

Time Lecture 1

1. Philosophical thinking about time is an attempt to get clear on a number of questions, e.g.: what *is* time? Could there be creatures outside of time? Does it flow—and if so how quickly? Does it exist at all? Etc. In the present course we shall concentrate on two questions: the reality of time and its apparent asymmetry. We shall begin with the second.
2. There are ways in which space and time are similar and ways in which they are different. One way in which they are similar is that we think of both as in some sense not a real thing, but a medium in which real things are somehow suspended. One way in which this comes out is in our measuring processes. Neither extended time nor extended space is directly perceived in the way that e.g. colour is. The way we measure the extent of either is through a comparison with some (arbitrary) physical entity or process. E.g. the length of an object in metres may be defined in terms of certain relations it bears to the standard metre rod in Paris; the duration of an object in seconds may be defined in terms of its relations to the ticking of the clock in Big Ben.
3. Another way in which they are similar is that we use the language of indexicals to describe both of them. An indexical is a linguistic expression whose reference depends on features of the speaker. Plenty of English expressions are not indexical e.g. “Julius Caesar” refers to the same person if uttered by me now or by you three years ago. The reference of a word like “here” or “now” (or “me”) depends on the location (or identity) of the speaker in a way that “Julius Caesar” doesn’t.
4. Neither of these features (indexicality and imperceptibility), being common to time and space, can explain features of time that are not features of space. One such feature is the apparent asymmetry of time. We think that there is a difference between the past and the future in a way that does not apply e.g. to left and right or north and south. In fact there is a number of asymmetries that one might have in mind here. For example some (e.g. Kant) have thought that it makes no sense to say that time didn’t have a beginning whereas it does make sense to say that it will have an end (see J. Bennett, “The Age and Size of the World” in Walker, ed., *Kant on Pure Reason*.) The asymmetry that interests me, however, is the idea that the future is in some sense open and that the past in the same sense closed (a good expression of this feeling can be found at the beginning of D. Lewis, “Counterfactual Dependence & Time’s Arrow”, *Nous* 1979).
5. This belief, if it is right, can have nothing to do with determinism, if by that is meant the doctrine that the world is determined by laws of nature. The laws of physics (with one exception) are temporally symmetric. If you made a film of some physical process and played it backwards, the result would be no more or less contrary to the laws of nature than if the film had been played forwards. The exception is the so-called second law of thermodynamics, which says that the entropy in a closed system increases. But there is no reason to think that that law makes time appear strictly asymmetric in the way that we think it is.

6. One way in which we can see how deep the assumption runs is when we consider the idea that one might bring about a past event. I do not mean by this that one could *change* the past, in the sense of now making it true that something did not happen which actually did happen. In that sense one can no more change the future than one can change the past: if it is now true that something is going to happen, then nothing I do now can make that not be true.
7. The idea is rather that one can do something that brings it about that some other event happened in the past. We do not think that this is possible for the past, whereas we *do* think the analogous thing to be possible for the future. What is it that explains this asymmetry of attitudes?
8. It might be thought that we can give a very straightforward argument for the impossibility of changing the past. Let X be some possible past event, e.g. the milk's having been spilt yesterday. Then somebody might say: either the milk was spilt yesterday or it was not. If it was spilt yesterday then anything you do now will be ineffective in preventing its spilling. If it wasn't spilt yesterday then anything you do now will be superfluous in preventing its spilling. So in neither case can you affect the matter.
9. The difficulty with this is that the same argument applies to the future (it is the "lazy man" argument from Cicero *de Fato*; see also A. J. Ayer, "Fatalism", in his *Concept of a Person and Other Essays*). Suppose I am wondering whether or not to work for an exam. Well, either I will pass or I will fail. If it is true that I am going to pass then working will be superfluous; if it is true that I am going to fail then working will be ineffective. In either case there is no point in working.
10. Note that this argument has nothing at all to do with determinism, if by that is meant the idea that the future is causally determined by the past. Determinism might encourage the attitude that since everything is causally settled anyway, it doesn't matter what I do. The fatalist argument, however, relies not on the idea that the future is causally determined but only on the idea that statements about the future are already true (in particular the idea that bivalence holds for future contingents; it is this that some take Aristotle to be wanting to drop in his discussion of the matter in *de Interpretatione*.)