

## How soon is now?

There are two models of time that have been debated by metaphysicians over the past century. I will spend some time on the first.

Think of an event such as the assassination of President Abraham Lincoln. For those living before 1865, the event was in the future. For us, the event is in the past. And on 14 April 1865 at about 10.15pm Washington DC time, it was a present event. Should we understand this case in terms of the spatial analogy? Did the event creep up on people, briefly attain presentness, and then go off into the past? Or is there some other way we should understand it?

There is a view that still has some respectability in which events have temporal properties of a sort. The assassination of Lincoln has a property of being past. A number of events have the property of being present, such as the event of you reading this sentence (and think of all the other events going on while you are reading). Many events have a property of being future, a property that might be called futurity. The Qatar football World Cup, the next UK general election, the solar eclipse of 21 September 2025, and the Earth's human population reaching eight billion are all examples, as far as can be told in 2012.

And here is where we might get some sense of the direction of time. Events always are first future, then present, then past. It never goes in the opposite direction, as far as we know. If backwards time travel is possible, that might complicate it, but it seems the three temporal properties are always possessed in that order. I am, of course, treating events as particulars here rather than what metaphysicians call types. The Olympics occurs every four years, but by that we mean a type of event. Each particular Games is a one-off, and it is such events-as-particulars to which I am referring. These events 'flow' from the future, through the present, and into the past.

Temporal properties would have some strange features. It seems they would be able to come and go in different combinations. What was future may now be past. The 2025 eclipse is in the future as I write this, but eventually it will be in the past. Perhaps you are reading this after it occurred. This shows me from my 2012 position that it has a property of being *future past*; that is, a future event will eventually become past (by October 2025, for instance). And there is also a past future. Lincoln's assassination was the future in 1860 but it isn't any longer. His assassination hasn't been future since 1865. It might then be wondered how things can have qualities such as these and what is happening when they undergo a change in respect of them. Is it that there are lots of things standing around somewhere with the property of futurity, waiting until they attain the property of presentness? Are there future people who are longing to be present, thinking to themselves 'How soon is now?'? And where do they go when they attain a property of pastness? Does anything really have that property, or is it merely that they go out of existence?

## No time like the present

There is a view that only the present is real; appropriately, it's called *presentism*. This could be thought of as a response to some of the questions just posed. For isn't it absurd to say there are things with the properties of futurity and pastness? To exist seems a condition of bearing properties, but one could argue that future and past things have no existence at all. Barack Obama was born in 1961. Wouldn't it be misleading to suggest that he existed in 1959 though at that time with the property of futurity? And Julius Caesar did exist for a time but he doesn't now. It would again be wrong-headed to say that he exists now but with the property of pastness. It seems an option, therefore, to say that instead of there being three temporal properties, we should instead substitute a simple notion of existence and allow that things come into and go out of existence. When present, they are real. After that, they are

not.

That seems a sensible view, but here are some issues to be considered. First, how long does the present last? Is it today, or this minute, or just a second? At 20:50 in the evening, midday today is surely past. Indeed, even 20:49 is past, and two seconds ago also. The present seems like a tiny sliver. We can wait for its existence, but it's too quickly gone. Indeed, if there is a smallest unit of time—some micro-micro-second, which we might call an *instant*—then the present seems only to be as long as that instant. If we deny that, and argue instead that the present has some extension, then how long should we allow it to be? Two minutes? That looks an arbitrary figure. And yet if we don't allow the present to have some temporal extension, it seems almost to vanish to nothingness.

Here is a second problem for presentism. The notion of the present is challenged by relativity theory. I may think that the sun is now shining, and it thus seems to be part of the present. But I'm also told that it takes 8 minutes and 19 seconds for the light of the Sun to reach Earth. Absolute simultaneity has been challenged in physics, and we are told it's illegitimate to speak of two spatially separated events being simultaneous. You could view two stars collapsing in distant galaxies and it might look as if they are collapsing at the same time. But if one is much closer to your telescope than the other, then those events are not really simultaneous at all. There is a problem then of what exactly we mean by the present when it seems always relative to a position or a viewpoint. We could settle for a purely subjective account of the present—it's what appears to be *now*, for some viewer—but many of us don't want our metaphysics to be so dependent on one's point of view. We like to feel that we are dealing in objective, eternal, and immutable truths, unaffected by our human perspective on things.

Speaking of which, there is a further problem for presentism. Although Caesar is not alive, there is a strong sense in which he is nevertheless real, even now. There are facts about him—he crossed the Rubicon—and there must be something in virtue of which those facts are true. If only the present exists, what makes it true that there was a Second World War or an assassination of Lincoln? Wouldn't it be wise to say that those past occurrences and things are a part of our reality even if they are not present? Given the above considerations from relativity theory, there are even some past facts that I can still see: for example, what the Sun looked like eight minutes ago. What is there to stop someone rewriting history if we deny any reality to what happened in the past?

## Getting pasturized

There is a view, therefore, that treats the past and future differently. It's one thing to call absurd the idea of future people standing around waiting to be born. But the past is not quite the same. It did exist. It was present. And in this sense, it should be counted part of the totality of reality. Being a part of reality but not in the present could account for our property of pastness, then.

This view is often likened to a growing block. One could think of the present as a thin layer on top of a big solid cuboid. New layers keep being added to it all the time on its top surface. Caesar, and all that he did, is there in the block, some little way down. When we speak of what exists, there are two things we could mean. What exists now is only the top surface of our block, which is in that position only fleetingly. Perhaps it is just a few molecules of the block thick. But we could also mean by what exists the entire block, which is the whole of existence from its start until present. The past is now part of this. But as new layers are added on to the growing block, former present events recede into the distance. We could say they become pasturized, just in virtue of having a new future built upon them.

We have moved, therefore, from a view that privileges the present to one that privileges both the present and the past, though not the future. This second view still has to face the problem of what counts as present: of how thin it is and of the problem of absolute simultaneity. To an extent, the problem remains of treating presentness and pastness as properties of events or things. The growing block picture has merely dispensed with the property of futurity.

I said earlier that there were two models of time philosophers had debated. The first tries to explain the passage of time in terms of events and things having a property of presentness, pastness, or possibly futurity. But we have seen that this leads us into saying strange things at every turn. Perhaps the problem is that we started by looking for a theory that would satisfy an image we had in which time flowed: it passed like the water in a river. There is a different way of understanding the temporal sequence, however. In this view, there is no property of presentness, nor pastness, nor futurity. Instead, we can only say that the events and things in our world stand in relations of order to each other. They are temporally related and to that extent can stand in a sequence.

### Early, late, or on time

The basic relations out of which such a sequence could be built are being *earlier than*, being *later than*, and being *simultaneous with*. Obama's birth is certainly earlier than his death, but it was later than the assassination of Lincoln, which itself was earlier than the assassination of Kennedy. The notion of simultaneity has been challenged, as we have seen, though that applies only to events at different places. I might thus legitimately still say something like Obama's birth was simultaneous with his first breath, given that those events occurred at the same place.

The flow or passage of time could be seen, on this view, as a misleading metaphor created to accommodate the *earlier than* and *later than* relations that hold between things and events. There is no change of properties, from presentness to pastness. The temporal relations between events in this new series hold for all times. It is at any time the case that Obama's birth is later than Lincoln's death. Nothing has to pass from one state to another. Nor do we need to see time as thing-like, such as a medium within which events occur. So perhaps there need be no worry about whether there could be time without change. Instead, we could just think of all the world's events being placed in an order—what was before what—and then we have the sequence of time.

This last idea gets us to the heart of a very important matter: one on which there is another Platonist–Aristotelian divide. The divide has lurked in the background throughout this chapter. Do we treat time as an objectively real thing, existing in its own right, whether or not any events are happening within it? Or do we think that time is nothing more than the ordered sequence of events?

At the start of the chapter, I almost suggested that we needed the reality of time as a background against which changes could occur. But an Aristotelian way of looking at it would be to start with change—maybe all of the world's changes—and see time as some sort of construction from them. If the thought of everything standing still for a year—and then resuming unnoticeably where it left off—seems absurd, then the Aristotelian view is probably more appealing. Time would be judged to have started with the first event: the Big Bang, if you like. The idea of there being anything 'before the Big Bang' would be absurd for an Aristotelian but not necessarily for a Platonist. The latter might also countenance a serious answer to the question of at what time the Big Bang occurred, as if there were some kind of godly astronomical clock that dated everything. For an Aristotelian, the first event was the point at which the clock started ticking.

One may have some attraction towards coupling this Aristotelian view with what is called *eternalism* about events and things. We considered privileging the present, or the present and past, but the eternalist takes all events as equally real even if from one perspective they are future. I

don't know whether the 2020 Olympic Games will pass off successfully or not, but, if they do, an eternalist takes them just to be as much a part of reality as anything. This may sound confusing. Trading on the image of the block again, the eternalist takes reality to be one huge block of everything that ever was and will be. We are located some place in the middle, able to look back at what occurred earlier than us but unable to see what is later than our perspective. But it's all just as real.

When we consider what exists, we are sometimes tempted to think of the question only three-dimensionally: of what exists in the whole of space. But shouldn't we be thinking four-dimensionally instead: about what exists in the whole of space and time? Obama's birth is earlier than his death. We cannot maintain this if one of those events is not yet real (as I write this in 2012). Why do I say this? The thought is that a relation is real only if its relata—the things it relates—are real. Obama's birth could not bear a relation to something non-existent. We must grant reality to Obama's death, therefore, while of course hoping there will be some time to go before it.

This may sound like a tempting account as it does away with the idea of time as a flowing medium. But there could also be a worry that it ignores something fundamental about time. It certainly does seem like there is a present that has a special quality about it. We may allow all times to be equally real in so far as they are all existent, but couldn't one also argue that the present has something that neither the past nor future has? What is that? Well, it's what's happening *now*—at one place and point of view at the very least. And does the view of time as nothing more than a relative ordering of events have the resources to explain what any kind of *now* is?

A further issue in the philosophy of time is worthy of mention. There is the question of its topography. We sometimes think of time as a single straight line. It has a beginning, it runs its course, and has an end. But there are other ways of picturing it. Perhaps the line continues indefinitely. Time might not be a finite resource. And it might continue infinitely in both directions. On the other hand, it could branch out as it progresses. There might be two separate timelines branching out from a single source, based on some significant difference. A more radical idea would be that time goes round in a circle. What caused the first event in the history of the universe? Perhaps it was the last moment in the history of the universe. These debates remain live, and perhaps the reader can see how our stances on some of the issues discussed earlier might inform our decisions on these latest options.