

The B-Theory of Time

Based on J. J. C. Smarts' "The Space-Time World"

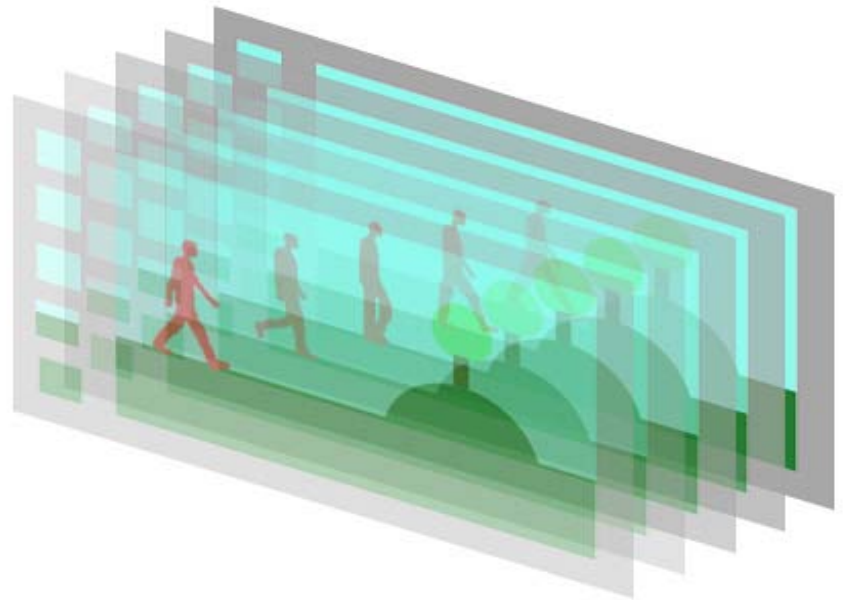
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Review of the A Theory

- * There is a past, a present, and a future.
- * Presentism
- * The Present is more more real and important than the past and the future.

B-Theory of Time

- * J.J.C. Smart
- * Tenseless Theory or Four-Dimensionalism
- * Block Theory



Smart on Tenselessness

- * Only evidence is scientific evidence.
- * This is best understood tenseless or without any respect to time.
- * I.E. $2+2 = 4$ is always true no matter what the time is.
- * In order to do this he replaces all verbs with grammatically present-tense verbs, which he calls the token reflexive approach.

Token Reflexive Approach

* Tensed Sentences (past, present, and future)

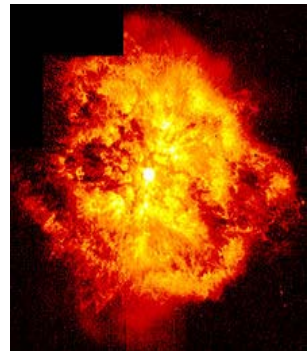
1. I went to the mall at 8 pm yesterday
2. I am going to the mall right now
3. I will go to the mall tomorrow at 6

* Token Reflexive Approach

1. There is a time t such that I go to the mall at t and t is earlier than the utterance of 1 (by some measure of temporal distance between 8pm yesterday and the utterance of 1, in arbitrary units).
2. I go to the mall simultaneously with the utterance of 2
3. There is a time t , such that I go to the mall at t , and t is earlier than the utterance of 3 (by some measure of temporal distance between the utterance of 3 and 6 pm tomorrow, in arbitrary units).

Problems With Token Reflexive

- * Take an example of the sun becoming a supernova.
- * Using the token reflexive approach
 1. There is a time t such that the sun becomes a supernova at t and t is later than the utterance of SN1 (by some arbitrary measure of temporal distance).
 2. The sun becomes a supernova simultaneously with the utterance of SN2.
 3. There is a time t , such that the sun becomes a supernova at t , and t is earlier than the utterance of 3 (by some arbitrary measure of temporal distance).



Change and the B-Theory

- * Clearly, there is change in the A-Theory
- * Smart and B-Theorists, however, says that there is really no change
- * Single Static Block
- * Their notion of time would just be looking at different temporal slices.

Problems with the B-Theory

- * Smart says that the future is not set
- * What do you think?