Introduction to Philosophy

Philosophy 110W
Spring 2011
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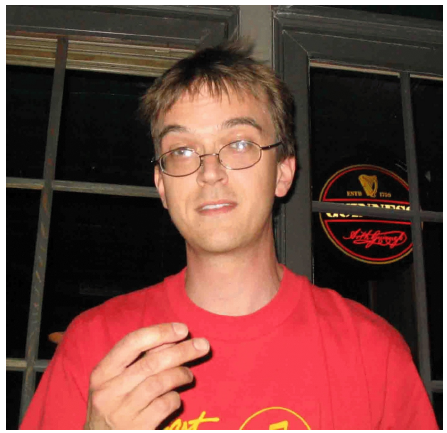
Smart, “The Tenseless Theory of Time”
aka the B-Theory

The Presentist A-Theory

- Zimmerman's relied on his intuitions about the importance of the present contrasted with past and future events and objects.
- When some thing or event passes from the present into the past, we ordinarily believe that it disappears.
  - It becomes unreal.
  - We lose it.
- Yesterday's breakfast
- Next Thursday's dinner
- These words



Intuition and Philosophy

- Appeals to intuition are controversial.
  - "Opponents of the tenseless theory tend to be influenced by the phenomenology of our immediate experience of time, whereas I distrust phenomenology" (Smart 227).
- What sorts of evidence will suffice?
- Smart believes that the only evidence is scientific evidence.
- The most fundamental scientific theories are best understood tenselessly.
  - Mathematics contains no references to time.
  - Physics takes time as a variable, but prefers no particular time.
  - The physical laws are indifferent to the direction of time.
- "Such intrinsic properties [past, present, and future] would be 'spooky' and they are not mentioned in physical theory. In physical theory there is no past and future, only earlier and later" (231).

Tenseless Time

- Smart concludes that we should prefer a theory of time which is similarly tenseless.
- “Now if, like me, you want to see the world *sub specie aeternitatis* (to echo Spinoza), or “from the point of view of the universe”..., you should want a tenseless language for metaphysics... Tenses and other indexicals make us see the world from a particular and egocentric perspective...” (227).

Three Tensed Sentences

1. Bonnie bopped Bobby at 4pm yesterday.
2. Bonnie is bopping Bobby right now.
3. Bonnie will bop Bobby tomorrow at noon.

- Zimmerman: these events have intrinsic temporal properties.
- Smart: these events have only relational temporal properties.

Reichenbach and the Token-Reflexive Solution

1. Bonnie bopped Bobby at 4pm yesterday.
2. Bonnie is bopping Bobby right now.
3. Bonnie will bop Bobby tomorrow at noon.

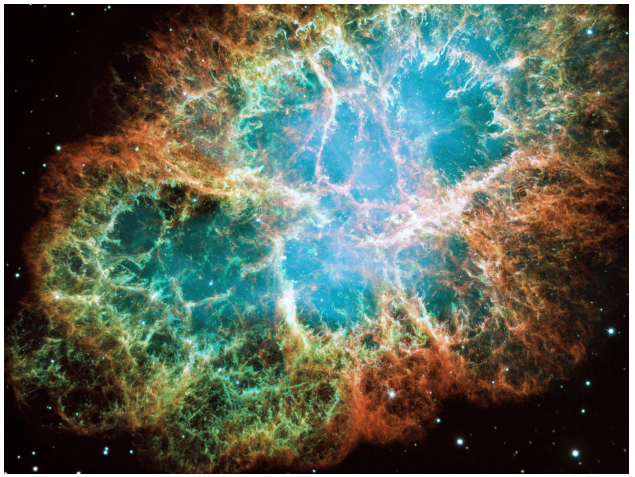
- TR1. There is a time *t* such that Bonnie bops Bobby at *t* and *t* is earlier than the utterance of 1 (by some measure of temporal distance between 4pm yesterday and the utterance of 1, in arbitrary units).
- TR2. Bonnie bops Bobby simultaneously with the utterance of 1.
- TR3. There is a time *t*, such that Bonnie bops Bobby at *t*, and *t* is earlier than the utterance of 1 (by some measure of temporal distance between 4pm yesterday and the utterance of 1, in arbitrary units).

- All references to time are rendered in terms of 'earlier than', and 'simultaneous with'.
  - We can also invoke 'later than'.
- No uses of 'past', 'present', or 'future' are required for the characterization of times.

Tenseless Verbs

- No uses of tenses, other than the present tense, are used by the tenseless theory.
- Present-tense verbs are to be understood tenselessly.
  - We are taking a four-dimensional view.
  - The block theory
- We need, from a grammatical standpoint, some tenses for our verbs.
- We think of them as mere grammatical artifacts.
  - Verbs are grammatically present-tense, but logically tenseless.

The Token-Reflexive Solution and Utterances



- One problem with the token-reflexive view is that time seems to outrun all possible utterances.
- We can not say anything about utterances simultaneous with some events.
- Consider the sentence 'The sun's becoming a supernova is future, will be present and then will be past'. On the token reflexive approach we might try: 'The sun's becoming a supernova *is* later than this utterance, and earlier than some utterance later [than this] (sic) utterance'. This is at best false, since presumably there are no persons or utterances at the time in question... (229).
- If we measure time in terms of utterances, we are liable to run into problems about times that are simultaneous to no utterances at all.

Davidson and the Date Theory

1. Bonnie bopped Bobby at 4pm yesterday.
2. Bonnie is bopping Bobby right now.
3. Bonnie will bop Bobby tomorrow at noon.

- DT1. There is a time t_1, such that Bonnie bops Bobby at t_1, and there is some other time t_2, such that t_1 is earlier than t_2 (by some measure of temporal distance between 4pm yesterday and now, in arbitrary units).
- DT2. There is a time t such that Bonnie bops Bobby at t.
- DT3. There is a time t_1, such that Bonnie bops Bobby at t_1, and there is some other time t_2, such that t_2 is earlier than t_1 (by some measure of temporal distance between now and tomorrow at noon, in arbitrary units).

- Smart argues that the advantage of the date theory is its invocation of sentences.
- "This seems to have the advantage over the token reflexive approach in that it deals with sentences, not utterances. There is only a finite number of (say) English sentences that ever get uttered, and yet the language contains an infinite number of sentences as abstract objects" (229).
- A theory which invokes timeless sentences is compatible with the supernova sentence in a way that a theory which invokes particular utterances is not.

Relativizing

- It's not clear from Smart's article how the date theory invokes sentences rather than utterances.
- The solution to the problem raised by the supernova sentence seems to be to relativize all temporal claims to some claim, whether an utterance or an instance of a sentence, in the present.
  - The [date] theory will entail sentences such as "I am tired" *is* true as (potentially) spoken by person *P* at time *t* if and only if *P is* tired at *t*... (229).
- The option to relativize temporal claims to some utterance appears to be available to both the token reflexive theorist and the date theorist.
- Let's not worry more about the distinctions among the token reflexive theory and the date theory.

Tenselessness and the B-Theory

- The central claim of the B-theory is that we can do away with appeals to ‘past’, ‘present’, and ‘future’.
- Zimmerman’s presentist relied on claims about the exceptional nature of the present moment.
- The B-theorist denies that there is any such exception.
  - TR2. Bonnie bops Bobby simultaneously with the utterance of 1.
  - DT2. There is a time *t* such that Bonnie bops Bobby at *t*.
- For the tenseless theory, the present is just one moment among many.
- The tenseless theory is indifferent to any particular time, and avoids what Smart thinks of as being parochial and egocentric.
- “The A-theorist of course will aver that sentences such as ‘E was future, is present and will be past’ are perfectly intelligible because ‘past’, ‘present’, and ‘future’ (or rather the corresponding abstract nouns) refer to intrinsic properties of events in respect of which events change and so the (in my view *pathological*) [supernova sentence] is perfectly in order and even *platitudinous*” (230, emphasis added).

The A and the B

- For the A-theory
  - Intuitions about the asymmetry of our access to the present moment and past and future moments.
  - Thank goodness that's over.
- For the B-theory
  - The laws of physics express the ultimate nature of reality.
  - "The A-theorist thinks that [considerations of the 'thank-goodness-that's-over' feeling] and an appeal to immediate experience more than compensate for the ontological economy and scientific plausibility of the B-theory. The B-theorist thinks that these considerations do not really support the A-theory" (233).

Change

- For the A-theory
  - Objects undergo changes as they become real, by moving into the present, and become unreal, by moving into the past.
  - The notion of an object as enduring through time has to be adjusted, since objects are only real at the present moment.
- For the B-theory
  - Objects exist over time.
  - Change is chimerical.
  - All of the spatio-temporal realm is taken as a single, static block.
- Change is ordinarily thought of as an active process.
- The B-theorist's view of change seems static.
  - "The B-theorist accommodates the facts of change by tenselessly saying that one temporal stage of a thing or process can differ in certain respects from an adjacent temporal stage" (231).

The Flow of Time

- The B-theory corresponds to relationalism about space, whereas the A-theory corresponds to absolutism about space.
  - On the A-theory, events have intrinsic (absolute) temporal qualities.
  - On the B-theory, events only have temporal relations to other events.
- On the A-theory, time has some definite status, transcending particular events.
- “If it is said that time flows, it seems, then, that the question ‘How fast does it flow?’ is a devastating one for the A-theorist” (235).

Smart on Presentism

- There is a bizarre form of A-theory called presentism...It is said that we cannot change the past. Equally we cannot change the future...The historical past is earlier than us in Minkowski space and the future is up ahead of us. Both are real. Our actions are caused by our beliefs and desires and in part cause future events. There is not room for the silly sort of fatalism that implies that our decisions do not matter (236).
- Fatalism is the view that we are powerless to alter the course of events.
- Opposition to fatalism should not be interpreted as a defense of presentism.