

## AN ARGUMENT AGAINST THE INTUITIVE NATURE OF PRESENTISM

Presentism, the thesis that only present events and objects exist and that past and future ones do not, maintains a following largely based on the argument that it is intuitively compatible with an everyday perception of time. This intuition is based on the present being the only time that *feels* it exists, and so is concluded that it is the only time that *does*. However this paper demonstrates that human time perception does not at all match a presentist account. Variability in the experience of both flow rate and the specious present within subjects' conflicts with the view that time has a constant rate of flow and that the present has a constant 'size'. Variability between subjects; such as differences relating to age or circumstance contradict the idea of time as having any metaphysically universal size or rate of flow; constant or variable. It is thus concluded that one's perceptions and intuitive responses are not sufficient to support any metaphysical picture of the nature of time.

When one thinks about the concept of time in an everyday sense, it seems that its nature is widely agreed upon. Time is a system of measurement for events, used to specify sequencing and duration. It is also considered a way of tracking a "movement" from past to present to future, often referred to as 'passing through' time. This much about time seems not only clear, but obvious. However philosophical debate regarding the nature of time is long running and unresolved to this day.

One such question under debate is whether or not the present, future or past exist. I.e. does the event of your birth still exist in the past? Or does it cease to exist *because* it is in the past? The same questions can be asked of future objects and events. Do they not exist until they become present? Or do they exist *as* future objects and events?

Those who believe that objects and events in the past and future cease to exist, and that only present objects and events are "real" are called presentists. Presentists not only believe that present objects and events solely exist *at this time*, for this much is obvious, but go further; claiming that only present objects and events exist, period. The sum total

of reality is contained in the present only. All that exists exists in an instant, and ceases to exist when the instant is over. The contents of this 'instant' are continually changing, containing different things at different times. Once it had dinosaurs, once it had the battle of Waterloo, and now it has you reading this paper.

Past and Presentism is the belief that along with the present, the past also exists, however the future does not. One way of imagining past and presentism is the growing block view of time (Broad, 1952). In this picture time is imagined as a four dimensional block, with three dimensions of space, and one dimension of time. The block grows as time progresses, since more is passed through the present and into the past. In this way the sum total of existence is continually increasing as more and more events come into existence. Broad (1952) ascribes this occurrence of coming into existence as 'becoming'. Lastly, eternalism is the view that all times; past present and future exist. This theory is also referred to as four-dimensionalism (Sider, 1997) -the thesis that objects persist in both time and space. Four-dimensionalism highlights the idea that the dimension of time is analogous to, and intertwined with three spatial dimensions:

“a concrete object can no more exist with zero duration than with zero breadth and length”  
D. C. Williams. (1951, p. 459)

One way to imagine eternalism is the block universe (Sider, 1997). This is akin to the growing block theory of past and presentism, except that the block remains static, as it cannot grow – it already includes all times. If one were to believe that time had no beginning and no end, then the block would be infinitely long. If one were to believe that space had no beginning and no end, then the block would be infinitely wide also.

Eternalism is favoured over other theories for its compatibility with the theory of Special Relativity. Both presentism and past and presentism conflict with the physical theory; as they require a distinction dividing the present from the future (in the case of presentism such a division is also made between the present and the past) in order to make the distinction between existence and non-existence.

However according to Special Relativity, there are no privileged frames of reference in time, as everything is relative to each other (Putnam, 1967). This means that simultaneity of events is not fixed, but dependant on the observer. So if two events in different locations;  $e_1$  and  $e_2$ , appear to occur simultaneously in time -constituting the present for observer A, they may appear to occur at two *different* times to observer B, depending on the location and / or speed of motion of the observer. This means that the sum total of the present at a certain time contained both  $e_1$  and  $e_2$  to observer A, but only  $e_1$  to observer B. In this case neither of the sequences of events is privileged; it is no more correct that the two events happened simultaneously than that they happened one after the other.

Relativity of events in time means that it is indeterminable as to what exists in the 'present'; as the appearance of what happens 'now' differs from different spatial view points. This means that the sum total of reality in a particular time is dependent on the observer, and not a metaphysical feature of the structure of time itself. This problem is overcome by eternalism, as there is no privileged point in time, no objective now, and so concern in events in time and space being relative to one another.

However despite this and other problems many presentists<sup>1 2</sup> (as well as some non presentists<sup>3 4</sup>) maintain that presentism is the intuitive or “common sense” theory of time, something that a layman would describe if asked about their intuitions. Reasoning for this is that the theory effectively expresses our everyday perceptions. In reality one is only ever conscious of being in the present; if you were to examine which time you felt you were in, the answer would inevitably be ‘now’. It can be argued then, that now is the only time that *feels* like it exists.

This paper aims to demonstrate that presentism is not as an intuitive theory as it claims, and that an examination of the conditions needed for the construction of any metaphysical theory of time; including presentism, are in no way compatible with our everyday perceptions.

The particular intuitive perceptions generally referred to by presentist are the “specious present” (Clay as cited in Markosian, 2008) and the flow of time. The perception of now

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<sup>1</sup> “I endorse presentism, which, it seems to me, is the ‘common sense’ view, i.e., the one that the average person on the street would accept” p. 48

Markosian, N. (2004) “A Defense of Presentism” In Zimmerman, D. W. (Ed.) *Oxford Studies in Metaphysics, Vol 1* Oxford University Press, Oxford UK. pp.47-82.

<sup>2</sup> “I am a presentist: nothing exists which is not present. I say this was believed by everyone, both the philosophers and the folk, until at least the 19<sup>th</sup> Century; and it is still assumed in everyday life even by philosophers who officially deny it” p.35

Bigelow, J. (1996), “Presentism and Properties” *Philosophical Perspectives*, 10: 35-52.

<sup>3</sup> “.if we attempted to set out the ‘man on the street’s view of the nature of time, we would find that the main principle underlying his convictions on this subject might be stated some-what as follows” (1) All (and only) things that exist *now* are real. Future things (which do not already exist) are not real... similarly, past things (which have ceased to exist) are not real, although they were real in the past” p. 240  
Putnam, H. (1967), “Time and Physical Geometry”, *The Journal of Philosophy*, 64(8): 240-247.

<sup>4</sup> “...These metaphorical ways of talking (about time)... are not the result of some wild flight if poetic imagination, but are, in some way, natural to us” p. 213

Smart, J.C.C. (1949) “The River of Time”, *Mind* 58: 483 -494.

or specious present is defined as having a consciousness of the present (Markosian, 2008). Another way of describing this is the feeling of 'being in' the present; experiencing a certain 'specialness' of now.

A presentist's explanation for the specious present is that it is the only point in time which exists, and thus a privileged feeling for this time is quite a natural one. Past and presentists account for this experience as the present is the forefront of experience in regards to time. Although the past exists 'behind' it; the future does not yet exist, and so the present has the special property of being the newest addition to existence (Broad, 1923). Eternalism however must find an alternative explanation as to why we perceive time in such a way, as this theory states that there is nothing privileged about the present.

Along with the specious present, both presentists and past and presentists neatly explain a second feature of how we perceive time in everyday life – the flow of time. The flow of time is a feature of movement of time, passing in a single direction. This directionality of time can be envisaged in two ways; as an advance through time from the past towards the future, or as time flowing towards oneself from the future towards the past. Smart (1949, p. 124) uses the metaphors "time as a river which flows" and "a sea through which we sail" to describe both intuitions. For presentists, the flow of time explains how events in existence (the present) change – as they flow by from the future and into the past.

Past and presentism accounts for the flow of passage intuition with the idea of a growing block; as the growing of the block corresponds to the movement that we experience with flow (Broad, 1952). In this sense time is given an intrinsic unidirectional nature in both theories.

An objection to the idea of flow as a metaphysical element of time has been made by Smart (1949). Smart acknowledges the *feeling* of the flow of time in human experience, however maintains that it is problematic to talk about time as really flowing. This is because the term implies movement, and although it does seem intuitive that time is moving in this sense, to make such a claim poses a few problems. Firstly, it begs the question as to how fast is it moving? A car in a school zone travels at 40 Kilometres per hour, an Olympian marathon runner<sup>5</sup> travels at one mile per five minutes, but what is the rate of time itself? Smart suggests that the only answer we can reasonably imagine is one second per second, or one hour per hour, not a particularly insightful response.

In order to measure the rate of time flow a second time scale is required to compare it to. However the problem with a second scale of time is that according to our intuitions on time, we would also expect this time to flow, and thus *it* would need a rate of passage, requiring a *third* time scale. This third time scale would then be supposed to have the same feature of flow as the first and second, and so it would need a *fourth* time scale to measure it. And so on. This infinite regress highlights the problem of thinking of time as “flowing”; as the rate of passage, or the movement required for this description of time cannot be measured: There is nothing to measure it against.

Markosian (1993) objects to Smart’s conclusion on the impossibility of flow, claiming that describing the rate of time as one second per second is not as problematic as appears.

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<sup>5</sup> Example taken from N. Markosian’s (1993), “How Fast Does Time Pass?” *Philosophy and Phenomenological Research*, 53: 829-844.

Markosian begins by describing what it is to measure rates of time like those in the driving and running examples. Take the example of marathon runner above. The way we measure his speed is by comparing his position in space to the positions of hands on a clock marking off five minutes. The rate of change of the hands on the clock is constant, and so we can measure the runner's positions in space to them. These changes of rate on a clock -or any time keeping device, represent the changes of position of the sun in the sky – the origin of our time keeping units. From this, it seems that the changes in position of the runner – an object in space, are measured in relation to the changes in position of the sun –another object in space.

However this immediately seems incorrect –for what if the rate of change of the position of the sun was to alter? Would this alter the sprinters time? Surely this is not what we were measuring against at all, but rather, the time scale intended to measure the sprinters time is time itself – the passage of time.

Back to our original question then: what is the rate of this time scale? One answer is five minutes to every one mile run by the sprinter. This rate can also be expressed as one second per second, or one minute per minute; Smart's original response.

From this argument Markosian claims to have maintained the idea of the flow of passage despite Smith's problem of rates of change. However, if you examine Markosian's argument more closely, you can see that what is described does not correspond very well to the intuitive flow of time described earlier. It seems that all Markosian has described in

his argument are changes in positions of objects – and the relations of these changes to other changes at different times. This description seems to better fit a static picture of time such as eternalisms block universe– where events and objects exist at different times in different spatial locations. The feeling of “flow” is not accounted for. And so it appears then that all Markosian has done in disputing Smart’s argument is eliminate the flow of passage itself.

However, disregarding problems of meta-time and how flow can be measured; given that time does flow, a further question to be explored is what kind of rate this is. Although Smart has illustrated that such a rate cannot be measured in relation to another scale; the question as to whether the rate is constant or variable can still be considered.

As we pass through time it sometimes feels like it is passing faster or slower than other times. During an exam time may seem to ‘fly by’, however if you were to sit watching the clock or are waiting for a bus, time can appear to crawl. From our perceptions it seems that the rate of flow of time is constantly altering and thus from our experience one could conclude that the rate of flow is variable.

However not only presentists but most people generally regard that the rate of passage is constant, as one does not expect that their varying perception is shared by the rest of the universe. When time drags on whilst I wait for a pot to boil; I do not expect that it has appeared slowed down for the rest of the world. In addition, people tend to think of time

as being measureable in a constant and on a continuous interval scale, which is evident in the way that we formally measure it with clocks and calendars.

In addition to differences in the rate of flow within individuals, empirical studies have been undertaken demonstrating that our perceptions not only do not match a constant 'real' or 'clock time'; representative of a constant flow, but vary between individuals. An experiment conducted by Holmes (1996) compared young and elderly people in estimating time passing. Respondents were asked to indicate when they thought 3 minutes had passed and results found variations in individuals relating to age; where younger peoples' estimates were close to accurate in real time, and older people guessing after much longer intervals – averaging 3 minutes and 40 seconds, thus underestimating how much time had passed.

Differences between subjects rules out the notion that the rate of flow may be metaphysically variable, as was possible with within-subject differences; as it is perceived differently by different people at the same time. These individual differences present a major problem for presentists as if perception is relied upon as a clue as to the structure of time; then any indication of time having a universal rate of flow; variable or constant, is unattainable.

In addition to differences relating to age, another experiment by Surwillo (1964) found that older people living in non-institutionalised environments yielded similar results to younger people, compared to older people living in institutions who underestimated how

much time had passed. This difference in time perception was attributed to living environments in that those in institutionalised environments' time is largely 'vacant'; that is, the participants are not doing much in their time, where as those in non-institutional environments' time is more 'filled' (Brown & Stubbs, 1992).

This suggests that one's perception of time is not then due to the accurate perception of time in its metaphysical state; but other environmental and psychological influences account for such differences.

Pockett (2003) proposed a theory to account for these types of differences occurring *within* an individuals' perception. According to Pockett, time perception differs according to the frequency of 'sampling', or updating of consciousness through input from the external world. Thus paying attention to something in your external surroundings, such as watching the clock, means large amounts of continuous sampling, and thus a slower perception of time. Yet, if one is concentrating on something in your internal world, such as reading or writing, then time seems to pass much more quickly, as fewer samples from the external world are taken into ones consciousness.

In addition to the phenomenon of flow, the second major feature of time perception supportive of presentism is the specious present. According to presentism the present is constantly changing as time passes. In this sense, the now exists in an instant: but how long is this instant? One suggestion is that it is infinitesimally small, as you can always divide up the duration of present into times more past or more future (McDaniel, 2007).

However if this is the case then there is the problem of being able to perceive something of an infinitesimal size.

Given this, the alternative is that there is some duration which constitutes 'presentness' before it becomes past and ceases to exist. Assuming so, once again the question arises as to whether this duration is constant or variable – that is, does the size of the now vary over time? If it is constant then the size of the now *now* would have to be the size of the now that I perceived ten minutes ago. If you are to imagine the now as an entity existing in the universe, with events passing through it from the future to the past, this window of presentness remains the same size throughout the history of the universe.

Conversely, a widening or shortening of this window of existence at different times would entail variable duration of now. If this were to happen, then (assuming a constant rate of flow) now would contain more 'stuff' temporally and physically, at some times than at others.

Similarly to the flow of time, ones perception of the specious present does appear to vary within an individuals' perceptions; and as such the window of 'nowness' must be constantly changing in size. If we are to use perception as a basis (as presentists do) for the construction of time, then our *perception* of now is neither infinitesimal nor constant. And so in order for the specious present to have a metaphysical variable duration, and for the flow of time to have a variable rate; this variability would have to be perceived by all people at the same instance.

However as with flow, although some experiences of 'now' personally *seem* to have longer duration than others, one does not expect the rest of the universe to be sharing in that variable experience. And if the now related at all to the experience of flow; then it is measurably different across participants.

Pockett (2003, pp.66) claims that the variability in the perception of now is much like that of flow; and that it is due to the rate of sampling: "the slower the sampling or updating of consciousness, the longer the specious present lasts".

As with the rate of flow; consequences for between-subject differences in perception entail that the present cannot have a metaphysically universal size; as the specious present can only exist as one duration at one time, and it appears that it is perceived as different durations between participants at the same time.

In conclusion, in order to construct a theory of time based on perception, variability in both our perception of the flow of time and the duration of the specious present within subjects indicates that each cannot have a constant rate or duration (and thus for the specious present to not be constant it can also not be infinitesimally small). In addition, variations between subjects indicates that there is no standard for the rate of flow or size of the present that can be set as determining how these things exist in the universe. Thus the intuitive perceptions relied upon by presentists cannot be used in any way to support a metaphysical constitution of time, presentist or otherwise.

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