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HUGH MELLOR ON

Time

David Edmonds: *I'm writing this cue now. In a couple of minutes I'll have finished it—my writing of it will have been done, past. Hopefully, in the future, after you've read this introduction, you'll be reading an interview with Hugh Mellor, Emeritus Professor of Philosophy at Cambridge University. Professor Mellor believes that 'tense'—the past, the present, the future—is not part of time per se. Your reading of this introduction will precede your reading of the interview: things happen earlier and later. But Professor Mellor argues time itself is not essentially tensed. Confused? Hopefully, in ten minutes, you'll be less so. Hugh Mellor took time out to talk to Philosophy Bites.*

Nigel Warburton: *The topic we are focusing on today is time. It's quite easy to see why physicists would be interested in time and its measurement, but why philosophers?*

Hugh Mellor: Time has always posed problems that interest philosophers, and indeed some physicists for philosophical reasons: like whether it flows, and whether it's something in itself or just, so to speak, something that separates events that happen one after the other. The relation between time and space is another question that interests both physicists and philosophers.

NW: *To me that sounds almost like science: whether time flows sounds like an empirical question.*

HM: It sounds like an empirical question, but it really isn't, although it's something physicists have occasionally taken for granted. Isaac Newton took it for granted: he said that time in itself flows equably without regard essentially to what happens in it—so you could have time without anything in it. But whether that's so or not, it's really a philosophical question; it's one on which Newton pursued a long controversy with the German philosopher and mathematician Gottfried Wilhelm Leibniz.

NW: *Your book Real Time, and its successor, Real Time II, both deal with the question of tense. Could you say a little bit about what tense is and how it relates to time?*

HM: Tense, in its normal, non-philosophical usage, simply refers to a variation in the form of verbs depending on whether you're talking about the past, the present, or the future: something *happened*, something *is* happening, something *will* happen. But as used by philosophers talking about time, it doesn't refer to the form of verbs, but to

what those verbs are used to discuss: namely past, present, and future as different regions of time. That's what we philosophers mean by tense; it doesn't matter to us whether those regions are referred to using verbs or in some other way. The issues tense raises arise from the fact that things and events—like this interview—appear to move through time. They start off by being future, which this interview was yesterday, become present, as it is now, and then go on to become past, which it will be in not too short a time.

NW: That seems quite a natural way of talking about time: we always talk about the past, present, and the future. What's the problem?

HM: The problem is that while things are past or present or future, none of them stays there. Everything that starts off future becomes present and then becomes past. Although this sounds innocuous enough, in the last century people have realised that it raises a serious problem. For one thing, you don't want to say that events *change* in respect of whether they're past, present, or future. Whatever this interview is *now* must be how it was *yesterday*, or you'd get a contradiction: I can't be saying some things now and it be the case yesterday that I would say something different. I might have *intended* to say something different, but that's another matter: you don't always do what you intend to do.

If I put money on a horse, for example, predicting it will win, and it does win, the now-past fact of its winning must be the same fact as the then-future fact that I put money on; otherwise the bookie could refuse to pay! Whether events are past, present, or future, they have got to be the *same* events. The only way in which they can change is by ceasing to be future by becoming first present and then past. That's quite different from things changing in any other way, like first being hot and then being cold. The question is, how to distinguish this special sort of change.

The best way to start is by noticing that this sort of change has a spatial analogue. For example, at the moment you're not only in Cambridge, you're also *here*, which is where I am. This morning you were in Oxford and at that point you *weren't* here. But the facts of your being in Oxford at one time, and then in Cambridge at a later time, must be the very same facts. And this variation across space, from your being *there* to your being *here*, is exactly analogous to the variation in time, from this interview being *future* to its being *present*. Yet we naturally think that variations over time differ importantly from variations across space in a way that reflects the nature of time itself. The difference is that things flow through time, from future to present, in a way in which things don't (as it were) flow across space, from here to there. The question is, why not and what's the difference?

NW: So is it fair to say that your view is that tense is another way of describing a relation between a person and an event, but the tense itself doesn't actually exist as part of time?

HM: The event exists as part of time, but you're right in saying that tense is a relation

between a person and an event, like this interview, and relations in general are not properties of what they relate. For example, if, as I suspect, you're taller than me, that fact is not a property of either of us. You yourself are a certain height; I myself am a certain height; and your being taller than me isn't a property of mine, or of yours: it's a relation between us. Similarly, if you say, 'Here I am in Cambridge' now, that statement will be true. But what makes it true isn't that Cambridge or you have the property of being *here*, but that you're saying it *in* Cambridge.

In the same way, while it's true to say 'this interview is happening now', what makes it true is just that it's said during the interview. What makes statements like this true is a relation between what you say—or think—and when you say it. But this 'when', the time at which you say something, isn't in itself either present or past or future. The time just *is*, just as Cambridge just *is*. Suppose, to pursue the spatial analogy, you want to put 'You are here' signs on differently located copies of a map of England. To make what those signs say true, you must put them on correspondingly different parts of that map. On a copy in Cambridge you must make the sign point to the representation of Cambridge, while on a copy of the same map in Oxford you must make the sign point to a representation of Oxford. In other words, the sign on a copy picks out a relation between that copy and its location: namely, the relation of being *at* that location. That's what makes the Oxford and Cambridge signs true, not that either Oxford or Cambridge has the property of being *here*: there's no such property. And so it is with time: this interview doesn't have the property of being *now*, that is, of being *present*, which is acquired when the interview started and will disappear when it ends. There's no such property: the interview simply occurs at a certain time on a certain day. What makes it true to say, during the interview, that it's happening *now* is simply that this statement is made during the interview.

NW: *Why then do we talk in tense terms?*

HM: We talk in tense terms because this relation I've been talking about matters very much to when we act and what we do. For example, if I decide to do something—pick something up, or go and fetch something—I will do it at whatever place I'm at or time I'm in. And that will make it true to say or think, as I do it, that I'm doing it *here* and doing it *now*. I don't need to know where I am to know that I'm doing it 'here', any more than I need to know the time at which I do it, to know that I'm doing it 'now'. It's because your 'here' and 'now' automatically follow you around, so to speak, that you can know you're acting in the 'here and now' without knowing whether you're acting in Cambridge or Oxford or at 10 or 11 a.m. And the reason it's absolutely indispensable to think about our actions in these terms is that we have to think of them in a way that fits this relation between our actions and when and where we do them, *not* that they can only occur in places and times that, for some reason, have these mysterious properties of being here and being now.

NW: *Your view, then, is that time is essentially tenseless: there's nothing about past,*

present, and future built into time?

HM: No, nothing about past, present, and future is built into time. What is built into time is the difference between *earlier* and *later*, which is the temporal analogue of spatial differences like that between *north* and *south*, say. The reason this temporal difference matters more than its spatial analogue is that other things depend on it that don't depend on the spatial difference. For example, I can't now decide to do something yesterday, because causes, like my deciding to do something, and effects, like my doing it, always precede their effects in time. But they can occur in any direction in space. As far as getting things done goes, there's no fundamental direction to space. So, for example, while turning on a light-bulb emits light in all directions (and indeed in none, since it lights up the bulb itself), it only lights up things at later times. That's why the direction of time—the difference between later and earlier—matters to us in practice. So when we think of action in tense terms, as we do, we have to distinguish what's future—what's later than when we're thinking about it—from what's earlier—that is, from what we correctly think of as past. That's why these notions matter to us. Only in philosophy is it important to realise that, when we think in this way, we're just reading out into the world what are really just relations between us and parts of it.

NW: *Does it follow from that that you can't go back into an earlier time—so that time travel is somehow conceptually impossible?*

HM: I think it does, though most of my professional colleagues think it doesn't—they think it is indeed possible to travel back in time. Here I'm on the side of people who aren't philosophers—people who think you couldn't go back in time. Because if you could go back in time then you might, for example, kill your grandmother before she has any offspring, thereby making it impossible for you to exist to go back in time in the first place. And while this argument doesn't persuade most philosophers, it does persuade me.

NW: *Why do you think that these issues about time matter so much?*

HM: I'm actually slightly puzzled about that, because I'm not sure they do matter very much. They certainly don't matter in practical terms and I don't think they matter in scientific terms either. That is, our physics will be the same whatever view we take about time. But many physicists think for some reason that there's a puzzle about time. They are not willing to take whatever is measured by clocks, and other devices for measuring time, as just another physical variable like temperature, or indeed distance in space. So a fairly recent issue of the *New Scientist* contained a very silly piece—by someone whose name had better escape me!—about the time 'illusion'. And while there's a long history of respectable physicists and philosophers thinking that time is an illusion, I don't understand why physicists today take this idea to be either new—for example, entailed by quantum physics—or important.

I suspect the idea that time is an illusion arises from a vague sense that there's

something odd about tense. And indeed, if you think of tense as a feature of the world, that *is* an illusion, as I've tried to show. What is *not* an illusion is that we are in the world, and need to think about it, and especially about how to act in it, in terms of tense. And the fact that the world requires us to do this shows that time itself—tenseless time, what makes events earlier and later than each other—is indeed a real feature both of the world, and of our experience of it. It's true that not everyone agrees with me about this, for reasons I reject but can at least understand. What I can't understand is why so many intelligent people get so worked up about it: it's on a par with people who think that splitting infinitives is worse than murdering your grandmother!