

Honors 229F
The Problem of Time:
Puzzles about Time in Philosophy, Literature, and Film
TuTh 11-12:15
 Tydings Hall 2108

Syllabus

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 OFFICE HOURS: Wednesday 10-12

IMPORTANT: During the first two weeks I will also have office hours on Mondays and Fridays from 10 to 12. Please all sign up to come and see me during these times.

Course Overview

In this course we will examine several philosophical puzzles concerning time. We all seem to experience time in a very fundamental and direct way. Yet once we begin to reflect on what time really is, it is easy to feel as puzzled as St Augustine was, who wrote: "If no one asks me, I know what [time] is. If I wish to explain it to him who asks me, I do not know."

The first set of issues we will discuss concern the question whether time is 'real.' Time appears to consist of past, present and future. But do the past and the future exist in the same way as the present or is only the present real? Does time 'flow'? In what ways is time different from space? What would it be to 'spatialize' time? Next we will ask whether certain views of time imply that there can be no freedom of the will. One might worry that if facts about the future (including facts about what I will do tomorrow) already existed in the same way as facts about the present exist, then I could not be free to choose what I will do. After all, how can I be free to decide to skip class tomorrow, if it is 'already' a fact today that I will attend class? What, if anything, is the connection between various views of time and 'fatalism'?

The third topic we will discuss is time travel. First we will ask whether time travel is a conceptual possibility. As we will see, there are certain conceptual puzzles associated with the possibility of time travel. For example, one might think that if time travel is possible, then I should be able to travel back in time and kill my father before the date of my conception. But this scenario seems to lead to a contradiction. Some have taken considerations such as these to argue that the very idea of time travel is incoherent. Is this right? If not, why not? Then we will look at what the theory of relativity says about the nature of time in general and about the physical possibility of time travel more specifically.

Finally we will examine several issues concerning the asymmetry of time. What is the difference between past and future? Intuitively, time seems to flow from the past into the future. What can account for this asymmetry? Often, this asymmetry is seen as closely connected to the thermodynamic asymmetry that the entropy of a closed system tends to increase with time. (For example: after you poured milk into your coffee, the milk and the coffee mix, but we never observe the time-reverse of this, that is, spontaneous unmixing of milk and coffee.) We will try

to get some basic understanding of the thermodynamic asymmetry and its connection to the asymmetry of time itself. We will also at the role of the fact that we have records and memories of the past but not of the future.

Readings:

Required:

- J. Westphal and C. Levenson (eds.), *Time*, Hackett
- C. Callender and R. Edney, *Introducing Time*, Totem Books
- K. Vonnegut, *Slaughterhouse Five*, Dell
- M. Amis, *Time's Arrow*, Vintage
- Course Packet, available at Maryland Book Exchange
- A few additional articles (see course outline), available online.

Recommended:

- P. Davies, *How to Build a Time Machine*
- The entry on Time in the Internet Encyclopedia of Philosophy
(<http://www.utm.edu/research/iep/t/time.htm>)

Outline of topics and readings (open to revisions depending on interests):

WEEK 1 Introduction; how do we experience time?

- M. Proust, excerpt from *Remembrance of Things Past* (Ch. 1, Westphal & Levenson (WL))
- T. Mann, "Excursus on the Sense of Time" (Ch. 19, WL)
- Callender, pp.1-18

WEEK 2 Can there be a beginning of time? Are the past and future unreal?

- Aristotle, "Time" (Ch. 8, WL)
- St. Augustine, Book 11 from the *Confessions* (Ch. 2 WL))

WEEK 3 Is time real?

- J. Mc Taggart, "The Unreality of Time," (Ch, 10, WL)
- M. Dummett, "A Defense of McTaggart's Proof of the Unreality of Time" (Ch. 11, WL)
- P. Horwich, *Asymmetries in Time* (excerpt), (Ch. 12, WL)
- Callender, pp. 32-51

WEEK 4 Tenseless time: 'The myth of passage' or 'Bugs stuck in amber.'

- D. C. Williams, "The Myth of Passage," (Ch. 13, WL)
- M. Merleau-Ponty, "Temporality" (Ch. 16, WL)
- K. Vonnegut, *Slaughterhouse Five*

WEEK 5 Fatalism and tenseless time.

- Aristotle, *De Interpretatione*, ch. 9 (Course Packet (CP))
- R. Taylor, "Fatalism" (JStor)
<http://links.jstor.org/sici?sici=0031-8108%28196201%2971%3A1%3C56%3AF%3E2.0.CO%3B2-2>
- Smith & Oaklander, "Fatalism and tenseless Time" (CP)

WEEK 6 Time travel.

- S. Lem, *Star Diaries* (excerpt), (CP)
- Callender, pp. 68-88
- D. Lewis, "The Paradoxes of Time Travel" (CP)
- R. Heinlein, "All you Zombies" (CP)

WEEK 7 **Movie: *Twelve Monkeys*.****WEEK 8** **The special theory of relativity.**

- A. Einstein, “Special Relativity” (CP)
- P. Kosso, “Special Relativity” (CP)
- Callender, pp. 52-67
- Callender, pp. 89-93
- P. Davies, Prologue and ch. 1

WEEK 9 **The general theory of relativity.**

- P. Kosso, “General Relativity” (CP)
- Smith & Oaklander, Appendix, Section B (CP)
- Davies, chs. 3 and 4
- Callender, pp. 94-132
- Maudlin & Arntzenius, “Time Travel and Modern Physics” (this is hard!)
<http://plato.stanford.edu/entries/time-travel-phys/>
- Maudlin, T. “Remarks on the Passing of Time” Proceedings of the Aristotelian Society volume CII (part 3), pp. 237-252
(go to: <http://www.lib.umd.edu/ETC/EJNLS/ejnls.php3>)

WEEK 10 **Branching time**

- Borghes, “The Garden of the Forking Paths” (CP)

WEEK 11 **Time’s arrow (I).**

- M. Amis, *Time’s Arrow*

WEEK 12 **Time’s arrow (II).**

- H. Price, *Time’s Arrow*, Chapter 2 (CP)
- L. Sklar, “Up and Down, Left and Right, Past and Future” (JStor)
<http://links.jstor.org/sici?sici=0029-4624%28198105%2915%3A2%3C111%3AUADLAR%3E2.0.CO%3B2-9>

WEEK 13 **Discussion of rough drafts.****WEEK 14 & 15** **Records and the direction of time. Movie: *Memento*.**

- G. Egan, “Hundred Light Year Diary” (CP)
- P. Horwich, “Knowledge” (CP)

Teaching Method: Discussion with some lectures. You will be expected to have done the assigned reading before you come to class to be able to participate in the discussion. Learning philosophy is as much learning a style of thinking and reasoning as it is learning certain contents. Therefore it is important that you try to participate actively in the discussions and learn to engage with the readings critically.

Course requirements and evaluation:

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|------------------------------------|-------------------------|
| • 3 short papers (700-1000 words): | 10% of your grade each. |
| • Final paper (2500-3000 words) | 40%. |
| • In-class presentation: | 10%. |
| • Participation: | 20% (at least!). |

You need to hand in all written work in order to pass the course.

1st Paper due Sept. 16: In what sense and why does St. Augustine believe that time does not exist? Clearly explain St. Augustine’s argument.

2nd Paper due Oct. 16: Carefully explain what a causal loop is. Are there causal loops in “All you Zombies”? If yes, describe one. Does the possibility of causal loops present a problem for the idea of time travel?

3rd Paper due Oct 28: Does special relativity cause problems for a tensed view of time? Briefly explain why relativity might present problems for the tensed view and then discuss what you think is the strongest response on behalf of a defender of a tensed view.

Final Paper:

Rough drafts due Nov. 25 (**two copies!!**)

Final draft due Dec. 15.

- 1) Take any of the topics we have discussed in the course and explore them further. (E.g. The connection between freedom of the will and different views of time. Or: The importance of records to the asymmetry of time.)
- 2) Pick a story, novel, or movie of your choice, different from those discussed in this course, that has a conceptual puzzle about time as one of its central themes (such as time travel, the reality of time, the direction of time), carefully explain and discuss the conceptual problem and analyze how the work treats that puzzle. (For example, if you pick a time-travel movie or novel, you might discuss the general issue of consistency and its importance and then analyze whether or not the work in question is consistent.)

You need to come talk to me as you are developing your paper topic, to make sure that you have a focused thesis!

A note about the readings:

Unfortunately most of the philosophy we will read is not very easy. Hopefully the literature and films will provide a counterbalance, but here are some suggestions that might help make the reading somewhat easier and less frustrating.

Even though the number of pages we will read for each class is going to be very small, you should budget enough time for the reading to be able to read each piece at least three times. Don't expect to be able to 'breeze through' the texts and you can avoid a lot of frustration. For all the readings (including the literary texts) you should have a pen and paper ready to take notes as you read. Philosophical writing is concerned with advancing and defending arguments. Your task will be to try to reconstruct the arguments and to critically evaluate them.

The first reading of a text should be fairly quickly. Your goal here should be to get a first, rough sense of the general argument the author is advancing and the rough structure of the text. What is the author's main thesis? (write this down!) Often you will find a statement of the main thesis in the beginning of the text, in the introduction and/or in the conclusion. Where in the text is s/he arguing for it? Where does the author address objections? Where does s/he discuss qualifications? Where motivate the argument? Don't worry, if during the first reading you don't yet understand how the author is arguing for his thesis.

The second reading should be devoted to giving a reconstruction of the argument that is as sympathetic as possible. Now you should spend a lot of time on trying to understand how the author supports the main thesis, and how s/he might address potential objections. Here it is usually useful to try to jot down the following: What are the premises of the argument? How are the premises themselves supported? For example the author might appeal to shared intuitions or might claim that the premises are self-evident. (e.g., “Obviously we have free will. But...”)

What are the steps which are meant to get the author from the premises to the conclusion? (Here words like ‘because’ and ‘therefore’ can provide a clue.) You might think of yourself as engaging in a dialogue with the text here. Ask critical questions of the text, such as “You say that free will is incompatible with a ‘spatialized’ view of time. Why should I be compelled to accept this?” Then search the text for answers. At this stage your aim should not yet be to try to discover flaws or problems in the argument. Aim to make the argument as strong as possible.

Then it is time to be critical. During a third reading you ought to try to see if you can uncover weaknesses in the author’s arguments. If you want to disagree with the author’s conclusion, there are two general ways in which you might attack the thesis. One, you can disagree with one or more of the author’s premises. That is you might accept that if we grant the premises then the author’s conclusion follows, but you might disagree with one or more of the premises. (But then you should ask yourself how you would respond to the author’s attempt to motivate the premises.) Or, two, you might disagree with one or more of the author’s steps in the argument. That is, you might be willing to accept the premises, but you might deny that this commits you to the conclusion as well. (Of course you also might have objections of both kinds.)

A careful reading of a difficult text takes time. Learn to read patiently and slowly, and before you get frustrated, remember that even professional philosophers struggle with the texts you are reading. One of the most wonderful aspects of reading philosophy is that it allows you to engage in conversations with some of the deepest and most original thinkers of all times. Enjoy the challenge!

Academic Integrity:

As you know, the university has a student-administered Honor Code and Honor Pledge. You will be asked to write in your own hand and sign the following statement on each assignment: “I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment).” Unauthorized assistance includes plagiarizing papers. You should avoid extensive quotes from secondary sources. If you do quote from another source you must identify the quote and add a reference to the source.

Accommodations for students with disabilities: If you need special accommodations please let me know at the beginning of term that we can work out appropriate arrangements.

Religious observances:

If you will need to miss class for religious observances, please let me know within the first couple of weeks of class.