

STUDY GUIDE: TIME

Ted Sider, Metaphysics

Reminder: I recommend you review earlier handouts on the proper method of **P**resenting, **E**xplaining, and **E**valuating. It's crucial, especially, that in explaining you give *line-by-line* justifications for the premises.

1. What does McTaggart mean when he says that time is unreal? (Answering this question involves distinguishing between the A-series and the B-series.)
2. Very long essay: What is McTaggart's overall argument that time is unreal? Present and critically discuss each of the component arguments.
3. P.E.E. the argument from change.
4. Describe Shoemaker's example (of the world with three freezing regions) and explain how one could have evidence for thinking that there was a period of time in which nothing in the whole universe changed.
5. P.E.E. the argument from Eternality. In evaluating, be sure to mention the objection based on Russell's theory of change. What does McTaggart say in response?
6. P.E.E. McTaggart's incompatibility argument that the A-series is incoherent.
7. Describe Smart's B-theory of time. This should include explaining tenseless predication, the temporal parts account of change, and the token-reflexive theory of tensed statements.
8. P.E.E. Smart's hyper-time and "how fast does time pass?" arguments against the A-theory.
9. Present the moving spotlight theory. Present the growing block theory, including its idea of time having a direction and its idea that the future is unreal. Contrast the moving spotlight and growing block theories. Why does Broad think the growing block theory provides a better account of the direction of time than the moving spotlight theory? What does Broad say about the truth values of judgments about the future? How does Broad describe the "growth" of the block universe?
10. What is presentism? Contrast it with the other theories of time (B-theory, moving spotlight, growing block). Illuminate the contrast between presentism and the B-theory by comparing it with the contrast between the two views of "existence in Greek mythology" and "existence in the mind" that Prior considers.
11. P.E.E. (each version of) the "Thank goodness that's over" argument.

12. Essay: "...he may even now — if I may use the phrase — be wandering on some plesiosaurus-haunted oolitic coral reef, or beside the lonely saline seas of the Triassic Age". What is the apparent contradiction suggested by these words? What is the two-dimensional time solution to this problem? What is Lewis's objection to that solution? Describe Lewis's preferred solution (distinguishing personal and external time).
13. In case A, a time traveler goes back in time to the time of the dinosaurs. In case B, someone walks into a room and is killed by a demon. Also, at the time of the dinosaurs, another evil demon had decided to create a person; that person just happened to be exactly similar to the person the first demon killed. How does Lewis distinguish between these cases? Be sure to mention the theory of persons as space-time worms.
14. Describe what a time traveler would look like to a non-time-traveling bystander, in a case where the trip is non-instantaneous (i.e., it takes up time in the time traveler's personal time), and in which the time machine and traveler are located throughout the trip in ordinary space and observable to watchers.
15. What is wrong with the following argument for the impossibility of time travel?

If you time traveled, you would change the past. For example, *right now, it is true that there was a certain tree in the Triassic period.* But if I time travel back and destroy the seeds from which it sprang, *then it is no longer true that in the Triassic period, there is such a tree.* This would be possible, if time travel is possible. But it isn't possible, because since B-series judgments are permanent, the two italicized sentences are inconsistent.

argument with a parallel conception of changing the present.

16. Essay: What is the grandfather paradox? How does Lewis resolve it?
17. What is Lewis's contextual notion of ability ('can')? Illustrate with the example of speaking Finnish. Apply to the case of killing Grandfather.