

Causation

Lecture 7

1. Must causes ‘precede’ their effect in time?

- Common sense view – causes make a difference to what comes later in a way in which effects don’t make a difference to what occurred earlier.
- But the issue here interacts with debates about the ‘direction’ of time (time’s ‘arrow’): does causation get its direction from the direction of time? or is it the other way around – does time get its direction from causation?

2. Time/Space and direction

- We don't think of space as intrinsically directed one way or another; but we do think of time as having a direction or order: from earlier to later (or past/present/future). Think of the 'flow' of time – which runs from the past to the future.

3. Deeper metaphysics of time

- ‘Tenseless’ vs. ‘Tensed’ views
(McTaggart’s A (tensed) vs B (tenseless) views).
- Tenseless view: events are ordered in time (earlier/later); this ordering, and the reality of the events thus ordered is not dependent on human experience of these events. So the future is just as real as the present and past. Tenses (past, present, future) have no metaphysical significance; they just express, from inside a course of experience, the temporal ‘location’ of one’s current experience in relation to other events (‘It’s now 5 pm on 31 May 2011’ etc.)

- Tensed view: The basic temporal order of events is given by whether they were past/are present/will be future, and this order does have metaphysical significance. Events 'come into existence' as they occur, and the present alone is real now. The past was real; and the future will be; but neither are real now, and there is no tenseless reality.
- (Often: on this view, the past, having come into existence, remains real – whereas the future lacks this status – what has occurred is determinate, whereas what remains to occur is inherently unspecific until it occurs)

- In thinking about this: separate epistemological issues from metaphysical ones. It's easy to see how tense is fundamental to epistemology (think of induction); but what's difficult to understand about the tensed position is why the present should have a special metaphysical status – as uniquely 'real'.
(Descartes' metaphysics – need for continuous creation?)
- I want to try to stay detached from this dispute; but in fact I favour the tenseless view and maybe this belief will enter into my discussion.

4. Back now to causation and the direction of time.

- On the tensed view of time, time gets its direction from the metaphysical difference between the future and the past: – the future is not yet real, unlike the present and past which have become real. This order does not depend on causation; but it clearly induces a temporal order on causation. It makes sense to suppose that real, present, events can bring into existence, ‘realise’ effects that are not real when their cause occurs; but the opposite makes no sense – an unreal future effect cannot bring into existence a past event which is already real.

- So: on a tensed view of time, causes typically precede their effects, but not vice-versa.
- What about on a tenseless view? If there is a symmetric dependence between earlier and later configurations (e.g. planets in the solar system) it seems arbitrary to single out the earlier-to-later order as distinctively 'causal'. But does that mean that, on a tenseless view, there is no good sense to supposing that causes precede their effects?

5. Agency

- It can seem that human agency provides a way of bringing a temporal order into causation. For we suppose that what we do makes a difference to the future but not to the past. For what has happened cannot be changed, - but we can change the future.
- However: one needs to be careful here: certainly what has happened cannot be changed; but, equally, what will happen cannot be changed.
- This isn't fatalism! What is true is that present acts affect what will happen, making it different from what it would have been. But present acts cannot make what will happen not happen at all.

- Is there any difference with respect to the past? Can present acts affect the past? Clearly we cannot change what has happened; but can we not say that the past depends on the present in the sense that if A is not done now, then B would not have occurred earlier?
- We can certainly maintain something of this kind where agency is not involved where later states of a system depend on earlier ones and vice-versa. But we like to think that agency isn't like that! That as agents we are not determined by the past and, equally, don't determine the past. ...

- Plainly at this point the free will debate opens up, and we don't want to go there. But suppose one does endorse some strongish claim about free will then, I think, agency will bring with it a past/future asymmetry. and in that way give a 'direction' to causation which is not just the 'subjective' direction of the order of experience.

6. Time's arrow

- But the way in which the tenseless view of time is usually thought to acquire a direction is from certain fundamental asymmetric natural processes. When we have looked at this we can come back to the question as to whether it would be right to draw from this the implication that causation is thereby temporally ordered.