

# Seminar in Philosophy of Science and Metaphysics: The Philosophy of Science Fiction

Phil. 298A and B

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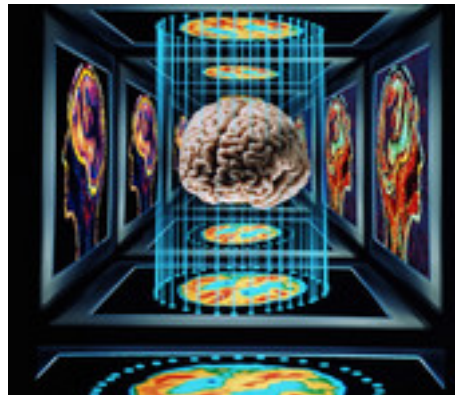
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(Parfit's teletransporter,)

This class is an introduction to the philosophy of science fiction. We will be delving into questions like:

Are you in a matrix?

Is time travel possible?

Can your mind survive the death of your brain?

Is God the sort of entity that is discoverable by science?

Is time real or is it merely an illusion?

Goals: We'll employ the genre of science fiction to (i), make people think crucially about the nature of reality, by the use of excerpts from stories to fire the imagination; (ii), develop interesting new avenues in philosophy, in line with certain issues that would likely be issues of the future.

Readings. There are two novels at the bookstore: *2001* and *Solaris*. There are also two non-fiction books: *Radical Evolution* and *The Singularity is Near*. Please read *Radical Evolution* over the next few weeks. The other readings are mainly philosophy journal articles, will go on library reserve, unless stated otherwise.

Also, you should read Jim Pryor's "Philosophical Terms and Methods", "How to Read a Philosophy Paper", and "Guides on Writing a Philosophy Paper." Read these immediately. These are available at my webpage, under "courses."

First reading assignment (to see if the class is indeed for you): before next time, read the first two chapters of *Radical Evolution*. Come to class with a suggestion for your first presentation topic, from the books or reading list below.

### **Schedule:**

**Introductory lectures.** “Science fiction, philosophy, and science fact: map of the terrain.” Please read (i) *Radical Evolution* and any background information on biomorphic/neuromorphic devices, nanotechnology, AI, and genetics recommended in class). (ii) Andy Clark and David Chalmers “The Extended Mind” at <http://consc.net/papers/extended.html>

### **I. ARE YOU IN A MATRIX?**

(Some relevant works: *The Matrix*, *The 13<sup>th</sup> Floor*, *Vanilla Sky*, *Total Recall*, *Animatrix*).  
Film: *Vanilla Sky* or *The Matrix*

1. Are You In a Matrix? – Nick Bostrom at [www.simulation-argument.com](http://www.simulation-argument.com) (the paper called “The Simulation Argument: Why the Probability that You are Living in the Matrix is Quite High”)
2. “What’s so Bad About Being in the Matrix?” – Jim Pryor (at: [http://whatisthematrix.warnerbros.com/rl\\_cmp/new\\_phil\\_fr\\_intro.html](http://whatisthematrix.warnerbros.com/rl_cmp/new_phil_fr_intro.html))
3. Free Will and Determinism - Excerpt from *Like a Splinter in Your Mind*
4. Personal Identity. (i) “Where am I” – Daniel Dennett (from *Brainstorms*) (ii) excerpts from Derek Parfit’s *Reasons and Persons* (reserve).

### **II. “GOD”, MIND AND PHYSICS**

(*2001*, *Solaris*, etc.)

Film: *Solaris*

Themes: Could science discover our creator? Are minds essentially non-physical? What are the nature and domain of the “physical” supposed to be? In the above stories there are themes in which it is speculated that there is some sort of God or at least, a creator, that is a “physical” feature of the universe. But then the creator would perhaps would be within the domain of what physics investigates. But then what does the physical/nonphysical divide amount to? A number of interesting issues relate to this:

1. Whether there is, in general, a plausible physical/non-physical distinction – (i) Crane, T. and Mellor, D.H., 1990, ‘There is no Question of Physicalism’, *Mind*, 99: 185 (reserve)  
(ii) Daniel Stoljar’s encyclopedia entry, “Physicalism”  
<http://plato.stanford.edu/entries/physicalism/>
2. We might be cognitively closed to knowledge about ultimate reality (e.g., *Solaris*) – Colin McGinn, excerpt from *Problems in Philosophy*.

3. The Anthropic Cosmological Principle<sup>1</sup> -- Frank Tipler and/or John Barrow (excerpts from *The Anthropic Cosmological Principle*).

4. Chalmers on consciousness as fundamental – Dave Chalmers, “The Puzzle of Conscious Experience” [Jamaica.u.arizona.edu/chalmers/papers/puzzle.pdf](http://Jamaica.u.arizona.edu/chalmers/papers/puzzle.pdf)

### III. FUTURE MINDS: NATURAL, ARTIFICIAL, HYBRID AND “SUPER”

(Some works: *Blade Runner*, *AI*, *Terminator*, *Childhood's End*, etc.)

Film: *AI*

1. Excerpt from Rudy Rucker's *Software*.<sup>2</sup>

2. Contemporary Cognitive Science and the Human Brain:

a. Multiple realizability, computational functionalism – my notes

b. “I am Neil's Brian” – Andy Clark

3. Future Minds (a typology of some possible minds given directions in both contemporary cognitive science and science fiction):

a. Hybrid minds:

Cyborgs (including discussion of extended minds) – excerpts from Andy Clark

b. Completely Artificial Minds:

(i) Traditional AI conception of an android with general purpose reasoning. Homework: watch *Blade Runner: Do Androids Dream of Electronic Sheep?* Peter Voss, “Essentials of General Intelligence” at [KurzweilAI.net](http://KurzweilAI.net)

(ii) Artificial life – film/interview with Rodney Brooks. “Fast Cheap and Out of Control.”

c. “Superminds”: superintelligence (natural or artificial)

The Singularity – read the first five chapters of *The Singularity is Near*.

### IV. CIVILIZATION

Themes: future civilization and distopia/utopia (Some sources: *Blade Runner*, *Planet of the Apes*, *Tank Girl*, *Terminator*, *Metropolis*, *Mona Lisa Overdrive*, *Gattica*, etc.)

1. The Doomsday Argument – John Leslie (excerpts, *The End of the World*; philosopher).

2. What's the shape of the universe? (Is the universe going to be a lonely place?) – cosmologist on the acceleration of the universe, including the Big Freeze.

3. Typology of civilizations and search for intelligent life. Michio Kaku piece, “Parallel universes, the Matrix, and Superintelligence” at [AIKurzweil.net](http://AIKurzweil.net).

4. Discussion: Creating genetically perfect humans and human cloning. Readings: excerpts from *The Singularity is Near* and *Radical Evolution*.

5. “Ethical Issues in Advanced Superintelligence” or, “In Defense of Posthuman Dignity” – Nick Bostrom (at [nickbostrom.com](http://nickbostrom.com)).

### V. SPACE AND TIME

Themes: this section begins by developing two related themes in science fiction, parallel universes and time travel. It then discusses the nature of space and time in a more general way. (Some works: *Twelve Monkeys*, *The Time Machine*, *Back to the Future*, etc.)

Film: Twelve Monkeys

1. Response to the Grandfather Paradox (Parallel Universe approach): Michael Lockwood/David Deutsch.
2. The Multiverse, String Theory, and Lewis' *On the Plurality of Worlds* – lecture. Readings: excerpt from *On the Plurality of Worlds* and Michio Kaku piece, “Parallel universes, the Matrix, and Superintelligence” at AIKurzweil.net.
3. Some other important puzzles about the nature of time. Excerpts from Paul Davies *About Time* on whether time is real, the problem of time's arrow, and the question: when did time begin?

### **Grading:**

*Class participation including presentations: 20%*

Students will be responsible for presenting the readings at various points. Note on presentations: It is okay if you find the material puzzling or difficult to understand. It is likely that others had the same experience and your confusion can often be instructive.

*Research Project: 40%.* Students will select a topic area to develop a long paper on. A five page paper is to be completed as a mid-term project. This paper is then presented, critiqued, and ultimately expanded into a final, 10 page paper.

*Exams (mid-term and final): 40%.* Each are worth 20%. The final is comprehensive.

**Other Notes:** Philosophy courses are participation oriented, and students must attend 2/3 of the classes to pass. The contents of the syllabus might change as the class progresses.

This course is very electronic. Course notes are found on the p-drive and the syllabus is often updated online and can be viewed by clicking a link at my webpage. Please check for updates to the syllabus reading list on a regular basis, especially if you miss a class. Please review the course notes before the exam and after class if you found the day's lecture material difficult.

