

An Hour in the Life of the Universe

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Here is a question: What time is it in empty space? That question makes no sense. For there to be time there have to be clocks of some kind or another, ultimately atoms. So in the void, where there is, by definition, nothing whatsoever, what can possibly be meant by an hour as registered by no clocks at all?

But where there *are* clocks, isn't an hour as measured by those clocks the same all over? But why should we assume that when a clock measures an hour in one part of the universe another clock – even an identical one – in some other part of the universe measures that same length of time? So how can we tell whether an hour ticked by even the most reliable clocks in different places is an hour of the whole universe or only of those clocks themselves? Without any possibility of being in all those different places at once, how can we possibly tell?

What, then, can be meant by an hour in the life of the universe – or, for that matter, a minute or a billion years? The more we consider these questions, the stranger they seem.

Every clock, every atom, measures its own age in its own time and not the age of any other clock. To compare one clock-time with another we have to view them together; and how can we do that if the clocks remain great distances apart? Is there, then, some cosmic deity that can compare them by viewing them all together, distance notwithstanding? That is not a scientifically warrantable assumption; for how, from our finite standpoint in the order of things, can we presume to know or even guess at what such an infinite being might see? So we are left with the fact that the only way in which we can compare the readings of distant clocks is *optically*, and that involves, in every case, what is commonly known as the 'constant speed of light'. Why not, then, subtract from our time of seeing a distant clock the time taken by the light from it to reach us and, in that way, compare the readings of that distant clock with ours? That's no use, because for that we have to define the unique state of rest with respect to which light travels. And since everything is moving relatively to everything else, there is no uniquely determinable state of rest among bodies with respect to which that 'speed of light' may be referred. And as for

defining any motion or state of rest of light or of bodies with respect to space as such, that is just pure nonsense.

So without any stationary datum of reference with respect to which either the 'speed of light' or the motions of the sources and receptors of light can be known absolutely, there is no just way of knowing what we may think of as the 'true' times registered by distant clocks.

How, then, can we tell whether or not identical clocks in different parts of the universe record the same length of time? Well, how about this? Let a bunch of those identical clocks be synchronised at some common location and then dispersed to the 'four corners' of the universe. Surely, those clocks would continue to measure time at the same rate; and wouldn't an hour ticked by those clocks be an hour throughout the whole system? Again, no, because for all observers, the distances travelled by bodies are times in the ratio c of 186,000 miles (or 300,000 kilometres) to the second, so for every 186,000 miles a body travels away from the observer, a second of time is added to the readings of its clocks as viewed by the observer, in comparison with his own. And although the opposite is the case for a returning observer, the sum of the added and subtracted times for the out-and-back motions is not necessarily the same as those recorded by the stay-put observer. As the Theory of Relativity demonstrates, even if these observers are twins, the asymmetry produced in their time-systems by the one or the other taking the reversing action to bring them back together destroys any synchrony in their time readings.

This exhausts all the logical possibilities of our being able to establish an overall, cosmic 'GMT' in which it can make any sense to talk about 'an hour' – or a week, or a hundred billion years – 'in the life of the universe'. In what sense, then, is there even a 'universe'? Why not a pluriverse or a polyverse? So much talk of 'the universe' and its properties is therefore just pure metaphysics – an indulgence on the part of theoreticians akin to the parlour game of 'Trivial Pursuit'. Those imbued with the true spirit of scientific curiosity will disdain such fripperies and, looking nature in the eye, realise the inescapable conclusion that there is no 'God's time' of the 'universe' as such, that time is *relative* to whichever clock, atom or other process measures it. They will see that there is no time to speak of in the space, or void, in between the various bits of matter – as if that could ever have made any logical sense! There are people who, for reasons entirely obscure to any honest thinker,

ascribe to the void – literally a *nothing* – the attributes of a *something*, a something that has dimensions of its own apart from matter, its own size and duration, its own ‘turbulence’, its own ‘zero-point energy’ ...and so on. And then there is the alleged ‘Big Bang’. How long ago was that? ‘Thirteen billion years,’ say some. But since there is no universal ‘God’s time, then in what time-system was that ‘thirteen billion years’ recorded? Over a period of thirteen billion years, even the slightest variation in the clocks recording it could amount to differences in millions of years, whereas for differences in the order of a mere two or three in the time-dilations of objects would add and subtract many billions of years to the ‘official’ estimate.

So, what can a minute, an hour or ‘thirteen billion years’ in the universe possibly mean? With this and so many other meaningless ‘official’ scientific assertions, how nonsensical can things possibly get? How nonsensical do we allow science to become before we yell out: ‘In the Name of suffering humanity, DESIST!’

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