Perceiving Multiple Places in Time: A Phenomenological Defence of Tenseless Theory

It is a common claim that one position on time, tenseless theory, conflicts more with how the world seems to us (with the phenomenology) than do tenseless theory's competitor positions of tense theory and presentism. This paper offers at least one counter-example to that claim.

Here, it is argued that tenseless theory fares better than its competitors in capturing the phenomenology in particular cases of perception. These cases are where the phenomenology – how the world visually appears to us -- is an appearance of events separated in space. The argument is that, in these cases, the events must each be at different times. As such, the ontological commitments required to make this phenomenology veridical suggest one prefer tenseless theory over both tense theory and presentism.

1. Preliminaries

Before proceeding to the main arguments, a number of concepts, positions and claims about time and experience need to be outlined and introduced. These are: (a) the three competing positions on time considered in this paper; (b) a concept relevant to their evaluation in phenomenological terms (what I shall call phenomenological fitness) and (c) a common claim about the phenomenological fitness of different theories of time.

1.1. Theories of Time

The three theories\(^1\) of time discussed here are presentism, tense theory and tenseless theory:

- **Presentism.** Only things at one time -- the \emph{present} time -- are real. Things at different times -- non-present times -- are not real.

- **Tense theory.** Only things happening at one time are present. Things happening at different times are not present.

- **Tenseless Theory.** (1) Things happening at different times are real. (2) Things happening at different times can be present.

\(^1\) In personal correspondence, Tim Bayne has suggested to me that presentism, tense theory, tenseless theory, etc. are better thought of as positions on time rather than concepts of time. What is the difference between 'concept' and 'position'? One difference might be this: these assertions about time do not merely concern thinking about time (concepts) but also commitments as to how time really is (positions). To acknowledge this, I will sometimes refer to them as ‘theories’ and sometimes as ‘positions’.
These definitions will be unpacked further in the arguments themselves. But it is important to note at this stage that 'tense' and 'tenseless' theories are so-called because tense is taken to refer to the past, present, future and all variations of these temporal determinations, e.g., such as 'two weeks past' or 'hundred years in the future'.

1.2. Phenomenological Fitness.

It is assumed here without argument that, in both science and metaphysics, it is a good-making feature of one's theory on what there is (one's ontology) that it corresponds to what might variously be referred to as the appearances, how things seem or the phenomenology. Here, how closely a theory T matches appearances will be referred to the phenomenological fitness of T.

A theory T which, for some perceptual instance P, posits illusion or other kinds of discrepancies between appearances and reality posits a lack of phenomenological fitness for T. As such, lacking phenomenological fitness, T lacks a good-making feature of a scientific or metaphysical theory. It may, of course, have other good-making scientific or metaphysical features (which is why one assumes illusions are not fatal for such theories on their own).

As for all sets of competing theories, when it comes to competing metaphysical theories of time, one can weigh them against each other in terms of good-making features such as simplicity, completeness, coherence etc. T is preferable to T' because T has more of these good-making features than T'. It is an advantage for one scientific/metaphysical theory over another that it possesses a good-making feature which the other lacks.

As such, one can weigh theories against each other in terms of phenomenological fitness. For example: T posits that some perceptual experience P is an illusion. A competing theory T' does not posit that P is an illusion. As such, for P, T' is phenomenologically fit; T is not phenomenologically fit. With respect to P, T' is at an advantage to T. If the only difference in good-making features between T and T' is this phenomenological fitness, then T' is preferable to T.

1.3. Common Claims about the Phenomenological Fitness of Different Theories of Time

It is a common claim that presentism and tense theory, along with being the intuitive positions on time, are more phenomenologically fit than tenseless theory.

For example, Prior argues that the feeling of relief – an instance of phenomenology or appearance -- requires that there be tense in the world and, indeed, that the past be unreal (Prior
1959). Schlesinger and Loizou both argue that a change in tenses is fundamental to how the world seems to us (e.g., Schlesinger 1991; Loizou 1986). Tallant criticises B-theory (the main variant of tenseless theory) by arguing that our experience is of a tensed world, of a world divided into past, present and future. We do not experience the features of time accepted by tenseless theory -- tenseless relations between moments, also known as the 'B-relations' (Tallant 2008; and see below).

If this is right, and if it is also right that these different theories of time are equal with respect to other good-making features, then presentism and tense theory are preferable to tenseless theory.

However, the phenomenological fitness of tense theory and presentism over tenseless theory is not so clear-cut. This advantage does not hold for all cases of perceptual experience. This paper gives an example of the opposite situation: where tenseless theory is more phenomenologically fit than either presentism or tense theory.

2. The Phenomenology

Consider the installation piece 'Waves' by Daniel Palacios (as of August 2013, a video of it is available at [http://vimeo.com/12075151](http://vimeo.com/12075151)). The relevant features of the work are that:

(a) A single elastic rope is spun rapidly by two motors attached to each of its ends.

(b) If you are seeing this part of the device, then you are seeing a single rope spinning rapidly through a region of space.

(c) What you seem to see is something occupying the surface of a three-dimensional volume or shape within that region. This surface includes more than one point in space, e.g., it includes the points marked by the circles denoted ‘A’ and ‘B’ in Picture 1 below.

(d) However, at no single time does the rope itself stretch over the surface which it seems to fill. The rope is just a relatively thin (yet elastic) rope spinning quickly about a horizontal axis. In so spinning the elastic rope, at one time, it is at ‘A’ and, at another time, it is at ‘B’.

When you go and look at the spinning rope — that is, not through a video, but just standing in front of it — you see in all important respects the same relevant features as found in this video: the apparent filling of the circumference of a volume by something, something which turns out to be the rope in motion.
In this situation, one can ask: what is *seen*? And how does it relate to visual appearances?

If you see this rope moving like this, and you *do* see it as being in two places (e.g., ‘A’ and ‘B’) — then it follows that you see this rope occupying different locations in space. We can generalise this 'you' to visual perception of any subject S who can see 'Waves'. Thus:

(1) *For any subject S, S sees this rope occupying different locations in space.*

This is the perceptual phenomenology that is used in this paper to weigh different theories of time. The question then is: which positions on time are consistent with this phenomenology? That is, which positions on time are phenomenologically fit for this particular perception?

3. **The Apparent Simultaneity of What is Seen**

Two points need to be made about this phenomenology prior to considering it under different theories of time.

The first point is that what is moving — in reality, a single thin rope — seems to occupy two points, e.g., 'A' and 'B', in space *simultaneously.*

The second point is that the rope cannot be occupying 'A' and 'B', or any two spaces like 'A' and 'B', simultaneously. This filling of the volume is from the movement of the rope. The rope is moving *from* one of these points *to* the other of these points, but it is never at both points at *one* time. The rope is occupying both locations, and all the locations separated by two dimensions of the
seen surface, over or through a multiple of times.

As a result, the appearance of simultaneous occupancy of these spaces does not correspond to real simultaneity.

It is a relatively uncontroversial claim in contemporary cognitive science that apparent simultaneity need not correspond to actual or real simultaneity. Empirical evidence suggests that our perceptions of events in the world have a simultaneity threshold, a minimal duration beneath which events seem simultaneous to us whether or not they are simultaneous (e.g., Wittmann 2011). As such, apparent but not actual simultaneity of the spinning rope's multiple locations is consistent with this claim in cognitive science.²

However, is it consistent with the different position of time?

4. Seeing Multiple Times and Places (SMTP)

Following from the discussion of the previous section, the following is the case:

(2) For any subject S, if S sees this rope occupying different locations in space, then S sees the rope occupying different moments in time.

Again: the rope is at one of these places (e.g., ‘A’) at one time, and at another one of these places at another time (e.g., ‘B’). If you see the rope at these different places, then you are seeing things happening at different times. (Note that the order — which place you see the rope at first — does not matter here; all that matters is that the rope is at each location at a different time).

So, if how things seem to you is how things are, at least regarding differences in spatial location, then

(1) For any subject S, S sees this rope occupying different locations in space.

(2) For any subject S, if S sees this rope occupying different locations in space, then S sees the rope occupying different moments in time.

(3) (From 1 and 2). S sees this rope occupying different locations in time.

² In visual perception, when the events are stages in something's motion (as they are here), we get what some might call motion blur. However, one should be careful about the use of ‘blur’. ‘Blur’ could be taken to mean something which is indistinct or unclear.

Phenomenologically at least, with 'Waves', the rope's occupancy of 'A' and 'B' is not indistinct or unclear. The rope seems very clearly to be at both of those locations (which is why, along with the point in footnote 3, this example is chosen for this paper).
Thus (making the trivial assumption that something *being* the case gives that something *can* be the case) we have at least one instance in which the following statement is true:

**Seeing Multiple Times and Places (SMTP).** For any subject $S$, $S$ can see things happening at different locations and at different times.

Another way to put this is: Things happening in different locations and at different times can be seen.\(^{3}\)

Another plausible assumption is this: being at different spatial locations makes no difference to the reality of something. For this paper, we can remove 'at different locations' from SMTP to get:

**Seeing Multiple Times (SMT).** For any subject $S$, $S$ can see things happening at different times.

Or, again: Things happening at different times can be seen.

Note again: SMT does not mean it has to appear as if seen things happen at different times. With respect to when what we see seems to happen, there is a lack of phenomenological fitness here. However, this lack applies to any position on time discussed in this paper. It is there whichever theory of time we chose; as such, it cannot be used to weigh one against the other.

However, SMT can be used to weigh different positions on time against others. This concerns the reality and the presentness of what is seen, and what different positions say about that.\(^{4}\)

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\(^{3}\) In the case of the rope, it might be claimed that it is the 'same thing' that is happening at these different locations and times, e.g., the rope is moving. However, some theorists might claim that what happens at these places and times are different things, e.g., different events happening to the same thing (the rope) or indeed even to different things (e.g., temporal parts of the rope). It is sufficient for this paper that *something* happens at these different times and places. So, to avoid complication, I keep the more general description. (For discussion on events happening to the same thing, and on temporal parts, see Mellor (*op.cit.*) and Sider (*op.cit.*)).

\(^{4}\) There are lots of other examples of seeing things in space which are at more than one time, some far more extreme in temporal terms. For example, what we see of distant stars happens at dramatically different times to each other and ourselves (for discussion with respect to temporal debates, see Power 2013). Allegedly, early examples of televisions involve cathode ray tubes lighting up the screen at different places at different times. If so, and if we see the whole screen lit up, then we are seeing illuminations happening at different times (e.g., Le Poidevin's 2004 version of ’The Experience and Perception of Time’ (not in later versions).

Again, I prefer the example of ’Waves’ because, in comparison with other examples, it extends over a greater range of possible worlds consistent with the phenomenology. In a possible world consistent with the phenomenology and

(a) the speed of light is infinite (as many medieval scholars thought),
(b) the illuminated screen is due to left-over heat on the screen,

things perceived in the distance and on television would be at one time. Yet, ’Waves’ would still be an example of perceiving things at more than one time.
4.1. Presentism

Presentism is the position that there is a single moment which is present, and only what is at this moment is real. What is outside this single moment, in the past and/or future, is unreal. From this, we can say of presentism:

*Presentism*: Only things at one time (the present) are real. Things at different times are not real.

From the definition of presentism, we can derive this conditional:

(4) *If presentism is true, then things happening at different times are not real.*

If SMT is true, then combined with a plausible premise about sight, presentism is false. The plausible premise about sight is this:

(5) *If x can be seen, then x is real."

From SMT and (5), we get:

(SMT) Things happening at different times can be seen.

(5) If x can be seen, then x is real.

(6) *(From SMT and (5)) Things happening at different times are real.*

Combined with (4), we get:

(4) If presentism is true, then things happening at different times are not real.

(6) Things happening at different times are real.

(7) *(From 5 and 6) Presentism is not true.*

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5 An alternative kind of presentism, compound presentism, is discussed by Dainton 2000. However, it does not seem to be defended by any avowed presentists, so I will not consider it here.

What we see is a single moving thing, only at those places at different times, only reflecting light at those places at different times. The difference is neither due to the time-lag of light nor anything to do with ‘heat traces’ at places where it once was. For, once it is no longer there, there is nothing there at one location (except invisible air) when the rope is at another location.
4.2. Tense Theory

Next, consider tense theory which is not presentism, i.e., an eternalism which is tensed. Tense theory holds that time is divided into unique tenses (e.g., A-determinations (e.g., McTaggart 1908; Craig 1998) or A-times (Mellor 1998)). In particular, of all the different moments in time, only one is present. From this, we can say of tense theory:

*Tense theory:* Only things happening at one time are present. Things happening at different times are not present.

From the definition of tense theory, we can derive this conditional:

\[(4') \text{If tense theory is true, then things happening at different times are not present.}\]

If SMT is true, then combined with a plausible premise about sight, tense theory is false. The plausible premise about sight is this:

\[(5') \text{If } x \text{ can be seen then } x \text{ is present.}\]

From SMT and (5'), we get:

SMT. Things happening at different times can be seen.

\[(5') \text{If } x \text{ can be seen then } x \text{ is present.}\]

\[(6') \text{(From SMT and (5')) Things happening at different times are present.}\]

Combined with (4'), we get:

\[(4') \text{If tense theory is true, then things happening at different times are not present.}\]

\[(6') \text{Things happening at different times are present.}\]

\[(7') \text{(From 5' and 6') Tense theory is not true.}\]

4.3. Tenseless Theory

Finally, we get to tenseless theory – or, since most tenseless theorists are eternalists as well, just tenseless theory.

Tenseless theory holds that time is fundamentally divided into positions along a tenseless series. This series is sometimes called the B-series, where the B-series is defined as events ordered
by the relations of succession and simultaneity. Further, as a form of eternalism, events -- things happening -- at any of these times are equally as real as each other. It does not matter if they are defined as past, present or future.

Tenseless theory does have concepts of tense. Tenseless theory’s concepts of 'present', 'past' and 'future' are like the spatial concepts 'here' or 'there'; they are relative, defined by positions in the tenseless B-series. And like 'here' or 'there', there can be multiple 'presents': as something can be 'here' to one location and 'there' to another location, so it can be 'present' to one time and 'past' to another time (e.g., Mellor, op.cit.).

One can go further: One can take an extended region of space and define multiple locations in that region as 'here' relative to that region (albeit 'there' strictly to each other). Similarly, one can take an extended time, i.e., a duration, and define multiple moments in that duration as present (e.g., such as the 'durational present' discussed in Power 2012).

Albeit, as two non-overlapping objects are strictly 'there' to each other, moments and events at these moments are strictly 'past' or 'future' to each other. But there is no unique present and, if two events at two different times seem present, in the absence of pre-specified temporal moment, this is not a discrepancy with how things are; each can be as present as the other. If this is the correct description of it, we can say this of tenseless theory:

_Tenseless theory:_ (1) Things happening at different times are real. (2) Things happening at different times are present (or past, or future) relative to some time but need not be present (or past, or future) to others.

From the definition of tenseless theory, we can derive this conditional:

(4'') If tenseless theory is true, then (1) things happening at different times are real and (2) things happening at different times are present (or past, or future) relative to some time but need not be present (or past, or future) to others.

Tenseless theory does not contradict either (5) or (5'). If tenseless theory is true, then things happening at different times are real (coherent with (5)) and, depending on which time one picks, things happening at different can be present (coherent with (5')).

Are there any challenges particular to tenseless theory, especially ones which are as problematic as those for presentism or tensed eternalism?

Here is one possibility: when the rope is seen at those two locations, the rope's being at those
locations seems present. According to tenseless theory, this is also how it is: it is just present at each place according to different times.

Yet, one might argue that the rope also seems to be in these locations in one and the same *unique* present. That is, it does not seem to be in one place at one present (a present defined by one time) and to be in the other place at another present (a present defined by *another* time). A tense theorist might then say: this is a case for tenseless theory where there is a difference between how things seem and how things are: the rope seems to be at both locations in one and the same present. But the rope is at these locations at different times, and so at different presents.

However, there are two reasons to think this does not give an advantage to tense theorists – at least, not an advantage which tenseless theorists do not already dispute.

First, when tenseless theorists address the perception of presentness, most question what it means to say that something perceived is perceived *as present*. Their argument is that over and above the phenomenology of something just being perceived, e.g., just seeing the rope in two places, there seems to be nothing extra which one might point out as such presentness (e.g., Le Poidevin 2007; Callender 2008).

For example, Mellor argues that we do not perceive any tenses (or, as he calls them, 'A-times'). He writes that when “I see two events [...] I do *not* see their A-times [...] [C]ontrary to received wisdom, we see nothing of the A-times of these events, or of any other visible events.”(op.cit., p.16).

We might say that, according to such tenseless theorists, the 'presentness' (of what is perceived) is nothing more than *what is perceived*; once we account for what is perceived which is not tense (e.g., colour, distance, loudness, etc.), there is no need to account for presentness as well.

Tenseless theorists might be wrong about this. However, Callender suggests that, if they are wrong about this, the onus is on tense theorists to show how they are wrong -- that is, to show precisely what it is that tenseless theorists are leaving out in denying that presentness is in any way perceptually apparent (e.g., Callender, op.cit.). And if tenseless theorists are right, then the objection that the multiple spatial locations seem present at one time dissolves into the initial phenomenological description: the multiple spatial locations seem to happen at one time, i.e., to be simultaneous. This reduces this objection to the discrepancy between phenomenology and ontology common to all the positions.

Finally, perhaps we can take another approach in denying this argument. Perhaps there are objections to the arguments here which are independent of holding any theory of time.
5. Responses

In closing, let us consider two responses one might make to the argument here.

The argument has turned on holding that the rope is seen at two different places, i.e., (1), and that things which are seen are real (5) and present (5'). This is an ontological claim but it rests on a claim from phenomenology: (5) and (5') are asserted because of how things seem. Is there any way to overcome this for the presentist or tense theorist?

There are two ways one might overcome it: deny phenomenological fitness as a good-making feature of theories of time; deny phenomenological descriptions, such as this one here, which threaten presentism and tense theory.

5.1. Deny Phenomenological Fitness in the Metaphysics of Time

One approach is to reject the move from appearances to reality. One denies that how things seem is how things are. In that case, the argument here loses force against presentism and tense theory. It does not matter if we seem to see the rope being in two places in the present; the rope is not in two places in the present.

This overturns the assumption of phenomenological fitness introduced at the beginning. Still, perhaps presentists and tense theorists should bite this bullet, and deny the importance of phenomenology to metaphysical debates. However, to do so is problematic given the positions such theorists typically take in the debates about time.

Denying phenomenological fitness is inconsistent with common claims tense theorists make about the phenomenology (as outlined in section 1.3.) Arguments from appearances are given to support presentism and tense theory. Denying the force of appearances also denies it in those arguments.

This arguably puts such theorists in a worse position than where they started. In terms of other good-making features of metaphysical theory (e.g., such as simplicity), it is not at all obvious that presentism and tense theory are preferable to tenseless theory. Indeed, tenseless theory is generally held to have the advantage over other theories when it comes to what is the case beyond appearances.

Space precludes going into detail here about why this is so; but briefly: tenseless theory
seems to fair better than its competitors with non-phenomenological issues such as (a) descriptions of causation, (b) resolutions of McTaggart’s paradox, (c) truthmaking for propositions about the past and future and (d) consistency with contemporary physics (for discussion on non-phenomenological issues in the philosophy of time from (a) the tenseless theory perspective, see, e.g., Sider (*op.cit.*) and (b) the tense theory/presentist perspective, see, e.g., Loizou (*op.cit.*)).

5.2. Deny the Phenomenological Description

So, perhaps presentists and tense theorists should try another approach: deny that the phenomenology is as it is described here to be.

One denies that the description of how things seem corresponds to (1), (5) or (5’). So,

- Contrary to appearances corresponding to (1), it just doesn't seem as if the rope fills this volume, i.e., occupies these multiple locations. As such, one claims that the rope seems to occupy no location or only one location.
- Contrary to appearances corresponding to (5), what we see doesn't seem to be real. As such, one claims that the rope does not seem to be real.
- Contrary to appearances corresponding to (5’), what we see doesn't seem to be present. As such, one claims that the rope either seems to be past, future or both (and perhaps present as well).  

The only response I can give to such objections is that those who assert them observe 'Waves' for themselves. Or, if they cannot, they should observe anything like it. The effect is the same from spinning any rope quickly enough, for example, consistently and long enough. If they do so, they should seem to see: a real (and present?) rope occupying multiple locations.

Or, rather, what they should not seem to see is anything which follows from the counterclaims above, i.e., a rope occupying space which is: (a) unreal; (b) past; (c) future; (d) occupying only one location; (e) occupying no location; (f) any combination of (a)-(f).  

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6 Or the rope seems to have no tense at all. But 'no tense at all' is a particularly problematic position for tense theorists to take. It is the position taken by the tenseless theorists discussed in section 4.

7 According to tenseless theorists, this is *trivially present*, as already discussed.

8 Although I will not discuss it here, I think that '(e)', in particular, is not even something that can be made sense of as a description of perception.
6. Conclusion

To summarise the conclusions of this paper:

- Phenomenology conflicts with presentism because what we see is real and at different times.
- Phenomenology conflicts with tense theory because what we see is present and at different times.
- Phenomenology might conflict with tenseless theory because of apparent presentness relative to one time. Yet, because of how presentness is considered amongst tenseless theorists, it does not obviously do so. If tenseless theorists are right, presentness is just perceptibility.

As such, for cases such as the spinning rope in ‘Waves’, we can conclude the following:

The phenomenology of the perception of this spinning rope supports tenseless theory over either presentism or tense theory. Given this phenomenology, one should prefer tenseless theory over presentism or tense theory.

Finally, note that this argument applies to any situation where the phenomenology of perception is of events which turn out to be occurring at different times. Further, this can apply to any perceptual mode. There could also be auditory or tactile perceptions which seem to be of events which turn out to occur at different times. If there are, the argument here can be run again, providing further evidence that tenseless theory is phenomenologically fit in ways that presentism or tense theory is not. Since the opposite claim is more common in the literature so far, this is an important result.

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References


