Overview

What it would mean for time to flow, and what does the direction of time have to do with flow? We’ll discuss what special and general relativity imply about time, and whether quantum entanglement has any implications for time (or time-ordering of events). We will cover the ‘Mentaculus’ thesis that time can be derived from nothing more than statistical mechanics and the big bang. We will also discuss what time travel means for personal identity. We’ll read current articles on these topics, as well as a few classics, and there will be a term paper.

Official Policies

I will do my best to accommodate all students. If you have a particular concern, first contact the Disability Resource Center, then contact me by email or visit during office hours. [https://www.ou.edu/content/drc/home/students/accommodations.html](https://www.ou.edu/content/drc/home/students/accommodations.html)

Disrespectful behavior will not be tolerated. This is a place to learn and share ideas, and that requires an open, supportive atmosphere for everyone.

Informal requirements: article summaries, active participation in class discussion, and early drafts of final paper for feedback.

Formal requirements: a final paper, 10-20 pages long, showing a thorough and nuanced understanding of relevant literature, proper citations, and an original and persuasive argument that is developed in depth.

There are no required texts. All readings will be made available online.

Books you may want to take a longer look at:

- Tim Maudlin, *The Metaphysics within Physics* [13]
- Huw Price, *Times Arrow and Archimedes Point* [20]
Background Philosophy (8/27)

2. Hans Reichenbach: *The Direction of Time* [23]

Background Physics (9/3)

3. Richard Feynman: “Special Relativity”
5. Richard Feynman: “Curved Space”
8. Roger Penrose: “Big Bangs, Black Holes, and Time’s Arrow” [18]

Direction of Time: Statistical Mechanics (9/10)

9. David Albert: *Time and Chance* [1]

Direction of Time: Statistical Mechanics (9/24)


Direction of Time: Backwards? (10/1)


No Time (10/8)


The Flow of Time: Presentism and Growing Block (10/15)

The Flow of Time: The Moving Spotlight (10/29)
23. Oliver Pooley: “Relativity, the Open Future, and the Passage of Time” [19]

Time’s Passing: Rate (11/5)

Time vs Space (11/12)

Is Time’s Passing an Illusion? (11/19)
33. Donald C. Williams: “The Myth of Passage” [28]

The Practical Implications of Time’s Passing (12/3)
34. Arthur Prior: “Thank Goodness That’s Over!” [22]
36. Tom Dougherty: “On Whether to Prefer Pain to Pass”

Time Travel and Personal Identity (Optional Fun Day!)
References


