

# SMART'S B-THEORY

Ted Sider, Metaphysics

**A-theory:** the A-notions are the basic ones: past, present and future. "Time flows".

**B-theory:** the B-notions are the basic ones: before and after. Time does not flow.

## 1. SMART'S VERSION OF THE B-THEORY

- (a) Tenseless predication
- (b) Temporal parts account of change

It is perfectly possible to think of things and processes as four-dimensional space-time entities. The instantaneous state of such a four-dimensional space-time solid will be a three-dimensional "time slice" of the four-dimensional solid. Then instead of talking of things or processes changing or not changing we can now talk of one time slice of a four-dimensional entity being different or not different from some other time slice. (Note the tenseless participle of the verb 'to be' in the last sentence.) (Smart, p. 95)

- (c) Token-reflexive account of 'now', 'past' and 'future'

Let us replace the words 'is past' by the words 'is earlier than this utterance'. (Note the transition to the tenseless 'is'.) Similarly, let us replace 'is present' and 'now' by 'is simultaneous with this utterance', and 'is future' by 'is later than this utterance'. (Smart, p. 95).

- (d) Eliminativism vs. Revisionism

## 2. REPLIES TO OBJECTIONS

- (a) Timeless theory of time?
- (b) Fatalism, determinism?

### 3. AGAINST THE A-THEORY

We can also see how misleading it is to talk of the flow of time, or of our advance through time. To say that by next year a year of time will have gone by is simply to say that our conscious experiences of a year later than this utterance are (tenseless) a year later than this utterance. Our consciousness does not literally advance into the future, because if it did we could intelligibly ask ‘How fast does it advance?’ We should need to postulate a hyper-time with reference to which our advance in time could be measured (seconds per hyper-seconds), but there seems to be no reason to postulate such an entity as a hyper-time... Moreover, anyone who thought that time-flow was necessary for time would presumably want to say that hyper-time-flow was necessary for hyper-time. He would therefore be driven to postulate a hyper-hyper-time, and so on without end. (Smart, pp. 96-97).

#### (a) The hyper-time argument

- i) If time flows, then anything “time-like” must flow
- ii) If x flows, then x must flow with respect to some dimension y that is distinct from x, and distinct from any dimension x with respect to which x flows, and any dimension x with respect to x flows, and so on
- iii) If i) and ii) are true, then if time flows, then there exists an infinite series of “time-like” dimensions
- iv) It is not the case that there exists an infinite series of “time-like” dimensions
- v) Therefore, Time does not flow

#### (b) How fast does time pass?

- i) If time flows, then it flows at some rate
- ii) But there is no rate at which time flows
- iii) Therefore time does not flow