

Time and Objectivity

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Abstract

A number of seemingly intractable puzzles in science could be unraveled if the element of time were introduced. It seems strange, in fact, that time is missing at all, considering that it is perceptively ubiquitous. A re-examination of time is needed in order to show its functionality within science and philosophy, laying to rest the notion of objectivity and in so doing will disambiguate the notions of unverifiability, unexplainability, and unpredictability.

Author bio

Ronald Green, a former lecturer in linguistics and philosophy at Tel Aviv and Oxford, is the author of *Time To Tell: a look at how we tick* (iff Books 2018) and *Nothing Matters: a book about nothing* (iff Books 2011), and 13 ESL books used worldwide. His articles on philosophy have appeared in a number of journals, while his short stories have been published in several literary journals. He is active in showing the connection of philosophy to science, and explaining it in terms that are popularly understood.

Introduction

Not surprisingly, time has been a subject of scrutiny for thousands of years, from the Stoics to modern researchers and thinkers. The ancient Greeks differentiated between 'chronos' (χρόνος) as sequential time, and 'kairos' (καιρός) as the opportune moment to do something, while St. Augustine in the fourth century professed his inability to explain what time actually is. More recently, alongside the New Age belief that time is just an illusion, there have been physicists, such as Lee Smolin, who have argued for the existence of time within the framework of mathematical equations, while yet others, such as Julian Barbour, have maintained that the concept of time is not needed in order to set out satisfactorily theories of fundamentals in physics.

Yet, while physics can be shown to manage well without inclusion of the time element, this does not abrogate time as part and parcel of human experience. And what does it mean to maintain that time is an illusion, other than to deny the immutable linear movement from birth to death? The question must be whether scientists can be objective about time, as philosopher Huw Price attempted to be in his book *Time's arrow and Archimedes' Point*¹, but which he undermined by mentioning that "We can't actually stand outside time, but we can imagine the physics that could". Actually, we can't.

However much we try, we cannot imagine a world that has no time; time would be passing for us even as we design the physics for such an unimaginable world. We cannot, in other words, stand outside time.

A Fresh Look at Time

As a fundamental element of human experience, time must be considered an ontological and epistemological whole. In order to examine it within that context, we need to dig deeper into what time is and the wide-ranging repercussions of its function within human perception.

Digging deeper necessarily entails re-examining that which we so naturally take for granted, viz. that the past is fixed and unchangeable, and that the future is open and changeable. While these feelings are eminently reasonable, they are contingent upon there being a temporal ‘now’, ‘the present’, situated between the past and the future.

But is ‘now’ so clear? When is *now*? As strange as the question seems at first – after all, *now* is, surely, right at this moment in the present – we also realize that any instance of *now* will be over before the thought itself is completed. With *the present* an amorphous period with fuzzy edges within a continuum of past and future, we don’t know where it begins or where it ends. All we can know is that our *now* instantly becomes the past, so that ‘now’ can only be grasped after it has been. We can’t, for instance, measure what is happening, but only what has happened. Nonetheless, although *now* is not easy to land on or even define, we all have the strong feeling that we are in it. After all, we have no difficulty in distinguishing it from the past and the future. We use it constantly in our day-to-day language, and don’t think twice about it. That doesn’t necessarily make *now* a temporal fact, even though, as attested by Rudolf Carnap, Einstein told him that “the experience of the *now* means something special for man, something essentially different from the past and the future, but this important difference does not and cannot occur within physics.”

According to Einstein’s special theory of relativity, there is no absolute time, since it depends on the location of the events being timed. There is no one ‘now’, in fact, since it is impossible in an *absolute* sense that two distinct events occur at the same time if those events are separated in space. What I am claiming goes even further: not only is there no one, individual *now*, there is never ‘now’, since every ‘now’ immediately moves to the past, into memory and itself forming more memories.²

We can readily see why the issue of *now* and the present is so important. If the central notion of where we are in space and time is shaken, the effect on our past and the future – on our perception of our Self, in fact – is profound. Time-shattering would be mind-shattering.

With *now* being different for each person, the subjectivity of our individual perception is brought to the fore. In short, we do not see things at the same time as anybody else does. Since two people cannot be in exactly the same place at the same time, light from any

object would take different lengths of time to get to each person. While Leibniz in his Identity of Indiscernibles³ and McTaggart's Dissimilarity of the Diverse⁴ show that no two distinct things exactly resemble each other, even if they seem similar in all properties, such as shape, colour, etc., it would be enough to claim the impossibility of sameness as being a function of location. It is, then, the element of time that obviates the possibility of identical objects. This has interesting repercussions regarding the notion of objectivity. The fact that no two people see the same apple (because they are seeing it at different times) there can be no claim as to which the real apple is. To put it starkly: there is no objective apple; everyone sees it subjectively from their point of view.

As strange as it seemingly is to claim that *the present* doesn't actually exist, it is nevertheless a reasonable conclusion, once we think of ourselves as being within constant change, continuously moving back, back into our memories. There is no getting away from this, let's face it, non-intuitive position. And the fact that we will always each see things at a fractionally different time to everyone else, even to ourselves in a mirror, we will never see even ourselves as we are, but as we were!

But do we know where we were? Can we look to the past as the definitive version of what has been? Memories of a moving past based on subjective perceptions should make us wonder. It does, though, give more than a clue as to the reason for the precariousness of memory and to why our memories are often not similar to other people's even of an event we all witnessed. Surely, it isn't surprising that there never is 'a same event', since there cannot be one memory recalling that event. Not only can two people not have the same memory, but neither can even one person have a memory that isn't itself constantly changing. Add to this the moving *now* coming in from events that happened afterwards, we can appreciate how and why our memories are fickle within a constantly altered state. There is, in fact, no objective past: the past is memory and is unverifiable.

The whole issue of our perceptions, experience and memory is problematic. After all, if what is happening is often influenced by the memory of the last event that (possibly) happened – be it positive or negative – how can we be sure that what we experience is anything other than a changed memory? How, in fact, can we reconcile our experience with our memory, when it is colored by events that occurred later? And it is why, frequently adjusting our memory of events as summed up by the French phrase, *l'esprit de l'escalier*, that we think later of what we should have said (or said better) at the appropriate moment in the past.

The idea, popularly believed, that it isn't memory that changes, but merely our perceptions of what happened, leans on the assumption that there is such a thing as a 'real memory.' We cannot assume, though, that our memories are ever of 'the real thing that actually happened', despite the absolutely clear feeling that they are, since there was never any static *now* on which they could reliably be based. "When to the sessions of sweet silent thought / I summon up remembrance of things past," says Shakespeare. Andy Warhol summoned back memories by sniffing at perfumes he had worn in the past – his personal 'scent museum' – so that he was instantly brought back to those periods. It's a comforting thought that we can do that. But can we? Does an intense memory make

it any more real? We have no idea; there is no way of knowing. Unattribuably, it was Mark Twain who said it best: “I am a very old man and have suffered a great many misfortunes, most of which never happened.”

So while we can refer to the past but can't know what actually happened, we are in the same unsteady position regarding the future. The future is supposition based on past experiences, which themselves are not certain. The further back our memories, the more uncertain they are. Similarly with the future: the further forward we try to see, the more unreliable it necessarily is. Just as the past is about what we believe did happen, the future is about what we believe will (or might) happen.

In which way is there a future? If it can be said to ‘exist’, it is only as potential. And as potential, the future is not of what *will* happen, but of what could *possibly* happen, perhaps even *probably* happen. Even for events that we are absolutely positive will happen, we can go no further than probability (even if we consider it to be 100% probability) and accounts for unpredictability. The future can be seen only after it has happened, i.e. when it is the past. Perhaps that is a good way of summing up the future: a continual movement towards yesterday, a prediction of the past! And bearing in mind the unreliability of the past, it would seem that the probability of the future is akin to the probability of the past. Unpredictability is not, then, only about what will happen, but also what will not happen. Absolute unpredictability, in other words. When Alice complains, in *Through the Looking Glass* that she cannot remember things before they happen, the Queen responds testily that “it’s a poor sort of memory that only works backwards.” While Alice claims that we have no memories of the future, this is not what people feel when they go through the uncanny past-future atmosphere of *déjà vu*.

The link between past and future is so strong, that the loss of one (memory) impairs the ability to produce the other (prediction of the future). Without the past there is no future; without the future, there is nothing.

The looped intertwining of the past and the future says a lot about us, trapped as we are within what we were. And it’s an explanation as to why we can never arrive at the future: the inexorable pull towards memory of the past. We stride towards the future on a metaphorical escalator that is itself moving in the opposite direction, back into the past into our memory.

Inevitably then, we must question the deep-seated belief that the past is intrinsically different from the future, i.e. that the past is known and the future is unknown. We know what happened in the past no better than we know what will happen in the future. They are both probabilities, symbiotically linked. Remembering the future and predicting the past is a jarring use of language that reflects a probabilistic circle.

So prisoners we are. We cannot help looking back, just as we continue looking forward as part of our experiencing the proverbial flowing of time. An analogy with space, given by Bernardo Kastrup,⁵ is illuminating. Describing a road in the desert, where mountains are ahead of us and the valley from where we have come, it is claimed that we see it all simultaneously as a “snapshot of your conscious life.” But the images don’t hit us

simultaneously. The further the places, the longer it takes for us to see them, all of which are already in the past when they do so. Even a painting of that scene would not be seen by us in one go. Our eyes flick from one spot to another, giving us the illusion of seeing it all simultaneously. It is the constantly backward-moving 'now' that gives the perception of the flow of time.

And it is our constantly changing memory that gives us the illusion of our always being in the now. The same mechanism that does not show us change as it is happening but that we see only after it has happened – a plant growing, people getting older, and that bugbear of the watched kettle taking an inordinately long time to boil – is the cause of the universal feeling that things are happening now. With the very slow backward-moving 'now' into memory, our brain gets used to the tiny changes as they occur, so that change is so small and frequent that we can't compare it with the memory of the one before and don't recognize that there has been a change. As far as we are concerned, nothing has happened and we are in the present ('now'). That is why someone who returns after an absence, notices the change compared with what is in his memory. In sum, not observing change as it happens is responsible for the feeling of 'living in the moment'.

As much as the future is the guardian of the past, the past is the guardian of the future. Their interdependent cyclical existence combines the relevance of the past with the potential of progress in the future, or as the communications theorist Marshall McLuhan put it: "We look at the present through a rear-view mirror," so that "we march backwards into the future".⁶ Two hundred years ago, Søren Kierkegaard summed it up similarly: "Life can only be understood backwards but must be lived forward."⁷

Within the current popular view of living every moment to the fullest in the here and now, is the dissonance of knowing that our lives will end even while we continue as if that won't happen. So while we don't know when our personal time ends, since we could know only in retrospect (!), the unverifiable fundamental properties of time and its functionality within the human psyche underlies the inherent dissonance that moves us constantly backwards while ever onwards towards the future.

Hanging onto an uncertain past in order to show us a probabilistic future, we depend upon the certainty of tomorrow, not because of what it predicts, but because there will necessarily be a tomorrow. The uncertainty of what can be predicted, in a symbiotic relationship with the uncertainty of what was, results in the dissonant balance within time, that makes us human. Perception, that is *per se* subjective, closes all doors to the very possibility of objectivity, so that verifiability, explainability and predictability are rendered moot within a constantly changing probabilistic continuum.

- ¹ Huw Price. *Time's Arrow and Archimedes' Point: New Directions for the Physics of Time*. OUP. 1996.
- ² Ronald Green. *Time To Tell: a look at how we tick*. Iff Books. 2018.
- ³ L. Loemke. *G. W. Leibniz: Philosophical Papers and Letters*, 2nd ed., Dordrecht: D. Reidel. (ed. and trans.), 1969.
- ⁴ J. M. E. McTaggart. *The Nature of Existence II*. Edited by C. D. Broad. CUP: London. 1827.
- ⁵ Bernard Kastrup. "Do We Actually Experience the Flow of Time?" *Scientific American*. November, 14 2018.
- ⁶ Marshall McLuhan, Quentin Fiore, Jerome Agel. *The Medium is the Massage: An Inventory of Effects*. Bantam Books. 1967.
- ⁷ Howard V. Hong, Edna H. Hong. *Søren Kierkegaard's Journals and Papers*, Volume 1 A-E. Indiana University Press. 1967.