there is another principle that they would have to violate. Let's call it the simultaneity principle: if event  $e$  occurs either before or after another event  $e'$ , then  $e$  and  $e'$  are not simultaneous. This principle is even more basic in the sense that it avoids any talk of A-properties such as being past or present, but is a fundamental principle of any common sense temporal ordering. In fact, it seems to be analytically true, if we want to define simultaneity as neither being earlier or later. A rejection of the simultaneity principle would then be contradictory. The only way the thick presentist would get around violating this principle would be to accept that whatever happens in the extended present is simultaneous, and not temporally ordered at all: the first and the second flapping of the butterfly's wings would be strictly simultaneous in the sense that the first flapping is not earlier than the second flapping because they are in no particular temporal order at all, if they are within the extended present.

Hestevold's rejection of times as an irreducible measure of temporal ordering over and above the temporal order resulting from A-properties such as being present suggests that he might propose such a view. However, this would go against how thick presentism was motivated in the first place: one of the reasons why one might want to propose thick presentism is that a temporally extended present makes room for causal relations *within* the present. But then one would have to argue that there is no temporal ordering between cause and effect. This goes beyond merely rejecting that the cause must be earlier than the effect, which we might want to do anyway: if we wanted to incorporate backwards or simultaneous causation into our account of causation, that principle would have to go anyway. However, if we reject *any* causal ordering in the extended present, *every* causal relation

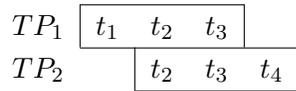
would be simultaneous. Similar consequences would follow for any notion of change or motion within the present. If change, minimally, is the acquisition or loss of a property, then if that change happens entirely within the present, there is no way to tell whether the property was acquired or lost, whether an object first had and then lost a property or *vice versa*, because for this we would have to know which of the two states was earlier and which later. The same holds for motion: if motion is to be possible within the extended present, the different positions of the moving object would not be temporally ordered. Hence, we could never really know in which direction an object is moving. So these are the options: the proponent of LTFTP has to either reject the simultaneity principle, which would, *prima facie*, lead to a contradiction, or they would have to give up that the events within the extended present are temporally ordered, which would have unwanted consequences for our notions of change, motion, and causation.

However the proponent of LTFTP wants to respond to these issues, the problem at the heart of thick presentism is not restricted to incompatible temporal properties, but, more generally, the extended present must, if any change, motion, or causation is supposed to be possible in the present, contain incompatible states. If an object goes from having to losing a property, or from being at one location to the other within the present, then both these incompatible states are compresent. Within the extended present, a changing object both has and has not the property it acquires or loses, or both is and is not at different locations. This problem is especially pressing if, as a proponent of LTFTP, one, in order to hold on the simultaneity principle, gives up any temporal ordering within the thick present. If one were to pry simultaneity and compresentness apart, one could, *prima facie*, give an account of a temporal ordering of events within the extended present. All the events within the present would be compresent but, given that they are temporally ordered, not simultaneous. But in order to achieve that, one would have to find a way to provide such a temporal ordering. For time-free thick presentism, where any temporal ordering is reducible to the A-properties of being past, present, or future, without referring to times, this seems impossible. But if one were to accept times, one could give an

account of temporally ordered times *within* the present. This is Sam Baron’s view, which we will turn to now.

### 3.2 Step-wise Timed Thick Presentism

Sam Baron proposes a version of thick presentism that deviates from Hestevold’s in the sense that he allows for times as irreducible markers for temporal location. Let’s call Baron’s view Step-wise Timed Thick Presentism [SWTTP]. In this view, the present encompasses a number of times, and as time progresses, subsequent thick presents partially overlap in the sense that they partially contain the same times. Let’s imagine a thick present,  $TP_1$ , encompassing times  $t_1$ ,  $t_2$ , and  $t_3$ . As time progresses,  $TP_1$  is replaced by the partially overlapping  $TP_2$ , consisting of  $t_2$ ,  $t_3$ , and  $t_4$  where times  $t_1 - t_n$  are temporally ordered. A succession of thick presents would look something like this:



With this notion of the extended present, Baron goes on to give an analysis of causation building on SWTTP. Let’s suppose that event  $e_1$  caused event  $e_2$ . Event  $e_1$  spans times  $t_1$  and  $t_2$ , and  $e_2$  spans over times  $t_3$  and  $t_4$ . While  $e_1$  and  $e_2$  are both partially compresent in  $TP_1$  and  $TP_2$ , they are both temporally ordered and do not overlap: at  $t_3$ ,  $e_1$  has ended and  $e_2$  has come about. And yet still, since both  $t_2$  and  $t_3$  fall within  $TP_1$ , we can say that the causal relation between these two distinct and subsequent events falls within the present.<sup>10</sup>

At first sight, that seems to do away with the issues we had with LTFTP, because it tells a story how times can be temporally ordered and subsequent, but can still be compresent. Speaking in the terms we defined earlier, SWTTP is able to uphold the simultaneity principle, since the times within the successive thick presents are temporally ordered: they might be

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<sup>10</sup>See Baron (2012).

compresent, in the sense of belonging to the same thick present, but they are earlier/later ordered within that present and hence not simultaneous in the sense outlined above. That way, Baron's analysis distinguishes between what we called simultaneity and compresentness above. Hestevold could not distinguish between compresentness and simultaneity because his rejection of times as a way to achieve a temporal ordering left no way to provide such an order within the present.

*Prima facie*, SWTTP can also solve the problem of incompatible states as mentioned above. While Baron would still have to accept that incompatible states of a changing object, incompatible positions of moving objects, and causes and their effects are at least partially compresent, they are not simultaneous, because they occur at different, subsequent, times. Let us for the sake of the argument accept that we could pry simultaneity and compresentness apart like that. The view would still be left with a serious issue concerning the temporal order of times and notion of being compresent. It seems that SWTTP either falls prey to an argument stemming from the transitivity of compresentness, or has to introduce a hypertime, or hyperprogression. Let me elaborate.

Barry Dainton discusses, and dismisses, an argument against thick presentism of the kind that Baron proposes.<sup>11</sup> The argument in question is meant to show that SWTTP would entail an infinite extension of the present, and the presently existing things. Say in  $TP_1$ , times  $t_1$ ,  $t_2$ , and  $t_3$  are present, while in  $TP_2$ , times  $t_2$ ,  $t_3$ , and  $t_4$  are present. Both  $t_2$  and  $t_3$  belong to both  $TP_1$  and  $TP_2$ . Let's stick with  $t_3$ . It is, by being part of  $TP_1$ , compresent with  $t_1$  and  $t_2$ , but by being part of  $TP_2$ , it is also compresent with  $t_4$ . So any thing existing at  $t_3$  coexists with anything at  $t_1$ ,  $t_2$ , and  $t_4$ , but also with anything that coexists with anything that exists at  $t_4$ , and so forth *ad infinitum*. Dainton argues that this argument against thick presentism presupposes that coexistence is transitive: that if object  $a$  coexists with  $b$ , and  $b$  with  $c$ , then  $a$  coexists with  $c$ . However, as Dainton argues, coexistence is not transitive: the transitivity of coexistence, Dainton holds, breaks

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<sup>11</sup>See Dainton (2001), 89–91

down because of the dynamic character or presentism: new events come into reality, and pass gradually into the past, and out of reality.<sup>12</sup>

While Dainton is certainly correct that coexistence, especially of temporally extended items such as events (or persisting objects) is not transitive, the same does not necessarily hold for the compresentness of *times*. Let's elaborate. I have never met my either of my Grandfathers, who died before I was born. Both of them partially coexisted with both of my parents, with whom I coexist. Obviously, I thereby do not coexist with my Grandfathers. But does the same hold for the compresentness of temporally unextended, non-overlapping times? The non-transitivity of coexistence of temporally extended things – and events – stems from the fact that these extended items only partially overlap: event  $e_1$  and  $e_2$  partially overlap, and so do events  $e_2$  and  $e_3$ , but that does not entail that  $e_1$  and  $e_3$  share any parts. But a relation between unextended times within a temporal order – being compresent – does not necessarily need to be intransitive in the same way that coexistence of extended items such as events or objects is. If we have a temporal order of times  $t_1 > t_2 > \dots t_n$ , then what property of that order prevents that the compresentness of  $t_1$  and  $t_2$ , and of  $t_2$  and  $t_3$ , implies the compresentness of  $t_1$  and  $t_3$ ?

The answer would probably be that this picture wrongly presupposes that we can treat temporal progression merely as the addition (and subsequent loss) of instants, represented as times, which gives us the temporal order. Rather, what is progressing, and comes onto existence, is a succession of thick presents  $TP_1 > TP_2 > \dots TP_n$ . These thick presents are overlapping extended entities, and hence it should not come as a surprise that their proper parts are not ordered in a way that the property of belonging to the same present is transitive. But this then lands us with a new problem. If we hold that temporal progression is the subsequent coming into existence of entire, partially overlapping, temporally extended presents, rather than the coming about of new temporal instants, then while this gives us a temporal order of thick presents, it makes the temporal order of times *within*

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<sup>12</sup>See Dainton (2001), 89.

the respective present mysterious.

Let us illustrate the point. In our example above, not only are the thick presents temporally ordered ( $TP_1 > TP_2 > \dots TP_n$ ), but so are the times within those thick presents ( $t_1 > t_2 > \dots t_n$ ). This gives of the following order:

$$\begin{array}{l}
 TP_1 \quad \boxed{t_1 > t_2 > t_3} \\
 > TP_2 \quad \quad \boxed{t_2 > t_3 > t_4}
 \end{array}$$

The question is where the order of times  $t_1 > t_2 > \dots t_n$  comes from.<sup>13</sup> In Hestevold's view, the only temporal order there is is the one of thick presents  $TP_1 > TP_2 > \dots TP_n$ . As we saw, this makes the temporal order of the events happening within the extended present problematic. The same issue looms for SWTTP here. If temporal progression is nothing over and above progression of the thick presents  $TP_1 > TP_2 > \dots TP_n$ , each consisting of several times, then the temporal order of the times within the thick present is mysterious. But the times within the thick present *do* seem ordered. If at  $t_1$ , the butterfly's wings are down, and at  $t_2$ , they're up, then there seems to be a temporal order of, and a progression from,  $t_1$  to  $t_2$ . However, this seems to be a different temporal progression from the one from thick present to partially overlapping thick present: an order in a succession of complex entities does not entail an order of their proper parts. It seems like we need both a general progression of time (from thick present to thick present), and a hyperprogression from time to time, which gives us the temporal order of times.

If the above considerations are correct, SWTTP might at first sight solve some of the issues of LTFTP, but, in turn, introduces a new dilemma: either the compresentness of times runs the risk of being transitive and renders times compresent which clearly are not, or we need a form of hypertime, of hyperprogression, to account for the temporal order of times within the thick present. Both options are unpalatable.

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<sup>13</sup>If one wanted to uphold that these times are ordered at all. See Dainton (2001), 90-91.

## 4 Conclusion

The idea of a thick present might at first sight seem alluring: by proposing thick presentism, we could get around the issues that presentism has with regard to causation, change, motion, and temporal experience. However, both prominent extant views of thick presentism, LTFTP and SWTTP, have serious issues: Hestevold's LTFTP runs the risk of either being conceptually inconsistent if he is forced to give up the principle of simultaneity, or he has to give up that the events happening within the extended present have any temporal order at all. This move would have unwanted consequences for the notions of change, motion, and causation, which would go against the motivation of proposing thick presentism in the first place. By introducing irreducible times within the present, and thereby arguably divorcing simultaneity and compresentness, Baron avoids this issue. But his view comes at the cost that the temporal order of times is either mysterious, or compresentness runs the risk of being transitive, which could infinitely expand the present. As they stand, both LTFTP and SWTTP generate more serious problems than they solve.

## References

- Sam Baron. Presentism and causation revisited. *Philosophical Papers*, 41 (1):1–21, 2012.
- William Craig. The extent of the present. *International Studies in the Philosophy of Science*, 14(2):165–185, 2000.
- Barry Dainton. *Time and Space*. Acumen, Chesham, 2001.
- H. Scott Hestevold. Presentism: Through thick and thin. *Pacific Philosophical Quarterly*, 89:325–347, 2008.
- William James. *The Principles of Psychology*, volume I. Henry Holt and co., New York, 1890.

Francesco Orilia. Dynamic events and presentism. *Philosophical Studies*, 160 (407–414), 2012.

Susan Pockett. How long is “now”? presentism and the specious present. *Phenomenology and the Cognitive Sciences*, 1(55–68), 2003.

Robin Le Poidevin. Zeno’s arrow and the significance of the present. In Craig Callender, editor, *Time, Reality & Experience*, volume 50 of *Royal Institute of Philosophy Supplement*. Cambridge University Press, 2002.

Bertrand Russell. *Human Knowledge – Its Scope and Limits*. Routledge, Oxon, 1948.