

THE TENSELESS THEORY OF TIME

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B-THEORY AND INDEXICALS

- Answers Zimmermann's questions negatively.
 - 1. There are not objective differences between past, present, and future
 - 2. Present events are not more "real" than past or future events
- Sees Time as tenseless: no "is, was, or will be"
 - Remove inflection from words
 - "is past, is present, is future" as a replacement
 - Distrusts phenomena of "our immediate experience of time" (226)
- Indexicals
 - State points in time "Past, Future, etc."
 - A-Theory says those are intrinsic properties to the events.
 - Similar to Moving-Spotlight theory

ATTRactions OF B-THEORY (IT'S GOT A WAY WITH WORDS)

- Math and physics are tenseless
- Reduces "egocentrism" of our beliefs on time.
- Addresses nature of biology (Does Fala exist?)
 - Biology is "cosmically parochial"
 - Derivative from Physics
 - Exists in physics abstractly
 - "Metaphysics...should not be cosmically parochial" (227)



ADDRESSING TENSES AS INDEXICALS (MR. TENSED-INDEXICAL)

- Need some method to create tenseless language with “No objectionable consequences for the metaphysics of time” (228)
- Semantics are important for temporal discussion
 - Case with “I”, where some have tried to add additional meaning “the ego”
- Two methods:
 - Reichenbach’s Token-Reflexive Approach (Utterance theory)
 - Davidson’s “Date Theory” Approach

UTTERANCE THEORY (*ASH NAZG ...*)

- An Utterance is a "token" of the word.
 - Abstract words: (type) words
 - Practical utterances: (token) words
 - "Queen Anne is dead" (228)
 - Inscriptions as momentary events
- "This Utterance"
 - I, you, here, now, tenses
 - "Is" becomes tenseless
- Issues
 - "Thank Goodness that's over" (229)

DATE THEORY (HASN'T HELPED ME GET A DATE)

- Davidson, Dyke
- "relativize truth of a sentence to a person and a time" (229)
- "I am tired"
 - "true if spoken by P at time T and only if P is tired at T" (229)
- Advantage: sentences, not utterances
 - Utterances finite
 - Sentences infinite

ISSUES WITH INDEXICALS (APPRECIATE ALLITERATION)

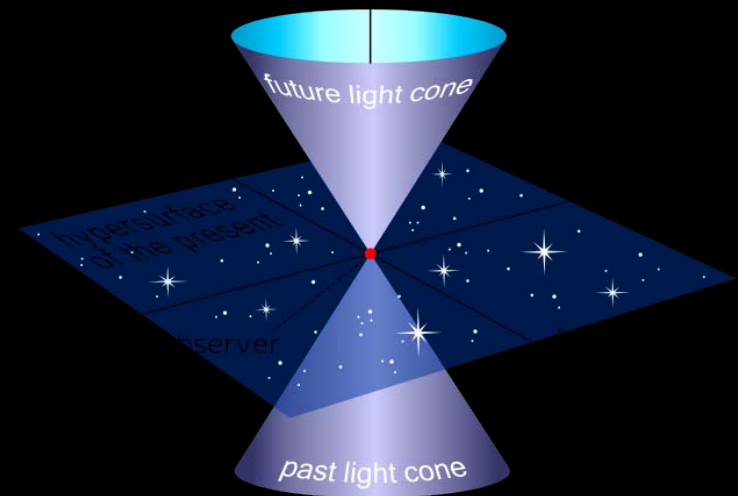
- “The Sun’s becoming a supernova is future, will be present and then will be past.”
 - Utterance: No one to make the proper utterances at the time
 - Date theory: “lack of appropriate utterances” (229)
 - Temporal stages and traffic lights
 - Properties v. Indexicals
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B-THEORIST CRITIQUE OF A-THEORY (SMART'S NO EBERT)

- Prior: A-Theorist?
 - "No-present" theory
 - Gives tenses to verbs
 - Redundant
- B-Theory and Change
 - McTaggart
 - E "before" or "earlier than" F.
 - "One Temporal stage of a thing...can differ in certain respects from an adjacent temporal stage" (231)
 - Do events change (McTaggart), or do things and processes change (Smart)?
 - "Spooky" intrinsic properties: truthmaker objection (231)

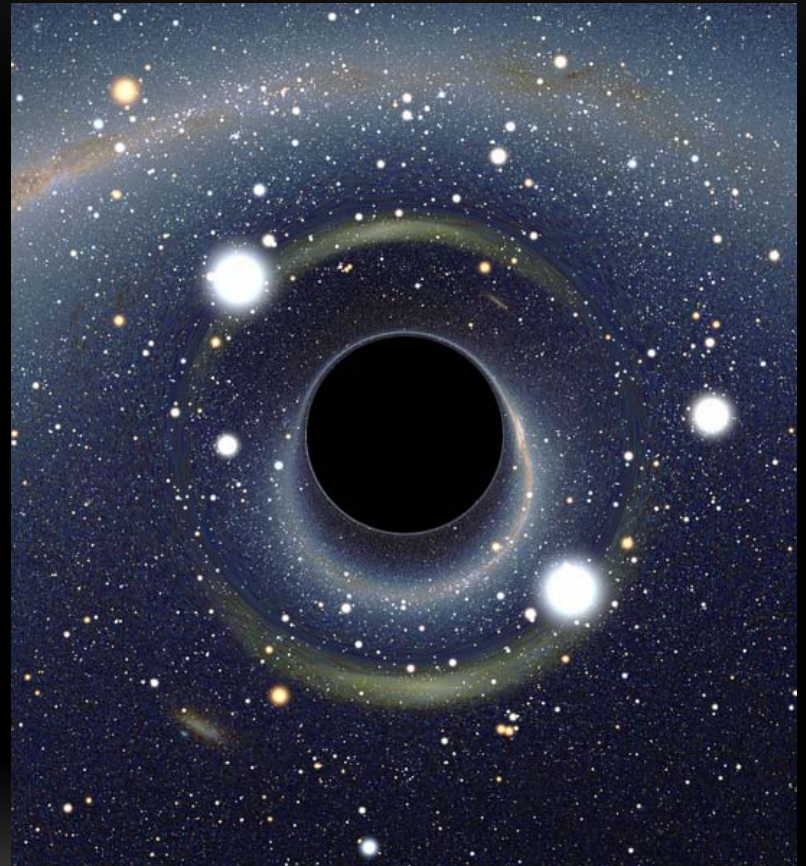
LET'S GET PHYSICAL

- Minkowski space-time.
 - Earlier and later v. past and future
- Physics and time
 - Not time-symmetrical, but CPT-symmetrical (charge, parity, time) (231)
 - Time-symmetry (like a mirror)
 - Postirons and minus signs
 - "no absolute space-time and no cosmic present" (232)



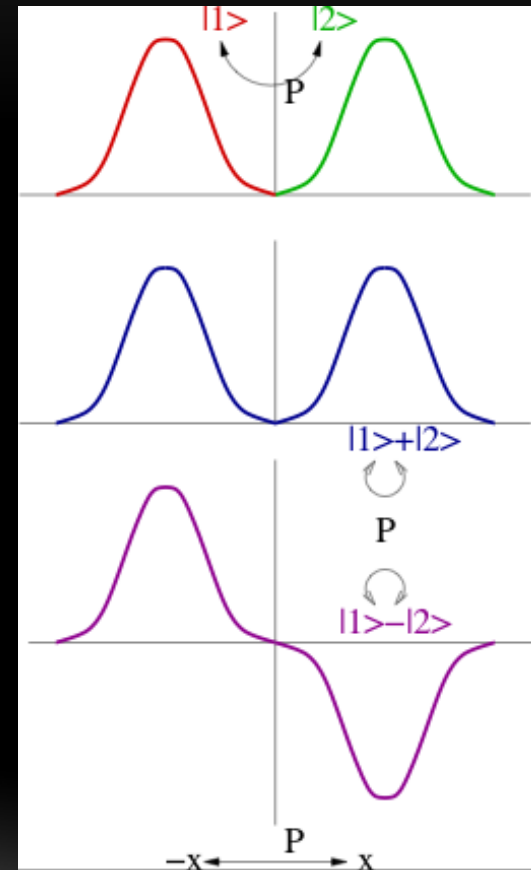
RELATIVITY AND A-THEORY

- Frame of reference?
 - Special relativity has none
 - Can have one outside the theory
 - Local frame and the expanding universe
- Concerns about black holes
- Most objections because of indexicals



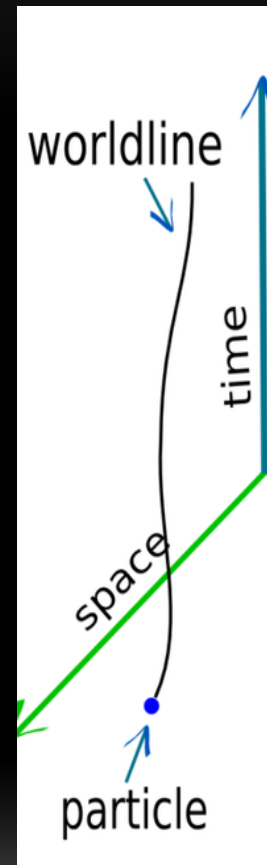
"THANK GOODNESS THAT'S OVER"

- Expression of relief
- Prior, "Why should anyone thank goodness for *that?*" (233)
- "Now why are we pleased that a pain has stopped and not that it is about to begin?" (233)
- Asymmetrical time reversal
- Forward-planning
- Example of the prisoner (234)



THE "SUPPOSED" PASSAGE OF TIME (NEXT YOU'LL TELL ME SANTA ISN'T REAL)

- <http://www.youtube.com/watch?v=gNIwIRCIHs>
Q&feature=related
- Time neither passes by us, nor do we pass through time
 - Phenomenology
- How quickly does this occur?
 - Dt/dt and dx/dx are unhelpful
- Minkowski space-time
 - "two particles are at rest...they are parallel, and motion is a matter of them...being inclined toward one another" (235)
 - World lines
 - Motion as inclinations
 - No flow of time or advance through time



LET'S DO THE TIME WARP AGAIN!

- Is Minkowski space static?
 - "Not all world lines are parallel" (235)
 - "dynamic" or "kinetic"?
- What is the rate of passage?
 - Markosian "we define rates of change by comparison of spatial changes" (236)
 - Most cosmically parochial; best one would be "frequency of vibrations in a cesium atom"
 - Phenomenology of flow, "We confuse the flow of information through our short-term memories with a flow of time itself" (236)
- Tenses: unfair to demand changing sentences into non-indexicals
- Static or dynamic/kinetic: not static
 - http://en.wikipedia.org/wiki/Lorentz_transformation

PRESENTISM AND FATALISM

- “bizarre form of A-theory” (236)
- Cannot change past or future
 - Present actions are future
 - Arm example
- “Our actions are caused by our beliefs and desires and in part cause future events” (236)
- Is B-theory fatalist?

CONCLUSION

- Is B-Theory reasonable?